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THE CULTIVATOR,

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

CULT. VOL. VII—No. 1. ALBANY, N. Y. JANUARY, 1840. CULT. AND FAR. VOL. I—No. 1.

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The Cultivator.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

INTRODUCTORY.

In assuming the editorial charge of the united Genesee Farmer and Cultivator, it may perhaps be expected that we should enter into some explanation of the views we entertain of agriculture and its importance, the best means of advancing it, and the principles we intend as editors to illustrate and follow. Were our readers to be only the numerous body of farmers and others who have accompanied us in our course as conductors of the Farmer, we should consider a simple reference to the volumes of that periodical as a sufficient exposition of the opinions we entertain; but as this paper will fall into the hands of thousands who were not readers of that paper, common courtesy demands that some brief intimations of what we intend, shall here be presented.

In taking charge of the new series of a journal heretofore conducted with such distinguished ability, we feel that in the new connection a double responsibility is resting upon us. The admirable editorial tact, the great practical experience, the extensive and varied information, and deserved personal popularity of the late lamented conductor of the Cultivator, gave him advantages we shall not pretend to claim; and which can only be compensated on our part by untiring industry, and a faithful use of the ample and varied sources of information within our reach.

The great truth that the true source of all wealth lies in productive industry, is beginning to enforce the assent which it should long since have freely received; and the events of the last few months, both in this country and in Europe, have demonstrated that of all the branches of industry, there is none with which the prosperity of nations is so intimately connected, and on which it is so dependent, as our agriculture. The failure of a year's crop in Great Britain, has deranged the monetary and commercial relations of the globe, and has influenced the condition and prosperity of different and widely separated countries, more than would years of war. With the advance of civilization, it is seen that agriculture is destined to perform a more influential part in determining the destinies of nations, than it has hitherto done, and its importance is becoming better understood and its wide spread agencies better appreciated in the mind of every intelligent man, be he statesman or financier.

With a conviction of the value of any cause, or the importance of any object, comes the inquiry as to the best manner of advancing that cause, or promoting that object. There was formerly a wide spread but evidently mistaken notion (arising from the feudal state of Europe, and designed to perpetuate a system in which the tiller was little better than an adscript of the soil,) which maintained that knowledge was useless to the farmer; that science could do nothing for agriculture; that books could teach nothing to interest or instruct him; but that he must be left to plod on his way by instinct, or, parrot like, by repeating operations he had seen performed by his father, without change or hope of improvement. Fortunately for mankind, this feeling and state of things has, in the main, ceased to exist. In all civilized countries, the cultivator is rapidly becoming the owner of the soil; with the possession of property, inquiry is awakened, information is demanded, experience is consulted, nature is interrogated, and her responses listened to and obeyed; science is invited to the aid of the farmer, and discloses the reasons of a multitude of processes which were formerly involved in impenetrable mystery; and with the acquisition of knowledge, agriculture and its professors have taken a position among mankind which has made the cultivation of the soil one of the most honorable, as it is one of the most useful and lucrative employments of man. To press forward these desirable results, associated power has been most beneficially exerted, and Agricultural Societies, Schools, Books, and Periodicals have united their efforts with the best effect. While all of these have been useful, while all have done much to awaken inquiry, promote investigation, and disseminate truth, it is not perhaps unduly magnifying our own office to say, that in no way has agriculture received more effectual aid than by the circulation of well conducted periodicals, devoted to the interests of the farmer, and furnishing him a record of the facts and theories that experience and science are daily bringing to light, as having a direct bearing on the cultivation of the soil. In the same way and by an extended use of the same means, must farther advances be made. The diffusion of knowledge, convertible to practical uses, is what we need, and in no country is knowledge of every kind so essential to the farmer as in this. All power being in his hands, he may be justly held responsible for every thing; and duty to himself and the world demands that he should avail himself of every possible means of qualifying himself for the position in which he is placed by the institutions of the land, and the path which destiny appears to have marked out for his advance.

In all our exertions as conductors of an agricultural journal, to promote the interests of the farmer, the first place, as of right, will be given to the *practice* of agriculture. Without any disposition to underrate investigations more purely theoretical, we consider a correct practice, based on well grounded principles, to be the great end of all agricultural teaching; and its inculcation the proper business of an agricultural journal. Multitudes of theories that appeared beautiful and promising in the study, have been found illusory and unsatisfactory in the field; a result not to be wondered at, when we remember that of the great number of causes that go to produce a given or desired effect, it is very probable some of the most important, are, in the present state of our knowledge, unknown, or overlooked. But though we thus assign the first place to practical agriculture, we are by no means disposed to undervalue its theory. Every person who has paid attention to the progress of agriculture for the last twenty or thirty years, is aware that many of the greatest benefits science has conferred on the farmer, have been the result of pure theory, a reasoning from cause to effect, making certain what was before doubtful, and enabling the farmer to co-operate effectually with nature in the amelioration of the soil or in the production of crops. In short, we intend the Cultivator shall be a repository of every fact, both practical and theoretical, that can aid and enlighten the tiller of the soil, that will promote investigation or dissipate error, elevate the mind, strengthen the understanding, develope the laws of nature, and enforce a rational, and of course, successful system of husbandry.

In carrying out our intentions, as conductors of the Cultivator, we invite the cordial co-operation of those friends of the farming interest, whose communications have given such interest and value to the columns of the Farmer and the Cultivator. Few are the individuals who are not able to contribute facts calculated to elucidate and establish some point of practical importance, aid in correcting some long cherished error, or suggesting some useful matter of inquiry. It was a maxim with Peter the Great, that "nothing is little to a truly great mind;" and the discoverer of an agricultural truth, which enables a farmer to grow "two spires of grass where but one grew before," must be considered a benefactor of mankind, no less truly, and perhaps more beneficially, than he who developes the theory of the universe.

To Correspondents.

The proprietors of the Cultivator desire to present their acknowledgments to the correspondents of the paper for the various evidences of their continued regard to the cause of agriculture that will be found in this number. Coming as they do, from contributors to the papers, the union of which has produced the present journal, these essays are considered as proof that the proceeding is viewed with approbation, and that in our endeavors to be useful in the great cause of agriculture, we shall receive their continued countenance and support. We have a number of valuable papers, which shall receive an early insertion; and we hope our friends, to whom we are already so much obliged, will still forward us the results of their observation or their experience.

We also beg leave to tender our gratitude to our friends for the numerous expressions of kind wishes and encouragement we have received from various and distant sources. The approbation of the intelligent, is one of he most welcome remunerations those who labor for the public good can receive, as a decisive proof that their efforts are appreciated and understood. This confidence, and this encouragement, it shall be our endeavor still to deserve.

Back Volumes of the Cultivator.

All the published volumes of the Cultivator can be furnished to new subscribers. The price is, for vols. 1, 2, 3 and 4, 50 cents each—vols. 5 and 6, $1.00 each.—They are handsomely done up in printed covers, and can be sent by mail at the expense of newspaper postage, viz: 12 cents per vol. if within the state, or within 100 miles of Albany. and 18 cents if over that distance and without the state.

Annual Agricultural Meetings.

The New-York State Agricultural Society, and the New-York State Agricultural Convention, are both to meet in Albany on the FIRST TUESDAY OF FEBRUARY, 1840. The members and delegates are requested to meet at the City Hotel, at 11 o'clock, A. M., from which they will adjourn to a place which will be provided for the public meetings.

Editors throughout the state are requested to copy the above.

☞ In connection with this notice, we are requested to remind the members of the different committees that were appointed last winter to report on the particular subjects assigned them, that much of the interest of the ensuing meetings will depend upon the fulfilment of their duties, and it is confidently expected that there will be be no disappointment in this respect. It is to be hoped, also, that the friends of agricultural improvement in the different counties will take measures to be represented in the Convention.

New Terms to Agents.

It will be seen by reference to the "Terms" in their appropriate place, that an alteration has been made in the conditions of the Cultivator, highly favorable to Agents, and to all in fact, who are disposed to promote its circulation by their personal efforts, viz: to allow every sixth copy gratis, instead of the eleventh, as heretofore; and a commission of twenty per cent on twenty-five or more subscribers, and twenty-five per cent on one hundred or more. We make these liberal allowances in the belief that it will induce our friends to make greater exertions to extend the circulation of the Cultivator, as there can, we should think, be but few neighborhoods where any one who is disposed to act as Agent, may not obtain subscribers enough to receive a copy gratis.

Advertising.

So general has been the complaint against the admission of advertisements into the Cultivator, that we are compelled to decline their insertion in the present volume. We had thought of issuing a quarterly advertising sheet, but we find that to make it pay its cost, for our large edition, we should have to charge at the rate of $12 a column, which would be more than most advertisers would be willing to pay. We think it best, therefore to leave the advertising business to papers of a more local and less permanent character. Believing however, that it will be a benefit to our subscribers, we shall cheerfully, when desired, publish the address of such of our correspondents and agents as are engaged in the seed or nursery business, dealers in improved stocks, agricultural implements, &c.

☞ The publication of the last No. of the 6th volume of the Cultivator has been delayed for an engraved portrait of its late editor, Judge BUEL, which the engraver has just finished. It will, however, probably occupy some two or three weeks to print copies enough to supply all the subscribers. The papers will be sent out as fast as the portraits can be printed. The No., which consists of a sheet and a half, will also be accompanied by a beautiful wood cut, of nearly the size of a page, representing the HORTICULTURIST'S COAT OF ARMS, devised by A. Walsh, Esq., of Lansingburgh, and exhibited at the Horticultural Fair at Niblo's Garden, New York, in October last.

District School Library.

In the December No. of the Farmer, the publication and contents of the second part of the School District Library, published by the Messrs. Harper, was noticed by us. We have since had the pleasure of examining such of the volumes as we were not before acquainted with, and can recommend the whole as a most valuable selection, and worthy the entire confidence and approval of the public. The fact that time was required for the preparation and publication of as many volumes as is demanded by the district Library system, is fully proved by the manifest superiority of this second series over the first.

The excellent volumes on Agriculture, furnished by Judge Buel, with the one on the same subject by Gen. Armstrong, with notes by Judge Buel, and the invaluable work of Chaptal on the Chemistry of Agriculture, are sufficient of themselves to give a character of usefulness and adaptation to the series, not possessed by the former, nor indeed by any other yet presented to the public. In addition to these, the Life of Franklin, whose name is more closely identified with the political economy of the country than any other; the volumes of American Biography, by Mr. Sparks and other able writers; the Universal History of Tytler; the Personal Narrative of Humboldt, the most instructive of travelers, &c., are volumes of the best kind, and cannot fail to give satisfaction to all. Next to the establishment of our common school system, we consider the most important step that has been taken towards a general diffusion of sound and useful information among the great mass of the people, has been the appropriation for the District School Library; and it can scarcely fail of producing the happiest effect, in every district of our state, except through the unpardonable remissness and negligence of those who are necessarily entrusted with the carrying out the liberal and praiseworthy design of its projectors. It may not be improper to add here, that those individuals whose means of forming private libraries are limited, will probably find the series published by the Messrs. Harper, as comprehensive and valuable, and certainly as reasonable in price, as any collection of a similar miscellaneous nature that could be made.

Means of Improvement in Agriculture.

That farmers at the present time have within their power the means for a more rapid advance in their profession, than was enjoyed by those of fifty years since, is perfectly plain to all. The object of this paper is not to establish this fact, but by the enumeration of some of the means within our reach, to enable us to decide whether we avail ourselves of them to the extent that we might and should, were their importance properly appreciated. The age in which we live is one of movement; and though farmers, as a class, are the last to be infected with the spirit of change and innovation, it would have been surprising indeed had this honorable employment of so large a portion of mankind, been suffered to rest without availing itself of the benefits which science and experience have furnished. The grand fact that the earth, through the operations of the farmer principally, is the great source of wealth, had long been overlooked; and when, by progressive advancement in civilization this truth was understood, it was at once obvious, that to foster and encourage agriculture was a paramount interest of society. With a knowledge of the necessity of agriculture to the increase of wealth, it began to assume a place in the estimation of the community, to which, however justly entitled, it might formerly have looked in vain, as no such claim would for a moment have been allowed.

The application of science to agriculture, was one of the first benefits which the business of the farmer received from a proper estimate of his employment. Formerly the farmer was compelled to plod on in an unvaried routine, he being presumed to understand by nature or by instinct, all that was necessary for the cultivator of the soil to know. The reasons for the processes he employed; the cause of the various phenomena of animal and vegetable nature; the why and wherefore of the changes continually going on before him, and for the observation of which no man is more favorably situated than the farmer, were held to be beyond the acquisition of the occupier of the soil, not easily understood, and useless if known. Science placed her torch in the hands of such men as Davy and Chaptal, and its light dispelled this delusion. Chemistry, by its powers of analysis, showed the nature and composition of soils; the proper kind, time and value of the several varieties of manures; the mode and the means of nutrition; and with the knowledge of these came the power of supplying wants where they were found, and correcting deficiencies where they existed. We do not mean to say that manures were not applied to soils and good crops occasionally raised, before the investigation of science had been directed to agriculture, but the whole business was one of uncertainty, and must always have remained so, had not the causes that produced these favorable results been shown, and the means of repeating them at pleasure placed in the hands of the tiller of the soil.

While the public mind was thus awakening, and science was beginning to lend her aid; men of inquiring minds, practical farmers, commenced a series of experiments, which, embracing in its advance the whole circle of agriculture, and continued with increasing zeal till the present time, has afforded the greatest benefits, and placed within reach of the farmer one of the surest means of unlimited improvement. Well conducted experiments, that is, experiments based on a knowledge of the ends to be obtained and the surest means of arriving at them, now constitute the most effectual means of advancing agriculture; and in every country are to be found men who are engaged in carrying them forward with a success that equals every reasonable anticipation. That every man who owns, or tills the soil, should engage in what may be termed experimental farming, is not to be expected or perhaps desired, though there is no one who must not at times feel the necessity of adopting new modes of culture, or who may not have experienced the benefit of doing so. A greater degree of attention and care than can be usually bestowed by the common farmer, is required to conduct experiments to useful conclusions, though as observers of facts, they can render the most essential aid to those who have means and leisure to attend to more strict investigations. In the accumulation of recorded facts, the result of these continued and multiplied experiments, the modern farmer has a means of advance already given him, of the greatest consequence.

A better understanding of the laws that regulate the improvement in the breeds of animals, and the increased productiveness of plants, have furnished one of the most efficient means of advance as well as of profit. It has been stated as the result of this attention to breeding animals, that the average weight of the cattle slaughtered in London, or sold at the Smithfield market, has increased full one-third in fifty years, and that the difference in the mutton is not less than in that of beef. A house in Boston, that has for a number of years slaughtered the number of five or six thousand head of cattle annually, state that the increase in weight for the last twelve years, has amounted to ten or twelve per cent; and as the average weight of the animals is about 900 pounds, there has been of course an average gain of about 100 pounds on each animal within the time stated. These facts are sufficient to prove the immense importance to the farmer of improvement in stock, and show him the way in which still further advances may be made. Nor has the improved state of quality and quantity of the grain grown at the present day been scarcely less decided than that we have noticed in beef. Forty bushels of wheat, and one hundred bushels of corn, to the acre, are as common now as thirty of the first or eighty of the last were but a few years since; and the fact of such crops not being oftener produced, does not militate against the theory of improvement; it only establishes the truth that the farmer is too slow in seeking the means of advance in agriculture, or negligent in availing himself of them when pointed out.

The great advances in the mechanical arts, by producing more perfect implements of agriculture, and enabling men of genius to carry out their plans in constructing new machines, have added further facilities to improvement, and means, which fifty years since could not have been found, are now every where at command.—Thus we have only to look at our light, beautiful, easy working cast iron plough, and compare them with the heavy, unwieldly, ill looking and worse working ploughs of our predecessors, to realize in part the difference that exists between the former and the present times in this important implement. The superiority of the hoe, fork in all its varieties, scythe, cradle and rake, is not less manifest. The horse-rake, by which one man performs the work of a dozen; the drill, so indispensable in the cultivation of roots; the reaping machine, by which the grain is cut, threshed, cleaned and delivered in the field fit for the miller; the cultivator, by which the labor of hoeing and dressing corn and root crops is reduced at least one half; the roller, so necessary to good husbandry, and in short the multitude of improved implements now in use, but which a short time since were unknown, furnish undeniable proof of the increased means of progress the farmer at the present time possesses.

Agricultural societies have been found among the most efficient agents in promoting agriculture, and at the present day they are constantly increasing in number, activity and consequent usefulness. The grand principle of association for the accomplishment of great objects, has received no better proof of its potency than is given by the history of some of the oldest of these societies. Agricultural societies bring farmers into a beneficial acquaintance with each other; they teach the best methods of accomplishing the several processes of farming; they bring to the knowledge of the many the most valuable plants, the choicest animals, and the most approved implements. They stimulate inquiry, they invite discussion, they reward care and research; and at the meeting of these societies, the bands of brotherhood, and a strong feeling of attachment to the pursuits of the farmer, naturally arising out of a congeniality of interest, are created or materially strengthened. From these associations, and the undisputed benefits found to arise from such communications and interchanges of opinion, in regard to agriculture, may be said to have originated another and most important auxiliary in the cause of the farmer, which, as a means of improvement, is second to no other; one which may be said to belong almost exclusively to the present age; one which already exercises, and which must continue to exercise, a boundless influence on the cause of agriculture. We allude of course to the Agricultural Press.

Other classes of men had long employed the press to advance their claims, enforce their rights, disseminate a knowledge of their principles, promulgate their views, diffuse necessary information, and serve as a kind of chain to bind the scattered members of the pursuit or profession into a community of interest and feeling.—The agriculturist long neglected this obvious means of improvement; and in this case, as in many others, while he cared not for himself no one cared for him. There seemed a tacit understanding among most of those in other pursuits and professions, that knowledge was not necessary to a farmer—that all the information he requires comes by instinct—that science could do nothing in aid of the tiller of the soil; and in this disposition of matters the farmer for a long while seemed patiently to acquiesce. At last came inquiry, and with it the desire for information; the experience of others was sought, and when obtained there was no rest till the "whys and becauses" were also given. Books could not circulate extensively or rapidly enough to meet the demand for agricultural knowledge; the sneer, once so powerful against book farming, was disregarded; facts demonstrated the utility of science in farming as well as in other pursuits; the necessity of mediums of communication between farmers became apparent, and the periodical agricultural press had its origin. That well conducted agricultural publications are the most efficient means of promoting good husbandry in a country, will scarcely be questioned by one who has watched their operation, or noticed the change in the agricultural state of the country that has taken place since their introduction. To be without the receipt of one or more periodicals of this kind, is a practical admission by the farmer that he is behind the age, and that his system of culture is of an old fashioned and inferior kind, and an examination of his farm and its products, will be found usually to confirm the impression. A paper which gives monthly a history of the opinions, or details the results of the experience of hundreds of the ablest, best informed, and most successful farmers of the country, cannot fail to interest and instruct. Where is the agriculturist that would not esteem it a privilege to spend an evening with any half dozen of these, and listen to their opinions or their facts; and this privilege a well conducted and well supported paper will give him monthly, and allow him at the same time to change the conversation and the speakers as it were, at his own pleasure. Of all the means which the intelligence, experience and genius of the age has invented or introduced for the aid of agriculture, there is none more effectual, less expensive or more decided, than agricultural journals.

Agricultural schools deserve, and would have received a prominent place in this notice of the means within the reach of the farmer to advance his interests, but the subject has been so ably treated in a late number of this paper, that further remark would seem to be superfluous. The experience of France, Prussia, England and Ireland, demonstrate their utility; the testimony of Fellenberg, Von Thaer, Dombasle, Youatt, Farday, and a host of other distinguished men, is decisive in their favor; and we shall hail it as a proud day for the agriculture of our country, when such schools, either by public or private maintenance, shall be established among us.

Notices of Agricultural Societies.

No more decisive evidence can be offered that agriculture, in its effects and consequences, is beginning to be better appreciated and understood, and the best means of advancing it more fully realized, in our country, than the numerous accounts of the formation and proceedings of new associations that reach us from all parts of the country. Resulting, as these societies do, from a full conviction of their usefulness; rising in the midst of our agricultural population, by a spontaneous, and, in many instances, a simultaneous movement, without the influence of foreign aid or other exciting causes; we have good reason to hope they will, many of them at least, be permanent, and do much towards the diffusion of correct agricultural information, and sound and judicious agricultural practice. We should be gratified to enter into the details presented by the reports of some of these meetings that have reached us, and give to our readers some of the excellent addresses these occasions have called forth. Our limits, however, forbid, and we must be content with such limited notices as our space permits.

We learn from the Onondaga county papers, that the agricultural society of that county held its first cattle show and fair at Syracuse, on the 17th day of October. There was a very respectable display of stock of various kinds, embracing cattle, horses, sheep and swine; of the productions of the earth, such as wheat, potatoes, &c. &c. and a spirit was manifested by the numerous company of farmers present, which argues well for the further efforts of the society. In its position and resources, Onondaga is perhaps second to no other county in the state, New-York excepted; and her farmers have the means and we hope the inclination to render that society one of the most prosperous and efficient in the country.—We may add here, as a fact much to their honor, that the conductors of the principal political journals of that county, take an active part in the cause of the agriculturist, and co-operate efficiently with the journals devoted to the farmer, in spreading the most important facts and papers that appear before their readers. The good effect of this proceeding is apparent, and we mention it here as a hint to journalists in agricultural districts, that they may in this way render a most important service to the productive interests of the country.

The able address before the Agricultural Society of Seneca County, by Mr. Strong, is now before us. The journal containing the other proceedings of the association has been mislaid, but they were of the most encouraging order, and promise much for that rich and fertile region. We copy from the address the following paragraph, as it contains important truth well and forcibly expressed:

> "To understand what the true process for renovating an exhausted soil is, requires a knowledge as comprehensive almost as the world of science itself. All the efforts and investigations which have been applied to this study, go far to establish this truth; yet how difficult it is suitably to impress this fact upon the minds of the farming population generally. Able and enlightened men have labored, and are now laboring with their pens and influence, to imbue our minds with a deep sense of its truth and importance. Experiments have been made and their results minutely detailed, so that we are without excuse if we have not profited thereby. Yet farmers too rarely heed these lessons of wisdom and experience. We seem to prefer to follow on in the footsteps of our respective predecessors, in the same modes of tillage and husbandry which they practiced, without stopping to inquire whether there is any thing to learn by departing from them. In this we greatly err; we misapply the lessons which experience in other departments of industry so emphatically teaches in the great improvements and inventions of modern times. Man's knowledge and usefulness increases in proportion to those expansive energies which direct and control his thoughts and investigations of subjects especially within the province of his vocation. This is an undisputed axiom, and how forcibly should it address itself to the farmer. No matter how much success may have accompanied his patient toil, or in what abundance the blessings and comforts of life may lie scattered along his pathway, (for these do more generally attend the faithful and industrious cultivator of the soil than almost any other pursuit or occupation,) he is still without excuse if he has allowed his mind to grope

and grovel along, without an effort to become enlightened in the great principles of agricultural science."

Of all the associations that have been organized the present season, however, the reports of which have fallen under our notice, none seem to have originated under more favorable auspices, to have been conducted with more spirit and intelligence, marked by a greater degree of liberality, or placed in a position to warrant the expectation of a wider usefulness, than the Agricultural Society of Cuyahoga County, Ohio, which held its first meeting, cattle show and fair, at Cleveland, on the 30th and 31st of October last.

Committees on the subjects of farms, horticulture, silk and mulberry, agriculture, domestic manufactures, and animals, consisting of spirited and influential gentlemen, had been previously appoined to examine the district, and interesting reports on all the subjects named, were made to the meeting.

The premium on farms, $50, was awarded to S. Giddings of Cleveland, and by that gentleman was immediately presented to the society in aid of their funds. The southern shore of Lake Erie has long been celebrated for its fine fruit; and the report on horticulture furnishes proof that for strawberries, gooseberries, raspberries and grapes, in addition to the more common productions of the garden and orchard, it may become equally celebrated. A number of lots of mulberry were examined, and of these, and the few attempts at the making of silk, (principally thread,) the report speaks in the most favorable terms. The report on agriculture cannot be considered as exhibiting a state of things altogether satisfactory; but the pointing out of defects in a system, and the announcement of remedies, can hardly fail, in an enterprising and intelligent community, of producing the happiest effects. From this report we take the following account of a field of corn raised by Mr. Sherman of Mayfield, and which received the first premium. Two acres were offered. The land a black ash swale without manure, planted four feet each way, labor performed as follows:

Plowing two acres, 2 days with team, ...	$4 00
Planting do 2 days, ...	1 50
Hoeing first time, 4 days, ...	3 00
do second time, 3 days,...................	2 25
do third time, 3 days, ...	2 25
Harvesting, 4 days, ...	3 00
Cutting and shocking, 2 days, ...	1 50
	$17 50

Credit.

By 182 bushels 22 quarts of corn, at 50 cents per bushel, ...	$91 00
Corn fodder, ...	8 00
16 loads of pumpkins, ...	8 00
	$107 00
	17 50
Nett profit, ...	$89 50

Of other crops that received the premiums of the society, was one of potatoes, 432 bushels per acre; of carrots, one at the rate of 853 bushels per acre; ruta baga, 972 bushels per acre; sugar beet, 928 bushels per acre. The wheat crops that received the premiums, were two of two acres each, of which the first produced by weight, 103 bushels, 44 lbs.; and the second, 112 bushels, or 56 bushels per acre. If there are many such crops produced in Ohio, we shall cease to wonder it is becoming famous for its wheat. Of domestic manufactures a great variety of useful and beautiful articles were exhibited, many of which were from the hands of fair contributors, and were alike honorable to them and the occasion. The report on animals, speaks in warm terms of the efforts made by the spirited farmers of Ohio to improve their domestic animals, and the great success which has attended their exertions. Ohio has set a most commendable example in this respect, and she is already reaping a rich reward for her labors.

The address was by the Hon. F. Whittlesey, and was precisely what was to be expected from his talents, general information and intelligent zeal in the cause of agriculture. The views presented by Mr. W. are such as must commend themselves to the mind of every intelligent man, to every one that has reflected on the relation the agriculture of every country bears to its prosperity, and the high rank to which it is entitled in the estimation of every true friend of the nation's welfare.—His remarks on farming, both in its theory and its practice; the rules that govern the fertilization of the earth, and should govern the rotation of crops taken from it; the best methods of culture; the advantages of knowledge, and the circulation of agricultural information; and the necessity of paying particular attention to the choice of animals for breeding, and seeds for planting; are eminently appropriate and well timed, and prove that to the consideration of the subject, had been brought the resources of a well disciplined mind, conversant alike with the theory and the practice of agriculture.

Every person conversant with agriculture in this country, is aware that strong objections have been made by a certain class to the importation of animals, alleging that we have among ourselves, and of our native breeds, as valuable animals as can be imported. For the sake of the argument this may be admitted; but have we any evidence that these animals will produce others like themselves? On the contrary, have we not the most conclusive evidence that these valuable qualities are in these animals accidental,—that they do not belong to the constitution or type of the breed, and therefore their continuance in the progeny cannot be counted upon with any degree of certainty. Now in the thorough bred imported animals, we have a stock that by long and skilful breeding have been brought to such a point that these valuable qualities are constitutional, they belong to the type, and we can count with safety on the certainty that the progeny will retain the good qualities of their parents. By abandoning thorough bred animals for our native ones, therefore, admitting that some of the latter can be found equal to the former, we throw away a certainty for an uncertainty, and voluntarily conclude to begin our improvements at a point some seventy or eighty years since, and from which, with infinite skill and perseverance foreign farmers have in that time brought their several kinds of cattle, sheep and swine, to their present high standing and perfection. The only extract we have room to make from Mr. Whittlesey's able address, shall relate to this important topic.

"Many look with a jealous eye upon the stately Durhams, as aristocratic intruders upon ground of right belonging to the piebald, ringstreaked and speckled denizens of the soil.—They wont bear starving, says one—and thinks himself highly favored in possessing cattle in whom the breath of life may be preserved by the least possible quantity of food. They give no adequate return it is true, either of milk, meat or labor, but then they keep so easy. Another declares it treasonable to import cattle from a foreign country, and most of all from Old England, the land of our foe. Why not improve our own stock, if improvement must needs be the order of the day. Set about it then, and after a lifetime has thus been spent, learn too late that a half century is still wanting to bring your improvement on an even keel with that you foolishly refused to profit by. Thank heaven, a different spirit is prevailing, and in a part at least of this community, as is evinced by the unwearied pains taken to introduce the very best kinds of stock among us. And our own Ohio, young as she is, is behind none of her sister states in this noble strife. The best description of every kind of stock is here, from Durham cattle, and the blood of old Eclipse, down to Berkshire hogs, and Leicester and South Down sheep. The farmer has only to choose, and in so doing he can scarcely go wrong, choose as he may. All, however, should recollect, whether foreign or native breeds be selected, whether unable or unwilling to change the stock already in possession, or both able and willing, that a prime requisite either for profit or pleasure is a full rack or manger. Keep no more than may be well kept, discarding every worthless animal the moment that fact is discovered, and a double advantage will ensue, for a creature well fed, sleek and smooth, is both a pleasure to the eye and a profit to the purse."

Situated as Cleveland is, at what may be called the northern gate of Ohio, located in a fertile district, and commanding an extensive trade, an agricultural society in such a position, conducted as the newly organized one evidently is, by able and spirited men, cannot fail by its example and its influence on the agricultural public, to produce the most beneficial results. We are confident we shall hear from this, as well as the other societies we have mentioned, again, and we trust under still more favorable auspices. Embarrassments growing out of a complication of causes which can scarcely again occur, have produced a depression in agricultural products; but this depression will pass away, as it is impossible to destroy the farmer's trade, while men will eat, and drink, and wear; or permanently depress an interest on which experience so conclusively shows all others are depending.

Statistics of Agriculture.

We are pleased to perceive that a suggestion of ours, made some time since, of the necessity of taking some measures to secure more ample and correct statistical accounts of the agricultural resources of this country, and the propriety of the government making such arrangements as shall secure this object at the time of taking the next census, or during the present year, has been adopted in substance by some of the soundest and most influential journals of the country, and advocated with an earnestness and ability which we hope will attract the attention of those servants of the public whose duty it is to manage affairs belonging to the general welfare. To take a record of our foreign trade, and preserve memorials of our indebtedness, requires an expenditure of millions annually; and an accurate collection of the items that belong to our agricultural wealth, cannot be objected to on the score of the trifling additional expense it may occasion, since the amount of the last very far exceeds that of the first; and so far as regards the actual increase of prosperity to the country, can admit of no comparison.

The fact, that to agriculture—to its spread and to its prosperity—we owe most of the increase in wealth, and consequent civilization and refinement, that marks the present age of the world, has become so obvious, that agricultural statistics are considered by every statesman as a kind of thermometer indicating most unerringly the advance or decline of a nation's prosperity. Hence the care which is taken to collect and register them, in all those states or nations where the true principles that regulate trade and productive industry are best understood.

The events of the last few years have forced on the public mind the necessity for this kind of knowledge. A monetary revulsion, preceded by changes and convulsions unexampled in the history of the world, seems to have originated and had its spread more from agricultural causes, and a want of knowledge of the actual state of productive industry throughout the world, than from any other. There can scarcely be a question, that had the actual quantity of grain grown in Great Britain last year, and the quantity of cotton and wheat produced in the United States for the same period, been well understood, the shock which the prosperity of both has received, might have been avoided. It would have been known that we have the surplus wheat, which an apprehended or actual deficiency has made necessary there, and the fear of which has aggravated ten fold the monetary difficulties under which the country was really laboring.

We wish to know the total value of the agricultural and productive industry of this country. Of the cotton we are able to give a tolerable estimate, since it is mostly sent from the country; but of the wheat, corn, rye, oats, barley, &c., of the cattle, horses, sheep, and swine, we know comparatively nothing. The immense amount that is produced by industry from our soils, or our fields, yearly, we are ignorant of, and must be until measures are taken to collect the scattered results, and show them in a vast whole. This can easily be done by the marshals and their deputies at the taking of the census. Every house and family will then be visited, and should the government adopt the suggestions the friends of the agricultural interest have proposed, blanks of the proper kind can be readily prepared, to which the information so collected can be transferred. Let it be once announced that the agricultural statistics of the country were to be collected; let the public once understand that inquiries on these topics were to be made and answered, all would be prepared, and the extra time consumed would be very limited. But let the additional expense be what it may, the public interest and the public voice, we think demand that a full report of our agricultural statistics be made.

"The Farmer's ompanion."

We are indebted to the publishers, Marsh, Capen, Lyon and Webb, for a copy of this valuable contribution to the stock of agricultural reading and information, presented to the American farming public by Judge Buel. The volume was prepared for the Massachusetts School Library Association, and will be found not one of the least acceptable of the volumes put forth by that enterprising body. The topics presented in the volume, belong to the most necessary and practical departments of farming, embracing all those things proper to a right understanding of the nature of soils, and the most efficient methods of culture, and given in that clear and accurate manner of detail, so peculiar to the lamented writer, of whom this volume was one of his latest labors.

The object of the volume will be understood by the following extract from the preface, and the intentions here shadowed out, have been amply fulfilled in the execution.

"The great objects of the farmer should be, *to obtain the greatest returns for his labor, without deteriorating the fertility of the soil; and to restore fertility, in the most economical way, where it has been impaired or destroyed, by bad husbandry.* It has been my aim to give instruction upon these points, and to explain the principles upon which my recommendations are based, and upon which my individual practice has been founded."

We shall have frequent occasion to avail ourselves, for the profit of our readers, of the mass of interesting matter in this volume, and the others prepared by Judge Buel. The present publication contains, in addition to the Essays, the Address prepared to be delivered before the Agricultural and Horticultural Societies of New Haven, but which intention was prevented by the death of the writer, while on his journey to fulfil the appointment. It is clearly one of the ablest of those papers, which the acceptance of similar invitations had produced, and which have been the means of the delight and instruction of thousands.

Rocky Mountain Flax.

We know of no plant which seems to better deserve an effort for its introduction into the class of cultivated vegetation, than the one above named. The common flax plant is an annual; is exposed to the depredations of many insects; to get the full amount of the crop it is necessary it should be pulled, and yet with all these drawbacks it is a valuable crop, and indispensable for many purposes. If a plant possessing the same valuable qualities as the common flax, yet which would be perennial, and could be cradled or mown at maturity,—thus giving an annual succession of crops from the same root,—could be discovered and brought into use among us, and particularly in the fertile valleys and prairies of the western states, the advantages would certainly be very great. Such a plant is the Flax of the Rocky Mountains; and the individual or the society that shall introduce it into cultivation, should it answer present indications, will be considered as benefitting the agriculture of the country essentially. Of the various notices which we have seen of this plant, we select the following, as more particularly describing its appearance, and the extent of its growth in those regions.

Mr. Parker, in his excellent narrative of his journey across the Rocky Mountains, from the Mississippi to the Pacific, says, "Flax is a spontaneous production of this country. In every thing, except that it is perennial, it resembles the flax that is cultivated in the United States—the stalk, the bowl, the seed, the blue flower, closed in the day time, and open in the evening and morning. The Indians use it in making fishing nets. Fields of this flax might be managed by the husbandman in the same manner as meadows for hay. It would need to be mowed like grass; for the roots are too large, and run too deep in the earth, to be pulled as ours is; and an advantage that this would have, is, that there would be a saving of ploughing and sowing." This was on a branch of Lewis or Snake river, of the Columbia.

In a late journal of a passage across these mountains, by Mr. Oakley, of Illinois, under date of the 21st of July, 1839, occurs the following; "Encamped to-night in a beautiful valley, called Bayou Selard, 28 miles from the head of the south fork of the Platte. It is a level prairie, thirty miles long and three wide, and was covered with a thick growth of flax, which every year springs up spontaneously."

Whether the Rocky Mountain flax will prove to be as near the common flax as is supposed by Mr. Parker, may be doubted; but that it is unlike, and far superior, to the two or three kinds of native wild flax that have before been discovered in the United States, would also seem to be clear. A tract of 90 square miles of flax, such as Mr. Oakley described, would be a sight in any country, and would rival the grass covered prairies of Illinois.

Bots.

Of all the insects that irritate and injure that noble animal the Horse, there is none perhaps more vexatious or more pernicious, in all its stages of existence, than the Bot. Its parent, the Horse or Gad-fly of the farmer, the Œstrus Equi of the veterinarian, is common in the autumn, and it is then that the mischief which is performed by its method of perpetuating its species, is usually accomplished. The bot itself is the larvæ or catterpillar of the fly, and the manner of its introduction into the stomach of the horse, where it is to prepare for its final transformation, is a curious illustration of the means provided the insect to effect the end designed.

The male of the gad-fly is rarely observed, but the female, during the season it occupies in depositing its eggs, may be seen, with the extremity of its body turned under and forwards, busily engaged in darting up to certain places about the horse, and at every such movement attaching an egg to a hair, where it usually remains, ready, on the slightest application of the tongue of the animal, to throw open the lid or valve with which it is provided, and leave the minute bot or grub on the tongue, to find its way to the stomach of the horse with its drink or its food. Like many other insects of a similar class, no sooner has the fly deposited its eggs, than it either falls to the earth and dies, or slowly flies away to perish.

The time occupied by the egg in coming to maturity, is partly depending on the temperature, or its position on the animal; but it never exceeds a few days; and at times, the application of a moist warm hand will show they are ready for hatching in twenty-four hours.—When, by the action of the tongue, the grub has been removed into the stomach, it attaches itself to the insensible coat of that organ, by the two little hooks with which it will be seen the head is provided. Here it makes a small opening, into which its head or muzzle is plunged, and where it feeds on the juices or mucus which the stomach in that state affords. In this position it remains during the winter, and until the early part of summer, when it detaches itself, and mixing with the contents of the stomach, is voided with the excrementitious matter. As soon as it reaches the earth, it burrows at once beneath it, where it remains in the chrysalis state for a number of weeks, and then emerges a perfect fly, busily engaged in the propagation and perpetuation of its species. Such is the history of the common bot; the one that most frequently falls under the notice of the farmer, and is the most injurious to the animal.

Besides the above bot, there is another, called from its color the red bot. It is smaller than the common bot, and the fly which is its parent has never been satisfactorily described. It is generally considered more injurious than the common one, but probably without sufficient reason. There is still a third species, the *Œstrus hemorrhoidalis*, or fundament bot, which makes its appearance within the anus and about the tail, the egg of which, it is ascertained, is deposited by a fly, while the intestine is partially developed in voiding the excrements. These bots occasionally produce a little irritation of the parts, but otherwise do not seem to produce injury. They are generally easily detached by the application of a little linseed oil.

Very discordant opinions are entertained among veterinarians, and among farmers, respecting the effects which the presence of bots in the stomach of the horse produces on the animal. Some contend that the bot is never injurious; that it never perforates the stomach of the living animal; that the deaths attributed to the bot, should be placed to the account of the colic; and that when the stomach is found perforated, as it frequently is, it is done by the insect in seeking to make its escape from the change that ensues after the death of the animal; and that, consequently, all the nostrums that have been prescribed for the dislodgment of the bot, are absurd if not positively injurious. An able and interesting discussion of this subject, was carried on in the 13th and 14th volumes of the American Farmer, between Dr. Harden, Mr. Ellis, and others, during which a mass of facts were adduced, proving that if death was not caused by the perforation of the stomach by the bot, it did cause death by choking up the passages leading to or from the stomach. This agrees with the statements of the best European writers on the diseases of the horse. Thus the Cyclopedia issued by the Society for the Diffusion of Useful Knowledge, says, "In a few instances, the bot has been decidedly injurious; fastening themselves on the edges of the opening into the windpipe, they have produced a cough, which no medicine could alleviate, and which, increasing with the growth of the bot, has ended in an irritation under which the animal has sunk. They have also travelled farther than the stomach, and have irritated and choked the first intestine, and thus destroyed the horse; and even in their natural habitation, under probably some diseased state of the stomach, arising from other causes, they have perforated it and caused death."

Mr. Youatt, in his work on the Horse, says the bot "cannot be removed by medicine, because they are not in that part of the stomach to which medicine is usually conveyed; and if they were, their mouths are too deeply buried in the mucous coat of the stomach, for any medicine that can safely be administered to affect them, and last of all, in due time they will detach themselves and come away."

That the most useless or pernicious methods are resorted to at times, for the removal of the bot, is evident to all who are acquainted with the treatment to which the horse is subjected in the hands of the ignorant. A correspondent in the last vol. of the Cultivator, mentions an instance in which a horse was cruelly killed by turning boiling water from a tea-kettle down his throat, to cure an attack of the bots. That no substance can be given as medicine, sufficiently powerful to destroy the bot, or make him let go his hold, that would not be fatal to the animal, is evident from the following table of experiments, which is copied from the Medical Register, and which were performed under the direction of Mr. Green. The bots were about two-thirds grown, were vigorous and active, and were exposed to the action of the several substances for the time stated.

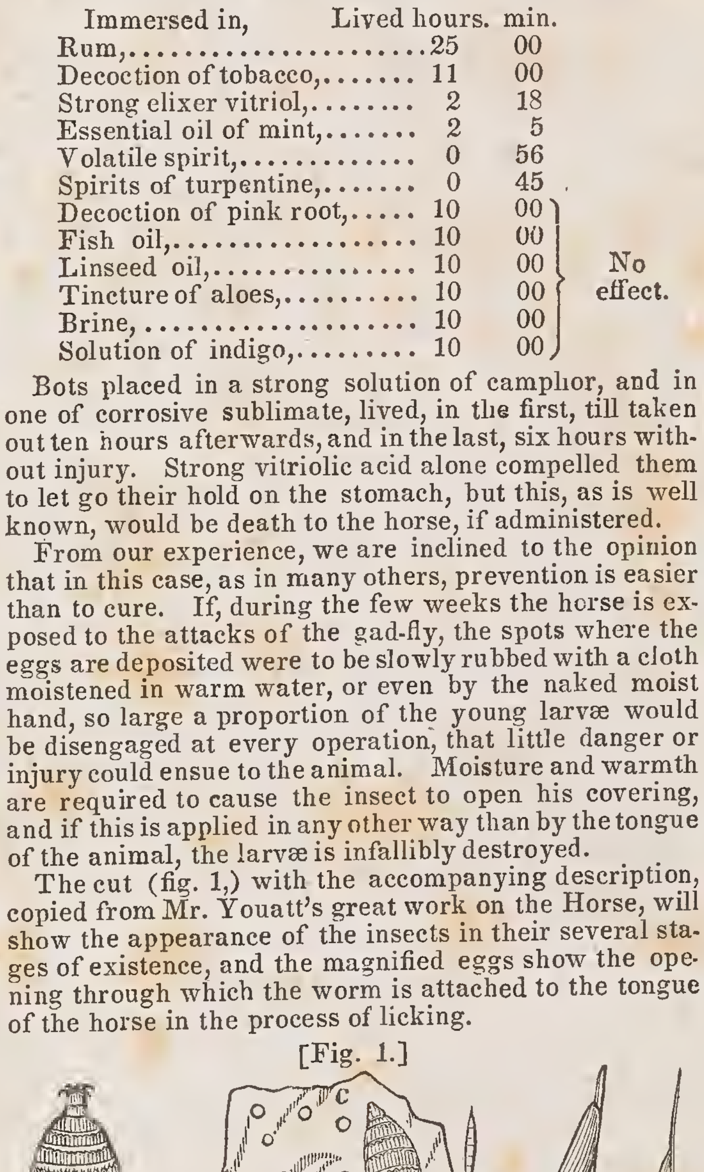
Immersed in,	Lived hours.	min.	
Rum,	25	00	
Decoction of tobacco,	11	00	
Strong elixer vitriol,	2	18	
Essential oil of mint,	2	5	
Volatile spirit,	0	56	
Spirits of turpentine,	0	45	
Decoction of pink root,	10	00	No effect.
Fish oil,	10	00	
Linseed oil,	10	00	
Tincture of aloes,	10	00	
Brine,	10	00	
Solution of indigo,	10	00	

Bots placed in a strong solution of camphor, and in one of corrosive sublimate, lived, in the first, till taken out ten hours afterwards, and in the last, six hours without injury. Strong vitriolic acid alone compelled them to let go their hold on the stomach, but this, as is well known, would be death to the horse, if administered.

From our experience, we are inclined to the opinion that in this case, as in many others, prevention is easier than to cure. If, during the few weeks the horse is exposed to the attacks of the gad-fly, the spots where the eggs are deposited were to be slowly rubbed with a cloth moistened in warm water, or even by the naked moist hand, so large a proportion of the young larvæ would be disengaged at every operation, that little danger or injury could ensue to the animal. Moisture and warmth are required to cause the insect to open his covering, and if this is applied in any other way than by the tongue of the animal, the larvæ is infallibly destroyed.

The cut (fig. 1,) with the accompanying description, copied from Mr. Youatt's great work on the Horse, will show the appearance of the insects in their several stages of existence, and the magnified eggs show the opening through which the worm is attached to the tongue of the horse in the process of licking.

[Fig. 1.]



a and *b*, The eggs of the gad-fly, adhering to the hair of the horse.

c, The appearance of the bots on the stomach, firmly adhering by their hooked mouths. The marks, or depressions, are seen, which are left on the coat of the stomach, when the bots are detached from their hold.

d, The bot detached.

e, The female of the gad-fly, of the horse, prepared to deposit her eggs.

f, The gad-fly by which the red bots are produced.

g, The smaller, or red bot.

Carbon of Plants—Use of Rotation.

All are aware that a large part of the substance of plants is carbon; the proportion varying from ten or fifteen to fifty-three or fifty-four. It is clear then that carbon forms the most important ingredient provided by nature for the nutrition or growth of plants, and the manner of its appropriation, and the source or sources from which it is derived, become inquiries of the most important nature to the agriculturist. The experiments of Saussure and Davy, prove, that of charcoal, in its crude state, however fine it be made, or however intimately blended with the water furnished the plant, not a single particle is ever taken up, consequently this substance is only available in the shape of carbonic acid gas, when combined with water, or derived directly from the air, of which this substance forms a part. That carbon is absorbed by plants directly from the atmosphere, is proved by the beautiful experiments of Woodhouse, which have been repeated and verified by De Candolle, in which it is shown that plants perform a sort of respiration, during which air is decomposed, the oxygen being thrown off and the carbon retained for the use of the plant.

It seems generally to have been taken for granted that the carbon acquired by plants during their growth is derived from the earth, and that consequently the exhaustion of the soil will always be in direct proportion to the crops taken from it, or that no more actual weight of crops can be taken from a soil, than there is carbon existing in it at the time, or is applied in the form of manure. In consequence of this supposition, it has been laid down as an indisputable axiom by most agriculturists, and by none more strongly than by the justly celebrated Von Thaer, that "the exhaustion of the soil is proportional to the quantity of nutritive matter contained in the crops."

That this principle is not strictly correct, is obvious from the fact of the absorption of carbon from the air; but we are not aware that any statements of the proportion furnished by the earth, or by the air, have been made, or experiments instituted to determine this point, except those of M. Boussingault, an interesting account of which is given from the French in the Quarterly Journal of Agriculture. M. Boussingault's first experiments were to ascertain the correct principles on which a rotation of crops should be conducted, and it struck him at once that the few tons of farm yard manure applied per acre on the fallow ground at the commencement of of the rotation, could not be sufficient of themselves, to cope with the weight of valuable matter, derived from the soil during the course of this rotation. This deficiency in the relations of apparent cause and effect, became more conspicuous, when it was remembered that at the expiration of a well conducted rotation, notwithstanding the amount of crops taken from the soil, the land was in a better condition, than when the rotation commenced.

In his remarks on rotation, M. Boussingault makes one assumption that cannot be admitted, and this is, that if the desired quantity of manure could always be obtained, the necessity for rotation would be done away with. The experience of many farmers shows that this assertion is defective. We are well aware that let us manure our lands as highly as we may, a crop of wheat for instance, cannot be profitably grown upon it for many years in succession. To the last, manure will produce a great growth of straw, but the berry will be wanting, and nothing but rest or rotation can prevent such a result, however liberal the use of manure. Skilful rotation establishes the rule by which the proper proportion of supply for each crop annually is ascertained, and by which uniformly good crops of the several kinds used in the course, can be maintained. Still as most of the substance that goes to the formation of the plant is derived from the soil, it is clearly necessary after each course to bestow upon it a good dressing of manure, to prevent its deterioration, and preserve it in a healthy productive state.

In order to determine how much of the carbon of the plants was derived from the soil, and how much from the air, M. Boussingault made his experiments with great care, on a considerable surface, and repeated them until all reasonable doubts of correctness were done away. His unit of surface is the hectare, which is to the acre as 2: 1½. The result is almost always derived from a mean of six years. The dung employed was farm yard dung, half fermented; the unit of its bulk was a measure of which the weight had been found after numerous weighings to be 1818 killogrammes of two lbs. three oz. each; (or 3976 lbs.) The grains, the straw, the roots, the tubers, were analyzed with the greatest care, each of those substances having been subjected to at least four analyses. Before being analyzed, all those substances were dried at a temperature of 230° of Farenheit, for a considerable time, and this is the course followed by M. Boussingault.

"Potatoes or red beet, dunged; wheat, clover, wheat, oats. It was found that in the dung consumed on the hectare, there were 2793 killogrammes of carbon; in the suite of crops produced by this dung, the carbon was raised to 8383 killogrammes. The weight of the carbon furnished in culture by the carbonic acid of the air was thus raised at least 5400 killogrammes. In the same rotation, the azote primarily in the dung weighed 147 killogrammes. In culture the weight of this article attained 251 killogrammes, the atmosphere thus furnishing 94 killogrammes of azote. In another very productive rotation the carbon of the crops surpassed the carbon of the dung by 7600 killogrammes; and the azote in excess was as high as 163 killogrammes."

In a three years rotation, the carbon taken from the air was 4358 killogrammes, but the azote acquired did not exceed 17 killogrammes. M. Boussingault adds, "the Jerusalem Artichoke is, of all the plants of which I can discuss the culture, that which draws most largely from the atmosphere. It is evidently alternate cropping and rest, that gives the most nutritive matter with the least manure. No doubt to this circumstance must be attributed the extension which has taken place in the culture of this plant in the last 30 years. It may be seen in the following tables, that in two years the carbon taken from the air, from the surface of a hectare, rose to 13,237 kilogrammes, and the weight of azote over that contained in the dung was almost doubled."

These facts are interesting, as proving that water is decomposed during vegetation; that carbon is derived from the air as well as from the earth; and, what we believe had never before been satisfactorily established, that azote, one of the most important agents of animal nutrition, can be assimilated from the atmosphere by vegetables. Do they not also furnish an explanation of a system which has been found very satisfactory by some of our wheat growers, but which, on the commonly received principles of husbandry, would hardly seem to warrant the results which have flowed from it. A friend of ours who sows annually some fifty acres of wheat, has never drawn a load of manure upon much of his most productive wheat lands. He sows clover with his wheat, plasters his wheat and clover, and has a crop of wheat on the same fields every third year. He keeps some 300 sheep to pasture down his clover, but they are not put into the fields until a heavy growth is on the land. What they do not eat decays on the soil, and as the growth of clover is luxuriant, the matter returned to the earth in the shape of manure, decaying clover, and the vigorous roots when the fields are broken up for summer fallow, unquestionably exceeds in weight that of the wheat crop taken from the land. As a large part of the substance of the plants grown, both of the wheat and the clover, is derived from the atmosphere, as the above experiments of M. Boussingault demonstrates, (and the experience of every farmer would indicate,) there could be no good reason given why such a course should not continue to be productive, unless indeed the soil should have become exhausted of some of the principles required in the perfection of the wheat plant, to restore which, rest and a different succession of plants may be adopted; though in the example alluded to, no such necessity has yet appeared, the crops under the system indicating a decided improvement.

The following, selected from the tables of M. Boussingault, will be found interesting, as showing the proportion of the several elements alluded to, in the substances named in the table.

SUBSTANCES.	THEIR ASHES COMPOSED OF						
	Dry matter	Water.	Carbon.	Hydrogen.	Oxygen.	Azote.	Ashes.
Wheat, ...	0.855	0.145	46.1	05.8	43.4	02.3	02.4
Rye, ...	0.834	0.166	46.2	05.6	44.2	01.7	02.3
Oats, ...	0.792	0.208	50.7	06.4	36.7	02.2	04.0
Wheat straw, ...	0 740	0.260	48.4	05.3	38.9	00.4	07.0
Rye straw, ...	0.813	0.187	49.9	05.6	40.6	00.3	03.6
Oat straw, ...	0.715	0.287	50.1	05.4	39.0	00.4	05.1
Potatoes, ...	0.241	0.759	54.0	05.8	44.7	01.5	04.0
Field beet, ...	0.122	0.878	42.8	05.8	43.4	01.7	06.3
Turneps, ...	0.070	0.925	42.9	05.5	42.3	01.7	07.6
Jerusalem Art'e,	0.208	0.392	43.3	05.8	43.3	01.6	06.0
Yellow pea, ...	0.914	0.086	46.5	06.2	40.0	04.2	03.1
Pea straw, ...	0.882	0.118	45.8	05.2	35.6	02.3	11.3
Red clover hay,.	0.792	0.210	47.4	05.0	37.8	02.1	07.0
Stem of Jeru. art.	0.871	0.129	45.7	05.4	45.7	00.4	02.8
Manure (mean,)	0.204	0.796	38.8	04.0	23.6	01.9	36.7

Mutual Improvement—Clubs.

What, we would ask, is there to forbid farmers' soirees, or converzaziones? or, if such words would be considered too much in the fashionable or boarding school style for the farmer, let the word "club" be substituted, and then we shall have farmers' clubs,—meetings we think both desirable and practicable. Intercourse with each other is what the cultivators of the soil need, to enlarge their views, diffuse information, promote inquiry, and create a feeling of unity of interest and concert of action, so necessary in all communities. It is the contact of mind with mind that brightens the faculties, and elicits light, as the collision of the flint and steel produces the spark and the flame. Horticultural meetings of any kind have a tendency to these good effects; institutes, societies, clubs, all co-operate to the same end, and with different degrees of effectiveness, contribute to the same result.

In England, where the science of agriculture, and the means of improving it, are as well understood, to say the least, as in any part of the world, clubs, or neighborhood meetings of farmers, for the discussion of agricultural topics, have been found among the most effectual aids the cause of the farmer could receive. That such would be the case in this country, we see little room to doubt; in fact the influence of our county and town societies, furnishes the most conclusive evidence on this point. It may indeed be said that the greater diffusion of agricultural periodicals in this country, renders such meetings less necessary than in the old country, where such papers or books are rare. This may in part be true, but could not these two means of improvement be brought to act together, and thus exert an influence more favorable and more powerful, than both acting singly and detached from each other.

The difficulty in originating and sustaining such clubs, has been found to arise from the want of continued interest in the discussions, and the paucity of topics introduced. To do away these objections, we propose the following method. Let the members of these neighborhood clubs, provide themselves with a number of the best agricultural publications of the country, each one, if he chooses, making his own selection; let these publications be a common stock for the benefit of the members; let meetings be held once a month, at which these publications shall be returned, exchanges made, the various matters found in them discussed, and the practical experience of the members for or against the several opinions advanced, be made known. We can hardly imagine that in such case the meetings would be uninteresting or uninstructive. At the close of the year, the numbers of each volume could be collected and bound, and ere long an agricultural library for the use of the club would be established, of the most valuable kind. Few individuals are found who are able to procure all the journals of this class they would like to read, nor can any one journal embody all the valuable papers and facts that are furnished for the information of the public. In this way an individual can command the reading, and avail himself of the information given in, the best farming periodicals of this country or the world, without any extra trouble or expense.

Should any neighborhood of cultivators be disposed to adopt our suggestion, we may be permitted to recommend, after our own Cultivator, The New England Farmer, The Farmer's Monthly Visitor, The Maine Farmer, The Farmer's Cabinet, The Franklin Farmer, The Yankee Farmer, American Farmer, and particularly Ruffin's Farmer's Register, one of the best publications in this or any other country. Of European works, the London Farmer's Magazine is the best.

Gov. Hill's Agricultural Address.

The October number of the Farmer's Monthly Visitor contains an address delivered at Keene, N. H., Sept. 1839, by the editor of that paper, the Hon. Isaac Hill.—The address is a sound and able production; characterized by the strong and clear common sense views, and straight forward practical manner of the author,—qualities most important in the man who wishes to impress valuable truths upon plain, hard laboring, but close reasoning men; such as constitute the great mass of our agricultural population.

We would willingly lay a large part of the address before our readers, but our limited space forbids, and we shall give a few disconnected paragraphs, cordially recommending the careful perusal of the whole to such as are fortunate enough to possess it. In speaking of the great advantages of New England, in point of morals, education, means of wealth, and general excellence of habits in her population, Gov. Hill remarks that "*Man's Necessity is his greatest temporal blessing.*"

Strange as this assertion may seem to the man who obtains his bread by the sweat of his brow, by labor either physical or mental, there can be no proposition more strictly true. That New England owes her exemption at this time from the curse of slavery that once like a dark cloud overshadowed her hills and plains, to the stern necessity imposed upon her sons, by her soil and her climate, that each one should exert himself for his own subsistence, is not made more clear by Gov. Hill, than the position that to the same necessity she owes her healthy state of intellectual feeling, and high tone of moral cultivation. Look at the world, and see where intellectual effort and moral light the most abound! where man approaches the nearest to his destiny, a state little lower than that of angels; or where he is sunk in apathy and idleness, and in physical or mental energy rises but a shade above the brute. Men rise the highest in the scale of being when necessity induces activity of both mind and body; when the physical part is employed in carrying out the ideas and conceptions that spring from the active energies of the instructed mind. The great truth is, there is never any advance made in civilization, knowledge, and their attendant blessings, till *want* is realized. The voluptuous, imbecile inhabitant of the Southern Pacific isles, whose wants are spontaneously supplied by nature, whose bread is produced on the trees that overhang his hut, whose clothing is limited to the merest fragment, whose cloudless sky precludes all care for shelter, except perhaps from an occasional shower,—have been found the most difficult of all people to rouse from their listlessness to the hope of a brighter destiny; and why? Because it was impossible to convince them they had any wants. Widely different has it been with the New Englander; from the landing on the Rock at Plymouth, necessity has forbid any pause to exertion, and the beneficial results are such as cannot be mistaken.

In illustrating the position that "The practice of farmers in New England [and, we may add, elsewhere,] is to go over too much ground; he relates the following:

> "A rich man of the society of Friends, who owns estates in the vicinity of Wilmington, in the state of Delaware, leased a single acre of good land to a poor man in his neighborhood, with the condition of furnishing him with a horse and cart twice a week to go to market. The product of the acre was to be divided equally; and the owner's annual share, on an average of five years, was $174.20, making the income of the acre $248.40 a year. The owner and tenant did well for five years on the single acre; but the latter thought he had not business enough, and asked for another acre, the use of which was granted with the same division, on the condition of adding the use and services of a man, a horse and a plough occasionally. To the owner, and to the tenant of course, the whole proceeds were less from the two acres, for a second term, than they had been from the one acre for the first term."

The benefits of agricultural associations are enforced by Gov. Hill in the strongest terms, and the example adduced as illustration could not have been more fortunately selected. We have passed over those hills and valleys, and know that the Berkshire Agricultural Society has added thousands, if not millions, to the wealth of that county.

> "Associations, even where only 'two or three are gathered together,' is more potent than individual effort alone: the experience of several collected, is better than the experience of one. Where much time is not consumed—where too much expense is not incurred—where the shadow is not grasped for the substance—where a passion for extended improvements does not outstrip and leave common sense behind—we may expect to derive much benefit from agricultural societies. * * * * * Berkshire, in Massachusetts, was the first to institute, and has been the longest to persevere in her agricultural society. Her mountain region can find at this time no superior in the United States, in fertility and production. Magnificent cattle range in her pastures; ten thousand fleeces are taken from her mountains; the fatlings of the flock are hers. The crops of wheat and corn groan as the burden of her hills and valleys."

Gov. Hill has seen fit to put his hearers on their guard against some of the humbugs or speculations of the day, particularly those belonging to agriculture; and the introduction of such plants as he conceives unsuited to the climate or soil of New Hampshire. Of this class he considers the Multicaulis, the Chinese corn, and the sugar beet, when grown for sugar. The success of the silk manufacture he is inclined to think is doubtful; the Chinese corn an imposition, and the sugar maple more certain than the beet. In the middle states the case may be different, and both silk and sugar succeed.

The address speaks highly of the Black Sea wheat, of the Brown corn, and of the Rohan potato. Of the wheat it is said, in comparison with the Tea and the Siberian wheats, that "It requires not so long a season to grow and ripen—it better stands the blight, which is the great danger of all wheat sown so late in the year as to avoid the grain worm and weevil—and it produces, in the absence both of the blight and the worm, quite as large a crop as any other kind of spring wheat." Of this wheat, Mr. Critchett, of Epsom, N. H., raised 42 bushels of clear grain this year, from four pecks of sowing.

The Brown corn has received its name from a gentleman who first cultivated it on an island in the Winnipiseogee Lake, and who last year raised of this corn one hundred and seven bushels to the acre. Gov. Hill procured some of it, for planting, last spring, and speaks of it in the highest terms,—it having fully ripened by the first of September, or as early as any corn known, and yielding nearly double to the Canadian, which approaches the nearest to it in early maturity. The address says with justness,

> "The Brown corn carried south, will be quite as sure of an ample space of time to grow in a short season, as perhaps any other. We had better pay a four fold price for seed corn raised and brought to us from one hundred miles north, than to have the gift of the same kind of corn, brought to us from a climate which, either by elevation or by distance on the map, measures the climate of two degrees south."

Gov. Hill's experience with the Rohan potato, seems to justify the favor with which it has generally been received, and adds new proof of the inherent natural vigor of the plant. He was, in addition to a quantity from other quarters which he planted last spring, favored with one, direct from the garden of Prince Rohan, in France. "It was shrivelled, and looked as if it might have passed perils by sea as well as perils by land; but every sprout of the eighteen cuttings into which it was divided, has sprung up and has become a fruitful vine." The roots have not been gathered, but the promise was fine, and he had the satisfaction of finding, that in appearance, those from the growth of this country, and the ones from the last imported, were similar in every respect.

Of the cultivated roots, the address gives the preference to the ruta baga. In speaking of a common objection to the turnep, Gov. Hill remarks:

> "It is a mistake to suppose that the ruta baga spoils either the meat or the milk of the animal fed upon it. This mistake originated in the fact, familiar to many practical farmers, that the turning of fat cattle and cows into fresh feed where turneps, cabbages, and onions have been raised and cleared out, leaving tops and leaves, will make them liable, when slaughtered or milked, to leave the meat or the milk tainted with the flavor of the articles upon which they have fed. Milch cows, fed once a day on ruta baga, will communicate no taste to the milk; and if there be any doubt about fat cattle, the leaving off the ruta baga one week, and substituting corn, or other food, will leave their meat in as good flavor and quality as if they had been fed exclusively on corn."

We have had considerable experience, both in raising and feeding the ruta baga, and consider it of the greatest value. From the use of the bulb itself, we have rarely found any inconvenience, arising either to meat or milk; but the tops give to milk and butter a most disagreeable flavor, and should never be fed to milch cows, or animals that are to be slaughtered. Care in this respect might do away some prejudice against the turnep, and would doubtless prevent the spoiling of sundry lots of butter annually.

Those parts of the address devoted to the importance of freeing soils from weeds and keeping farms clean—illustrating and enforcing the use and value of salt for animals—the necessity of freeing soils from surplus water by draining—and the loss which the farmer, more than most other men, sustains from neglecting the roads, are well conceived and forcibly expressed. If agricultural societies produced no other good effect, than the calling farmers together annually to listen to such addresses as this of Gov. Hill, or many others we might mention, and have the objects they should keep in view, and the duties they should perform, as luminously spread out before them, the labor and expense of sustaining them would be remunerated a thousand fold.

Wood Painting.

The advantages of covering wood buildings with paint are so obvious, that explanation or enforcement must be alike unnecessary; the only thing requisite would seem to be the ascertaining of the best method of performing the work. We paint our buildings in the first place for ornament, and in the second place to give their materials greater durability. The first is depending in a great measure on the coloring materials employed, and the taste shown in their adaptation; the last on the quality of the articles used, and the skill with which the work is done.

The closing of the pores of the wood, or saturating the surface of the wood so as to exclude atmospheric action, is the great point to be gained, and for this we must mainly rely on the oil, the coloring matter only serving to form a coating to the wood, or protecting the surface, so long as it is combined with oil. It is a common complaint, that paint on buildings is not as durable now as it was formerly, and numerous buildings to be every where seen almost denuded of paint, that have stood but a few years, would seem to give some grounds for such an impression. If such is the case, the fault must be in the material, the preparation, or the putting on. There is unquestionably a great adulteration, both of oil and white lead, practiced in many cases, but it cannot be so general as to justify the inferiority of modern painting. That it is not put on with as much care and skill, will hardly be admitted; the only inference, then, would seem to be, that the fault is in the preparation, and such we believe to be the case.

If we can ascertain what is necessary to have painting durable, and determine the manner in which it is usually performed, we may perhaps arrive at the source of the evil, and so be able to point out a remedy. The first object to be attained, is the saturation of the entire surface with oil, and this should be applied as long as it will be readily absorbed. Utility should be attended to before ornament, and the coloring is comparatively of second rate interest. If oil without any paint was applied once or twice, experience shows the wood will be much better protected, and perhaps in the end would be found the cheapest method; but the first cost would be considerably enhanced from the additional number of coats that would be required. Modern painters of buildings seem to direct much of their attention to the rapidity of execution, and this has been found incompatible with the proper filling the wood with oil, without extra ingredients or preparation. Oil, in sufficient quantity to close the pores of the wood, applied with no preparation except the ground lead, would not dry so quickly as is desirable, where haste alone is consulted, or appearance, without regard to permanence, considered in the work.

The preparing of drying oils, or the ingredients that, mixed with oils, will cause them to dry or harden almost at once, has become a regular branch of trade, and mixtures of spirits of turpentine, litharge, &c. &c., are found for sale at the shops, and used extensively by painters. The consequence of this practice we believe to be, that the oil or paint so prepared, dries with such rapidity when applied to the wood, that little or none is absorbed, the pores are only closed by the paint, and as this has little firmness, owing to the decomposition of the oil by the ingredients added, or the small quantity of the oil combined, it soon gives way before atmospheric action, and the wood is at once left unpainted and unprotected.

To be convinced that turpentine must be injurious to the durability of paint, we have only to remember the effect that turpentine produces on oil spots on clothing, floors, &c. The housewife is well aware of the effects in such cases, and the painter should know that the operation of the turpentine used by him, is precisely similar in proportion to the quantity used, and that where mixed with oil, a decomposition of the latter is accomplished by it. Every one is aware of the fact, that in painting pine boards, if what is called a fat knot occurs, (or one in which turpentine abounds,) it is almost impossible to cover it with paint, and the reason is obvious; the turpentine decomposes the oil with which the paint is mixed, and the latter, left free, is at once rubbed off, since the principle of adhesion is destroyed. In painting a pine floor, a few years since, in which such knots occurred, we found it impossible to make the paint adhere, until by repeated applications of oil, and the consequent decomposition of the turpentine in its combination with the oil applied, the surface was so far freed as to permit adhesion. In modern painted buildings, we frequently find that as soon as the superficial gloss wears off, the paint seems in the state of dry powder, easily rubbing off on every object it touches, or washing off in every rain. Here the cause of the defect is evident. So much turpentine, or other drying matter was added, that the oil was decomposed instead of being absorbed, and the oil, which is the only principle of durable adhesion in paint, being absent, as a natural result, the paint soon crnmbled to powder. Such paint, too, while it lasts, affords but little protection to wood. Owing to the absence of oil, it soon becomes permeable to moisture, the pores of the wood, being unclosed, retain it, the apology for paint retards its evaporation, and experiments and experience would seem to show, that wood thus nominally protected, decays faster than it would if left to the usual action of the elements, in its natural state.

All the preparation that oil needs to make good paint (and in this we are confident every painter who understands his business will agree with us,) is a thorough boiling to free it from its impurities, and render it perfectly clear and limpid. The desire of despatch has led to additions to the oil, which indeed ensure that object, but are destructive of durability, and certainly add little or nothing to the finishing or the ornamental part. We strenuously advise farmers to paint their buildings, yard fences, &c., as it contributes to give a look of neatness and thrift to the farm, that nothing else will do, and besides, if well performed, it increases their value and durability, in a much greater degree than the expense.— But they should remember that in painting, every thing is depending on having the work well done, the articles good, and the operations skilfully performed. Great haste in painting is inadmissible; oil must be applied to the wood, and time allowed for absorption. Some painters talk of laying on two coats of paint in a day; they may do it, but we are confident they will not for him who looks more at durability than despatch, and has more regard to permanence than to the saving of a few shillings in expense, or a few hours in time.

Hacthing Chickens.

A contrivance, to which a long Greek name has been given, has been put in operation in London, one of the uses of which, and the most prominent one, is the hatching of chickens. The heat is supplied by water, which gives a more uniform temperature than can be derived from any other agent, and though not quite equal to the chicken ovens of Cairo, the machine, while it occupies little space, does a respectable business, turning out about a hundred chickens daily when in operation.— Hens sometimes addle their eggs in hatching them, the machine never. If the egg is good, the chicken is sure to appear at the proper time, and is as vigorous and active as if under the care of its proper parent. It feeds without difficulty, though it experiences no inconvenience from going without food for 12 or 20 hours after leaving the shell. Darkness is found most proper in the process of incubation; and the remarkable fact has been disclosed, that the chick, at the moment of leaving the shell, is heavier than the whole egg was in the first place. The older chickens brood the younger ones, and the pleasure from this operation appears mutual. It is to be presumed that the Eccaleobion will become a part of every poultry establishment; and that hens, saved the drudgery of hatching and providing for their young, will be confined to their legitimate business of providing fresh eggs for the table, or such as are required for hatching in the machine.

Items from our Note-Book, No. 1.

Hedges and Fences.

The following remarks, copied from a letter of Col. Springer of Stanton, Delaware, published in the Western (Ohio) Register, agree in the main with the observations we have been able to make of the success, or probable result, of the efforts at hedging in this country The best specimens we have noticed, exhibiting a closeness and freshness of verdure that indicated health and permanence, were between Geneva and Canandaigua, near the former, and in the town of Sodus, near Lake Ontario. Unless we are misinformed, these hedges in both places were planted by the same individual, an Englishman, and are of the thorn so much used in that country. Our hot and dry summers are unfavorable to hedges, or at least to the plants commonly used for that purpose, when treated in the ordinary manner. No where in the United States have more persevering attempts been made to cultivate hedges than in the district of Delaware alluded to by Col. Springer.

"I will merely tell you, for your information, that all the kinds of thorn used here for fences, are fast going to decay. I have seen no young hedges planted for the last three or four years, but numbers have been cut down, and numbers more will soon have to be done so. I think you would probably render yourself and the public great service, if you would carry out your project of planting a forest of chestnut into successful operation. It is decidedly the most valuable timber for fencing with which I am acquainted. It is very durable and of rapid growth. I think that ten acres, once well set, would keep your whole farm well fenced. Black locust would also be very valuable as a timber for posts.— Chestnut grows here on almost every kind of soil."

Baulkey Horses.

There are multitudes of these most uncomfortable and vexatious animals in the country, many more than there would be, if common prudence and care in breaking into the harness were used; and if the following mode of treating them, which we copy from a Boston newspaper, should perform what it promises, it would prevent much hard swearing, and save many a poor beast a cruel and useless beating.

"A truckman in Boston, that had a refractory horse that would not draw or move forward, beat him most unmercifully. A gentleman came along, who told him he must not beat him any more. 'What shall I do?' said the man, 'my horse has stood here these two hours. Shall I stand here all the day?' 'Oh no, the horse must go, but you must not beat him any more. Get me a rope twice as long as the horse.' The rope was got, secured to his tail, and then passed between his legs forwards, then a smart pull on the rope was given. The horse was frightened and showed symptoms of kicking, but the pulling was continued. Suddenly he started forward, and went off without any more beating. The gentleman had seen that method tried on that most refractory of animals the Jackass of South America. If you question this, you that have obstinate horses, try it for yourselves."

Seton or Rowel.

There are numerous cases in which the use of the seton in the treatment of horses is most beneficial. The following, in substance, from the Franklin Farmer, is one of the simplest methods of performing the operation, and at the same time will be found effectual.

As to the seton, it is thus prepared: Cut as many small thongs of leather as may be needed, about eight inches long, and rather less than an inch wide, one end to be cut rather pointed, the other must have a slit nearly one inch from the extremity of the broad part, and one inch in length. Then draw the skin of the animal with the forefinger and thumb, the skin being thus drawn clear of the flesh, thrust a sharp and narrow pointed knife through the skin between the fingers and the flesh, and introduce the leather immediately. Pull it through to about half its length, then let go the skin and rub the leather with besillean ointment mixed with Spanish flies; turn the strap so that the mixture will be well introduced, and secure the seton by drawing the pointed part through the slit of the other end. Leave it for twenty-four hours, then rub the string again with ointment, and move it as before. The discharge will soon commence, which is the object sought from the introduction.

Galls from the Harness or Saddle.

Major Long, in his well written and valuable account of his expedition to the Rocky Mountains, says that his party found white lead moistened with milk, to succeed better than any thing else in preventing the bad effects of galls on their horses' backs, in their fatiguing march over the plains that border the mountains. Its effect in smoothing and soothing the irritated and inflamed surface, was admirable.

Bee Moth.

Mr. James Thatcher, author of the "American Orchardist," &c. &c. in a communication to the New-England Farmer, says: "I will embrace this opportunity to communicate, for the benefit of the cultivator, what I believe to be an infallible remedy against the bee moth, which has proved so destructive to bees throughout our country of late years. The remedy is simple and easily applied. It consists merely in covering the floor board on which the hive stands, with common earth about an inch thick. A hive set on earth will never be infested with worms for the bee moth will not deposite her eggs where the earth will come in contact. She naturally resorts to a dry board as her element. The remedy has been employed by a number of persons in this vicinity for several years, with the most complete success."

Mites in Cheese.

We copy the following from the Zanesville Gazette, and shall publish it for the special benefit of cheesemakers and cheesemongers, not doubting that it will materially increase the consumption of the article. Were it as fashionable to drink spirits of turpentine as spirits of wine or brandy, the first might be substituted for the last in its application to cheese, and quite as effectually. As it is, we go for the brandy decidedly, and recommend its use to the possessors of all colonized cheeses.

"All who deal in cheese, whether housekeepers or merchants, know their liability to be attacked by skippers, and the better the cheese the more liable they are to such attacks. To drive them out, the following mode will be found effectual, while the flavor of the cheese will be greatly improved. Cut out a large plug in the upper side of the cheese, and fill up the cavity with the best French brandy, and repeating the operation two or three times, when the plug may be restored, and pasted over, for the skippers will be found to have left the cheese, making their way outside. A lover of

GOOD CHEESE."

Value of Sweet Apples.

A recent writer, who thinks apples, especially sweet ones, decidedly superior to many root crops for feeding farm stock, says:

"Their greater cheapness is also becoming established. It has been already shown that they may be afforded, at a reasonable compensation of the expense of planting the orchard and the price of the land, at the rate of half a cent a bushel. This, of course, is only to be expected from good culture and the selection of proper varieties. The expense of root crops, when cultivated in the cheapest manner, may be considered on an average as ten times that amount, or five cents a bushel. Apples are especially valuable, as, in addition to feeding other animals, they are so admirably adapted to the fattening of hogs. For the preceding reasons alone, it may be safe to predict, that in a few years the crop of anples will be considered as only second to the wheat crop."

Saltpetre for Gargets.

"B. W. F." in the Maine Farmer, gives an account of the use of saltpetre for this troublesome disease in milch cows. We have generally found the garget or scoke root, a sufficient remedy, but as it appears to have sometimes failed, the use of saltpetre may be the means of saving many a valuable cow. In the use of the garget root our method has been to cut it up fine and feed it to the animal in a mash of grain. The saltpetre is dissolved and given in the same way. Mr. B. W. F. says:

"Taking sometime since a hint in the Farmer, I have tried saltpetre as a remedy for the *garget* in cows, and am able to state with confidence that it is decidedly the best remedy I have ever known used for that troublesome disorder to the dairy. The cow I gave it to was so badly diseased, or rather so subject to the disease, as to be nearly useless a great part of the summer. I gave what I supposed a pretty strong dose —something like two ounces—and in less than twelve hours her milk was as good as ever, and she has not been troubled since."

Mr. F. has also adopted the plan of giving saltpetre to his cows, at the rate of two pounds, made fine and mixed with a bushel of salt; and thinks, given in this way, it will prevent the appearance of the disease. This is probable; but as this substance in any considerable quantity must be injurious, we should advise caution in constantly feeding it to animals not diseased.

Scab in Sheep.

The following remarks are from the pen of one of the most experienced and competent woolgrowers in this country. We have had some acquaintance with the remedies proposed by Mr. Grove, and can add our testimony to their value.

"The scab is very contagious, but when observed at an early period, it may easily be cured, or at least prevented from spreading. One of the best remedies is a strong decoction of tobacco, to be applied to the diseased parts, after scratching off the scabs with a comb or other instrument.— The decoction of tobacco mixed with lime water and oil of vitriol, and used constantly, when necessary for some time, will generally effect a radical cure. Another excellent remedy is a decoction of hellebore, mixed with vinegar, sulphur and spirits of turpentine. Internal remedies are of no use, except when the disorder has induced other complaints by weakening the general health."

DICTIONARY OF TERMS

USED IN

Agriculture and its Kindred Sciences.

[We commenced in the Genesee Farmer of last year, the publication of a Glossary of Agricultural and Scientific Terms connected with the cultivation of the soil, which was received with so much approbation, that we have thought best to republish the few numbers which appeared in the Farmer, in order to furnish it complete to the readers of the Cultivator. To what extent the Glossary will extend, cannot at present be accurately determined. The explanations will be as much condensed as will be consistent with utility, and the nature of the subject. Where a thing, or a process, has a number of names, the one most generally in use will be selected; and where the information sought is not found under one of the terms in use, it will probably be under another of the synonyms.]

ABRADING. This is a term applied by some agricultural writers to the crumbling down of earth from the effects of frost. This process is seen most on fall plowed lands, and is an efficient agent in ameliorating and rendering fit for cultivation heavy or clay soils.

ABRASION. The wearing away, by running water, of earths, rocks, &c. the banks, or the bottom of streams, and the result of which is the deposit of alluvium.

ABSORPTION. The process by which plants and animals are nourished is called absorption. In most plants this office is performed by the roots, and it is through the vessel called spongioles, with which the roots are terminated, that absorption takes place. In aquatic plants, the water which affords the nourishment is absorbed with facility from every part of their surface.— By causing the roots to imbibe colored liquid, the general course of the sap may be traced with considerable accuracy.

ACIDS. Bodies that have usually a sour taste, and corrosive qualities. Some acids appear only in a fluid state, gaseous as carbonic acid, or liquid as sulphuric acid; others are chrystalized as the boraic, benzoic, &c. Of the acids, the only one that has much influence on vegetation is the carbonic.

ACCLIMATING. Plants are endowed with a power of gradually accommodating themselves to the temperature or climate in which they are placed, unless the change is at once so great as to suspend their vital functions altogether. This process is called acclimating. Plants will bear removal better from a warm climate to one of lower temperature, than from a cold to a warm one. As instances in plants, we may mention the potatoe, the bean, the melon, and among fruits the peach and apricot. The cucumber affords an instance of the effect of acclimation. It is grown in the open air at Cairo and at Petersburg; at Carracas and at Quebec.

AERATION. An important change effected on the sap of plants, by the action of light. It consists in the decomposition of carbonic acid gas, which is either brought to the leaves of plants by the sap, or absorbed directly from the atmosphere. The substance of all plants is mostly carbon, and as carbon in its common state, however minutely divided, is never taken up by the sap of plants, this most essential ingredient is obtained in the form of the carbonic gas, from which the oxygen is separated by the leaves under the action of light, leaving the carbon ready for assimilation, or conversion into vegetable fibre. That this process is performed by the green substance of the leaves or stem, is evident from the fact that if a leaf is bruised or its vitality destroyed, its substance is no longer capable of decomposing carbonic gas in the light, or absorbing oxygen in the dark. The necessity of this aeration of sap for the purpose of ripening fruit, or maturing vegetation, may be seen in some fruit trees, the plum for instance, in which an excessive quantity of fruit causes a premature fall of the leaves, after which, owing to this loss of the organs of aeration, the fruit never ripens, but remains immature and worthless. The necessity of the leaves for aeration, or perfecting the juices of plants, shows the absurdity of plucking or injuring the leaves of any plant before it is ripe; topping corn, &c. under the idea of hastening maturity, or increasing the product. Attempts to improve on nature must be failures.

AFTER-GRASS. The grass grown on meadows after they are mown. The usual practice among farmers is to feed this off by cattle or sheep, and in some cases so closely as to nearly destroy the roots of the grass. Unless the turf is close, and the meadow rich, it is better to not feed at all, or very lightly. For cropping after-grass, sheep are better than cattle, since, though their bite may be closer, they do not injure the roots with their feet, like the former. If mown a second time for rowen, it is called—

AFTER-MATH. On rich meadows, or where manure can be had in abundance, for top dressing, a second mowing may be justifiable, and the grass so cut, if well cured, is much relished and eaten with avidity by ewes, calves, and other animals that are apt to become poor under ordinary management. The practice of the second mowing, however, like after feeding, is not to be recommended on the whole; experience proving that the injury grass roots always receive from mowing, is increased by the second cutting. Necessity alone can render after feeding or mowing justifiable or proper.

AGRICULTURE. In the most extended use of this term, it is made to embrace all the operations made use of to obtain food for man, whether from the field, the orchard, or the garden. In its proper and limited sense, it means the cultivation of the soil, which is the great source of wealth. The first want of man was food; the place to obtain it was the earth; hence the origin of agriculture; and in proportion to his wants, and the ease or the difficulty with which they can be supplied, is his progress in agriculture. Where the wants of man are supplied by the spontaneous productions of the earth, as in parts of Africa, or in the South Sea Islands; or where the inhabitants expect no food from the earth, as among the Esquimaux, or Somoiedes, there agriculture is unknown. It is only where exertion is necessary to procure food from the earth, that wants abound; that wealth is increased; and that agriculture becomes a science, and assumes its proper place as the basis and precursor of civilization, society and order. All history proves that such is the fact. The creation of wealth belongs to agriculture. Food must be had, and the value of every other article depends directly or remotely on the amount of food it will procure. The skill of the mechanic may improve; the enterprise of the merchant may exchange; but the origin belongs to the earth, and the cost and the profit is alike determined by the result of agriculture.

Science has within a few years done much in aid of agriculture; not that many positive discoveries have in the first place been made by the sciences, of which the agriculturist has availed himself; but the cause of certain results before known to the farmer, have been revealed by chemical or other researches, and thus the means of more certainty and in many more cases of producing the same results has been obtained. On this is based the improved system of agriculture. Where the earths are not in due proportion, it is impossible to make or keep the soil in a productive state. The nature of the earths is now inquired into, and their balance maintained by a rotation of crops, or the application of such matters as shall prevent exhaustion, or restore fertility to such as have been improperly treated. The capabilities of the earth in affording food, when properly tilled, are but imperfectly understood. Now and then instances occur in which either by skill or accident these powers are developed to the surprise of all; but what is done in one case may be done in others; and when agriculture is what it should be, when the tillage of the soil, and the application of proper manures shall be better understood, the results that now astonish will become common, and while the labor shall be diminished the product will be vastly increased

AIR. In a state of purity, air consists of nitrogen and oxygen, in the proportion of 76 of the former and 23 of the latter; but as it exists in the atmosphere, it contains about one part in 500 of carbonic gas, and also aqueous vapor in the form of an elastic fluid, the proportion varying from the merest trifle, to 11 grains in a cubic foot. Air acts a most important part in the processes of germination, and subsequent vegetation, not only furnishing the oxygen required to decompose the carbonic gas consumed by the plants, but the most of the gas itself. The water held in the air is also easily parted with, and hence the great advantage of aration or frequenly stirring the earth, to bring its particles in contact with the atmosphere. A square foot of earth in a solid form exposes but a small surface to the action of the air, and hence absorbs from the atmosphere but little; pulverize this mass, and the surface exposed to the action of the air is increased a million fold, and its powers of absorption from the atmosphere in the same proportion. This shows the absurdity of those who refuse in hot or dry weather to stir the earth around plants under the apprehension that it will render them more dry. Multiplying the absorbing surface by stirring the earth is the only way of obtaining the moisture which in greater or less quantities always exists in the atmosphere.

ALBUMEN. A colorless insipid fluid, coagulating at a heat of 120°, existing in the leaves, juices, and fruits of most plants, but most abundant in animal products. The white of eggs is nothing but pure albumen, and the blood contains large quantities of the substance. Its principal use in domestic economy, is in clarifying or cleansing fluids; such as sugars, &c. for which purpose it is unrivaled. Milk contains albumen, and hence is sometimes used for cleansing syrup, but it is inferior to the whites of eggs. These, carefully incorporated with a fluid when cold, and then submitted to a coagulating heat, will lift all impurities to the surface, where they can be easily taken off by skimming. Albumen is more abundant in the bark of the red or slippery elm, than in any other vegetable product, hence its value for medicinal purposes. Albumen is composed of carbon 52, oxygen 23, hydrogen 7, and nitrogen 15.

ALBURNUM. Wood of trees is usually composed of three distinct parts; the pith or central part, having a loose spongy texture; the heart-wood, the most durable and valuable part of the tree; and the sap wood or alburnum. This last is usually whiter than the heart-wood, is more porous, and through it the circulation of the sap is principally performed. It is the soonest attacked by the borer or powder post, and in exposed situations is always first to decay.

ALCOHOL. The purely spiritous part of all liquors. It is the prodnct of vinous fermentation, and can be derived from all substances capable of such fermentation. It is the intoxicating principle of liquors, and few nations have been found so rude as not to have found some means of producing it. Alcohol is produced principally by the distillation of wine, molasses and grain. The product of the first is brandy, the second rum, and the third whiskey or gin. Alcohol is of much use in the arts, but it has, by its general use, produced a most unhappy effect on the happiness and morals of multitudes. Perhaps greater quantities of distilled spirits are used by the nations that border on the Baltic than in any other part of the world, and here they are principally produced from the distillation of potatoes, Pure alcohol consists of hydrogen 13.70; carbon 51.98; and oxygen 34.32.

ALGAE. One of the families of plants into which Linnæus divided the vegetable kingdom. They are defined to be plants of which the roots, leaves and stem, are all one. The remains of algae are abundant in a fossil state in the shale of many parts of New-York, and their decomposition may have contributed to the fertility of the strata in which they exist.

ALKALI. A substance usually extracted from plants; and distinguished by the following properties: It has an acrid and corrosive taste and power; it changes vegetable blue to a greea, red to a purple, yellow to a red brown, and purple reduced by an acid to its original colour. It is most used in the arts for neutralizing acids. It is best known in the shape of potash and soda. These unite with oils and animal fat, and form soap. Lime is possessed of alkaline properties, which gives it its principal value in many cases. Alkaline substances have been divided into volatile and fixed; the volatile being known as ammonia, the fixed as potash or soda. Modern chemists have divided them into 3 classes: 1, those with a metallic base combined with oxygen, potash, soda and lithia; 2, that which contains no oxygen as ammonia; and 3, those containing oxygen, hydrogen and carbon, as aconita, circuta, morphia, &c.

ALLUVION. Land deposited by the action of rivers; either at the mouths in lakes or the sea, or on the banks in their passages to these receptables. Constituted as it usually must be of the richer and lighter parts of the regions drained by the river that deposites it, it is the most fertile of soils, and the most valuable, when it can be drained, or rendered secure from floods. Nearly the whole of Holland is alluvial. In this country the vast tract on both sides of the Mississippi, for a great distance from its mouth, is of this character; but owing to its annual submersion is of comparatively little value. Perhaps there is no river in the United States in proportion to its length and volume, that has so much valuable alluvion on its borders as the Genesee.

ALUMINE. One of the earths most important to the agriculturist, and entering largely into the composition of all rocks, clays and loams. It was formerly termed *argil*, or argillaceous earth, but Sir H. Davy's discoveries led to the belief that it was a metallic base combined with oxygen. It is found nearly pure in the Corundum; porcelain clays and kavlin contain about one-half of this earth, and it may be obtained pure from the alum of commerce, by chemical processes. Alumine is the principle that gives the peculiar tenacity and plastic nature to clays; rendering them heavy and impervious to water, in proportion to the quantity contained in them. Alumine has a great affinity for water, hence clay lands are usually more cold and wet, and more difficult to cultivate than those into which it enters in less proportions. Its presence in soils is, however, absolutely necessary to prevent porosity; and when combined in due proportion with the other principal earths, it constitutes one of the surest ingredients of a fertile soil. Much attention has of late been paid to the amelioration of clay soils, and of all the methods tried, thorough draining has proved the easiest and most effective. When clay land is drained, its texture is changed; and the plants it naturally produces, as well as those it is made capable of producing, are of a higher and more valuable kind. Alumine is of much use in the arts; it is extensively employed as a cleaning powder; as a mordant in dying; and is the basis of bricks, crucibles and porcelain.

AMMONIA. Volatile alkali. It is a transparent colourless gas, of about half the weight of common water, with an exceedingly pungent smell, extinguishes flame, and is fatal to life. Its old name was "spirits of hartshorn." To the agriculturist, ammonia is particularly interesting from the fact that those substances that contain the most of it, are the most efficient manures, and act with the most certainty and promptness. Ammonia is produced from soft or fluid animal substances while in the process of decomposition, and this change is rapid in proportion to the quantity of earthy salts they contain. It is particularly to the developments of ammonial gas," says Chaptal, "which, combined with gelatine, passes into plants, that we can attribute the wonderful effect produced upon vegetation by certain animal substances." These substances are the animal manures, the urine, *poudrette*, the bones, horns, hair, &c. The urine of the animal contains in muriates and carbonate of ammonia about 20 per cent, besides 11 per cent of phosphate of lime and sulphate of potash or 30 per cent of the most active manure yet discovered; and the saving and proper distribution of it forms an important item in Flemish husbandry. The larvæ left after the cocoons are reeled in the extensive silk manufactories of France and Italy, are considered invaluable as a manure. Their excellence is owing to the ammonia they contain, which in them Chaptal found to exceed in quantity that of any other animal substance.

Extracts from our Correspondence,

ANSWERS TO INQUIRIES, &c.

Mangement of Hogs.

Mr. James T. Warder, of Clark Co., Ohio, who has asked our opinion on the system of feeding hogs proposed by him, is answered, that, setting aside the contingency of a failure of the crops, (beets and potatoes,) on which he principally relies for feeding, he will probably succeed. He will doubtless find, however, that it will be necessary to make the most of his ten acres of roots, and his ten acres of corn, to bring his 200 hogs up to 250 or 300 lbs. Ten acres of clover, of the second year, will give abundant room and pasture for ten swinish "mothers and their progeny," if they are allowed besides "slops, boiled vegetables, bran, and milk from the dairy." Mr. Warder will find it necessary, however, to take effectual measures against the rooting of his swine, as, unless this is done, his fine clover fields would become a waste,—our experience showing that there are few things of which swine are more fond than the roots of clover. The facility with which corn and roots can be grown on the rich prairies of the west, gives the farmers of that part of the United States advantages for the making of pork possessed by no other, and which has thus far proved one of the lucrative branches of productive industry west of the mountains.

Night Soil.

Mr. Robinson, of Baldwinsville, inquires "by what process night soil can be converted into an inodorous manure in a short time, so that any cultivator may be able at once to remove a nuisance, and obtain a valuable manure." We are unable to inform Mr. Robinson of the processes adopted where the preparation of poudrette is carried on extensively and in the most approved manner; but it is said in the 1st vol. British Husbandry, that "All unpleasantness of odor may be prevented by the mere use of ashes; and were those thrown upon the night soil, or into privies that have no communication with sewers, the ashes made in every dwelling house would so completely absorb the fluid parts, that a solid heap of manure would be produced, which might afterwards be removed without difficulty or offensiveness." This is the method practiced extensively in some parts of England, and on the continent. Lime is, however, much better than ashes, and this is the disinfecting agent wherever poudrette is produced. In Rigby's Agricultural Reports, the following is recommended as the best method of preparing and using night soil:—"Spread it on a spot of clean grass; let it be well harrowed on a clear drying day; then put it under cover, and add a chaldron of lime to four loads of the soil in that state, and it will become dry, and can be reduced to an inodorous powder." All that seems to be required, is to mingle with the drained material something that will dry and render the mass friable and pulverulent. Lime is the most efficient agent for this purpose, and that which is slaked, is stated in Pilkington's Transactions to be preferable, for this purpose, to that which is caustic.

Planting Apple, Plum and Peach Seeds.

"MESSRS. EDITORS—Will you please to say what is the best time for sowing apple, plum and peach seeds, for raising stocks to graft upon; and if the spring is the best season, then in what way should the seeds of each be kept over the winter?" R. D., Lancaster Co., Pa.

With the apple it usually makes but little difference whether the seeds are sown in the spring or fall, they being very certain to vegetate, whether placed in the earth in the spring or fall. The manner in which they spring up in apple pomace is proof of this; but if put into the earth in the fall, they sometimes suffer from mice, an evil avoided by spring planting. Nature, however, points out fall planting.

Fall planting is doubtless the best for plum and peach stones, and we have rarely found any difficulty in their vegetating, when planted in light garden or good mould, and slightly covered with such earth through the winter. The following, from a letter of D. Chipman, of Ripton, Vt., will show the result of an experiment made by him, from which useful hints may be taken. "I took a quantity of peach, cherry and plum stones, with a number of butternuts and walnuts, or in the language of the south and west, hickory nuts and white walnuts, wrapped them in a cloth, that I might more conveniently take them out of the ground in the spring, and buried them in a loose muck, under a fence, where they were covered with a snow drift during the winter. When I took them out in the spring, the sprouts had perforated the cloth in all directions. When I opened the cloth I found the stones, as well as the walnuts and butternuts, all opened, and the young plants disengaged from them, which I placed in the ground, and they all grew." Whether planted in this way, or without a covering, we have experienced no difficulty when the stones of these trees were planted in the earth, and exposed to the softening and preparatory influences of the winter.

Improved Berkshire and China Pigs.

Our respected correspondent, to whom we are indebted for the excellent "Chapter on Swine," in this paper, informs us that he will have for sale by the first of May next, a considerable number of pure blooded improved Berkshire and China Pigs, which he believes will be inferior to no other stock in the United States or England. The price per pair, caged and delivered on board steam boat at Buffalo, at eight weeks old, will be for Berkshires $20; Chinese $15; Tuscaroras $15. He also expects to have a few Black Siamese Pigs in September next, which will be sold at $20 per pair. Address A. B. ALLEN, Esq., Buffalo, Erie Co., N. Y.

The Rohan Potatoe.

Of this potatoe there seems to be no difference of opinion. All agree that it is no humbug. Mr. James J. Jackson, of Wellsboro' (Pa.) after expressing in strong terms his condemnation of the Chinese Corn Humbug, says, that from one potatoe weighing 10 oz.. with 53 eyes, he raised the last season, 134 lbs. measuring two bushels, being an increase of 214 fold in weight. The potatoe was cut into 53 pieces, and two pieces planted in a hill, in sandy loam, manured in the hill, on the 17th of May; twice plowed and hoed. Mr. J. will see that we have adopted his suggestion in relation to a table of contents.

Mr. Levi Robbins, of Copenhagen, (N. Y.) says—"In the spring of 1838, I planted 6 lbs. 12 oz. of Rohan potatoes; in the spring of 1839 I let two of my neighbors have 6 lbs. 12 oz, each, and several others I let have one potatoe each. The remainder of the product of 6 lbs. 12 oz. I planted; part of them as early as the ground would answer, and the other part about the middle of May; and one moderate sized potatoe on the sixth day of June. Part of the crop was injured by frost in June, and also by the grub worm; but notwithstanding these disadvantages, I had 700 bushels. From one potatoe I had nine bushels and half. From the potatoe planted on the 6th of June, I had three bushels. In another experiment from half an ounce of seed I had 30 lbs. Sixty of the large sized tubers fill a common sized salt barrel, and sixteen of the very largest will fill a bushel basket. I think they are a rich and valuable potatoe for the table and for feeding."

Mr. George C. Gillett, of Clarkson, (N. Y.) says—"I bought three and a half small Rohan potatoes for two shillings, which together weighed 13 ounces. I planted them in 21 hills, putting two eyes in a hill. The tops grew very large, and were still green when the frost in September killed them. I dug them soon after, and they measured three bushels and a peck; the largest ones weighing two pounds and six ounces."

Culture of Carrots.

Mr. Gillett also informs us that on the 10th of June, he sowed about 11 rods of ground to carrots, which was all he had seed to sow. The ground a sandy loam—the year before in potatoes, with manure. The ground was raked over with a garden rake; then marked out in drills 16 inches apart, and the seed planted and covered by hand. Owing to the seed being poor, and the cold weather which followed, nearly a third part of the ground was almost naked. They were hoed twice, and were harvested about the middle of October, and the product was 37 bushels. He thinks that if it had been sowed early and the ground well supplied with plants, it would have produced nearly double the quantity.

To make Leather Water Proof.

A correspondent at Northampton, furnishes us with the following recipe, published in the London Mechanics' Magazine, by Col. Macerone, for making a composition, which it is said will render boots and shoes water-proof:—"Melt a pound of tallow with half a pound of rosin. When melted and mixed, warm the boots or shoes, and apply the hot stuff with a painter's brush until the sole and upper leathers will suck in no more. If it be desired that the boots should immediately take a polish, dissolve an ounce of bees wax in an ounce of spirits of turpentine, to which add a teaspoonful of lamp-black. A day or two after the boots have been treated with the tallow and rosin, rub them over with the wax and Turpentine, but not before the fire. Thus the exterior will have a coat of wax alone, and shines like a mirror. Tallow, or any other grease, becomes rancid and rots the stitching as well as the leather, but the rosin gives it an antiseptic quality and preserves the whole."

Communications.

A Chapter on Swine.

The writer of the following article, having become a breeder of improved swine to some extent, among other choice stock, has found himself so often called upon for descriptions of them, and rules for their breeding, that, by way of general answer to numerous inquiries, he has embodied below such information as his little experience and limited range of inquiry have enabled him to obtain. Though much has been desultorily written upon this interesting subject, we have still to regret the want of some standard work to refer to, for full and complete information in so important a branch of rural economy. It is to be hoped, however, that the British Society for the Diffusion of Useful Knowledge, will soon add to the valuable Treatises that have recently appeared on horses, cattle and sheep, a similar one on swine, and thus supply this great desideratum. The substance of the rules of breeding, together with some other observations, appeared originally over the writer's signature, in the 2d and 5th numbers of the current volume of that excellent agricultural periodical, the Franklin Farmer, published in Kentucky. Those who then took the trouble of perusing them, he trusts will excuse their reappearance here, among a numerous and almost entire new class of readers.

Of the hog tribe, (*Sus*) zoologists describe no less than six species, some of which are so entirely distinct in their general habits and appearance as to have prevented their ever breeding, or even associating together. Five of these species, however, can only be regarded as matters of curiosity to us at present; we shall therefore pass them over, and come at once to that known as *Sus scrofa ferus*, the common wild hog of the Eastern Continent, and from which has directly descended the domestic among us, in all its countless varieties. Except with those nations where its flesh was forbidden by their lawgivers, the wild boar has ever been considered a great delicacy and eagerly sought for, not only to gratify the appetite of the epicure, but as affording a favorite amusement in the chase, that was considered equally noble, dangerous and exciting to those who followed it. Among the earliest feats that Zenophon thinks worthy to record of his favorite hero Cyrus, is that of hunting and slaying the wild boar with his own hand; and the greatest of modern heroes, Napoleon, thought a chase of the same kind highly indispensable to royal habits, and to assist in qualifying him to assume the imperial purple, with the greater dignity and grace.

The time of the domestication of the hog, like that of most other animals, is lost in remote antiquity, but that it must have been very early, we infer from the fact, that the Greeks and Romans offered it as a grateful sacrifice to Ceres, the goddess of agriculture, in order to propitiate her smiles upon their labors, previously to commencing their harvests. That distinguished philosopher Aristotle, also gave hints on the raising and breeding of swine, which are worthy of regard at the present day; and Varro and Columella, if we could subbstitute soft, thin hair, for "thick, strong and erect bristles," have described the main points, of what we may now consider, with all our modern improvements, a very perfect hog.

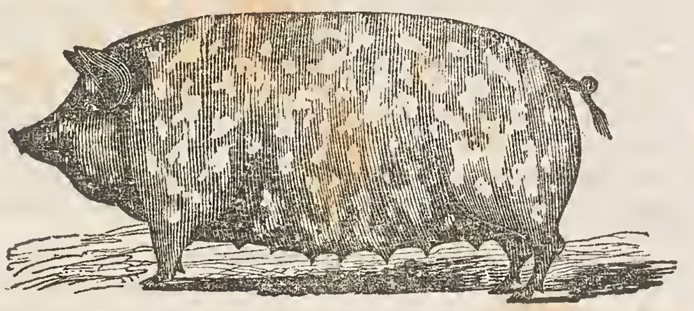
The reasons that were supposed to influence the forbidding of eating swines' flesh, as well as that of several other creatures, under the Levitical law, are, that the children of Israel, at the time of their exodus out of Egypt, were a very debased and gross people; but few grains and vegetables were then cultivated to vary the food of man, and as they were destined to inhabit, where a generally hot and dry climate prevailed, a great indulgence in these meats would tend to thicken the blood, check perspiration, and consequently, especially engender scrofulus, scorbutic and cutaneous diseases. We find among the Egyptians, that some of the same prohibitions of Moses were made sacred by their priests to that singular people, with the intention, undoubtedly, of more certainly preventing their being used as food, and mainly for the reasons spoken of above. Pork, however, as now usually made, and above all eaten in the moderate quantities that it generally is, and accompanied by so great a variety of grain and vegetable food, can no longer be considered objectional, especially in a cool climate; and as it is one of the most palatable and substantial of meats, the cheapest and easiest reared, the longest and most certain to keep, it has at length become the most necessary item of the stronger food of civilized man, and without doubt the most important of the stock grower's products in the United States.

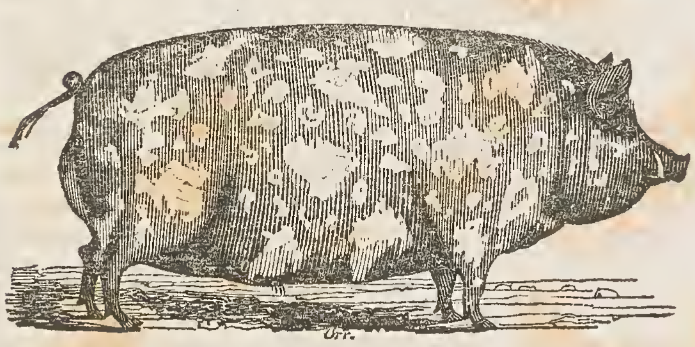
What amount of pork is annually raised and consumed in the republic, it is impossible to accurately say, but something of an approximation may be made towards a calculation of it. The census of the present year, will doubtless give us a population in round numbers of 16,000,000. The army ration to each soldier of the best quality of mess pork per day, is three-fourths of a pound, which would be about equivalent to one pound of the whole hog. It is intended that this ration shall be rather more, upon an average, than each soldier can consume; we will therefore put the allowance in whole hog pork at 12 ounces. Admit, for the people at large, that beef, mutton, fish, &c. would make half their meat, again deduct half of this remainder for women and children not being as great consumers as men, and the result would be three ounces per day, or say 64 pounds each per annum for the whole population of the

United States. But for fear of an over estimate, we will suppose the consumption only 2 ounces per day—this amounts to 730 million pounds, or 3,650,000 barrels, which at eight dollars per barrel, (the probable average price, taking one year with another,) would make 29,200,000 dollars as the value of our pork consumption alone. Now many of our most experienced stock growers assert, that the improved races of swine will make three times as much meat from the same quantity of food, that those of the unimproved will; and again, the quality of the meat is so much superior that it will go twice as far in giving vigor and sustaining life. Experience has convinced me of the truth of these assertions; but, lest we should claim too much, we will allow only one-half saved, or say, in round numbers, fifteen millions of dollars. What a vast sum to be annually lost to America, just for want of a little attention in breeding pigs! Why, if properly applied, it would soon finish all our projected rail-roads and canals, or keep a good school one-half of the year in every district in the union.

Of all the known varieties of the domesticated hog, the Chinese has long been celebrated as decidedly the most perfect in shape and general conformation. How this breed was first produced, it is impossible now to say; there is no doubt, however, in my mind, but that, like the Arabian horse, it was *original*, and that the best specimens to be found on the Eastern Continent, are the identical counterparts of the pair that descended with Noah from the ark, after the subsiding of the deluge, and that all other varieties have deteriorated by running wild, or from carelessness in feeding, and neglect and inattention in properly breeding,—the goodness of the Deity never forming in the beginning the detestible brute that we see roaming in every direction the country round, like a veritable cannibal, seeking who and what he may devour. But be this as it may, the Chinese, as we find them scattered along the coasts of the Celestial Empire, and on the adjacent islands, vary greatly in size, and somewhat in shape, and are of every shade of color, from pure white up to jet black. The most approved varieties, however, may be thus described. A fine head and snout, with the face somewhat dished, small upright ears, a somewhat short and very thick deep carcase, large hams and shoulders, short legs, delicate feet, soft thin hair and skin, a tendency to grow and fatten almost upon air alone, and to give when slaughtered very little offal, and the sweetest and most delicate of pork.

Below are the portraits of a pair of the improved Chinese (figs. 2 and 3,) in the writer's possession, bred by himself, and faithfully sketched after the originals, by his friend Mr. Julius Gerber, and engraved by Buffalo's promising young artist, Mr. J. W. Orr. They are represented in no better flesh than they will always attain when full grown, running in a common grass pasture during the summer, or with the most moderate allowance of food in the winter.


[Fig. 2.]—*Maid of Erie.*

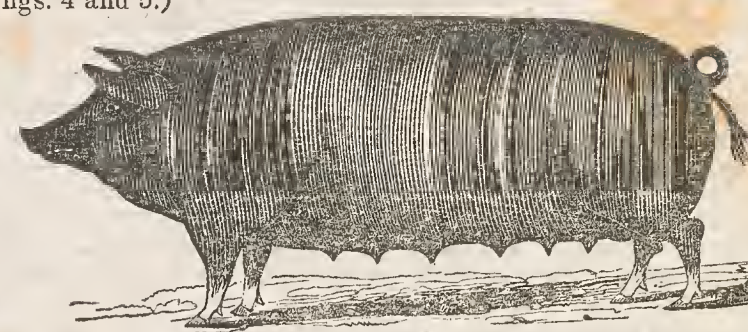


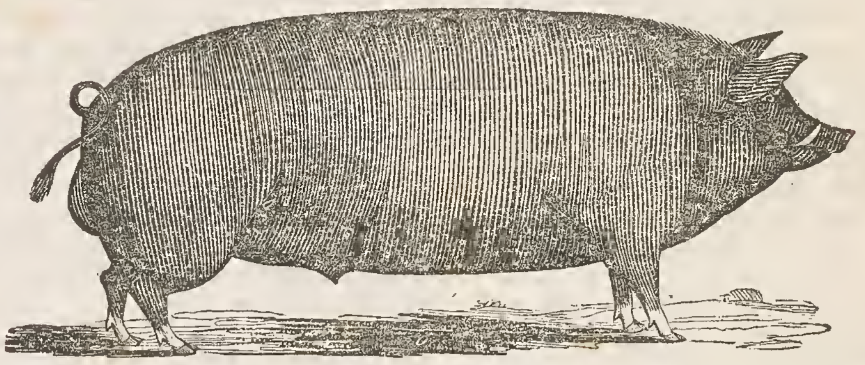
[Fig. 3.]—*Seneca Chief.*

There was a slight mistake in the coloring of the engravings, the spots of black and white in the originals being fewer in number, and of course somewhat larger than here represented. As now bred by the writer, their live weights full grown, are generally from 200 to 300 pounds; occasionally they have gone as high as 400 pounds, but this is extremely rare. They are equally hardy, enduring heat and cold as well as any of the native swine; are fair breeders, usually having from six to nine pigs at a litter; mature easily, and can be fattened at any age. Whether in field or pen, they are ever quiet; the loosest boards keep them up, and the poorest fence secures them within their bounds; and like Diogenes in his tub, they seem never so happy as when left alone to sleep, and dream, and cogitate on deep philosophy. Their meat is exceedingly delicate and sweet. In England it bears the highest price, and is called par excellence the "gentleman's pork." The improved Chinese will give a greater amount of pork for their food than any other breed in existence; and it is in allusion to this circumstance that the able editor of the Maine Farmer, with no less truth than justice, calls them the "poor man's hog." Boars of this breed are highly recommended to cross with the common hog of the country, as they most rapidly improve the quality of the meat of their progeny, fine their points, give breadth and depth to the carcase, quiet their dispositions, and add a greater tendency to mature quick, and fatten kindly, and at the same time increase their sizes.

Many attempts have been made in Europe to improve the breed of the native swine, by selections and otherwise; but so far as the writer has been able to follow them up, there has been little success, and that little very slowly obtained, except only where resort has been had immediately to the Chinese boar. This is particularly the case with England, whose efforts seem to have carried her, in this department, as far beyond her neighbors as in that of the improvement of horses, cattle and sheep. Every county there boasts of its breed of swine, and certainly many are very deserving, having derived their chief excellence from a cross more or less deep with the large white Chinese boar. Of these are the Leicester, the Bedford or Woburn, the Sussex and Cheshire. But the most decided improvement, and which by the care and skill of recent breeders, has now nearly attained perfection, was that of the black Siamese boar upon the old stock of Berkshire county. This, I understand, began about forty years since. The Berkshires were then mostly a long, large, coarse, lop eared hog, of a sandy or reddish brown, or white, with black spots, and coming up, not unfrequently, to the high weights of 800, and even 1,000 pounds. But it was a slow feeder, long attaining to maturity, an enormous consumer, and in common with most of England's other varieties, an unprofitable beast. Yet possessing rather thicker hams and shoulders than the other kinds, a longer, fuller body, and its meat abounding greatly in lean, the little, short, fat, black mouse-eared Siamese told well in the cross; and thus was produced the dark, splendid Berkshire, that at present occupies the same rank among hogs that the Durhams do among cattle. They mature quickly, and like the Chinese, can be fattened at any age, and still may be selected, when desirable, for great sizes; are prolific breeders and the best of nurses; thrifty, hardy, and of most excellent constitution. They are fine in their points, possessing remarkable thickness in the ham and shoulder, and show a round, smooth barrel of good length, that gives a large proportion of side pork. They have little offal, thin rind and hair, and few or no bristles. The meat abounds still greatly in muscle, and the hams particularly are highly prized, commanding an extra price in market, being very tender, juicy and lean.

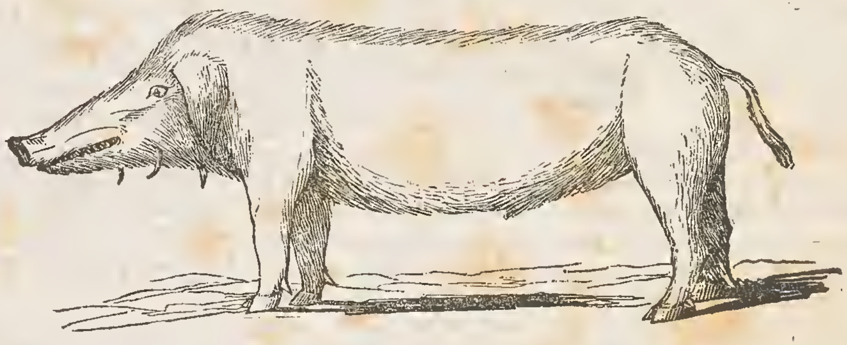
As now bred, the Berkshires vary somewhat in size, appearance and maturity. Those with the finest heads, a dished face, and rather upright than forward ears, with a snugger shoulder and ham, and shorter body, most resemble the Siamese ancestor, and therefore are quickest to mature, and probably give the most delicate meat, and to one satisfied with moderate size, are undoubtedly to be preferred. Barrows of this description, if well fed till 18 months old, easily attain 300 to 400 pounds, and weights within these limits are the most eagerly sought for at the Smithfield market, and are probably on the whole the most profitable for both consumer and producer. Others, generally of a straight nose, with a coarser head, and ears protruding well forward over the eye, or slightly lopped, with greater length of body, incline more to the original Berkshires, attain higher weights, and require a longer time to mature. There are individuals, however, occasionally possessing all the fine requisites of the former selections, together with the large size of the latter. Of this class the figures below are supposed to be as fine specimens as any at present in the United States, (figs. 4 and 5.)

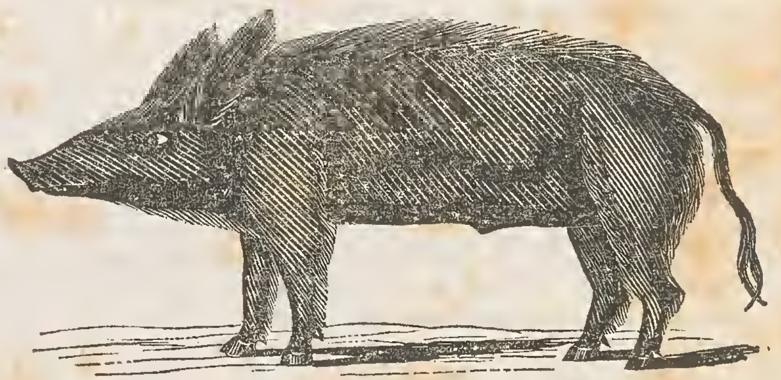

[Fig. 4.]—*Raven Hair.*


[Fig. 5.]—*Black Warrior.*

This pair is among the writer's breeding stock, and he believes that he can confidently appeal to the numerous gentlemen who have favored his piggery with a call, to attest to the faithfulness of the portraits. They are not considered fat at all for Berkshires, but merely in good store order, and were two years old last spring. The live weight of the sow is now about 450 pounds, that of the boar 500 pounds. They have never been pushed at all in their feed, but kept steadily along, and when grown, in fair condition, will weigh respectively 600 and 700 pounds at least, and probably something more.

We now come to a pair of fatting barrows of the unimproved breeds of swine.—They abound throughout the country, under a variety of most euphoneous names, but we may suppose those of Alligator and Landpike about as appropriate to them as any others that could well be applied. They are not, however, introduced here for derision, or for the purpose of getting up a carricature, as the originals can easily be found; but to show that there is *something in breed*, and to illustrate the difference between a good animal and a poor one of the same variety. They have long, peaked snouts, coarse heads, thin chests and narrow shoulders, sharp backs, slab sides, steep rumps, and meagre diminutive hams, big legs, clumped feet, with the hide of a rhinoceros, and the hair and bristles of a porcupine, and as thick and shaggy as a bear's. How can such animals thrive, and above all ever be fattened? To attempt to make them do either, as the writer found to his cost in his first efforts at farming, were time, and money, and produce thrown away. They have no capacity at digestion, and concocting their food in the stomach for nourishment; and if they had, to the formation of what would it all go? Pork? No, indeed—but offal, bones, rind, bristles and hair, with a narrow streak of gristle underneath, and a still narrower line of lean, both as tough and rank as whitleather, and about as incapable of being masticated; and if it were not, must require a vast deal of *larding* to make it sustain human life. I have been obliged to purchase it occasionally for my work men, and before they could possibly get up a fry for breakfast, twice the weight in lard from other hogs had to be added to it; and as for baking or boiling, one might as well undertake to stew an alligator's hide itself. In disposition, they are like the Ishmaelites of old—their *snouts* are against every man, and every man's *hand* is against them. No reasonable fence can stop them, but ever restive and uneasy, they rove about seeking plunder; squalling, grunting, rooting, pawing, always in mischief and always destroying. Enormous gormandizers, yet never satisfied; but like Pharaoh's lean kind, they lick their jowls for more, and show in their miserable carcases no return for the food consumed. In short, the more a man possesses of such stock, the worse he is off, and he had far better sell his produce at any price—yes, even his


[Fig. 6.]—*Alligator.*


[Fig. 7.]—*Landpike.*

corn at a dime a bushel, than to put it into such totally worthless brutes.

Of the Choice of Stock, Breeding and Rearing.

The Boar.—After obtaining as many other good points as possible in choosing a boar, reference should then be had to a strong, masculine appearance in him, even at the risk of getting some little coarseness, as this denotes great vigor and constitution. Both sexes of the improved breeds of swine are, if allowed, precocious in breeding. To prevent this, the boar pig must be separated from the sows, as soon at least as he has attained four months of age, and it is better thenceforward to keep him entirely by himself. For this purpose, a close covered, roomy pen, with a plank floor, and plenty of litter is provided for him to feed and sleep in, and retire to whenever he pleases, and made comfortably warm in winter and cool in summer. This communicates, by a door that can be opened and shut at pleasure, with a yard for him to root and exercise in, and a strong upright post or two to rub and scratch against, and a slough hole to cool and refresh himself by wallowing at his pleasure during hot weather. If this yard could be extended to a good grass pasture, with clear, sweet water passing through, it would be still better for the boar to have a run there, and more conducive to his health, vigor and longevity.

He should never be permitted to be used till seven months old at least, and it would be much better that he were allowed to run till nine months. But if commencing at seven months, he should cover sparingly, say not more than fifteen to twenty sows, till a year old, and these as distant apart as possible, not more than three in any single week. From this time, till he has attained pretty full vigor, which for the Chinese I should call twelve, and the Berkshire at eighteen months age, he may be used a little more freely. His spring seasons might then vary from twenty to thirty sows, and the fall nearly double this number. The sow should be introduced to him when in heat, and allowed but one coitus, and then be immediately taken away. It has generally been noted, that one covering produces a greater number, and stronger offspring than two or three, and that an *ad libitum* service is alike pernicious to all parties.

During his seasons, if pretty freely used, he should be kept up, and with care, being fed at least three times a day, about, or quite as much as he will eat. The best aliment for him then is boiled or soaked corn, with plenty of pure fresh water, and for variety some swill from the house, slightly thickened with meal, (oat is the best,) and a few raw or boiled vegetable roots. As an antidote to disease, and to give tone to the appetite and assist digestion, a table spoonful of sulphur is occasionally put in his food; salt also is placed where he can get at it when he pleases, and charcoal or small chunks of rotten wood, together with a handful of crushed bones. Between the seasons his feed is made lighter, but sufficiently nutricious to keep him in fair store order, and more exercise, and a greater run as above is recommended. A good animal thus treated, may last ten years or more, and get excellent stock from first to last. I have lately heard of boars having been effective till past twenty, and can see no good reason to doubt the truth of the communication, as the hog has been known both in ancient and modern times, to have frequently attained the age of thirty years. The duration of their services, and goodness of their stock, depends mainly upon their treatment. Great error is committed in irregularity of feeding, and overtasking their procreative powers, and hence the frequent disappointments in distinguished animals, not producing stock at all equal to themselves.

The Sow.—When growing pigs or shoats, and kept up in pens, not more than half a dozen sows ought to herd together, yet in large pastures any reasonable number may be suffered to associate. But when full grown, and especially if of a large size, two at most is sufficient together in confinement, and it would be still better that each one had an apartment to itself in the piggery.—Unless the pig was lean, and the object was to somewhat fine her, it ought not to be allowed to breed, if a Chinese, till twelve, and if a Berkshire, till eighteen months old; and if something extra large was wanted, defer their coming in still six months longer. There is then no check in youth, and the first litter of pigs is usually as fine and as large as any subsequent ones. The period of their gestation is sixteen weeks, and the time that they are stinted to the boar should be set down, and one month at least previous to farrowing, each sow should be taken up and occupy a place alone, either in pasture or in pen, similar to that described for the boar, be kept in good order, and strictly watched when expected to bring forth. As soon as dropped, see that the pigs are cleaned and take the teat, and the dam rid of the placenta, and that carried off and buried. She should then be supplied with short cut litter in a moderate quantity, so that her young will not get tangled in it and be smothered. The watching should continue several days, till the pigs are strong and lively, especially if the sow be full grown and heavy, otherwise they are in danger of being lain and trod upon, and killed. One pig more saved than leaving the sow to herself, amply repays all this extra attention.

The sows being somewhat feverish at farrowing, should have what water they please to drink about blood warm, but very little food, and that of a light kind the first twenty-four hours. After this their feed may be gradually strengthened, and when the pigs get a week old, the dam should be fed all it will eat three times a day without cloying. All the whey and milk that can be spared, with a mixture of oat and barley with pea or Indian meal, of one part of either of the latter to three parts of the former, is highly recommended for nursery, together with an equal quantity of boiled or steamed vegetables. As soon as the pigs will eat, a small open box frame should be placed in the pen, under which they could run and be separate from the sows, a trough set there, and milk with a light mixture of meal and cooked vegetable roots poured out for them. This greatly relieves the sow, and adds much to the growth of the pigs; they wean then without scouring, losing condition in the least, or being checked in their growth.

It is generally thought that pigs do as well to be weaned at six weeks' old as later, for the little milk that each then gets is obtained by more or less quarreling, and adds a distaste to their other food; besides it is a great consideration to get them off the sow as soon as possible. Eight or ten great pigs tugging at her breast for two or three months, is hard to be borne, and is frequently very pernicious to her teats. In weaning, all but one should be taken off, put the dam on short allowance, and in two days take the remaining pig away, allowing it at first to draw the breast twice a day, and then diminish till once in two or three days during a week, then turn the sow out to grass and leave off entirely, and commence gradually to put her into condition again. The Berkshires especially are great milkers, and must be well attended to at weaning time, or the breast will fill, become caked and swollen, and finally ulcerate, and be the cause sometimes of the death of the sow. Two litters are allowed per annum, and a preference for farrowing in this climate is given to the months of April and September. Farther south, later and earlier will answer. A pig when first dropped is a very tender animal, and if the weather be too cold it will perish; the dam also is likely to become ravenous and devour her offspring, or refuse to nurse it.

After being weaned, pigs should be fed upon cooked food, at least for a few days; they will then very rarely scour, and if they have a dry, warm place to sleep in, covered from the weather, will not take cold or be afflicted with swollen head and throat, that too often destroys them. Night air is very pernicious to young pigs, and is the direct cause of most of the ills that effect them. In order to give them an handsome shape and good growth, some attention must be had to their food and accommodation. To their snug sleeping apartment in the winter, a large dry yard that the sun will shine in when out, should be appended for exercise, and in summer they ought to have the run of a good grass or clover lot, with pure water if possible passing through it. The best food that can then be given them, is as much milk, whey and house swill as can be had, and a mixture of oat and Indian meal about half and half, with flaxseed ground with it, at the rate of a pint or so to the bushel, or for want of this a quart or two of oat meal may be substituted. All this, and more especially if it can be cooked beforehand, mixed with an equal quantity of steamed roots of any kind, such as potatoes, beets, &c. makes the most palatable, healthful and thriving food for young pigs or old, that I know of. There is a very great saving in cooking food for hogs, and making it pretty thin with water; the liquid alone, in this case, seems to go farther with them than the whole of the food uncooked. Repeated experiments have established the fact, that water, under these circumstances, becomes very nutricious. Shorts and bran, so much given to pigs, is most miserable food alone, and especially if used without being cooked. It almost invariably scours them, and under the most favorable circumstances I could never see much thrift from the feeding.—Cold swill, and above all if any frozen, is very pernicious; it is the cause of several diseases, especially that of casting the inwards, and ought never to be fed.—When confined, either as store animals or fattening, all hogs should have a little sulphur and salt occasionally in their food, with pure water to drink at all seasons once or twice a day, and charcoal or chunks of rotten wood thrown to them, and be allowed now and then to come to the ground a short time for the purpose of rooting and eating dirt. They may not fat, or rather *bloat up*, quite so fast for this, but their flesh will be much superior, and the poor animal will be kept free from the fever that otherwise so much torments it; and indeed, it is believed, except in rare cases, of all other diseases.

Of the pathology of the hog, the writer acknowledges almost total ignorance; he trusts, however, that some one well qualified will soon be induced to come forward, and treat the subject with the ability that it so highly merits. In so doing, not only the more extensive breeder, but the public at large would be placed under great obligations, for there are few families in the United States, out of our large cities, that, to use the Irish expression, do not "live neatly and keep their pig."

A. B. ALLEN.

Buffalo, December, 1839.

Book Farming.

There are two classes of farmers who, it strikes me, err equally,—those who indiscriminately denounce all "book farming"—and those, on the other hand, who grasp at every visionary theory, every ill-advised conjecture, because it is ushered into the world in the columns of an agricultural publication. The first class seem to think truth ceases to become so, by being printed; the other, that speculation is made to assume the importance of established fact, by the same process.—A farmer, otherwise an intelligent man, not long since declared to me his firm conviction "that one could learn nothing about farming from newspapers." I inquired of him if, by his own practice and experience in husbandry, he had arrived at any conclusions which he considered true and undeniable. He had. I then asked him if he should communicate to me in a letter those facts, would they become any less true and undeniable? Certainly not. Well, then, should I cause your letter to be published in the Cultivator, would your facts cease to be facts by being printed? The man was convinced.—His error, and it is the error of thousands, lay in supposing that all that is printed on the subject must necessarily be theoretical. Too much undoubtedly is so. I have known farmers err as far on the side of credulity, as the one I have alluded to did on the side of scepticism. I knew one who destroyed the lives of several valuable animals, by a process which he found recommended by a correspondent in an agricultural paper—recommended, doubtless, without being subjected to the test of accurate experiment.

It is the duty of the conductors of the press to be exceedingly careful on this point, not to *mislead*, where they assume to *instruct*. The line between theory and established fact, should be kept broad and well defined. Yet a moment's reflection will convince us, that the conductor of the press should not reject all theory, merely as such. This would throw a serious obstacle in the way of improvement and discovery. There are many who have the ability to form useful projects, who have not the means of putting their projects in execution, and until this is done, they are theorists. Franklin, when he went into the fields and let fly his kite, was but a theorist; but when the electric spark answered to his touch, theory was converted into discovery. Fulton was a theorist until the first steamboat* ploughed the waters of the Seine, in 1803. Sir Humphrey Davy, so far as agriculture was concerned, was but a theorist, yet he has conferred more lasting benefits on it, as a science, than any other man of his day. The celebrated Arthur Young, whose authority on the subject of husbandry is universally received and acknowledged, was mainly a theorist. The remark will be found generally true, though there are striking exceptions to it, that the most important discoveries in the various departments of agriculture have not been made fortuitously, but have been the fruits of theories, founded on scientific principles, matured by observation and analogy, and finally ascertained to be genuine by the touchstone of experiment.

The *reader*, as well as the conductor of the press, is called upon to draw the line of demarkation between the spurious and the true, the applicable and the inapplicable, whether presented in the garb of facts or speculation. Facts may mislead as well as theories; indeed, I apprehend it is a mistake of quite as frequent occurrence. The same process will ordinarily produce the same result, but the minute and less apparent circumstances which in many cases govern it, are liable to vary, producing disappointment, which to the mass is entirely unexplainable. Nature operates upon fixed principles, but her agents, unlike those of science, are beyond the control of man, neither can they be brought to bear in the precise determinate proportions which give accuracy to the experiments of the chemist. We cannot control the weather—cold and heat, the rain and the winds—neither can we always bring to a given standard the precise properties or combinations of soil, or even, with the exception of a few scientific men, decide in what proportion they actually exist.

But the class of facts by far the most calculated to mislead, are those which are introduced from the practice of nations whose systems, institutions, circumstances of population, relations of property, &c., differ so essentially from our own. Agriculture has arrived at a higher pitch of improvement in many parts of Europe than in our own new and sparsely inhabited country; and to England, our Fatherland, especially, have we been in the habit of looking for the model of every thing that is correct in husbandry. This is to some extent proper, but the examples of English agriculturists are always to be received with due allowance for the decided difference between the circumstances which affect the agriculture of the two countries. There, land is every thing, labor nothing—here the case is exactly reversed, labor is every thing, land nothing. If the wealthy English agriculturist, situated where money ordinarily bears a rate of interest not exceeding four or five per cent.; where products find a readier and far better market than in the United States; where labor costs scarcely a tithe as much, can afford to bestow immense labor on drainage; on the collection and preparation of manures; on a system of tillage generally not falling far short of horticulture in the nicety or the expense of its operations—it by no means follows that the American farmer would find it profitable to follow his example. The draining, in many instances, would exceed the value of the land when drained; the crop would not pay for the manure; and the annual income of the farm would fall short of the laborers' wages. This subject was alluded to in a late number of the Genesee Farmer. I hope to see it more elaborately followed up hereafter by some competent pen.

If theory and fact are both so liable to mislead, the conductors and the readers of agricultural newspapers are called upon, as I have before remarked, to exercise a sound discretion in deciding what they shall receive or reject. We should apply the same rules of evidence to statements submitted to us, that we should deem necessary in business or commercial transactions. If A. B. or C. publish an alleged fact, purporting, for instance, to be the result of an experiment tried by him, he becomes a witness before the jury of the public. His veracity, ability to conduct the experiment accurately, and interestedness in the ultimate decision, should all, so far as is practicable, be weighed in the balance. We may be compelled to believe when no adequate rationale can as yet be presented; but in no case contrary to the dictates of reason or common sense. Even in the former case, the proof should be strong and decisive. Concomitant circumstances, their bearing and effect, should be carefully investigated. If a theory is presented, let the reader soberly weigh the reasons on which it is based, and any experiments to test the truth of either theory or alleged fact, should ordinarily be conducted on a scale so limited, that failure would involve us in no serious loss. But it is unnecessary to follow up this branch of the subject. Every man's common sense, if he will allow it to influence him, will direct him in the right course.

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* The first practically successful steamboat.

Let no man say that agricultural publications are valueless, because mistakes and inaccuracies will creep into them. There may be some chaff, agriculturally speaking, but the bulk is wheat—sterling wheat. A condemnation on such grounds will be found far too sweeping. Who will pretend that the advice of a sound, practical, intelligent farmer is valueless on the subject of farming? Yet there is no man who does not fall into errors. And if the advice of *one* such farmer is valuable, let it be borne in mind that *many* such contribute to the columns of such a paper as the Cultivator. Who will pretend that the writings of such men as Marshall, Sinclair, Dickson, Loudon, Berry and Youatt, in England—Von Thaer, Du Hamel, Tessier and Chaptal, on the Continent—Lorrain, Livingston, Colman, Buel and ———, in our own country are valueless? There can be no one so utterly ignorant, or so thoroughly prejudiced, as to believe this! The very proposition involves an absurdity—for it goes to say that talent, observation and experience are all worthless, and that all of them, brought to bear on one point, are capable of achieving nothing. It goes to say that a Davy or a Gay-lussac, a Newton or a Liebnitz, were not qualified to communicate information in relation to the sciences in which they so eminently excelled!

One word as to agricultural newspapers. When politicians, literary men, religionists, and the champions of fifty different "reforms" support their periodicals with so much zeal and *esprit du corps*, shall the farmer alone trust to the slow spread of oral communication between man and man, to learn the general success which attends his vocation—its advance or its retreat—its triumphs and its achievements? The spirit of the times forbid it. H. S. R.

Cortlandville, Dec. 1839.

Management of Sheep—No. 8.

(Continued from the Genesee Farmer.)

Messrs. Editors—As a former correspondent of the Genesee Farmer, I beg leave to tender you, with much cordiality and sincerity, the usual *compliments of the season*. Permit me also to express my unqualified pleasure and congratulations on the *marriage* of the Genesee Farmer to the Cultivator—a *union* of the East with the West—May your lives long be spared, gentlemen, editors and proprietors, to sow in the columns of the consolidated paper, the well selected seed of agricultural knowledge; and by proper nourishment may it bring forth fruit abundantly to the farmer—some twenty—some fifty—and some an hundred fold.

Agricultural correspondents of the east and west can now meet each other on common ground, to measure their *blades* of zeal in the great cause of husbandry: therefore, as an humble follower and well wisher of this cause, I respectfully call on all my brother correspondents of the west, to come forth and do joint battle with the east, in striking down those gigantic foes to a perfect system of agriculture—*ignorance*, and its legitimate offspring, *prejudice and error*. The field is the Cultivator—and thrice honored be he, who is boldest, and is found in the thickest of the fight.

The theme I have chosen is indicated by the caption. You are aware, as well as the readers of your late paper, that I have already written much on this subject, but it is not, as yet, quite thread bare. It will be followed up in the order as announced at the conclusion of the last essay; consequently *winter management of sheep* is the subject of the present chapter; and with your approbation, will hereafter contribute farther on the great and important subject of sheep husbandry. Before entering into details, it will be well to state, that I shall, as heretofore, confine myself to communicating the results of my own experience; that the information conveyed is now, and will be, based on facts—what my own eyes have seen and hands handled, therefore in all respects practical; and furthermore, that my system of management is more particularly applicable to the finer grades of sheep.

In common with *good keeping*, were I asked what is the indispensable and most important matter connected with successful management of sheep during the winter season, I would unhesitatingly reply, *protection*; and were I asked again and again, the answer would be the same, *protection—protection*. By the great mass of farmers, however, it is wholly disregarded; and from this cause greater losses have accrued than from any other within my knowledge. But in former numbers, the importance of attention to it I have dwelt upon, bordering on prolixity. In view, however, of its necessity, permit me to ride my *favorite hobby* a short distance, in order to show up the advantages to those who have not been readers of the Farmer.

The positions I have sustained, are as follows: that protection is a *prevention of disease*, therefore saving of life: *improvement of fleece: increase of its weight: saving of provender: increased number of lambs:* and not to protect sheep, is a *violation of humanity.*

As briefly as possible, I will cite some facts in support of each. Before protecting my flock, which varied in numbers, from 900 to 1400, averaging, say 1200—the loss amounted to from 70 to 100 during the winter, and once rose to 150. Since protection, now four years, the average number wintered has been 1800, and the average loss of each winter amounted to only 31; being less than 1 3-4 per cent.

In proof of the second position, I should be compelled to introduce two invoices, showing the sorts of two clips, one of which was shorn the year before protection, and the other immediately following, which would occupy too much space. If any are desirous of investigating, they will find the record on the sorter's books of the Middlesex Co. at Lowell, or in the May No. of the Genesee Farmer.

As regards the third, for several years before my flocks were protected, the highest average yield of wool per head, was 2 lbs. 9 oz. The clip which followed the first winter of sheltering, which was the terrible one of 1835 & '36, the average was 2 lbs. 10 1-2 oz. The next clip was an average of 2 lbs 14 oz.; the next 2 lbs. 12 3-4 oz., and the last, which was the lightest, generally throughout the country, shorn for many years, the average was 2 lbs. 10 1-2 oz.; consequently the aggregate gain amounts to, of four clips, 1252 lbs. This is, of course, in exclusion of tag wool, the average amount of which, each year, was about 480 lbs. The cause of this increase is to be attributed to the *better condition* which can be sustained by means of protection.

In reference to the fourth, saving of provender—protection has been the cause, to my certain knowledge, of saving much hay, but from want of actual experiment, am unable to say precisely how much. One ton to the hundred, however, I deem a fair estimate. Of oats, which I fed liberally before protection, the amount saved is equivalent to 500 bushels each year; and yet, as a confirmation of the above remark, *that sheltering is a means of keeping up good condition*, my sheep have been in finer order than when they were grained; showing, notwithstanding the virtue of grain, that there is *more virtue in warm shelter*.

The fifth proposition, that protection conduces to increase the number of lambs, is accounted for by reason of the greater strength and vigor of the ewes, arising from good condition, which, and I say it most emphatically again, can only be *uniformly sustained*, but by means of sheltering. Since the adoption of this improved system, the average increase of lambs, from the same number of ewes, has been over 100 each year; formerly the loss, from the emaciated condition of the ewes, was very large; so much so, that it would be mortifying indeed to make the number known.

To substantiate the last position, I boldly put the question, is humanity to the domestic animals, which Providence in his wisdom and goodness designed for the use of man, a *virtue*? Will any one but a barbarian say nay? Then let none evade and outrage this christian duty by permitting their flocks to be exposed to the terrible storms of winter, for it is a violation of humanity in the *worst form.*

Having broached the important matter of protection, I deem it essential, as coming within the scope of my subject, to mention the kind of shelter of which I make use.

They are barns, and varying in size; several of which are 30 feet by 20, with 14 feet posts; and others 36 by 20, with 15 feet posts; six feet of the lower part of the last mentioned is taken off for granaries. It should be stated that the first size named, are not long enough to contain a sufficiency of hay for 100 sheep, which is the largest number I permit to herd in the winter; a remedy will be found, however by adding two feet to the width and two feet to the posts. The largest size afford room enough for the necessary quantity of hay for the above number of sheep, provided it is not of a course quality, and the winter an ordinary one. They all front the south, on which side are boards made to shove like bars; a space, however, of some six or eight feet is always open to admit of the sheep going in or out at pleasure. It ought to have been stated before this, that the protecting apartment is formed by a vacancy of four and a half feet from the ground, and of course, that above it the hay is stored. On a distant farm I have several barns constructed after the "Massachusetts mode," standing on side hills, the inclinations of which are such, that it was only necessary to excavate the ground in rear, in order to form shutters. The size of these is 36 by 45 feet, and by means of a division wall afford ample accommodation for 100 sheep each. On three sides of each apartment are fixed box racks, which are used only when the weather is severely cold or stormy; at such times the advantages of feeding under cover can not be too highly appreciated.

The average cost of the barns, first described, was about $55 each: they were built by the job, and when lumber was bearing a price below its present value; and the entire expense of all my sheep buildings approximates $1000. But in No. Four of this series I entered into the most minute calculation derived from my books and invoices, wherein it is shown that my gains already, in consequence of protection, arising from saving of life, increase of wool, &c. &c., have reimbursed this expense, with an overplus of $1427. I refer for particulars of this estimate to No. 14 of the Weekly Genesee Farmer, or May No. of the Monthly, 1839. But notwithstanding this powerful *pecuniary* argument in favor of protection, there will be found thousands of your readers too sceptical to be willing to incur the same expense that I have undergone, and therefore the following mode of building cheap shelters is respectfully recommended.

When securing hay, if stacked, build two pens for the reception of the bottoms of the stacks four and a half feet high, and place them about 35 feet apart, in or nearly an east and west line: then take two poles of sufficient length to reach from pen to pen, resting the ends on the tops of each pen; the centre of the poles to be supported by crotches, and well secured in the ground. A sufficient number of rails or poles will then be required to support the straw which will be necessary for a covering. I will also suggest that the straw ought to be secured by placing a few rails on the top of it, otherwise violent winds will displace it. The rear of the hovel, which of course should be the north side, can be made of boards, and must be tight; if it is not, snow when drifting will be certain to find its way in, and often occasion the necessity of its removal. If boards cannot be readily obtained for the back, racks made of rails or poles, and stuffed with straw will answer quite as well. I wish to be understood that all this is not to be done at the time of building the stack, by no means; all that is required at that time, is to place the long poles on the tops of the pens; the residue can be constructed when convenience permits. I also recommend the erection of several racks to be filled with straw, called "wind breakers." I will not mention where they ought to stand, as practical farmers know pretty well the point a northwester is apt to bite hardest. The necessity of attention to this is obvious, to protect the sheep when feeding, and waste of hay by being blown away by high winds. What straw is required for the above purposes, should be old, or partly rotted; otherwise sheep will be often employed in gnawing holes. The size of the hovel, as described, is calculated for 100 sheep.

With all those who choose to adopt this plan, or follow my example of building barns, the location should be considered. If the necessary quantity of straw is used for littering under and about the hovels or barns, much manure will accumulate; and therefore, the situation should be on the borders of the meadows, at least if placed on them at all: otherwise when the manure is carted away in the spring they will be much trodden and cut up.

I have already swelled this essay quite beyond the limits I had prescribed, and without entering into such particulars in relation to winter managament as I intended: what has been recommended however, every farmer will find it highly advantageous in a pecuniary point of view, to put immediately into practice. Much remains to be said on this subject, which will be accomplished in my next chapter; and in the mean time, gentlemen, will do all in my power to aid the circulation of the "consolidated" Cultivator.

Your friend, L. A. M.

Lansing, Tompkins Co., N. Y.

Prospects of the Silk Culture in the U. States.

The close of the year, and the entrance upon a new one, presents a convenient point from which to take a view of some of the prominent subjects connected with the cultivation of the soil, which are engaging the attention of our countrymen; as, at such a time, we naturally look back upon the past, and from it form anticipations of the future. Among these subjects, there is no one of more absorbing interest, at this time, than that of the *Cultivation of Silk.*

As there exists much incredulity in the minds of many on the subject, and doubt of our being able to produce silk profitably; as the spirit that has been so extensively awakened, by some has been deemed a *mania*, and the whole matter ridiculed as "a *humbug*," got up merely for the purpose of speculation, by designing men, it may be useful to take an impartial view of the subject, inquire what has been done, not simply in the raising and sale of trees, but in the growing and manufacture of silk, and from the *practical results*, as the only correct and safe criterion to form our judgment of the case.

The greater part of this incredulity arises from a want of information, and from that suspicion with which men are apt to view any new enterprise. This *distrust*, this disposition *to doubt*, we are far from censuring, provided there is at the same time, a mind open to conviction.—It argues a becoming prudence and caution. But we do disapprove of this wholesale condemning of a thing without evidence, without even examination. There needs but the knowledge of *facts*, and an impartial examination of the subject of the silk culture on its own merits, to convince every unprejuciced mind, even the most sceptical, not only that it is a branch of business from which may be derived great profit to those who engage in it understandingly, but one of great national importance. Many individuals who have been entirely sceptical on the subject, and the most strenuous opposers of the silk business, yielding conviction to the light of truth, are now its warmest friends and advocates, and are preparing to embark in it extensively.

To enter into a full examination of the subject, would require more space than can be devoted to a single essay, in the columns of an agricultural journal; inasmuch as it would require the introduction of a multitude of statistical facts in relation to the silk business in our country. But a few of these we shall present, for the consideration of the candid.

1. That silk can be raised with perfect ease, that our climate, from north to south, is admirably adapted to the constitution and health of the worm, far better than that of Europe, and to the growth of the Mulberry tree in its different varieties, has been satisfactorily proved by thousands of experiments. While in Europe, owing to the humidity of their climate, nearly one-half of the crop of worms usually die from disease, and they are obliged to have their cocooneries nicely regulated in their temperature by the thermometer, here, owing to the dryness and warmth of our atmosphere, with proper care, scarce a worm dies from disease; and a building of the cheapest construction—any out-house, shed or barn—answers perfectly well for a cocoonery. That the silk made in this country, is of *the very best quality*, for fineness, lustre and strength, *equal to any in the world*, has been decided by competent judges. Specimens of raw silk have been sent to European manufacturers, and pronounced by them to be superior; and in our own manufactories it is much preferred, and receives a higher price, by a dollar or two on a pound, than the foreign article. There is no more mystery or difficulty in raising the worms, than in raising chickens; children, females, aged and infirm persons are competent to the work, and it requires no more skill to reel the silk from the cocoons, than any of our intelligent females may acquire with a little practice. Persons have succeeded perfectly well, even to the reeling and spinning of the silk into beautiful sewing silk, who never saw a silkworm or a cocoon before, and who had no other instruction than what they had derived from silk publications. If, then, abundance of the raw material, of the best quality, may be produced without any difficulty, what should hinder us from becoming a silk growing country, and from manufacturing it, not only into sewing silk, but into all the variety of silk stuffs used by our people; and thus save the millions which are annually drained from us, to pay foreigners for raising and manufacturing our silk?

2. Silk may be raised with *profit*. There is no branch of business which yields *so large profits* on the capital invested and the labor bestowed. It requires, indeed, but a small amount of capital to go into it extensively; a few acres of land, a few trees to begin with, and the necessary fixtures for feeding worms. Hence it is admirably adapted to the small farmer, and persons of limited means. It is peculiarly of a *domestic* character, and may be pursued with profit in the family, by employing the children and females, without detriment to other branches of the labor of the farm. As a practical illustration of this, we will mention a fact stated in one of our silk periodicals. A Connecticut farmer, the past season, "hatched out some worms to be attended by his three children, who were going to school every day, and they gathered leaves and fed the worm in the morning before leaving home—returned at noon to feed them again, and at night completed the feeding for the day.—The worms had no attention but what was given by these children, and the silk, when reeled, was sold for one hundred and seventy-five dollars. This was more than the farmer made from an excellent dairy farm, (on which several crops were cultivated besides,) from any other *one crop* to which his attention was directed." That silk, from the common white Italian Mulberry, may be raised with profit, has long since been demonstrated in Connecticut, where, in the town of Mansfield, originally one of the *poorest* agricultural towns in the state—the land so poor and broken that our farmers would hardly take it as a gift, and be obliged to cultivate it—the culture of silk has, for half a century, formed the chief source of the wealth and prosperity of its inhabitants. Silk, to the amount of many thousands of dollars, has been raised in a single year. The farmers are above-board, out of debt, with money to lend; and their daughters have something comfortable laid by, to present their husbands when they marry, as a marriage gift, in the form of *money at interest*, the product of their own labor in feeding the silk worm and reeling and spinning its tiny fibre. Who would not value such a wife, not only for her *solid charms*, but for her habits of industry, her spirit of independence, and her knowledge and skill in a branch of business which is destined to be the source of incalculable blessings to our country?

But the introduction of the Chinese Mulberry, (the Morus multicaulis and the Canton) has produced a new era in the silk business in the United States; and by its tested superiority over every other kind, and its rapid and extensive propagation and distribution through the land, is hastening the period when we shall be a silk-growing country. Its large, nutritious and abundant foliage, and the consequent great saving of labor in picking the leaves, (a saving of nearly nine-tenths,) and its immediate fitness for use, greatly enhance the profits of the silk culture. Fears have been entertained that it would prove too tender for our climate; but, placed on a high and dry soil, not very rich, it stands even our severest northern winters. But even were we obliged to take the trees up every fall, as we do a crop of potatoes, and plant again in the spring, it would yield an ample return of profits in the crop of silk. A field of Morus multicaulis, cultivated in this way, would require but little more labor than a crop of corn. The high prices which the tree has commanded have resulted from the conviction of its great value for producing silk. It stands upon its own intrinsic merits, upon the solid basis of silk. We are not in favor of making large estimates; but at the lowest, the profits of the silk culture with the multicaulis, are ample—greater than can be realized from any other agricultural pursuit. By actual experiment, it has been demonstrated, that from 50 to 100 lbs. of silk may be raised from an acre of ground the first year, planted about as thick as you would plant corn or potatoes; at an expense of not more than $2 per pound. This silk, reeled, is now worth $6 per pound in its raw state, or $10 if converted into sewing silk. Even at the past and present high prices for the tree, a very large per centage may be realized the first season, by the crop of silk that may be raised. An intelligent dealer in the Morus multicaulis has informed us, that he had made sales to a considerable amount this fall, at fifty cents a tree, on a credit, and that he had given purchasers the choice, either to pay the whole in money, or half the amount in money, and the other half in the crop of silk which could be raised the first year, by feeding as many worms as the trees would supply with leaves; the purchaser thus making fifty per cent. on his investment the first year. A number of sales of this kind he had made: and in one instance, the farmer—(who had had some experience in feeding worms)—sitting down with his pencil and paper, and making a calculation, chose to pay him the whole in *cash*. The growing and sale of the Morus multicaulis, has by no means been all speculation. Large permanent plantations have been made, for raising silk. Whatever have been the motives which have influenced those who have gone into the business, it has resulted in good to the country: it has awakened attention to the subject, and enlisted a deep interest, far and wide, in our citizens; it has elicited much light and knowledge, experimental and practical; called forth the inventive energies of our people, in the construction and improvement of silk machinery, and by the rapid multiplication and diffusion of the tree which forms the food of the silk worm, is putting it in our power soon to be independent of Europe. We prophecy that in *ten years* we shall raise, if not manufacture, our own silk, and that in *fifteen years*, raw silk will form as important an article for foreign exportation, as does now our cotton; and this without encroaching upon, or diminishing our other great staples. Instead of, as now, being tributary to Europe, she shall be tributary to us, for the material which will form her finest and most beautiful silk fabrics; and the millions of specie, which have been drained from our country—the life's blood of our commerce—to pay our foreign debt, producing national bankruptcy and ruin, shall flow back into our coffers, and circulate freely through every artery of trade, giving health and vigor to the whole. By some, we may be deemed visionary, and pronounced a false prophet. Be it so. Whoever lives will see. Our anticipations of the future are not formed from *fancy*, but from *fact*—from a careful and attentive examination of the subject, and observation of the progress of the silk culture in our country. We judge of the future from a knowledge of the past—from what has already been done, and is now doing.

3. *And what*, it may be asked, *has been accomplished?* We answer, the *feasibility* and *profitableness* of the silk culture has been satisfactorily proved, as we have shown. Thousands, through the whole length and breadth of our country, have engaged, or are preparing to engage, in the business. Immense numbers of worms have been fed with perfect success the past season; no less than 400 cocooneries have been erected, and preparations are making to feed worms on the most extensive scale the coming season: hundreds of acres will be planted with the Morus multicaulis, not for the purpose of speculation in the sale of the trees, but for *raising silk*. Societies have been organized for the promotion of the object, and recently a National Society, at Philadelphia, at the head of which are some of the most distinguished men of our country: Legislative bounties have been granted in several states, to encourage the culture of silk, and we trust our own will not be behind her sister states in encouraging, by legislative aid, the noble enterprise. Several manufactories have been established, and are in successful operation, producing fabrics which our wives and daughters need not be ashamed to wear, and which only want a supply of the American raw material, to rival the silks of Europe. With these cheering facts before us, is there not ground for the most favorable anticipations? Who that is acquainted with the genius and character of our people, for enterprise and perseverance, can doubt, that with the impulse now given to the silk culture in our country, its onward course is to a high destination?

4. And is there an American bosom, in which dwells one spark of *patriotism* and *philanthropy*, but that would most ardently wish this?

As statesmen and political economists, is it a *wise policy* in us to pay out millions to other nations for that which we can just as well produce ourselves? To run in debt to Europe for a single article, to an amount far exceeding all our exports, with the single exception of cotton, 18 or 20 millions of dollars per annum;—to make the balance of trade against us, and thus impoverish ourselves to enrich others?

As *philanthropists*, can we do otherwise than give our best wishes and cordial aid to a branch of industry which will give employment and a comfortable support to thousands in our land, whom poverty, misfortune, age and infirmity have placed in necessitous circumstances; to the children of the poor in our large towns and cities, who are growing up in idleness and vice; to females who are dependent upon the painful and precarious labors of the needle for a scanty subsistence, and to the aged and infirm, who are disqualified for more laborious employment? In the just language of the editor of the Silk Farmer, "In all our large cities, where female suffering is the most intense, and in every agricultural district of our widely extended country, the blessings attendant on the progress of the silk culture, will fall with grateful beneficence upon this dependent and neglected portion of our population. A child of twelve years old, or an aged person, unable to follow any laborious employment, will attend during the feeding season to as many worms *as will make twenty-five pounds of raw silk*. The same individual will reel a pound of silk per day. Cannot the reader of this recall to his remembrance some destitute family—some widow with a numerous group of suffering children—to whom a domestic employment of this kind would indeed be a blessing? Or some lonely and aged female, too feeble for labour, too good for the poor-house, whom a steady fire-side occupation at the silk-reel, might lift up into the sunshine of grateful independence? Considerations of this kind expand the sympathies of the human heart, and make the subject as interesting to feeling and philanthrophy, as it ought to be to private interest or commercial enterprise."

There is but one point more on which we wish to offer a remark; and that is, *the benefit that would result to the silk culture, by laying a duty on foreign silks.*—This benefit would immediately be felt; it would give a new impulse to the silk business, check the influx of foreign silks, and the consequent draining of our country of its money—enable our manufacturers to compete with those of Europe, and establish the silk culture on a firm and immovable basis. It is certainly the true policy of a government to cherish its home industry, to encourage its own manufactures, by protective duties. We hope that Congress, consulting the true interests of the nation, will take the subject into early consideration, and lay at least a moderate duty on foreign silks. In the mean while, let the friends of the cause make known their wishes, by memorializing that honorable body, to whom is confided the interests of the nation. With this remark, we leave the subject to abler pens; hoping that, though we may not have thrown any new light on it, nor convinced a single sceptic, we may at least have presented the subject in such a view as to ensure the favorable consideration of all.

W. W. B.

Hammondsport, Dec. 3, 1839.

Union of the Cultivator and Genesee Farmer.

Messrs. Editors—The great utility of agricultural periodicals, circulated among the farming community, is a fact which none but those who refuse to read them will question; and it is believed, so far as I am acquainted, that "The Genesee Farmer" stood first, and was more pre-eminently useful, than any other of the various publications of the kind in the country. It was so considered by myself, as well as by many others. It was better adapted to the agriculture of western New York. The editor was a resident among us,—was acquainted with our soil and climate; and what was more, he knew from personal observation wherein we failed in good management. And when I first heard that my old and tried friend, my counsellor and director, was soon to stop his friendly visits, I was sorry. I did very much regret that the days of the Genesee Farmer were numbered, and would be shortly finished. Yet one reflection on this matter gave me some consolation, to wit, that the whole life of this noble philanthropist,—all his acts and deeds—all his counsels, warnings, admonitions and recommendations, from his first breath to the termination of his useful life, are in my possession. These I can peruse and re-peruse, and thus will I yet draw, from his useful instructions, many valuable admonitions in my noble calling.

But on more mature reflection, I considered that, although my old friend was to be consigned to the tomb, yet, since he is to rise again, though under another name, and to reside in another city, he will come among us again with the same spirit, and with the same partiality to our profession. Since it is to be only a transmigration,—since he is to re-appear with all his excellence of matter, and more of it,—with possibly more talent, knowledge and vigor, I am satisfied with the arrangement. And I hope the new publication will prove as advantageous to the editors and publishers, as I am sure it will to its readers.

Importance of Good Fences.

It is an old maxim that "Experience is the best schoolmaster;" and it is only by practical experience that we are to become established in the best course of agricultural improvement. I am aware there are certain fixed principles which may be learned from books, and which always remain the same in all countries and in all ages; yet to know how to apply these principles, is the result of experience. I am now 49 years of age, though it is but seven years since I commenced my agricultural life. During these seven years I have read much and reflected much, made many observations, and performed much labor. Though I have but begun to learn the secrets of this great and most important calling, and am thus but poorly qualified to instruct my brethren of the same profession, yet, with your leave, I will offer a few hints which are the result of my hitherto short agricultural experience and observation.

And first, I have learned the importance of good fences. It is in vain, and worse than in vain, to plant and sow, having but a poor enclosure of the field. There is nothing so vexatious and so trying to patience, as the destruction of a crop when half grown, by cattle and hogs. I have seen, in more cases than one, a promising field of corn literally destroyed for the want of a proper fence. To prevent such losses and drawbacks upon my labors, I have adopted the plan of setting the stakes perpendicularly, dressing the upper end about two feet, to fit a 3½ inch augur hole, put on a tie, two rails below the top, and drive the stakes about twelve inches into the ground. Stakes and ties of white oak. There are several advantages in this manner of setting stakes. All the rails, from top to bottom of the fence, are confined, and the stakes thus set are not in the way of the plough or of the scythe.

Of Stock and the manner of Feeding.

I have learned that a good cow in good condition will more readily sell for forty dollars, than a poor cow in low flesh will bring twenty dollars. A good cow, well fed, is more profitable than two poor ones. Hence the importance of keeping such stock as will pay well for first rate keep. We are too careless on this subject. A great proportion of the farm stock is of that worthless character, that its best returns will not pay for the food consumed. But still, I believe there is more carelessness and indifference, more censurable negligence, and perhaps greater call for reform, in the manner in which our stock is protected and fed, than in the quality of the breed. Within the last two years, in the course of business, I have visited many farmers in different parts of the country, and for the most part during severe winter weather. I have been into the house, barn, cattle yard, and fields. And I am ashamed to tell the result of my observations. I am exceedingly mortified to see, and even to think of such slovenliness and poverty, even among men esteemed respectable. I mean not, however, poverty absolute, but poverty of the carcases of cattle, sheep, and horses. And, sirs, I would only whisper these facts to you, were it not that I believe there is a remedy. And that remedy is in diffusing information. And I feel it my duty to proclaim such facts upon the house-tops. I would go into the minutia of such management. I would draw such a picture of improvidence and recklessness, as should prove a looking glass, in which every farmer, if he saw not himself, would at least see more or less of his neighbors.

And first of the cattle yard, which, in some cases, was a lot, of six, eight, or ten acres, and the barn somewhere near the centre. In other cases there was a pretended enclosure about the barn, but did not afford the least hindrance to all the stock, from rambling the whole farm over in search of scanty food and water. In these cattle yards I have seen dead sheep, which, from the appearance of those alive, one would expect had died of starvation. Colts and calves, which might be expected to be found in the same condition in a few days. Cows which, instead of furnishing the family with milk, looked as if they themselves would require to be fed with milk, to preserve their lives a month longer. Not a stable, cow-house, hovel, or shelter of any kind, to protect them from the chilling winds and storms of winter. I have seen the owner of such a stock of cattle and sheep, scatter hay of the most worthless kind about the yard, which was filled with mud and filth. The stronger of the herd would, with apparent reluctance, eat a portion of the hay, and trample the balance in the filth of the yard; while the weaker were driven away to shiver in the corners of the fence.

Such management I have seen with my own eyes, or I would not believe it. Such, to be sure, is not the general character of our farmers, but far too many would see themselves in the above description. Now, sirs, what do you suppose was the first question I should ask such a man? I will tell you. It was this: "Do you take the Genesee Farmer?" And can you imagine what was his reply? Of course you can. He says, "No, I do not; I have thought several times I would, but my family expenses are large, and I cannot afford it." "What! not fifty cents a year?" said I. "Suppose you sell one of those pigs for 50 cents, give the same food to the other three, and subscribe for the Farmer. Here, (continued his visitor,) you have three or four sons between twelve and twenty-one years of age, and it appears to me exceedingly important that they should have the opportunity of reading and informing themselves of the very great improvements in agriculture, which have been made within the last few years." But all to no purpose. Ignorant he was, and ignorant he will be.

But I rejoice to say I have visited farmers of a different character. And with your approbation, I will give you a little sketch of the management of one of them, with whom I am personally acquainted. I went also into *his* house, barn and cattle yard, for he had one deserving the name, on two sides of which were barns well filled; on one of the other sides, a good frame cow-house, and on the other side a large stack of straw, and a well-house, covering a good well of water and a pump, and in which well-house were deposited ploughs, harrows, cultivators, roller, wagon, &c. In the yard were good substantial racks for coarse fodder, such as corn stalks, straw, &c. But no mud or water. This was all absorbed by the straw and litter which was scattered liberally about the yard. I went with him to his barn at night, (for he attends to these matters himself,) to observe his manner of doing things. And when he opened his stable door, first a large pair of oxen, next several cows, all in such condition as butchers would not complain of, marched into the stable, and each to the proper stall, in the most perfect order and regularity, where they were tied with ropes, standing to their knees in dry straw litter. Then he took a basket, and went into a cellar adjoining the stable, and brought out sugar beets, and fed to each milch cow a half bushel, first cutting them in a box standing on the barn floor, directly in front of the stable, with an instrument resembling a large family chopping knife, the edge straight and about fifteen inches in length, and the handle about three feet in length. In the same manner, and from the same cellar, did he feed to his oxen and other cattle the same quantity of ruta baga turneps.

I requested of this farmer a statement of his opinion of the root culture, and the comparative value of roots and hay; also his manner of wintering his stock. And I was so well pleased with his views and his practice, that I am inclined to give it to the public through the Cultivator. It was in substance as follows:—He says, "In the first place, I keep no more stock than I can keep *well*. As to the feeding of milch cows, I commence in September with a liberal supply of pumpkins, which I continue till the first of December, and then commence with sugar beets, in preference to turneps, because the turneps give a bad flavor to the milk and butter. The sugar beets I continue all winter, half a bushel per day to each cow. When I put up my cows at night, I first feed them their beets, and in the course of the evening feed them with good clover and timothy hay. In the morning give them corn stalks, and through the day feed with straw, plentifully scattered in the yard. And I find by experience, that I can keep more stock in this manner, than to feed hay only. And besides, I am doubly paid for the cost of the roots, in the increased quantity of milk. And with this feed, together with good water in the yard, and a decent application of the card every morning, my cows are always in good flesh, and, as may be supposed, are always glad to see me.—I feed my oxen and calves in the same manner with turneps.

"My manner of feeding my sheep is as follows:—They are kept in yards well protected from winds and storms. They are fed in boxes made perfectly tight, very accessible, and yet so constructed that they cannot get into them. In these boxes I feed in the morning, at the rate of one peck of corn to a hundred sheep, and at evening 1½ bushels ruta baga turneps, cut fine and salted. This is all the feed they get, except a liberal supply of straw of the different kinds scattered about the yards."

Perhaps some of your readers may at first object to this manner of feeding sheep, thinking the expense greater than to keep on hay. But suppose we make an estimate for 130 days, say from 1st Dec. to 1st April.

130 pecks of corn, or 32½ bushels, at 4*s*.	$16 25
195 bushels turneps, 1*s*.	24 38
Total expense of keeping 100 sheep 130 days,	$40 63
It is generally estimated that ten sheep will consume as much hay as one cow, and some think more, which, at 1½ tons for every ten sheep, would require fifteen tons for 100 sheep, which, at $10 per ton, is	150 00
Then would there not be a saving of	$106 37

in the keeping of 100 sheep for one winter?

Again. Suppose we compute the quantity of land which would be occupied in these two cases. Fifteen tons of hay, at an average yield of one and a half tons per acre, would require ten acres of land to furnish hay for the hundred sheep. But at a very moderate calculation, one acre of corn will furnish the 32½ bushels, and the corn fodder into the bargain. And one-fourth of an acre of turneps will furnish the 195 bushels. Thus have we not 8¾ acres of land to appropriate to other purposes? Or, if you please, let us put eight of the ten acres to corn, and the other two acres to turneps, and we shall have the means for keeping eight hundred sheep from the same quantity of land which would be required to keep one hundred upon hay; and the manure of the eight hundred sheep will keep the ten acres of land in good condition.

But enough for the present. Should you deem such communications conducive to the agricultural habits of the farming community, you may expect again to hear from your friend, NIAGARA.

Rural Life.

Messrs. Gaylord and Tucker—For ages past the poets of all nations have sung to us of the charms and enjoyments of rural life; they have told us in their minstrelsy, that happiness has fled from the palaces of kings and has sought an asylum in the cottage of the peasant; they have told us, that

> "Those who have wealth must be watchful and weary;
> Power, alas! naught but misery brings."

And philosophy, which has been but too frequently the inspiration of the muse in the garb of reason, has told us that seclusion from the world, in the pursuits of the field is the cradle of virtue, and the undisturbed repose of happiness and the choicest blessings of heaven. And time, which has often sanctioned by venerableness the grossest errors, and thrown a charm and loveliness around the delusions of fancy, has, in connection with the brilliant language and imagery of the poet and the philosopher, transmitted and sanctified to us the poet's goose quill dreams and experience; and the anomaly, strange as it may appear, is presented in this age of intelligence of man's feelings and knowledge being diametrically opposed upon a mere matter of fact. For we now see, and have long seen, when we have divested ourselves of poetic delusions, and have looked at things with practical, common-sense eyes, as they have been and now are, that the cottage is generally the abode of contracted intellect, contracted virtue and contracted happiness; and that the farmer is as likely to be immoral and irreligious as other members of society, and is generally less refined and less intelligent. I say not this to traduce or to detract, but to exhibit truth in its native simplicity, and to strip the syren song of the poet of its delusive attractions.

Rural life, or in plain English, the farmer's life, is not and never has been, productive of the virtue and happiness claimed for it by the ancient and modern bards; it has ever been a life of toil, of drudgery, of limited enjoyment, of uncultivated taste and rustic manners. But this state of things has resulted more from inattention to the cultivation of the mind and heart, and an enlightened understanding of his business, than from the actual occupation of the farmer. The proof of this assertion, if proof be necessary, is found in the fact that American Farmers are rising and improving, preparing to merit and assume a more exalted station in society.

The press, with a power almost omnipotent, is shedding abroad upon the world of mind, a mass of intelligence, practical and theoretical; grand and interesting; elevating, expanding, and refining the intellect; opening a more extended range of usefulness, and coming within the reach of all who will grasp at and possess it. The possession of these high intellectual attainments afforded by the press, gives worth, and interest, and enjoyment to the possessor, which the bare pursuit of the most useful avocations of life can never bestow. Such being the fact, it requires but little discernment to see that any one distinct class in society, which shall disregard the progress and dissemination of general intelligence; rejecting the advantages and improvements which it affords, will cease to be respected, as being destitute of those high intellectual attainments which are the powerful incentives to interest and action. Such, for ages past, has been the relative condition of the laboring classes. Compelled to labor as the only means of procuring a livelihood, little or no leisure was afforded for mental culture; and from the cost in times past attending the acquisition of knowledge, before the art of printing was discovered, and long after that period the poor were completely shut out from the world of intelligence, and were consequently held and esteemed as almost a distinct race of beings, unworthy the kind regard and respectful consideration of the wealthy and the learned. But through the benign influence of the press a happier day is dawning upon the world; the laborer is becoming intelligent and respected; and the respect which is given to the *laborer* is extended to the *labor;* for in the same degree as the *laborer* is respected or despised, is the *labor* made respectable or despicable.—And the farmer, who of all the laboring classes is universally acknowledged to be the most important and necessary to society, is assuming his proper rank among the honorable of the earth, with a speed proportionate to his march of mind, and his approximation to the high standard of intelligence established in society.

Every day is unfolding some new project for the more general diffusion of knowledge and its attendant blessings among the laboring classes. The last, most grand and efficient measure for this purpose in the state of New-York, has been the establishment of school district libraries; and if our farmers will second this wise enterprise of our government, by the continued application of the public funds to the purchase of new and valuable books, and making themselves masters, as they most certainly will, of their contents, how enlightened, how elevated and how influential must they now become. Then, indeed, may the beautiful reveries of the poet be verified. For intelligence establishes an elevated standard of morals, as ignorance does a low and contracted one; and upon the strict observance of moral and religious principles, depends man's greatest happiness.

Happiness, to be found, must be sought for in that mode of life, and in the possession and the practice of those things which all the wise and good of mankind have declared affords peace and tranquility. It is often sought for, and thought to consist in an indulgence in the extravagant, evanescent and enervating luxuries of life. But, alas! how delusive the idea, and how ruinous in its consequences to that exalted happiness which depends upon a contented mind. Luxury has crept into society as an attendant upon wealth; but not necessarily, for in the hands of good men wealth is a source from which emanates a thousand blessings; but in the hands of bad men, a thousand evils flow therefrom. Therefore, it may be said, that wealth is not an evil, only as it is in evil hands to do evil. Yet, in another light, it may be said that wealth is the greatest evil in society; that in its influence upon the character and conduct of men, it is the most to be dreaded of all the agents that induce to action. It is powerfully calculated to weaken the bonds of fellow feeling—that feeling which is the basis of society, affording the sweetest enjoyments of life,—weakening it, by increasing the natural distance between man and his fellow man. It tends, directly and strongly, to detach the heart and the head from the social and religious feelings and duties of life, *by substituting in their stead a wide and splendid variety of sensual enjoyments which centre in self.* Here sensual enjoyments are of two kinds and characters, exerting two distinct evil influences upon society. One is purely animal, extending its ill fraught consequences immediately to those who indulge in it, and remotely to their offspring; as luxurious living, indolence, &c. The other is of a mixed character, having its rise in a more morbid state of the feelings; it is that kind of enjoyment, *totally pernicious*, where self is gratified when others admire, not ourselves, but the gaudy trappings of dress and equippage which we put on. This latter species of enjoyment, which is superinduced by wealth, is most directly pernicious to our moral and religious principles and practices—to the cultivation of the mind and of the social and refined feelings of our natures, by directing our moral and intellectual powers to objects totally useless and unworthy their regard, and thus diverting them from the important considerations and duties of life. And extending, as it does, its malign influences, not only into the mansions of the wealthy,

> "Where *cash* is *real*, and *dress* is *show* of worth,
> And he is great who claims a noble birth;"

but also into the more humble dwellings of the middling and lower classes of society, whose means are but the proceeds of their daily labor, where wisdom demands the expenditure of those means for the *necessaries* of life, and for intellectual improvement, wealth may be considered as a positive and general evil to the whole community.

Religion, virtue, philanthropy, demand that this evil be stayed; that its demoralizing and enervating influences upon society be checked. And beginning, as the American Farmers are, to assume a station in society where they will exert a powerfnl influence upon all its institutions, manners and customs, to them, if to any, the world must look for an example which will roll back this inundating tide of moral and physical evil. As they are in their occupation the most essentially useful, so let their example, in their "march to empire," be most essentially serviceable, bearing on their standard the word UTILITY, as a guide to all they do.

Respectfully yours,

EDWARD WILBUR.

P. S. Regretted, as is the removal of the late Mr. Buel, (formerly known as the editor of the Cultivator,) from his sphere of usefulness in the agricultural world, it becomes, on the other hand, a matter of gratification to the patrons of that paper, that his place is so ably filled by the talented editors of the Genesee Farmer.—May you long continue in your new and "more extended field of usefulness," to exert your talents for the good of mankind, and receive as a reward, *not wealth*, but the gratitude of those you serve. E. W.

Pittsford, Dec. 4, 1839.

Oak Lands for Wheat.

Messrs. Gaylord and Tucker—A few days since I took a short excursion into the northwest corner of Ontario county, on to a tract of land long known by the name of Hopper Hills, and was agreeably surprised at the thrift and elegant appearance of the farm buildings, and the apparent happiness and prosperity of the inhabitants.—I formerly knew this tract, and recollect well the character it bore, being proverbially a haunt for foxes, and the last resort of those poverty stricken souls who did not like to emigrate so far as to be out of the reach of the *good creature*, whiskey. These hills are not so remarkable for their height, as for the fantastic shapes into which they are thrown,—resembling a lake in a storm covered with bubbles; reminding us of our youthful poetic reading lessons—"Hills peep o'er hills, and Alps on Alps arise." These are sparsely timbered with scrub white oak, without stone or water. The soil is a coarse gravel, sandy, with a slight mixture of clay. The general appearance of the tract in its wild state, was sterile and forbidding. And now, as if by enchantment, these scrub oaks have given place to highly cultivated and beautiful farms. These farms bear, on the face of them, most indubitable proof of the causes which have rendered their possessors thrifty and in dependent, in the luxuriant fields of wheat which in every direction meet the eye. Indeed wheat and clover appeared almost exclusively grown, for the raising of which the soil is most abundantly qualified.

And now the question naturally arises, What has brought these lands into use? And why, if they are now so valuable, were they not taken up in the first settlement of the country? To the first question I would say, that our system of Internal Improvement has had a great effect upon such lands. Since the completion of the Erie Canal, wheat has been in constantly increasing demand, and at very fair prices. The use of plaster, threshing machines, improved implements of husbandry—have each tended to facilitate the raising of wheat, and of consequence brought into use all lands capable of producing it. Had we no plows but the old bull plow to till our lands; had we to pound out our wheat with flails; were we ignorant of the wonders which plaster produces on light soils; and above all, had we no canals to transport our produce to market, these lands would in all probability have contined to be a resort for foxes, producing nothing but winter greens and whortle berries. The second question requires to be considered somewhat more at length. Those familiar with new countries know well, that much stress is laid upon the timber covering the land, as indicating the quality of the soil. I believe this is considered by writers on agriculture to be a just criterion. The first settlers of the Genesee country chose lands timbered with maple, beech, bass, elm, and occasionally large and thrifty black and white oaks; and the soil was a rich muck, highly productive in the grasses, corn, wheat, oats, &c. On such lands were plenty of good building timber, rails, &c., and the produce was just such as the circumstances of the inhabitants required. These lands may have deteriorated a little by forty years' culture, yet with the improved husbandry of the present age, they will now produce equal to any other soils whatever. But they do not now do so. I believe that no one will pretend that large crops of corn and wheat are now as *frequently* grown as thirty years ago. To what extent the climate affects our crops, by the alteration occasioned in it by the clearing up of our forests, I am not prepared to say. Certain it is, that blight, mildew, rust, winter killing, frosts, &c., have rendered the raising of good crops on such soils, rather an uncertain business. Yet, when all these causes are avoided, and all circumstances are favorable, as in the year 1833, we get very heavy crops. I am not capable of investigating fully the reasons why our heavy timbered soils are more subject to blight, rust and frosts, than the lighter soils. The more obvious reasons are, that strong soils give a more rapid, luxuriant growth, and sudden changes in the weather are more sensibly felt.—Clayey soils are retentive of moisture, and therefore very liable to heaving with the spring frosts. Rust and frost are the two worst enemies we have hitherto been called to contend with; and both of these are mostly avoided on the oak opening lands. Some persons not familiar with the Genesee country, may perhaps think that there is a deficiency of lime in our heavy timbered soils, and that that may be one cause of the failure in wheat. This is not the case. Lime abounds in all these lands. Our field stone are mostly lime. There are three grades of oak lands, varying very materially in their value for raising wheat. The first and best are called openings, and are supposed to have been annually burned over by the Indians. They are now covered (if not cleared) with a very thick growth of black and white oaks, from three to eight inches in diameter, and of a uniform height. The soil is very strong, having a greater mixture of clay, and the very best for wheat and clover. The second quality is such as first above described. The third grade differs but little from the second in the appearance of the timber, but the soil is very different. It is apparently white clay, having but little vegetable matter intermixed, and abounding with stone of a kind called shale or slate. Springs and marshy spots are very frequent, and the water is soft. Lands of this description are found in the southern tier of counties.—They are considered poor wheat lands.

In conclusion I would say, that were I to select a farm for the growing of wheat as a principal business, I should choose oak opening land. Sheep husbandry is very well connected with raising wheat on such lands, and I know of no surer way of obtaining the *needful* than by raising of sheep and wheat. Yours, &c.

MYRON ADAMS.

Ontario county, Dec. 1839.

Farm Wall.

Common stone wall, for durability, and an effectual security to crops, is not surpassed by any other kind of fence. The making of it is somewhat expensive, but the benefit, resulting from removing a useless incumbrance from our farms, more than counterbalances the expense.

Although the advantages of this kind of fence are obvious, yet, with many, it is not in very high repute.—They object, that it is every year falling down, and requires much labor to keep it in repair. This objection has some force from the fact that many of our walls in western New York are unskilfully built.

The stones in this region are not generally of the best kind, and wall built of them will not stand as well as wall in those parts of the country where the material is more abundant and of better form. But I know from actual experiment, that wall built as it should be, will make a very permanent fence and require but little repair.

Much of our wall in western New York is laid wrong side up, that is, the stones that are laid at the bottom should be laid at the top. The largest and best shaped stones are selected to be laid upon the ground, the next best for the second tier, and so on till the wall is topped out with small stones, unfit for the place. Although this, at first thought, might seem to be the best way of building, a little reflection and experience will teach a man that it is the very worst. Where will your round and cobble stones lie best? Is it not on the ground, where they will be firmly imbedded in earth and must be immovable? And will not your large and well shaped stones make a much better superstructure than the small cobble stones?

In many parts of New England, wall-laying is a trade; and I have observed that they there select their poorest stones to lay upon the ground. They lay a broad foundation, and with small stones raise the wall from 8 to 12 inches high. This absorbs most of their poor stones.—They then select stones a size larger, and lay them in a double row on each side of the wall, and thus raise their wall 12 or 15 inches. They then select their longest and best stones, and lay them across the wall, so as to firmly bind together the two sides, reserving smaller but good shaped stones for completing the top of the structure.

The wall, when thus built, should be secured by plowing about three furrows on each side, and throwing up, with a shovel, the last furrow, so as to raise an embankment against the wall, at least a foot high. By this means the small stones are all covered, and lying beneath the surface, will be but little affected by frost, and will lie as firm as the best stones you could select. Even if they were no larger than the stones used on a McAdamized road, they would make a firmer and surer foundation than broad and flat stones. The small stones will settle about uniformly and equally into the earth, and being pressed by larger stones above, will lie steady and unmoved in their place. But when large stones are laid upon the ground, the heaving of the frost, and the softness of the earth in a wet season, will cause them to settle more on one side than on the other, and thus tumble down the cobble stone structure above them.

The method of building wall here recommended, will, I think, commend itself to the reflecting and intelligent. But if any have doubts, I could easily remove them by showing them wall that has stood the test of time, remaining firm in its place, while wall laid in a different manner has become dilapidated.

There is another error in wall-laying that I would notice. Some take great pains to lay the smooth surfaces of the stones outward, so as to give a handsome face to the wall. To effect this, they often lay the stones in the most unfavorable position. I have often seen a long and smooth stone set up edgewise and lengthwise in a wall, which seldom fails to be crowded out by the pressure from above, to the ruin of the wall. But do the best you can, no great beauty can be given to a stone wall; and here, as in other cases, *utility* should not be sacrificed to *beauty*. That wall will eventually *look* best, that *lies* best.

In making wall, I direct to have every stone laid in a position so that it will lie most firmly in its own place, and bind together most effectually the stones beneath and about it, without regard to the beauty of the wall when completed. A.

Pittsford, Monroe Co., N. Y.

Improvement in Dressing Hogs.

Jesse Buel, Esq.—None but those who have experienced it, can know the difficulty of enforcing good advice on the ignorant—particularly, if they are to pay any thing for it.

We have labored and argued with wealthy farmers, to convince them of the profit they would derive from taking the Cultivator. We believed what we said, when we told them it was worth the dollar for family reading, beyond the instruction in the better mode of farming.—Very few are willing to pay the dollar for it. If you would give it free of expense, they would read it, but that you ought not to do. We ask them, how an uncultivated mind can be better than an uncultivated farm, growing up with weeds and bushes of no profit? A man of a cultivated mind can improve a farm better than an ignorant man. We have endeavored to illustrate the subject to them, by pointing to the French peasantry of Lower Canada, where they are now farming with the same and similar tools, which their forefathers brought from France about two hundred years ago, on their first emigration to Canada.

To make it more plain—it requires four men and a woman there, to butcher a fat hog. One man to hold each leg of the hog—and, as they say the devil deceived the woman first, and that he is in the hog, so the woman, the wife, must take the knife and shed the blood of the hog, while the four men hold each a leg. The next process is, to light feathers, or other combustible matter, set on fire, hold the hog over the blaze, and singe off the hair. This is their mode of dressing their pork. This was the style, also, in the French West India Islands, half a century ago, and may be yet. These peasants would not pay a shilling for the Cultivator. They know nothing of the value of literature, and have no desire to improve. They do not know its value. We presume, therefore, it was the mode in France, when they emigrated from thence.

Our farmers are proud of the advances they have made beyond the Canadian, in scalding their hogs in a tub of boiling water.

Would it not be useful to our farmers, if they could learn to scald a hog of five or six hundred weight, with the aid of two men, without a tub, where it would require half a dozen men to lift and scald a hog of six hundred pounds, besides the expense of an extra tub, and at the hazard of scalding themselves in the process?

If such improvements are to be learned from reading, and the Cultivator is intended purposely to convey useful improvements in agriculture, and in ordinary, common life concerns, will it not be profitable to the farmer to pay one dollar a year to learn all the improvements through all the United States?

We see, that if a person is accidedtally exposed to a sudden dash of boiling water, on his naked hands, or other naked skin, the heat evaporates so soon in the air, that it inflicts but slight injury to the skin and flesh.—But, if the boiling water happens to fall on the legs, covered with stockings, the stockings prevent the heat from escaping, so that the skin is certainly scalded severely, before the stocking can be removed. Let us learn from this. that boiling hot water, applied to the skin of a hog, will produce similar effects.

If a hog weighs six hundred pounds after he is slaughtered, two men can place him on a plank, or on boards laid on a common freight sled, which most farmers have. Then cover the body, or the upper side at least, and the legs and head, with some cloth that will set close, and woolen is the best, as it is not so good a conductor of heat as linen or cotton. Thick cotton, or double cotton may answer, but a horse blanket of woolen is best. When this is wrapped close to the hog, as the stocking is on the leg, so as to exclude the air, then pour on boiling hot water, sufficient to wet thoroughly the whole, and the blanket will retain the heat, so that it will soon scald the hog, and let the hair loose. Try, and if not all loose, cover and pour on more boiling water. When one side of the hog is cleaned, turn him over and treat the other side similarly.

If the hog be small, a blanket will cover the whole. He may be rolled in it.

If you put tar in the boiling water, or sprinkle fine powdered rosin on the hog, before you cover him, which is better, it will take off the scurf, and his skin will be as clean, after scalding off the hair, as a lady's hand.

Now, is not this information alone worth the price of the Cultivator, to a farmer who fats the improved breed of hogs, which weigh from three to six hundred pounds?

A farmer who fattens such large hogs, will, I think, if he takes the Cultivator, and reads this mode of dressing them, acknowledge that he has reaped the value of the dollar paid for that useful paper. Women may clean the feet and head of the calf, in the same manner, if they please, and save much labor, which I know will be a boon to them, as they are more liberal and not advocates for extra labor.

In my former communication, you said the whale *sails* with his tail. I wrote *sculs* with his tail, like as the boat is sculled by an oar over the stern, his tail being flat, like the oar. Respectfully,

DAVID TOMLINSON.

Schenectady, 2d Dec., 1839.

The Root culture.

Messrs. Gaylord and Tucker,—As you are to extend your usefulness to the farming community, by uniting with the Cultivator, I am disposed to go with you with my views occasionally. While you have been going through with the nine volumes of the Farmer, I have received each number with expectations to be well compensated for the trifling expense. I have perused its pages with pleasure and no small profit. The culture of roots has received considerable attention, but the subject has but just begun. I am of the opinion that in all grain growing districts the root culture will be considered second to no other crop, except wheat; not that roots will be turned to money as corn, barley and oats, but will aid the farmer to extend his wheat crop and increase his stock of cattle, sheep and hogs, and thereby increase the quantity of manure. With a good supply of manure, the root crop may be increased so that both sheep and hogs can be better carried through the winter on straw, chaff and roots, than on hay and grain, and at one half of the expense. Ruta baga for cattle, mangel wurtzel and sugar beet for sheep and hogs. Before we commence with roots, we must see if our soil is well adapted to roots. The turnep requires a sandy soil, but will make fair returns on a gravelly loam. Where clay, or clay loam, are the principal parts, turneps will not make good returns. The mangel wurtzel or sugar beet will do well on clay loam. Clover sod has been recommended for ruta baga. If it is free from other grasses it will do well; if made rich, twenty-five loads of manure to the acre has been recommended; if it is short, unfermented stable manure it will do. In wheat growing districts, where straw is freely used in the stable and yard, forty or fifty loads to the acre will well pay in the increased size of the roots. The 20th of June has been recommended as the best time for sowing ruta baga; for western New-York is too late. The dry and hot sun of July, gives the turnep fly a good chance to destroy the tender plants. The first of June will give a better crop. The average of seasons, if planted the middle of May, they will be less liable to be injured by the fly; but in thus early planting they are more subject to run to neck and top, and are somewhat stringy, and not brittle and sweet as those planted the first of June. Some have raised their seed; such seed runs more to neck and top, and the roots are more branchy. One pound of seed to the acre is as good as two. If the fly attacks them they will as soon destroy them when two pounds are sown as one. I have tried manuring in the drills and spreading the manure over the ground. When I have a good supply of manure I prefer spreading. It is less labor and will do as well. As soon as the manure is spread, plow it under as smooth as possible; then roll and harrow with a light fine-tooth harrow, till it is completely mellowed; then we are ready for the seed, which should be sown the same day; rows twenty-eight inches apart, with a drill that can be built for $2,50. I can sow as fast as I can walk. As soon as they are up so as to be followed in the row, they should be drest out by going through with the cultivator or shovel plow and hoe; at the second dressing, they should be thinned out so as to be one foot apart, and after that they will want but little attention, if the land is not weedy. Many neglect hoeing too long, and then it is a slow business, and the turneps become stinted, which is very injurious to them.

Your obedient servant,

RAWSON HARMON, Jr.

Wheatland, Monroe Co. N. Y. Dec. 18, 1839.

Dutch Method of Yoking Oxen.

J. Buel, Esq.—Having a few days since received from your agent, Mr. C. H. Beleher, of Halifax, N. S. the New-York Cultivator, I am pleased to say it contains many valuable remarks, well worth the attention of the farmer.

On the 137th page of the 5th vol, I saw a cut representing the Spanish or Dutch mode of gearing oxen. For some years past, I have been in the habit of using oxen more or less, yoked both in the English yoke with bows, and in the Dutch Yoke with straps, and now find the Dutch mode to be the best. This way of yoking, has the decided advantage over the English yoke; they are calculated to haul more, and they will back nearly as much as they will haul; and will travel with greater speed. Great care should be taken, in fitting the yoke to the head. And when the oxen are yoked, they stand as close as their horns will admit of, so as not to touch. Cattle yoked in this way can be worked in damp weather—whereas those in the English yoke are apt to get sore necks when used in damp or wet weather. Those who have been in the habit of using oxen yoked in the English yoke, will, on first using the Dutch yoke, despise it—but after a little practice, and the more they become acquainted with it, the better they will like it. I am quite sure those who give the Dutch or Spanish mode of yoking, a fair trial, will, in a short time, give it the preference. In this county, there are but few cattle worked any other way than by the horns. Oxen will often command a higher price yoked after the Dutch mode. They are well calculated for lumbermen.

Nova-Scotia has hitherto been deemed a barren soil. The husbandman has been well paid for his labor for the last year; the soil on which we tread is endowed with a thousand capabilities of production, which require only to be excited by our intelligence to yield the most ample return. It is not an uncommon yield for a wheat crop, to get 35 to 40 bushels wheat from an acre in the ordinary way in which our land is prepared.

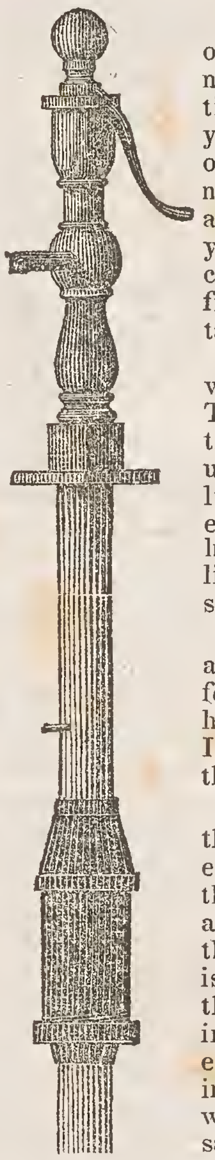
The district where I reside is situated about 30 miles from Liverpool, the market town for this county, where the farmer is enabled to realize a very good value for all kinds of produce he is able to spare off his farm, which I am pleased to say has increased for the last fifteen years; and should the New-York Cultivator be more generally taken, and the precepts thereof more generally adopted, even in this cold country, the farmer would soon be enabled to take three hogs to market where he now takes but one.

I am sir, yours respectfully,

E. H. BURNABY.

Brookfield, Queens Co., Nova Scotia, 4th Nov'r. 1839.

Miner's Pump.—[Fig. 8.]



In the 2d volume and 12th number of the Cultivator, I took occasion to notice this very superior and cheap article; a farther trial of one for four years, only confirms the very favorable opinion I then formed of them. I have now two in operation,—one in a cistern and the other in a well in my cattle yard, as much exposed as it possibly can be, and so far, as severe as the frost has been, no injury has been sustained, or its operation retarded.

If I should judge from the number which I have seen in use, in Albany, Troy, and adjacent towns, I should think they were getting into general use, and superceding the old fashioned lumbersome common pump. Wherever I have seen them in operation, I have invariably inquired how they liked them, and have always been answered in the affirmative.

The cut represents the well pump, and as the Cultivator, containing my former notice of it, may not be in the hands of all the present subscribers, I have transcribed the description as there given.

"This pump is intended to stand on the platform of the well or cistern, even with the surface of the ground; the part exposed is beautifully turned and painted. About ten feet below the base, and above the working box, is a small metalic tube, which lets off the water and prevents it from freezing. It is very light and easily removed; the wearing or operating parts being of cast iron, and the composition with which the wood pipe or tube is saturated, renders them durable, and obviates the evils so often charged on leaden pipes as injurious to health.

"The advantages of these pumps are: the very low price at which they are offered; their durability, perfect operation, and protection against frost." The joints are put together, by means of screws on the ends, one end inserted in the other. This renders the transportation safe.

Since my former communication was published, I have been applied to, by letter, from several gentlemen from different sections, for farther information respecting its capacity; the quantity of water it will discharge in a given time; the distance they will lift water, and the price. To answer which, I applied to the manufacturer, H. Warren of Troy, for I had then only the cistern pump in use, who replied as follows:

"These pumps discharge water about the same in quantity, for a given time, as a first rate one of the old wooden kind, but much easier. I never tried to ascertain more particularly as to time, quantity of water, &c. One man can pump, quite comfortably, with one of these, forty feet deep, and I do not care about selling them *longer* than that; although I have sold them seventy-five feet long; but such pumps *go too hard to suit me*, especially to send off.

"The price of well-pumps, delivered in Troy, with sixteen feet of pipe, below the platform, is $15: all over sixteen feet, 18¾ cents per foot will be added—if under sixteen feet, the same deducted. For cistern pumps, from eight to ten feet in length, $11; all over that, 18¾ cents per foot. But for *very long* well-pumps, say from thirty to forty feet long, our prices are from two to five dollars additional to the above rates.

"I have no pumps, as yet, fitted up for operating in any other way than simply by hand."

Those gentlemen who are desirous of procuring a good, durable and cheap pump, not liable to get out of order, I would advise, by all means, to apply to H. Warren, 437 River-street, Troy, N. Y.

C. N. BEMENT.

Three Hills Farm, January, 1840.

Letter from Solon Robinson, Esq.

Editors of the Cultivator:

Doubts and fears came over my mind, on seeing the announcement of the death of that most useful, and one of the greatest friends of the agricultural community, the late editor of this paper. But could I be assured of life until such time as my memory would be crowned with such honors as this nation have universally poured out of sorrowing hearts upon his, I would ask no greater fame, or proud memorial for my children, than he has left for his. May the mantle of their father rest upon them, and may they be possessed of that father's meekness to wear it becomingly. No doubt but it troubled his last moments, as to what should be the fate of his darling journal. Whether it would be able to sustain life when its heart was taken away, or whether it would follow him to that cold and silent tomb. How it must have brightened his mind at that dark hour, could he have forseen the present bright prospects, that are now dawning anew upon this paper. No step could have been taken by those into whose hands it fell, so well calculated to carry out the good intentions of its founder, as this one of uniting it with the Genesee Farmer. A consolidation of interest will create an expansion of usefulness. The business is arranged so late, that perhaps many at a distance will not be able to become acquainted with the fact in time to partake of the benefits the present season, but I am sure that much good will come of the union.

Enclosed I send you a list of names which I shall hold myself responsible for, though I have not had an opportunity of seeing many of the persons.

I wish those who are anxious to extend the circulation of the paper, would act a little more upon my recommenation in the November No. Induce people to take the paper, money or no money—I will advance the money, and take my pay of subscribers in any thing that grows by cultivation.

Friends of agricultural improvement, common schools and common sense, be up and doing—doing good—cause this paper to circulate—to be read—and those that read, must, will, shall improve. And upon your death bed you will remember with gratitude, the founder of this paper, and I hope also with ample reason therefor, the present editors, that they have been the means of not only increasing your own happiness, but of enabling you to do so much good to so many of your fellow creatures.

Let every subscriber who is able, take two papers, one to preserve and bind, and one on purpose to lend. Let them also be introduced into common schools.

Gentlemen editors and proprictors, my best wishes are with you. Most respectfully,

SOLON ROBINSON.

Lake C. H. Ia. Dec. 14, 1839.

Preserving Hams.

Messrs. Editors—Various opinions are afloat in the world, respecting the best method for preserving hams for summer use. Every lover of ham, no doubt, has a way of his own. But as new inventions are every day coming out, I wish to give my opinion upon a plan for saving hams, that will keep them through the summer just as good and palatable as when first taken from the smoke-house. For the benefit of the readers of the Cultivator, I will give you the recipe for making the brine, and if any should think it worth trying, they will find it to be the best way in which hams can be preserved.

8 gallons of water,
16 lbs. of salt,
½ gallon of molasses,
¼ lb. of salt petre,

and so on in proportion for a less or greater quantity as you may have to save. Hams preserved in this way, will keep through the summer, and I have known them to be kept till winter, and be perfectly good. About the first of March, (or sooner, if you please,) the hams should be taken out of the brine, and washed perfectly clean. Then prepare the smoke house for smoking them. Various opinions have been formed in regard to smoking hams. Some think a smoke-house ought to be perfectly tight, and others think the more open a smoke-house is, the better. I do not think the building that is intended for smoking meat should be tight. The hams are more liable to injury, and are not so good, as those that are smoked in an open building, where the air can have free access. The best material for making smoke to smoke hams, is corn cobs. They make the meat taste better, in my opinion, than any thing else we can procure, though other materials are used, such as chips, wood, &c., but nothing is so good as cobs. About four weeks is long enough to smoke hams; and if the smoke-house be a good one, the hams can remain in it till warm weather. As soon as the warm weather commences, the hams must be taken out; and if it is desired to keep them through the summer, they should be encased in small cotton sacks, which should afterwards be thoroughly covered with a lime white-wash. Then hang them up in a cool place, and whenever you want ham you can have it, and that which is good and palatable. I have practiced the above method for several years, and know of no better way of preserving hams, though many may differ with me. If there be any such, I should be happy to have their opinions given through the columns of the Cultivator. W. S. T.

Culture of Indian Corn.

Mr. Jesse Buel—As I have been a constant reader of the Cultivator, I often find the inquiry from your different correspondents, respecting the best method of raising a crop of corn. I therefore send you a statement of the soil, management and profit of one acre, planted by me with corn the present season. The soil, two thirds of it, was a warm gravel; the other third was low, wet, and covered with rushes and wild grass, with a very tough sod; but I was careful to put two good under-drains through it, which left it a rich black mould.—About the first of May I drew twenty-two loads of unfermented manure, each load containing thirty-five bushels, and spread it evenly over the acre. I then plowed before the manure had time to dry; then dragged lengthways of the furrows; planted the 9th of May, with Dutton corn, the hills three feet apart each way, making 4840 hills, with six kernels in a hill. It was attacked by the grub as soon as it made its appearance above ground, at which time I spread twelve bushels of unleached ashes upon it, which checked them a little, but they succeeded in destroying 70 hills, leaving only 4770. These were hoed and thinned to four stalks in each hill, June 6th; then I sowed two bushels of plaster upon the hills, and hoed again July 2nd; put no more earth to the hills than was taken away; went through with the cultivator both ways, four times—June 1st and 6th, July 1st and 12th. On the 14th of September I cut up and shocked the corn, and on the 28th finished husking and housing it.

Upon one square rod, of twenty hills, and one fourth of a hill, of the best of the low ground, grew seventy pounds of ears, equal to one hundred and forty-eight bushels per acre. The whole product was one hundred and twenty bushels.

COST OF CULTIVATION.

One day plowing,	$2 00
Harrowing half a day,	1 00
22 loads of manure,	11 00
Planting, 2 days,	1 50
Seed corn,	50
Hoe and cultivator, 2 days,	2 00
Hoeing, 4 days,	3 00
12 bushels ashes and 2 bushels plaster,	1 70
Spreading ashes and plaster,	1 00
Cutting and shocking,	1 50
Husking and housing, 7 days,	5 25
Carting stalks,	75
Threshing, 3 days,	2 30
Interest on land,	2 50
Total cost,	$37 00

PRODUCT.

115 bushels of first rate corn,...............
Five bushels of second rate,...............
Stalks, four loads, ...

WILLIAM INGELL.

Volney, Oswego co. N. Y. Dec. 9, 1839.

I hereby certify, that I am personally acquainted with the above named William Ingell, and believe him to be a person of truth and veracity, and that his statements may be depended on.

R. D. HUBBARD, *Justice of the Peace.*

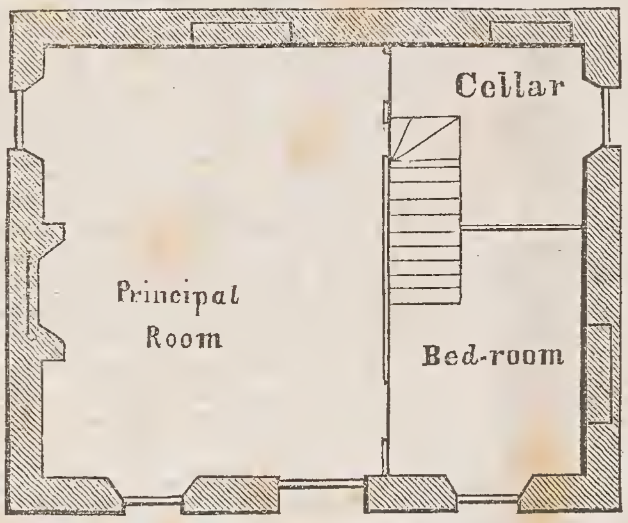
Experiment with Potatoes.

Messrs. Editors—Farmers are generally aware that the potato is not produced on the proper roots of the plant, or those devoted to nutrition, but on side shoots from the main stem, above the roots proper, and nearer the surface of the earth. It has been stated that De Candolle, taking the hint from this production of the tubers, and conceiving that the shoots still farther from the roots on the main stem, if covered with earth, would furnish tubers instead of leaves, actually succeeded in growing them, for considerable distances on the main stems, by repeated coverings of them with earth. A writer on vegetable physiology, in the Farmer's Register, basing his opinions, it is presumed, on this peculiar law of the plant, recommended the following method as probably the best for the cultivation of that root.

"Let the ground be prepared in the usual way; lay the potatoes in the bottom of the furrow, and cover them to the depth of three or four inches, with coarse manure or leaves, and then with two or three inches of earth.—After the stalks are six or eight inches above ground, cover all except their ends in the same manner; and perhaps this process may be advantageously repeated a third time; after which they should be suffered to go to seed. The first covering should, unless the land be very rich, consist in part of manure, in order to furnish nourishment to the plant; the second and third may consist of straw or leaves, as the principal object is to keep the earth loose, and protect the tubers from the action of the sun."

In order to test the correctness or fallacy of these opinions, I determined last spring to partially repeat the experiments of De Candolle, and selected for the purpose two hills on my bed of early potatoes in the garden. The ground was highly manured, having the last year been occupied by a mound of manure, on which cucumbers and melons were grown. This was thoroughly incorporated with the garden mould by plowing, and in this potatoes of the common early variety were planted in hills, at the distance of about three feet. Taking a barrel, I sawed it in two in the middle, and placed one half over each hill of potatoes, sinking the rim some two or three inches in the earth; the heads of the barrel of course were out, and the hills were covered in the usual manner by being slightly rounded.—When the plants came up, and had attained a height of about ten inches, I filled the half barrels with the same rich mould, merely leaving the tips of the plants in sight. The growth of the plants was most luxuriant, the length of the stems far exceeding those in the same earth near them, and they continued green and flourishing long after the others had ripened and died. At the time of digging, the half barrels were taken away, and the earth carefully removed, without disturbing the stems. Not a trace of a tuber was to be found, except on the shoots below the natural surface of the ground, not differing, in this respect, in the least from those around them. The shoots that came out above these, from the main stems, showed no disposition to produce tubers, but reaching the surface, rivalled in vigorous growth the original stems. The yield from the hills was a little more than from those around them, owing perhaps to the longer period of their growth, or the greater supply of nutriment afforded by the additional mould.

Whatever may be the cause, my experiment has not resulted as did De Candolle's, in the formation of tubers above the original or first crop, and would seem to add but little force to the arguments used by some in favor of deep hilling, at the second or latest hoeing. A *rich friable earth*, in which the roots find sufficient nutriment, and the tubers enlarge at their pleasure, and a covering of sufficient depth at the first, would seem to be about all that is required, with a clean surface, for the production of the potato. H. M. G.



Laborer's Cottages.—[Fig. 9.]

The inconvenience frequently experienced by farmers in boarding laborers, renders the proper construction of cottages a matter of some importance. The English mode of building not being adapted in general to this country, it becomes necessary that we should devise our own plans, and with a view of contributing in a small degree to this object, the accompanying outline is furnished, of a laborer's cottage recently erected.

The dimensions inside are 19 by 21 feet. The walls are built of cobble stone, and are 18 inches in thickness. The building fronts the east, and is built on sloping ground, so that the back part has a bank of earth against it three or four feet in height, and the north-west corner is used as a cellar, the bank being rather the highest at that part. The cellar is about 8 feet square, the bed-room 8 by 11, and the principal room 13 by 19. The caves are 4 feet above the second floor, and the chamber is divided into two rooms. Cupboards, one in each of the rooms below, are made and set in the wall, which is built round them. They extend about two-thirds of the distance through the wall; as they are surrounded thus by solid masonary, there is no entrance for rats and mice; and as they are even in front with the inside wall of the room, they occupy no space. The cellar being on a level with the principal room, is rendered very convenient for access; and the expense of a separate cellar is thus avoided.

The inside plastering is upon the surface of the stone wall, but in moist climates the wall next the bank should be lathed to prevent too much dampness. The chimney is built in the wall, and some expense in brick thus avoided.

The cost of such a building must depend much upon the convenience of materials In the present instance, the stone were drawn from adjacent grounds, and a part of the sand obtained on the spot. It was erected however at an unfavorable season of the year, which overbalanced these conveniences. The whole cost, including every thing, was about two hundred and fifty dollars.

Macedon, 12 *mo.* 1839. J. J. THOMAS.

Weight of a Durham Calf.

Messrs. Editors—Having seen in your Cultivator of of the 20th November last, that a Mr. Winant Younghans of Rensselaer Co. had raised a Durham calf, which when five months old weighed 554 lbs., I was induced to try one that I have raised, and was five months and ten days old, and found him to weigh 575 lbs. I was pleased to see that we can raise as large calves as you folks down east. The mother of my calf is only 30 months old, and girts six feet four inches. I have never weighed her. I weighed a common cow to-day, (at least of the common breed,) she weighed 1,295 lbs. If Mr. Younghans will weigh his calf when one year old, I will weigh mine and compare notes. Please give this a place in the Cultivator. JOHN JOHNSTON.

Near Geneva, 7th Dec. 1839.

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Albany—Wm. Thorburn, Seedsman, N. Market-st. gratuitous.
Auburn—H. Ivison, Jr. Bookseller.
Alexandria, D. C.—Bell & Entwistle, Booksellers.
Boston—Hovey & Co. Merchant's Row.
Baltimore—Gideon B. Smith.
Johnson's Springs, Va.—E. Valentine.
Lansingburgh—Alexander Walsh, gratuitous.
New-York—Israel Post, Bookseller, 88 Bowery: A. Smith, Seedsman, and A. Wakeman, Office of Am. Institute, Broadway; G. C. Thorburn, John-street.
Philadelphia—Judah Dobson, Bookseller, and D. Landreth, Seedsman.
Rochester—F. D. A. Foster, at old office of Genesee Farmer.
Richmond, Va.—Richard Hill & Co.
St. Louis, Mo.—John Thorburn, Seedsman.
Toronto, U. C.—Eastwood & Skinner, and E. Leslie & Sons, Booksellers.

☞Every person will be considered an agent who obtains five subscribers and forwards the money for them, and will be entitled to one copy gratis.

☞The previous volumes—the first four at 50 cents each, and vols. 5 and 6, at $1.00 each—can be sent to new subscribers at newspaper postage, and they are also for sale by our agents in the principal cities.

PRICE CURRENT.

ARTICLES.	New-York, Dec. 20.	Boston. Dec. 20.	Philadelphia. Dec. 17.	Baltimore. Dec. 20.
Beans, white, per bushel,	1 25— 1 50	1 75— 2 00	1 25— 1 50	1 50— 1 75
Beef, per cwt.	6 50— 7 00	6 70— 7 00	7 00— 9 00	6 25— 7 50
Bacon, western, per lb.	0 09— 0 10	0 80— 0 10	7 50— 8 00	0 09— 0 10
Butter, fresh, per lb.	0 12— 0 15	0 11— 0 23	0 14— 0 16	0 15— 0 22
Cheese, per lb.	0 08— 0 10	0 10— 0 12	0 10— 0 11	0 09— 0 10
Cotton, best per lb.	0 11— 0 12	0 11— 0 16	0 13— 0 16	0 14— 0 15
Flour, best, per barrel,	6 00— 6 50	6 25— 6 50	6 00— 6 25	6 00— 6 25
Grain—Wheat, per bushel,	1 10— 1 15	1 28— 1 33	1 18— 1 22	1 20— 1 30
Rye, per bushel,	0 70— 0 71	0 88— 0 90	0 70— 0 71	0 73— 0 75
Oats, per bushel,	0 31— 0 41	0 40— 0 52	0 63— 0 73	0 30— 0 31
Corn, per bushel,	0 63— 0 66	0 78— 0 86	0 68— 0 75	0 67— 0 73
Hams, pork, per lb.	0 10— 0 13	0 10— 0 11	0 09— 0 11	0 12— 0 13
Pork, in hog, per cwt.	6 50— 7 25	5 50— 7 00	7 00— 8 00	7 00— 7 50
Seeds—Red Clover, per bushel,	....	8 00— 9 00	5 25— 5 75	2 00— 2 50
Timothy, per bushel,	2 75— 3 00	2 75— 3 00	2 75— 3 00	2 00— 2 50
Wool—Saxony, fleece, per lb.	0 55— 0 60	0 58— 0 62	0 55— 0 60	0 60— 0 70
Merino, per lb.	0 50— 0 55	0 55— 0 63	0 50— 0 55	0 50— 0 55
¼ and common, per lb.	0 37— 0 40	0 45— 0 48	0 37— 0 50	0 47— 0 42
Sheep, per head,	2 00— 5 50	1 50— 2 50	2 50— 3 60	1 50— 3 25
Cows and Calves, each,	23 00—30 00	35 00—55 00	23 00—33 00	34 00—40 00

FROM THE STEAM PRESS OF
C. VAN BENTHUYSEN,
ALBANY, N. Y.

THE CULTIVATOR,

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

NOTICES.

We cannot refrain an expression of satisfaction at the general and flattering terms of approbation which the union of the Cultivator and Farmer has called forth from the most able and efficient of the agricultural as well as other journals of the country. We are still more gratified at the prompt and large subscription we have received, indicating an increase, which, considering the peculiar state of the times, is as welcome as unexpected. Our thanks are renewedly due to our numerous correspondents, whose favors we are most happy to receive and publish. We consider all these things as decisive indications of approval, to be repaid by us, by increased devotion to, and zeal in the great cause of agriculture.

Some of our friends have expressed a fear that by removing the publication to Albany, it would not give that particular attention to the western district, which characterized the Genesee Farmer. We will prove this fear to be groundless. Our journal belongs to our country, in its largest sense; we have subscribers and contributors from every state and territory in the union; yet we hope to contribute useful information to every section. The quantity of matter each number of the Cultivator contains, will enable us more fully to do justice to all, without neglecting any.

TO CORRESPONDENTS.—Notwithstanding we have filled this sheet, as we did our first number, entirely with original articles, we have still on hand several valuable communications, which will appear in future numbers.

TO AGENTS.—Having been assured by several of our friends, that they could greatly increase our subscription list, were they permitted to receive subscribers without insisting on advance payments, we would give notice that the paper will be sent to all such subscribers as our agents may be willing to become responsible for—the money to be remitted in the course of a few months, or as soon as received from the subscribers. The liberal terms allowed to agents will, we trust, induce many of our readers to interest themselves in enlarging the circulation of the Cultivator.

RECEIPTS.—The publication of the list of receipts for the Cultivator, we have thought best to omit the present year, on account of the space it would occupy, to the exclusion of more important matter. The usual list for the past month, would fill nearly a page. Receipts will be sent to all those who may particularly desire them.

PROPRIETORS OF THE CULTIVATOR.—We neglected to state, as we should have done, in our first number, that the firm of JESSE BUEL & Co. consists of LUTHER TUCKER and JESSE BUEL, who are sole proprietors and publishers of the Cultivator.

Establishment of a Board of Agriculture.

The events of the last few months have convinced those who reflect at all, that the only way in which this people can extricate themselves from the embarrassments in which they find themselves, discharge their immense foreign obligations, and restore that healthful state of feeling so necessary in every transaction of business, is to rely on the productive resources of the country, rather than on those of a mere financial nature. The people of the states have learned that it is far easier to create a debt, than to reduce or pay it—that a transfer of an obligation is not a cancelling of it; and that nothing but labor, productive industry of some kind, can be safely relied upon. They are beginning to feel the importance of giving to this labor the most profitable direction, of ensuring to industry the returns to which it is ever entitled.

The state of New-York has long taken an active and leading part in all the great measures that have conferred so much honor on the country and so signally benefited the community. We need only to refer to our system of internal improvement; our noble foundation for the education of every individual in our state; our system for placing ample means of useful knowledge within the reach of the most remote or most humble of our citizens; and the aid which has at different times been granted to the cause of agriculture.

Of the importance of agriculture to the community every one is aware. It is at "once the cause and the evidence of civilization;" it is the base on which the whole social superstructure rests; when agriculture prospers, all goes well; when that fails, and the earth, no matter from what cause, does not yield her increase, depression, panic, and ruin ensues. That the nation depends for its bread on agriculture is obvious to all; that it is not less dependent upon it for commercial and financial prosperity is equally so to every one, who has attentively considered the signs of the times. On the surplus produce of his fields the farmer relies for the extinguishment of his debts, and the accumulation of wealth; on that same surplus must the nation rely to produce the same effects; and to increase this surplus, to develop and bring out our resources, and of course to create new additional means, is one of the most important objects that can engage the attention of our legislature and the country.

We think that for the accomplishment of these objects, and others more or less connected with them, the establishment of a Board of Agriculture, to be under the control and receive the patronage of the state, to be essentially necessary. That if properly constituted and conducted, it would be of the greatest service to the cause of agriculture there can be no reasonable doubt. Connected with the Board and under its supervision, might and would be soon collected an agricultural museum, embracing models of all the most approved implements; specimens of the various seeds, roots, and vegetables, most important to the farmer; forming altogether one of the most instructive and interesting of exhibitions to the agricultural visitor at the capitol of the state, and combining in one view the various sources from which our substantial property is derived.

Every one acquainted with the history of our country knows that there is scarce a section of it, in which the main articles of its produce, and of course the sources of its prosperity, have not materially changed within the lapse of half a century. New-England formerly exported grain and cattle; now her productive industry is turned into a different channel, and manufactures are the chief source of her strength, and constitute her disposable surplus. The middle states have changed their staples less than either the north or the south. Grain has been, and will probably continue to be, the principal object of attention and culture. It is but comparatively a few years since the great products of the south were rice, indigo, and tobacco. With the exception of the last, these staples have sunk into comparative insignificance, and cotton has not only become the grand product of the south, but the great article of export to other nations. Sugar and silk, at the present moment, appear to be pushing their claims to public notice successfully, and there is every indication that ere long these two articles will be struck from the list of our imports, if not added to those of our exports. That we can grow our own silk and sugar is certain; that we shall do so, present indications render very probable. What others can do, the people of the United States can do; and embracing almost every variety of climate and soil, the same principle that prompted the declaration of independence should now enforce the adoption of the only means by which that independence can be maintained. This state has not escaped the fluctuations and changes in the products of its several sections, that have existed elsewhere. For a time the eastern part of the state almost suspended the growing of grain, and allowed it to be confined to the newer and less worn districts of the west. Under a better system, grain in abundance is now produced, while the counties of the west are beginning, and with reason, to inquire whether there is not on the whole a decline in the productiveness of their lands.

In giving the enterprise and energy of our citizens a proper and successful direction in relation to those topics enumerated above; in introducing from abroad such new varieties of seeds, plants, or trees as promise to be valuable, or are suited to our climate; in testing by experiment the value of different agricultural implements, and their adaptation to the purposes for which they have been introduced, by which an immense sum would be saved to the agricultural public annually; in short, by taking the lead in our efforts to improve the state of agriculture, a Board could render the most essential service.

The rooms devoted to the museum would soon become the resort of all that take an interest in the promotion and success of agriculture. The most valuable works on this oldest of arts would soon accumulate; the choicest specimens of our crops would there find a place; the portraits of animals of the most celebrated breeds might line the walls; and the whole made worthy of the visits of persons of taste, as well as become of permanent utility. The cost of accomplishing all this would be little, only some five thousand dollars annually. Enough to defray the expenses of a secretary, and charges for carrying out the designs of the board. One of the acts of which this state may be proud, is the Geological Survey now going on. That it will many times repay, in developing the hidden resources of the state; in preventing useless expenditures; in diffusing useful knowledge respecting the character and mode of treating our several soils; and in throwing light on all those subjects which render a more complete knowledge of the earth and its constituents desirable, any expense that may be incurred, cannot be reasonably doubted.

Wherever the plan of a public Board of Agriculture has been tried, the effects have been of the happiest kind. So self-evident is this fact, that there are few European countries which have made any considerable progress in agriculture, that are now destitute of them, or which has not some arrangement to a similar effect. Propositions have been, or are, before the legislatures of several of the states designed to organize such bodies; and we can see no good reason why in a course which promises so much good at so cheap a rate, New-York should be behind her sisters of the confederacy. The times are hard, it is said; but let us improve the times by improving the soil, and by furnishing its cultivators the most efficient means of doing it.

In reply to the question, "In what way would a Board of agriculture benefit the state?" Judge Buel gave the following satisfactory answer:

> "A Board of Agriculture should consist of three or more intelligent men, and a secretary, meet perhaps quarter-yearly, and receive a fair compensation for the time necessarily devoted to the duties of their office. The secretary should devote his whole time, under the direction of the Board, to the interests of agriculture—
>
> 1. In collecting, arranging and publishing statistical and other useful information in regard to rural affairs.
> 2. In collecting and distributing seeds of such kinds of agricultural products, as may promise to profit our husbandry: together with the modes of their culture, management and preparation for market.
> 3. In receiving, labelling and arranging, models of implements, geological specimens, seeds and samples of rare or excellent products of the soil, portraits of fine animals, donations of books, &c. and in exhibiting them to visitors, and explaining their objects, qualities and promised advantages.
> 4. In answering the inquiries of agricultural men, on all matters relating to any branch of husbandry, or any article of culture.
> 5. In corresponding with societies and individuals, on matters promotive of the interests of agriculture.
>
> The due performance of the above enumerated duties could not fail to be very serviceable, to the state, in promoting the improvement of her agriculture. But there are other duties which might be performed by the board, of unquestionable benefit, should one be instituted, and the legislature think proper to confide such to them, to wit:
>
> 6. Examining, testing and deciding upon the merits of all new implements of husbandry, offered for their inspection—and upon which the board might be authorized to award discretionary premiums, where the articles should be judged highly meritorious—and thereby giving them a character upon which the public might rely. And
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> Last in order, though perhaps first in importance, a Board of Agriculture might write, compile, or procure to be written, and printed, books upon agriculture, the veterinary art, orcharding, gardening, rural embellishment and household economy, suitable for the common school libraries of an agricultural population.
>
> In the several duties above enumerated a Board of Agriculture would do much good. Such a board has been eminently useful in Great Britain. Such virtually, in France, is the Royal Central Society of Agriculture—its premiums, and its laboring members, being paid from the public treasury."

"What should a Farmer be?"

An important query this, and one that deserves to be well pondered. We answer it thus:—

A Farmer should be Industrious.—In no department of life, without industry, can any thing valuable or important be achieved. There is such a thing as an idle farmer, "true it is, and a pity 'tis 'tis true;" but an idle, successful farmer, is something the world has not yet seen. No where is persevering industry more indispensable than on the farm, and no where is well directed labor better rewarded. When we say the farmer should be industrious, we do not mean he should be a slave.—There is, among some farmers, perhaps a majority at the present time, a feverish anxiety to become rich, a disposition to go ahead which renders rest impossible, and hardly allows time to eat or sleep—such men are subject to a task-master of the most imperious character, and one from which they should make no delay in freeing themselves. The farmer can have, and he who manages his affairs well, will always have, his hours of relaxation—hours to spend with his friends, and hours to devote to the improvement of his mind. The way to ensure this, is always to be beforehand with the labor of the farm, and never allow himself to be crowded.—More work should never be laid out than is compatible with this rule; and the work that is required to be done to-day should never be deferred till to-morrow. The difference in the ease with which labor is performed, when done in the right time, or when we are driven to it by urgent necessity, is so great, that attention to this point alone, would, in performing a given amount of labor, make a most material addition to the farmer's hours of rest and improvement.

A Farmer should be Economical.—Let the farmer labor as hard as he may; let him deny his soul and body every required good; let him abridge his hours of sleep, and toil from "morn till dewy eve," without rest, or relaxation; it will amount to but little, unless his affairs are in other respects managed with economy. By economy, we do not mean that closeness or littleness—stinginess if you please, which some are pleased to call economy, but which is infallibly connected with meanness, and is one of the most effectual preventives of all improvement, and the surest precursor of utter degradation that can be found in a man, and of all other things, is most out of place in a farmer. The great secret of economy, is knowing what is useful and necessary, and what not; of knowing when to expend and when to withhold expenses; in keeping our out-goes clearly within our income, and never purchasing what we can ourselves produce, or which a corresponding amount of our own labor will not procure; and in having every thing in doors and out in its proper place, nothing wasted or destroyed, but a general supervising care directed to every thing connected with our business at all seasons of the year. It is miserable economy to undertake to labor without the proper tools; to undertake to see how cheaply we can summer or winter our animals; or to see with how little knowledge and intelligence, or the means of obtaining either, we can contrive to plod along through life.

A Farmer should be free from Debt.—If the farmer wishes to bind a millstone round his neck, to sink him beyond the possibility of hope or rescue—to keep him constantly restless, and struggling for subsistence if not for existence, let him keep in debt; if he would be able to call what he has his own, and breathe the air of a freeman, let him religiously eschew debts. We would almost go so far as to say that nothing excepting the purchase of land, can justify a farmer in contracting a debt; and before he sells himself for more land, he will do well to inquire whether he has capital to work it profitably, or whether what he now has, is brought to the proper degree of fertility. We are confident that if men were to pay ready money for a thousand things they fancy they need, and can obtain on credit, they would not be purchased. The habit of contracting debts has a direct tendency to induce needless risks, and bad domestic economy. Two-thirds of the law suits that arise, and which are productive of so much expense and ill will, spring from this single cause. But whatever circumstances else may occur to render debt necessary, indebtedness to banks is what should never happen to a farmer, and he should never be seen within the doors of one of those institutions. They were never intended for the farmer; and, necessary and beneficial as they may be for the purpose of exchanges and trade, the man whose business and transactions are as those of the farmer should be, can never with safety allow his name to be used too familiarly within their walls.

A Farmer should be Intelligent.—It is an old and true maxim, that "ignorance of the law excuseth no man," and ignorance on any topic necessary to a proper prosecution of his business, or to his proper standing and influence in the community, cannot now be plead by the farmer, without indirectly confessing to a great and inexcusable neglect of means within the reach of every one. Knowledge, no less than money, is power; and its accumulation in the hands of any class is a sure proof of eventual ascendancy; and this fact should stimulate farmers to use every exertion to become its possessors. Universal education is the glory of our land; the true foundation of our national greatness, and, in connection with sound morals, is its surest preservative. Schools, books, newspapers, and journals of all kinds, have a wide circulation, and at a rate that places them in the hands of all who choose to think and investigate. Error cannot escape under the guise or plea of antiquity; and the stake and the pillory are not required to combat it in a land where reason is free to expose its absurdities, or plead the cause of truth. By this general diffusion of the means of knowledge no class has been more benefited than the farmer, and none can have a deeper interest in its continued increase; and none should more freely and fully avail themselves of the means the laws have so liberally placed within their reach.

A Farmer should be Moral.—It has been said that "an undevout astronomer is mad," and an immoral, profligate farmer is an equally decisive instance of mental aberration. The owner of the soil; the producer and the possessor of the main part of the country's wealth; its defence in war, and its conservator in peace, the farmer has every reason to uphold a system not only right in itself but productive of prosperity and permanence, and frown down and repudiate every thing that has a contrary tendency. There is no surer index to the general happiness of a people, and stability and excellence of their institutions, than the tone of morals that exists among them. If the standard is high, private right is respected, the law is paramount, and property is safe; if the standard is low, power makes right, force is law, insubordination prevails, persons and property are insecure, the temples of justice become the fountains of bribery and corruption, prosperity passes away, and society resolves into its original elements. There is always in every country a mass of persons, idle and profligate, who herd together in cities, and who, having nothing to lose, are always ready for every innovation, or every disturbance that threatens convulsion and overturn, as in the general scramble they may obtain plunder and power. It was this fact that induced the illustrious Jefferson to pronounce great cities "sores on the body politic;" and the murders, mobs, and riots that prevail in them, are only so many proofs of the great deficiency of moral feeling existing. The observation of every intelligent man in the country has convinced him that if the democratic republican institutions of our country are destined to pass away, it will be in the flood of immorality and profligacy engendered by lawless ignorance; and the patriot and the statesman instinctively turn to the plains, the hills, and the mountains, of our broad and glorious land, as the abode of the principles, and the men, who, under Providence, are our safe-guard and our hope. The farmers have always been found the firmest supporters of order and law, and if they have ever been found arrayed against either, it has been because ignorance fitted them to become tools of the unprincipled and the designing. If ever vice and immorality triumph in our land; if ever our civil and social institutions are subverted; if ever our political liberties are destroyed; the farmers of the country, such men as fought at Bunker Hill and Bennington, Plattsburg and New Orleans, will be found the men to defend them to the last, and die in the last ditch in preventing their overthrow.

The Garden.

There are few things more certainly indicative of good taste and a cultivated mind, in an individual of any class, than a well laid out, and neatly managed ornamental tree and flower-garden; and rarely indeed do we find a man who has any claims to the title of a good farmer, who does not also have a good vegetable garden. Such a garden is an appendage to every farm, indispensible, and which will never be overlooked by the man who has any pretensions to economy. A garden is not less necessary for a mechanic, or a professional man, and the few hours that such men have to spare for exercise in the air, cannot be more profitably or pleasantly employed than in the labors the cultivation of such a spot requires. Few are aware who have never paid particular attention to the subject, of the actual profit every farmer receives from the half acre of land devoted to this purpose; or how much the health and comfort of a family is increased, where the fruits and vegetables of the garden are daily enjoyed. That there is much less attention paid to the garden than it should receive is evident to all, and we hope by frequent recurrence to the topic, to aid our agricultural friends, and others, in this pleasing part of rural economy.

The selection of ground for a garden, where the situation admits of choice, is the first thing to be attended to. Almost any ground, with sufficient labor and expense, can be made productive and fertile; but the task of managing land naturally possessing these qualities, is altogether easier than that which is artificially so, and the expense of keeping it in good heart and condition much less. A soil that is what is usually called a rich loam will be found the best for a garden; not too light and porous, but having sufficient tenacity to prevent drouth, and sufficient permeability to prevent any water from standing on or near the surface. If the soil is naturally too heavy or wet, draining deep and fully must be resorted to, for in no place is stagnant water more fatal than in a garden. If the soil is not sufficiently friable and deep to furnish ample room for the roots of plants grown in a garden, it must be deepened by ploughing or spading, incorporating manure with the newly disturbed earth liberally, until the proper depth of soil is reached and secured. If it still is too tenacious, and inclining to settle after rains, as clayey soils are prone to, a covering of sand or fine gravel mixed with the native earth, will be found of essential service in correcting the evil; the quantity applied depending on the extent of the difficulty to be overcome.

The exposure of a garden is of very considerable consequence, and where every thing else is equal, a southern one is to be preferred. Our north, northeast and northwest winds are the most to be dreaded, as not only bringing frosts, but at a later period chilling the young plants, checking vegetation, and thus in many instances retarding the maturity or ripening of fruits and plants. A decided advantage will therefore be found in having gardens protected from these northern influences. Where convenient the ranges of out buildings may be sometimes advantageously used for this purpose; where they cannot be so constructed or applied, closely planted fruit or forest trees will be found of essential service. Every one is aware how much warmer and earlier the earth is on the sunny side of a grove, in the spring months, than on the reverse, and it is this early warmth which is required, especially in northern latitudes, to bring forward and mature vegetation. Where trees are used for this protecting purpose, a border of evergreens will be the most effectual, and these can in ordinary cases be provided with but little expense. Independent of their value for protective purposes, such a bordering of properly arranged trees constitute quite an ornamental appendage to a farm, and it should be remembered that every tree planted by the farmer is money placed at compound interest.

During our winters much cannot be done to advance the labors of the gardener. But every preparation should be made by providing seeds of all the kinds it is intended to cultivate, having them properly labelled and arranged that there may be no unnecessary want or delay, when the fit time for planting arrives. Frames for melon hills, covered with glass, or with millinet, as intended for forcing the plants, or preserving them from insects, may also be provided; and where manure has to be brought from a distance, the winter will be found the best time for drawing it, and depositing it in piles to be spread when wanted.

Where there is considerable tenacity in the soil of a garden, a coat of manure applied in the fall, and the whole plowed as deeply as possible, will be found to have a good effect, frost being one of the most efficient of pulverizers, and the manure becoming more thoroughly incorporated with the soil than when put on in the spring and planted upon at once, after being plowed under. It is to be remembered that depth, richness, and fineness, are indispensible requisites in a garden soil; and every operation should have a tendency to produce these results.

A part of every garden should be so prepared that advantage may be taken of the earliest spring to put in such seeds as will not be affected by frosts, and which in this way may be grown much earlier than if delayed till the ordinary seasons of planting. Of these plants the most prominent in the farmer's garden are peas and lettuces, which may be planted as early as the state of the earth will admit. Plants, too, which are intended for transplanting, such as the cabbage, and other tolerably hardy kinds, should be sown as early as is consistent with their safety.

With the progress of gardening and agriculture in the country, various improved methods of forwarding plants and hastening their maturity have been adopted with much success. Where the proper fixtures for hot-beds are not at hand, other modes of applying the artificial heat given out by fermenting manures, have been devised with the best results. Holes filled with manure, and the earth slightly raised upon it; mounds of considerable extent and height covered with sods and earth and planted upon or around, have been found serviceable, and are at the command of every farmer. We shall return to this subject in our next, and if possible give an engraving of a cheap and simple hot-bed which every farmer may and should possess.

Water for Animals.

The value of good watering places for cattle, and the other stock on a farm, is well understood by every farmer; and is felt as one of the greatest inconveniences to the cultivator, wherever they are deficient. If the farmer is obliged to have recourse to his pumps and wells for water during the year, his flocks and herds will most assuredly suffer more or less; and the simple fact that all animals will drink at times when water can be had, is sufficient proof that it is necessary for them. They can exist without it perhaps, but that does not prove they would not be more comfortable with it; and if more comfortable, then the amount of flesh, milk, or wool, is increased to the farmer.

Natural springs or brooks, where they exist, make the best watering places; where these are not to be had, artificial fountains may in many, or in most instances, be provided, and make the best substitute for the first to be found; and where these are not to be had, recourse must be had to wells; the most inconvenient of the whole. If possible, water for the use of animals should be in the fields where they lie, or the yards where they are kept. In stormy weather cattle cannot wander far for food or drink without injury; but when it is mild, it is better for animals to go fifty or eighty rods for water, in the winter season, (store animals we of course mean,) than to have it in the stable or yard. The exercise given to the animal in walking is beneficial in promoting muscular energy, keeping the appetite good, and preserving the health generally. We were assured by a farmer the other day, that he had never had a case of foot ail among his cattle, while the most of his neighbors had suffered greatly; and he could attribute the exemption to nothing but the practice he was in of making his cattle, though he had water nearer, go for their drink nearly a hundred rods, unless in the worst storms of the winter. The circulation in the extremities was thus kept unimpaired, and the stagnation that seems to exist in hoof ail, and certainly precedes freezing, was prevented.

We are convinced there are but few farms, where natural brooks or springs do not exist, on which artificial watering places may not be made, which shall supersede the necessity of wells and pumps, unless perhaps in some very dry seasons. The practice of under draining, if skilfully performed, and with reference to this point, will furnish abundant facilities for this purpose. On almost every farm where no springs appear, wet moist places will be found, rendering the ground cold and sour, and unfit for crops. At the foot of hills, wate will ooze out, or little spots of marsh, producing nothing but coarse grass or flags exist; and in all such places draining will not only improve the soil, but will in most cases furnish sufficient water, when conducted to the surface, for the use of a stock of cattle. Let the drains be cut deep enough to reach the springs that cause the injury to the soil; let them be directed to some central point, or in such a manner that the greatest quantity shall be collected for use, and if necessary a small reservoir or well may be dug to allow the water to settle and become pure previous to passing into the pipes for conducting it to the watering place. If the drains and reservoir are well planned, a few rods of wood or lead pipe, or cement from water-proof lime, will give a head sufficient to raise the water into a trough, and give every facility for watering.

We have, during the past season, seen many watering places made from the water collected in under drains, which thus secured a double good to the husbandman;

and we are confident that nearly every one, the situation of whose farm renders such conveniences desirable, may, by turning his attention to the subject, readily be provided with them, and at an expense scarcely worthy of being named.

WHEAT.

Every thing relating to this plant, its production, cultivation, and improvement, must always be of paramount interest to the farmer of the middle and northern states, as well as those of the vast west, as on this crop the country not only relies for bread, but also for one of its most available articles, next to cotton, for the purposes of exportation. Western New-York has justly become celebrated for its beautiful wheat, and the excellence of its flour, an eminence which it is hoped will be long retained, and we think certainly will be, if the modes of culture best adapted for the production of this crop, are adopted and persevered in by our citizens, and pains taken to improve our varieties by proper selections at home, or importations of approved kinds from abroad. It should be borne in mind, however, that a variety producing excellent grain in England, will not necessarily succeed here;—causes existing in the nature of the climate and seasons may prevent this; neither should the failure for the first year induce the rejection of a promising variety, as it is well known that acclimization is as much required by plants as by animals.

We imagine that the best method of improving our varieties of wheat will be by selection, choosing one or more heads that appear to combine the greatest number of desirable qualities as it regards the berry, flour, length and shape of ear, quality and stiffness of straw, hardihood, and apparent liability to disease, and cultivating from these alone. We cannot doubt that in the hands of a man of science, skill, and observation, results might thus be produced as favorable to the production of wheat in the United States, as the same course of labor, in the hands of Le Gasca, and Le Conteur, have proved to the agriculturists of England and Europe. We have scarcely heard of a sustained and well conducted effort to improve our varieties by selection: and but very few to effect an increase of our crops, by the introduction from abroad of new kinds, and thoroughly testing their qualities. The kind of wheat called in Cayuga county the Canada flint, and in Onondaga county the Cummings wheat, from the name of the gentleman who introduced it, and which is rapidly taking the place of the common flint wheat, is unquestionably an English wheat, introduced into Canada, acclimated, and from thence brought, as we know it was, to the United States. We are assured by extensive farmers, that their wheat of the new variety, produced from one-fifth to one-third more per acre than the old flint wheat in equally favorable circumstances; and hence we may judge of the immense value that would have been added to the wheat crop of the state, had that variety, instead of the old, been generally used for seed the previous year. That wheat will degenerate is unquestionable; the experiments of Le Gasca place the matter beyond a doubt; and that new varieties may be made to take the place of the old, is equally certain. The cause of degeneracy is probably to be found in the want of proper care on the part of the farmer in the selection of his seed; and on this point he should take a lesson from nature, whose productions are, when the action is not interfered with, usually from the most vigorous and healthy seeds alone, these by their natural vigor taking and maintaining the precedence of all others.

But our object in commencing these remarks was not so much an essay on wheat culture, as to call attention to the communication below from a gentleman, who, by the successful experiment he has made in introducing a new variety of spring wheat, has shown not only the practicability but the feasibility of such undertakings. Some of the wheat grown by Col. Abbott the past season, was, we understand, exhibited at the Onondaga Co. cattle show and fair, and excited much notice from its fine appearance and its origin. We raised a number of bushels of this wheat from seed obtained from Col. Abbott, and find its qualities to correspond with those so well described by him. The contrast in the brightness of the straw, and freedom from lodging, between this wheat and some Italian wheat sowed beside it, was striking. It was slightly shrunk, however, as was spring wheat generally. The wheat of Col. Abbott, which we had the pleasure of seeing at his residence, is the finest spring wheat we have noticed this season; berry full and bright.

"Editors of the Cultivator:—According to the promise made in the 6th No. page 82, of the Monthly Genesee Farmer, for 1839, in a paper relating to the conversion of winter into spring wheat, I enclose you the result of my experience with the new wheat the past season.

"It proves to be the best wheat I have raised this season, both in quality and in quantity. It retains many of its primitive winter wheat qualities, and is inferior in no respect, to the very best varieties of spring wheat yet known among us. In the same field, sowed the same day, the product of the new wheat was one and a half to one of the Italian, and while the latter was very badly lodged, the new variety stood erect, a bright stiff straw, that good judges might very readily have mistaken for fine winter wheat.

"I have never had so large a yield of wheat as many writers relate, but I have grown good wheat; and the present experiment produced at the rate of twenty-eight bushels per acre. By comparing the quantity and quality of this new production with the other varieties of spring wheat, I feel myself amply repaid for the labor of the experiment. It has shown me that new varieties can be produced, as old ones degenerate; and that the experimental farmer, may, by care and attention, produce the very best kinds of seed on his own farm.

"Yours, truly, W. ABBOTT.

"Otisco, Onondaga, 1839."

Agricultural Societies, Addresses, &c.

MR. GARNETT'S ADDRESS AT FREDERICK.

Among the many distinguished Virginians to whom that state is deeply indebted for the unceasing efforts they have made to place her agriculture on a high and secure footing, there are two eminently deserving of the respect such men are sure to receive, one of whom is Edmund Ruffin, the indefatigable and able editor of the Farmers' Register; and the other, the worthy president of the Frederickburg Agricultural Society, James M. Garnett, whose address before the Society on their late, or twenty-second anniversary, is now before us. Such men deserve well of their country, as their labors are of more service than that of the whole of our politicians; since the efforts of the last only relate to the disposal of the wealth of the country; the object and result of the labors of the first is to increase it.

The address of Mr. Garnett is principally occupied with an interesting detail of experiments conducted by himself on a variety of articles, such as corn, roots, broom-corn, &c. &c. and in stating the conclusions to which he arrived. One of the most interesting of these experiments was the one instituted between the Baden and the Dutton corn; or rather its continuation from last year. Mr. Garnett comes to the conclusion that neither are exactly adapted to that climate and latitude. Some of the results stated by Mr. Garnett are the following. The Dutton corn which last year was a dwarf compared with the Baden and others, this year rivalled in height all the varieties cultivated, the Baden excepted, which it fully equalled in size and number of ears; thus showing the influence which climate exerts on plants. Another result was, that the Dutton corn, though the earliest, was considerably changed by the Baden, many white grains being mixed with the yellow, whereas no yellow grains were mingled with the white of the latter. This disposition of corn to mix and form hybrids should receive more attention from the farmer. In stating the fact that the color of the grain commences in the outer end of the grain, we think Mr. Garnett has made a little mistake in saying that the silk communicates with the small end next the cob. The reverse is certainly the case with our northern corn, the silk being attached nearer the outer than the inner part, and of course the change resulting from intermixture, if partial, should first show itself on the outer part. Mr. Garnett's remarks on the systemized frauds practiced by some seedsmen are severe, but from some late developments appear just. There must be a reform in this respect, or all confidence in such establishments will be lost.

Another of Mr. Garnett's experiments was on the efficacy of several kinds of manure in the cultivation of turneps. We extract his account of the experiment and its result:

> "One of my turnep experiments was to ascertain which acted best, of the following kinds of manures,—marl, having about 37 per cent of lime,—undrawn but old ashes,—bone dust,—fresh cotton seed mixed with pulverized mortar that had grown hard though recently prepared—bone dust again,—old plaster pulverized,—and fresh stable manure mixed half and half with the sweepings around my stable. These were regularly spread in the order in which they are mentioned, in equal quantities as well as I could judge by the eye, and on equal spaces by measure as to length and breadth. Across these spaces I drilled, in rows fifteen inches apart, seed of the globe or Norfolk white turneps; the yellow Scotch, called the Aberdeen; the ruta baga, and Dale's hybrid turnep, which is also yellow. The seed of the last was at least five years old, but came up as well as the rest. Each kind of turnep appeared to be equally benefited by the same kind of manure; but there was an obvious superiority in the growth of all upon the spaces where the bone dust and the cotton seed with pulverized mortar had been applied; between the effects of which two manures I could perceive no difference. The plants on the marl and ashes spaces were the next best; but slightly better on the latter. The old pulverized plaster, and the fresh horse manure mixed as above stated, evidently produced less effect or benefit than the other manures."

The last extract we can give from this patriotic and able address must refer to the state of the times, and the means of remedying the evils that press upon the country:

> "The last of my warnings and cautions, which above all others I would most earnestly press upon your attention, is against a moral disease of such universal prevalence, that it affects every class of society, but ours, I think, most injuriously; for I consider it the chief cause of the numerous emigrations heretofore made by our brethren to the new states and territories. In a word it is the disease of *Extravagance—of Expenditure beyond Income.*"

And the manner in which he points out and enforces the grand remedies of industry, retrenchment, and economy, is eloquent and instructive. But our limits warn us to forbear.

Cortland County Agricultural Society.

This Society held its annual meeting at the court house in Cortland village on the 8th ult. We learn that several able reports were read, and an interesting address made by the Hon. Wm. Berry, president of the Society. Mr. Berry having declined a re-election, the Hon. John Miller was chosen in his place for the ensuing year. The following officers were also appointed—Joseph Reynolds and Peter Walrod, vice presidents; Paris Barber, of Homer, secretary; Henry S. Randall, of Cortlandville, corresponding secretary; Rufus Boies, treasurer; Wm. Berry, Lyman Hubbards, Hiram Hopkins, Israel Boies, and William P. Randall, executive committee.

The annual fair of this society was held in Cortland village in November, which was well attended, went off with great spirit, and in the display of animals and vegetable products has been equalled by few similar exhibitions the present year in our State. There are few things more gratifying to the lover of agricultural improvement than these fairs, or farmers' holidays, which are becoming so frequent, as they show that the right feeling is operative among farmers, a feeling which leads them to rely on individual effort and associated strength, rather than on the grudged appropriations from the public treasury. The farmers of the beautiful valley of Cortland, have set an example of public spirit alike honorable to themselves, and beneficial to the community. The recorded results of such associations abroad and at home, when managed by intelligent and active men, prove that they communicate an onward impulse to agriculture, cultivate feelings of a fraternal nature among farmers, and by occasionally lightening the mind of its anxiety, and giving the body a respite from its labors, materially assisting to erase the furrow which time engraves on the cheek of long continued care. Our best wishes are with every such institution—let them go ahead.

Mr. Colman's Address.

We have now before us the address delivered by this gentleman at the annual meeting and fair of the Middlesex Agricultural Society. It is in Mr. Colman's best manner, and well calculated to give the professors of agriculture a proper view of the importance and honor of their calling. The introduction is beautiful, and in effect combatting the doctrine that every man is as idle as he can be, he shows that the natural state of man is one of action, and that he is happy in having it thus. It seems a little singular to hear a descendant of the Puritans, talk of the position of man in Eden and his consequent fall and expulsion as "the beautiful allegory of Genesis," but the important moral he deduces from this allegory will perhaps excuse the selection of such terms:

> "It is evident that man could not endure this condition. He would have sunk into effeminacy under such indulgence. Therefore it was that the Creator expelled him from Paradise, and sent him out to till and dress the earth; and to get his bread by the sweat of his brow. So long as his nature is what it is, the Divine Providence could not have ordained for him a greater benefaction. The cultivation of the earth, therefore, is man's duty and business; made so by his constitution; by the necessities of his condition; and by the appointment of his Creator. Let us not complain of it. Let us thank God, for we have great reason to thank him that it is so. If we must complain, let us complain as we may with the best reason, of every institution, sentiment, custom of man, and the world is full of them, that interferes with this great law of his being."

Mr. Colman's remarks on the nature of wealth; what constitutes it; and its true sources, are perfectly correct. He shows that it is labor alone; labor of some kind constituting productive industry, that originates wealth. Of course the farmer, the tiller of the soil, is one of the greatest contributors to a nation's wealth, and so far as that, is a blessing to its real prosperity. There is in the following extract too much truth—to many, bitter truth, to render it palatable to all:

> "We have, it is true, in modern times invented another mode of increasing national wealth, and that is by the creation of bills of credit, bank notes, promises to pay. Many of us are simple enough to believe that we grow rich, just in proportion as we can multiply and circulate these promises to pay. Now I admit that to a certain extent, and within rigid limits, this may be a wholesome operation; but is it any actual increase of wealth? Does a man grow rich as he multiplies his promissory notes of hand? In private life this would be deemed an Irish way of getting rich; in associations it does not differ from this. I mean where it is mere credit; not resting upon actual accumulations, nor based upon prospective results, which are as certain as any thing future in human calculations can be. But when these promises to pay are once made, who is to pay them? If they are ever paid at all, it must be by the hand of productive labor, by the products of the fields or the sea. If productive labor does not make them good, they will never be good for any thing. Every bill of credit that is issued, is an assessment upon the industry of the country. It would have been well for the public, had they seen this before they incurred the tremendous losses they have already suffered. It would be well if they could now see it in season to guard as well as they may against the tremendous explosions which must accompany the extravagance and reckless extension of a system fraught with innumerable evils to the honest industry of the country, and adapted to frame the profligate idler's palace out of the laborer's bones."

This is truth, sober truth, clearly and strongly expressed, and to which the productive classes would do well to listen. But sitting in taverns and railing at the banks, or the government, will not remedy the evils under which this nation groans. The whole cotton crop of the south, will this year but little more than pay the balance of trade against us, leaving our former enormous foreign debt, to which must be added the frightful accumulations of this year, to hang like a millstone on our productive industry, and paralyze all our energies. It is idle to disguise the fact. We are fast becoming the bond-slaves of the brokers of London and Paris, and the destinies of our nation, if not openly, yet actually, wielded by foreigners. So long as we continue to add to our foreign debts, so long must we be subject to the caprices and fluctuations of the times, and if our farmers could be induced to rely more on themselves and their own productions, and less on the manufactures and workshops of Europe, there would at least be a reasonable hope of brighter days. Such fairs as those happily becoming so common in this country, have an excellent tendency to arrest the evil; the addresses and labors of talented individuals may effect still more. Among the first of these, ranks Mr. Colman, and we trust his book will be extensively circulated and read.

Domestic Economy.

We have been requested, for the benefit of our numerous lady subscribers and readers, to give an occasional article on subjects connected with domestic management; a request with which we shall comply with pleasure, albeit we do not pretend to be versed in the mysteries of cookery, or the kitchen; and believe that men should eat to live, and not live to eat.

Coffee has become so general a substitute for tea, as a morning beverage with farmers, as well as others, that a short account of the most approved process for making it may be acceptable. Multitudes of substitutes have been attempted for coffee, but with little success; and the most of them are unpalatable and unhealthy. Mocha or Java coffee is the best, but that from the West Indies is the most common and cheapest. No imperfect berries should be allowed in it. Much of the goodness of coffee depends on the burning. When it reaches the proper point, it will be of a dark brown throughout, and brittle. Roasted in a coffee roaster it is best, as in an open vessel much of the aroma or flavor, depending on an essential oil, is lost. Where the best coffee is required, it should be roasted, ground, and drawn at once; as any delay in these processes injures the quality. An ounce of coffee or a good table spoonful to a pint of water is about the proper quantity. The water should be poured upon the coffee boiling hot, and boiled about twenty-five minutes; longer than this is prejudicial. Various methods are used to clarify or render coffee clear. Some people drop in an egg, and stir it up with the coffee, just as the roasting is completed; the albumen of the egg assists in rendering it clear when cooked. Others use fish skin for clearing it; a piece as large as a shilling piece is sufficient. Some use a filter; and others strongly recommend tying the ground coffee in a clean flannel cloth, which is then placed in the boiling water. A gill of cold water poured into the coffee-pot when taken from the fire, and allowed to stand a minute, will render it tolerably clear, but not thoroughly fine. Much of the goodness of coffee is depending on the quality of cream and sugar used with it. Skimmed milk and rich coffee are incompatible.

Poultry.

There is many a good housewife that can roast or boil a chicken, turkey, or goose, to admiration, that does not understand determining the age of the fowls they are to cook, and hence serious mistakes sometimes occur; part of the chicken-pie, or one of the brace of roasted fowls being over-done, while the other is utterly unfit to send to the table. They who undertake to cook a pullet with its maternal progenitor of the third remove, or spit a ten months duck or goose by the side of their grandsires, will probably be unsuccessful in producing a dish to their satisfaction.

The breast bone of a fowl gives one of the surest indications of the age of the bird. If it is soft and bends or gives easily, the fowl is young; if it is hard and inflexible, whatever may be the quality of the bird in other respects, time will be required to cook it. Much may also be known by the appearance of the toes and feet—those of the young being usually perfect and flexible, while older ones rarely have their feet in that state. In young geese, the cavity under the wings is very tender, the web between the toes thin and partially transparent, and if the head of a pin is passed along the breast or sides, the skin will readily tear like fine paper under a knife. By attending to these points, disappointment may at times be avoided, as the time required for cooking in any manner, young and old poultry, is widely different.

Preparation of Souse.

Pig's feet, ears, &c. when properly prepared or cooked, make one of the best of dishes; and as these can usually be procured at a low price, the use of them at times may be economical. In preparing them the water in which they are cleansed, should not be very hot; the hoofs should be peeled off with a sharp-pointed knife, the hard, rough places cut off, then thoroughly singed, and boiled until they are thoroughly tender, or till they are with difficulty taken out with a fork. Four or five hours are generally sufficient. When taken out, the souse should be put into cold water. The bones are then to be removed, and the whole carefully packed down tight, in a wooden or stone vessel. After it is packed close, boil the jelly-like liquor in which it was cooked with an equal quantity of vinegar. Salt as required for the seasoning, and add cloves, allspice, and cinnamon, at the rate of about a quarter of a pound to a hundred weight of the meat. The vinegar with these ingredients added, is to be poured upon the souse scalding hot. When wanted for cooking it may be cut in slices, and prepared either by broiling or frying—the latter is the most preferable.

Hard Water.

There is nothing that gives more annoyance to the housewife in the management of her domestic affairs, than what is usually called hard water. This is water impregnated with the muriate or sulphate of lime, the acids of which unite with, and neutralize the alkali of the soap she uses, leaving the grease free to float like a dirty scum on the water, and rendering all attempts at clean washing, a failure. The best way to avoid this evil, is for the farmer to provide a good rain-water cistern; but where this has not been done, water may be rendered fit for washing in two ways—the first is, to "put a couple of quarts of wheat bran into a bag, which is placed in the water, while heating over the fire, and the water, when hot enough for use, will be found soft. This quantity of bran has been found sufficient for any common washing." The second method is to use soda, for the purpose of neutralizing the acid of the substances that occasion the hardness. "A few ounces of soda will soften a hogshead of the hardest water. It is greatly superior to either pot or pearl-ash; (or the common ash-ley which is sometimes used for the same purpose;) giving a delicate whiteness to the linen, without the slightest injury; and it never, unless excess is used, in the least affects the hands." The expense of either method is trifling, compared with the trials of patience arising from unprepared water.

Batter Cake.

The following is from a Lady:—"One pint of cream, one pint of sour milk or buttermilk, four eggs, a teaspoonful of salt, saleratus sufficient to destroy the acidity of the milk, and three pints of sifted flour, or enough to make a stiff batter. Stir the articles well together, and bake in a deep dish. To be eaten hot with butter."

Extracts from our Correspondence,

ANSWERS TO INQUIRIES, &C.

The following is from an esteemed contributor in New-York, and refers to some remarks of ours on an extract from a correspondent, who is, we believe, a native of Great Britain, and a first rate farmer. The remarks may be seen in the last volume of the Farmer. On the subject of draining, there is no necessity for 're-considering' our opinions. We are its most strenuous advocates, having abundantly experienced its beneficial effects on our farm, and consider it essential to any system of good farming. We are at the same time aware, that expenditures for this purpose, to the extent practiced in G. B. would be ruinous here; and should our farmers in general attempt such a course of expense, they would soon find themselves without a farm to drain. Four-fifths of the farms in the United States would not sell for more than from thirty to forty dollars per acre; and on such farms to attempt an extended system of draining, at from 50 to 80 dollars per acre, where the land, when the process was completed, would not sell for more than half the sum, would be an absurdity, of which we are confident few men would be guilty. Our correspondent seems to overlook the difference between the profits of a farm near the city, and those in the country; and this is the point which must determine the policy of expenditures. If by an expenditure of 80 dollars, an acre of land worth 200 dollars, can be made worth $500, few men would hesitate about the outlay. If a man expends 80 dollars in draining an acre of land worth but 40 dollars, which would only be worth 50 afterwards, we apprehend common sense would pronounce him in "not a very good way."

"I have drained a few acres at an expense double the extravagant sum ($70 or $80 per acre,) mentioned in the editorial remarks, and I think the outlay has been highly judicious. Not one farmer in ten, who has lands that require draining, can pull up stakes and hie away to other sections of the country, and buy lands cheaper than he could drain his own. But very few farms require more than a comparatively small portion of them to be drained—and this portion, owing to its particular location, its appearance and other circumstances, must be drained at a price even greater than that for which the owner can buy superior lands in the neighborhood. I wish, Messrs. Editors, you would re-consider your decision, and I am sure you would come to the conclusion, that nine-tenths of the farms in this country that are injured by excess of water, should be drained as soon as the owners can possibly do it. I may add, that nearly the same exceptions may be taken in respect to the remarks on gathering leaves for a manure. S. F."

Water Proof Cloth.

"As the cold and wet season of the year has commenced, it would be of great service to farmers, when exposed in rainy weather, to wear a coat, or large cape, made of some light, but water-proof cloth, to throw off the wet; and I would thank you, or any of your numerous correspondents, to inform me of the best mode of making cloth, either cotton, linen, or woolen, water-proof, by means of India Rubber or other substance, provided the method be easy and practicable, and that the cloth will be durable and not liable to crack in wearing."

The substance most commonly used for making cloth water-proof, both in this country and abroad, is some one of the varieties of the gum Caoutchouc, or India rubber. All that is necessary is to dissolve the gum, and with it to saturate the cloth. Purified sulphuric ether, will dissolve it, as will spirits of turpentine, but the last solution is so long in drying, as to be objectionable. The fluid now commonly used is purified naptha from coal tar, (the Seneca oil of the shops, is this substance formed by nature,) which is a cheap and powerful solvent, and does not change the properties of the gum. A thin covering of this solution laid on cloth, renders it impervious to moisture.

A late volume of the London Encyclopedia gives the following directions for its preparation and use. "In Europe, caoutchouc is also used extensively in the manufacture of water-proof cloth. For this purpose it is usually dissolved in the oil distilled from coal tar, and spread upon the surface of a piece of the cloth, upon which a similar piece is then extended, and the whole passed between a pair of rollers. Thus the fabric consists of two pieces of cloth, with a layer of the India rubber interposed, and uniting them together. The cloth thus prepared is so impervious to moisture, that floating or hydrostatic beds for invalids, are formed of it, and even beds and cushions are rendered elastic by inflating them."

Notwithstanding, the preparation of water-proof cloth may be performed by individuals, we imagine it would be preferable to purchase such cloth already prepared, at some of the manufactories of water-proof cloth and goods. Of its value for the purpose suggested, there can be no doubt.

Internal Improvement.

"A Traveler," is respectfully assured, that although in the main we agree with him on the question he has discussed; yet, as the subject is not strictly in accordance with the design of this paper, and may be construed as an interference with matters more properly treated elsewhere, we shall not insert his communication. We are the decided advocates of internal improvement, believing, that wisely constructed, and well managed, they aid the producing classes most essentially; and desire their progress as far and as fast as the undoubted resources of the state treasury will justify. We are farther as decidedly opposed to any crude or ill-digested projects, founded on conjecture, or calculations manifestly erroneous, and which in their progress may involve the expenditure of uncounted millions, and create the hazard of entire loss, or the fearful result of future taxation. *This* state has so far done honorably; that career is not yet closed.

East and the West.

We have received from Liberty county, Mo. a well written paper, defending the west against some of the charges which eastern tourists and writers have brought against it, and with no inconsiderable success. As on all these subjects however, we know but one country and one people, we must decline publishing the paper; confident that whatever of error exists, will be speedily dissipated by enlightened intercourse; and knowing that none but feelings the most friendly and fraternal prevail in the Atlantic states toward their brethren of the west, we cannot willingly aid in causing or perpetuating a feeling of querulousness or complaint.

We thank our correspondent for the suggestion in his last paragraph, and will endeavor to make such arrangements as shall meet his wishes and that of others, in regard to a supply of the back volumes of the Cultivator.

Silk Culture.

Our respected correspondent, T. W. Smith, Fauquier county, Virginia, requests us to give a plain and unsophisticated account of what we ourselves know experimentally about the profits and losses of raising mulberry trees for the exclusive purpose of making silk—and asks that our experienced subscribers will do the same. We quote the last paragraph of his letter:

"I have myself at this time upwards of 20,000 of the morus alba, (four years old next spring,) for all of which I now only ask $100, and must take them up and throw them away in the spring, if I cannot have some assurance that the manufacture of silk, will be more profitable than the raising of wheat and corn."

We answer for ourselves, in the first place, that we have never attempted the cultivation of the mulberry either for silk or for sale; have never made a single experiment on the subject, and of course can have had no personal experience or knowledge on the subject from our own practice. We have had, however, from the first, great confidence that the culture or production of silk, was destined to occupy a prominent place among the articles grown by our agriculturists, and the experience afforded the past year, has confirmed us in the opinion, that for ease and profit, silk may soon rank with our most valuable staples. The production of silk will be found to be a very different matter from growing mulberry trees, partaking less of the nature of speculation, and taking its place at once among the sober occupations and business of the farmer and his family.

Two instances have come to our knowledge of the operations of the last season, the facts of which are beyond doubt, and which will show what *has been done* in the production of the raw article, of which, by the way, there is nothing has a quicker and more certain sale. "A Connecticut farmer, the past season hatched out some worms to be fed by his children, three in number, who went to school every day; and they gathered leaves and fed the worms in the morning; returned at noon to feed them again, and at night completed the feeding for the day. The worms had little attention, but what was given by these children, and the silk when reeled, was sold for one hundred and seventy-five dollars." The other instance is the experiment made by the Rev. Mr. McLean, of New-Jersey, the past season; and is, we think, perfectly conclusive not only as to the practicability, but the profit of growing silk. From one quarter of an acre of ground, planted with the morus multicaulis last spring, he fed worms which gave him of fine reeled silk twelve pounds, or about 50 lbs. per acre. This is a low, and we think a perfectly safe estimate of the quantity that can be grown from an acre of mulberry trees, even where they were to be taken up every winter, and set out in the spring, (where the tree will endure the winter, the amount will of course be much increased,) and at the very lowest prices of the raw material, this crop would give a greater profit per acre, than could be derived from almost any other source.

We shall give Mr. McLean's paper an early insertion, as it is in its details more full and clear than any which has yet come to our notice.

Inquiries.

A 'Boston Subscriber,' has propounded a number of queries, which we shall answer seriatum:

"1. What is your method of employing liquid manure?"

Liquid manure, as the term is understood abroad, we have never used either on grass or plowed lands. Where the proper substances are provided, there will be little or no liquid manure in our stables or yards; it will be absorbed, and may be applied with the other parts of the manure at once to the soil. Where manure is with difficulty procured, the modes of preparing and using liquid manure may be adopted with profit; at present its combination with other materials will be preferred by the farmer.

"2. What is your opinion of fall plowing for New-England soil?"

The benefit or propriety of fall plowing in New-England and elsewhere, is depending on the quality of the soil itself. Light soils do not require, and are not benefited by fall plowing; but those that are compact and heavy, and abound in clay, are benefited by such plowing, frost being one of the most active agents we have in pulverizing the soil.

"3. What is the difference of profit between milking cows twice or three times per day; and what the difference in the cost of keeping or pasturage?"

We know of no experiments that determine these points; they are of but little consequence, however, and our correspondent can easily test the matter for himself, if he chooses to institute the proper experiments.

A variety of plans for improved farm buildings, barns, &c. have already appeared in the Cultivator, and the suggestion of our correspondent as to barns with cellars shall not be overlooked. Hogs require both light and air, but barns can be easily constructed which will allow these, or other animals, to be kept under them.

We are unable to name any agent for foreign agricultural periodicals; but in all our principal cities, booksellers may be found, who will order for subscribers such works as they may desire.

Suffocation of Wheat.

Extract of a letter from a correspondent in Western New-York:

"The winter thus far has been one of unusual severity. The mercury has been lower that it has been for a number of years, and below 0 far more frequently than usual. The heavy body of snow which accompanied the storms of December, and the fore part of January, has had the effect of preventing the freezing of the ground, or rather taking out what little frost was in it previous to the fall of snow. In this state of things, the wheat crop is always in danger; you recollect how much the country suffered in 1836, from this cause, although it was not in operation at so early a period of the year. When the ground is unfrozen, there is always, owing probably to the slow thawing going on, a space between the earth and the overlaying snow; and as in this space the air cannot circulate, it speedily becomes deteriorated, parts at first with its oxygen to the plants in the unfrozen earth, and then produces on the plant the same effect as confinement in carbonic gas does on vegetation. The more dense and solid the snow becomes, as it always does towards the spring of the year, the more urgent the danger; as at this time the warmth is increasing, and consequently the greater the space occupied by the confined air. At this time of the year, the wheat plants, if dug down to, will be found a fine green color, but as soon as the snow goes off, and it becomes exposed to the sun's light, it speedily turns yellow, and then white and dry. In the year above mentioned, I lost entirely 16 acres of the finest looking wheat I ever saw on my farm. It was oak land, had a gentle slope to the east, and the snow did not disappear from it till in April. It lay very evenly over the whole field, and when it went off, the wheat, to an unpracticed observer, would have appeared fine. As fast as the snow disappeared the whole dried, having evidently been suffocated, and not a bushel of wheat was produced from the whole ground. The wheat as yet is not hurt; but if the snow continues to accumulate, or we have no thaws to bare the ground, before this snow is carried off in the spring, it can hardly fail of suffering more or less. For this danger there appears to be no available remedy; and I never knew but a single instance in which one was attempted. A farmer had some five or six acres of wheat on which the snow lay equally, and till late in the spring. By digging through the snow he found there was no frost, and thus his wheat was in danger of suffocation. The snow was then about a foot in depth, and very compact; but by taking advantage of its softening in the middle of the day, and driving his stock of cattle repeatedly over it in every direction, he filled the snow with holes, partially expelled the vitiated air, and gave an opportunity for its replacement by atmospheric air, and in that way saved his wheat, while others similarly situated, yet who neglected such precaution, suffered a total loss. Perhaps this preventive might be used oftener than it has been, and it might be successful. At any rate where practicable, no injury could result from attempting it where the wheat crop is similarly situated. H. M. G."

Inquiry—Roots.

"Messrs. Editors—I should be pleased to have your opinion on the following points; what kind of roots will be the most profitable for us, in this section of the country, to cultivate? Should roots be washed when fed to animals? and is cutting or slicing them necessary for feeding to cattle?—*Kentucky, Dec.* N. S."

From what we know of the general character of the soils of that State, and the temperature, and frequent dryness of their seasons, and the fact that the ruta baga frequently fails in a dry soil and a dry summer, we should suspect that valuable as the turnep is, the sugar beet or the carrot would be better for our correspondent than that root. As the turnep must be sown late, just as the period of our summer heats is commencing, it does not get as firmly rooted as plants sown earlier, and consequently cannot resist a drouth, should one occur, as well as such. We are of the opinion that for the Middle States, the sugar beet will become a favorite root, not only for the making of sugar but for feeding animals. The moist, humid air of England secures their turnep crop against drouth, while it is unfavorable to the beet; here the seasons are in a manner the reverse, and it is not unreasonable to suppose, in this respect, practice must be so too.

We have never found it necessary to wash roots for animals, unless grown in a tenacious soil, and gathered at an unfavorable period. Turneps, beets, and carrots, thrive best in a soil loose and friable, and if gathered when dry, there will not enough dirt adhere to the roots to produce any injury in feeding. But if grown in ground tenacious in its character, or where the earth is wet, so much dirt will be found on them as to render washing necessary. The same remarks apply to potatoes, which are extensively used for feeding swine, and which are usually prepared by steaming or boiling.—We have never found any advantage in washing them when gathered dry and in good order, and from the avidity with which swine, when confined, seize on fresh dirt when accessible, think it possible it may be beneficial in small quantities, rather than hurtful.

Roots, when fed to horses, hogs, or sheep, should be cut, particularly the ruta baga; but when the latter are fed to cattle we prefer them whole. For a number of years we have grown and fed turneps to a considerable extent. At first we were in the habit of slicing or cutting them, but we found cattle were very liable to be choked with the pieces when cut, and rarely or never when given whole. The practice of cutting for cattle has therefore been wholly abandoned, and we have not had a creature choked since. It is a pleasure to see an animal used to the ruta baga, making his way with dexterity and ease into the large yellow roots; and feeding in this way is no inconsiderable saving of labor, where a number of cattle are to be fed.

"A Subscriber," at Knoxville, (Tenn.) who requests a "detailed account of Mr. Bement's Forcing Pump, &c." will find his wishes gratified in our next paper, Mr. Bement having furnished us with the desired description, and a drawing of the apparatus, which is now in the hands of the engraver.

Giant Rhubarb.—Several of our friends have requested us to send them a few seeds of this recently introduced variety of the Pie-plant, which we would do with pleasure could the seeds be procured, but none are to be had in this city.

Dutchess Co. Ag. Society.—The report and Constitution of this Society, furnished us by a friend at Poughkeepsie, were published at length in the Genesee Farmer. The Society is to meet on the first Tuesday of this month, to complete its organization by the choice of officers, &c., and we trust, from the spirit already evinced, that measures will be adopted to enable the Society to prosecute its objects in such a manner as to give a new impetus to the interests of Agriculture even in this highly improved county.

Are your Apples good?

If not, February is the time to make preparations for improving them. There is a most surprising negligence among farmers on the subject of fruit, which is the more inexcusable, now when the value of fruit, apples particularly, is so much better understood than it formerly was. It should never be forgotten that a tree that will yield from 50 to 100 bushels of large, fair, and beautiful apples, which would be worth in any market from 25 to 50 cents, occupies no more space than a tree producing perhaps half the quantity of sour, bitter, inferior apples, that even hogs, unless threatened with the horrors of starvation, will not touch. Grafting is the remedy for such fruit, and there is no one who may not now sufficiently understand the process of grafting, to perform all that may be necessary to furnish an assortment of the best apples the year round; or if a farmer prefers to employ some one to do this business for him, such men can in general be readily obtained at the most reasonable rates. The farmer himself, however, should procure his own grafts, label them properly, and then, when put in, he will be certain of the fruit he wishes, which is not always the case when itinerant grafters are employed, that find their own scions. Let the farmer then look about him during this month, and procure such apple grafts as will give him an ample supply of all the most desirable kinds, not only for the table, cooking, and the whole year, but such as will be the most valuable for feeding to swine or cattle, and have his poor worthless fruit-trees filled with these scions, and in a very few years he will reap an abundant harvest for his pains and expense. When an orchard is to be commenced, the better way doubtless is, to apply to some nursery-man upon whom reliance can be placed, and make such selections as may be wanted, of trees grafted when young. This method will ensure good fruit, as when well planted, such trees rarely fail, and the danger of failure, which sometimes exists where large trees are grafted, is thus avoided. We then again ask the reader, are your apples good?—and if not, urge upon him the importance of attending to the matter without delay, as every year's delay in grafting, renders another year's use of worthless fruit necessary.

DICTIONARY OF TERMS

USED IN

Agriculture and its Kindred Sciences.

ANALYSIS. To determine the value of any soil, or to be able to correct any fault in the original constitution, or any deficiency arising from improper cultivation, it is necessary that the nature and proportion of the substances composing it should be understood. In agriculture this examination is termed analysis; and in its simplest, yet still effectual method, may be practiced by every farmer. The implements required are a pair of scales, accurate to the tenth part of a grain; a crucible; some muriatic acid, and a few small vessels of china or glass.

The earth to be tested by the farmer should be taken from a few inches below the surface, and be an average specimen of the field, or the soil to be examined. The quantity to be examined, say 2 or 400 grains, is to be slightly pulverized or well mixed together. Put of this, 200 grains in a crucible, and heat it to 300° of Fahrenheit, or bake it in an oven, heated for bread, for 15 minutes; cool and weigh. This will show the absorbent power of the soil, and as this is depending mainly on the animal and vegetable matter, if the loss is considerable it is a decisive proof in this respect of fertility. The absorbent power varies from 1 to 12 per cent.

After weighing, heat it again in the crucible to a red heat, and until the mass shows no bright or sparkling particles, stirring it with a glass or iron rod; cool and weigh, and the loss will be the animal and vegetable matter in the soil.

Take 200 grains of the dried earth, mix it thoroughly with a gill of water by stirring it for several minutes. Let it stand for three minutes, and turn off the muddy water into another glass. Dry the sediment in the first glass at a high heat, weigh, and it gives the silica contained in the soil. Let the water turned off settle clear, turn it off, dry at a high heat and weigh; this gives the alumine or clay.

Put into a suitable glass or flask, one fourth of a gill of muriatic acid and water in equal proportions, and balance the scales carefully. Put into this mixture, 100 grains of the earth, let it stand till all effervescence has ceased, which will sometimes be an hour or more; carefully note the weight required to again balance the scales, and that may be set down as the weight of carbonic gas expelled, say six grains. Then as 45 is to 55 so is this weight to that of the base, or the lime. In this case the lime would be $7\frac{1}{3}$ per cent.

To ascertain if earth contains iron, stir the muriatic acid and water with a strip of oak bark, and if iron is present in the liquid the bark will turn dark. To ascertain the quantity, put in prussiate of potash till it no longer forms a blue precipitate, let it settle, heat the deposit to redness, carefully weigh the remainder, which is oxide of iron.

To determine the presence of gypsum, take 400 grains of earth, mix one-third the quantity of powdered charcoal, keep it at a red heat in a crucible for half an hour. Then boil the earth in a pint of water for 30 minutes, filter the liquor and expose it for some days in an open vessel. A white deposit will be sulphate of lime, and the weight will determine the proportion.

These processes are all simple, and can be performed by any one. By them we obtain—1st, the absorbent power; 2d, the amount of animal and vegetable matter; 3d, the silica or sand; 4th, the alumine or clay; 5th, the carbonate of lime; 6th, the oxides of iron; and 7th, the gypsum, or plaster of Paris. The salts exercise a great influence on vegetation; but as they principally depend on the animal and vegetable matter in the soil, and as the determining their qualities and kinds are too difficult for the analysis of the farmer, the processes are omitted. The above ingredients are all that exert a marked influence on the fertility of soils, and on their proper proportion its goodness depends. If soils contain too much silica or gravel, they are porous; and if too much clay, retentive. The last is usually the worst fault, and may be known by the water standing upon it after rains, remaining unsettled for a long time, owing to the clay held in solution. Wheat winter kills on such soils; on calcareous gravelly ones rarely. Good soils usually contain from 65 to 75 of silica; from 10 to 16 of alumine; from 4 to 10 of lime, and varying proportions of vegetable matters, animal and mineral salts, &c. The analysis of soils forms one of the most decided steps in the improvement of agriculture, as it clearly points out what is wanting to remedy any defect, and give ease of working, and abundance in product. Every farmer should understand the nature and composition of his soils, and may do so, with little time, and at a mere trifle of expense.

ANIMALCULÆ. The microscope has opened to the observation of man a race of beings so small as to be utterly invisible to the naked eye, yet endowed with all the functions of vitality and perfectly organized animals. Some of these are called Infusoriæ, from being always found in water where plants are decaying, and some Diatoniæ, but all included under the term animalculæ. They have long been regarded more as objects of mere curiosity than any thing else; but recent discoveries seem to indicate that these minute insects have had an important influence in modifying the crust of the earth, and giving it the character it now possesses. Mountains of flinty rock in Silesia have been found by Ebrenberl to be wholly composed of the shells of animalculæ; and in this country masses of remains of the infusoriæ have been found several hundred yards in extent. Unlike the shells of the molusca and testacea, which are lime, the shells of these invisible animals are found to be unchanged by fire, and composed of pure silica. All bodies of long stagnant water, such as those where peat is formed, or bog earth deposited, abound with infusoriæ; and Professor Bailey of West Point has found at the bottom of peat earth and in it, immense quantities of these minute remains. It is a curious fact that animals invisible in themselves to the eye, should be able in the course of centuries to form mountains, change the face of continents, and exert an influence by no means trifling on the labors and productive industry of man.

ANNUAL. This term is applied to plants that arrive at maturity in a single year and then perish. The stem of annuals is generally of rapid growth, porous, and abounding in the juices necessary to the perfection of the seeds in a single season. The herbage of some plants is annual, while the roots are perennial, or remain from year to year. Maize is an example of a proper annual; the grasses, of perennial roots with annual herbage.

APHIS. A family of insects that prey extensively on plants, and are endowed with such astonishing powers of reproduction, that though insignificant as individuals, they are formidable in their numbers, and in most years occasion more or less loss to the agriculturist. The congregations of aphides consist in spring and summer of apterous and wingless individuals, and of nymphæ with undeveloped wings. They have no mouths, but are provided with beak-like suckers, which they insert into plants, and feed on the juices. Almost every cultivated plant or tree has its peculiar family of aphis; and those trees or shrubs that are wild, or found only in the depths of the forest, cannot claim exemption. What is called the apple tree louse, is an aphis; and on lifting the scale-like covering, the depredator, and its implement of suction, can be seen. Another species infests the tender shoots of grafts, and the thrifty shoots of the apple and other fruit trees, and if allowed to multiply unmolested produces great injury. The American Blight, as it is called in England, or the *Aphis lanata* of the entomologist, is a destructive species, when permitted to make a lodgment on the apple tree, but fortunately the cotton covering in which it is enveloped renders it easy to discover, and thus timely put the fruit grower on his guard. In passing through the Tonnawanda swamp from Lockport to Batavia in 1838, the Alder, *glauca*, that lined the road was literally loaded in places with a species of aphis, the long cottony filaments of which, erect in air, seemed to be waved at will, and simultaneously, giving a most singular aspect to the branches on which colonies were planted. The turnep is greatly infested with the aphis, as is the rose, fennel, parsley, and many other plants cultivated for use or ornament. The aphis, while fixed by its sucker to the branch or the leaf, elaborates a sweet honey-like fluid, clear as water, and this is projected at will from two tubes in the hinder part of the body. We have seen in the sunshine, these drops falling like the spray of a waterfall, from a fruit tree on the leaves of which millions of the aphis were feeding. It is for this substance that colonies of the aphis are so frequently visited by the ant, which drinks the sweet fluid as it is thrown out by the aphis. Soapsuds, and a strong decoction of tobacco, have been deemed most effectual in destroying them; though when a foothold is once obtained, from their rapid multiplication, extermination is difficult.

APIARY. The place or building in which bees are kept, is termed an apiary; and where these industrious insects are kept for profit, or for observation, much care is sometimes taken in this department of domestic management. There is no question that keeping of bees, may be made a source of considerable profit at very little expense, as their food costs nothing, and a residence is provided with the very hive in which they are placed. Moveable apiaries are common in eastern countries; and a long boat, with a hundred swarms of bees on board, accompanied by the owner, may be seen floating down the Danube, the Po, or the Nile, anchoring where materials for honey promise to be abundant; and moving onward when the district is exhausted of its sweets. Among farmers, too little attention is usually paid to the apiary; the hives being left exposed to the storms and cold of winter, and the intense heat of summer, without protection. Bees, like other domesticated creatures, will well repay care and attention.

AQUATIC. Plants that live and flourish in the water are termed aquatic. There are also aquatic animals and birds. All our lakes, rivers, and the ocean, furnish specimens of aquatic plants, some of which are of great use and value. A large part of the soda of commerce is obtained from a sea weed, which, drifted ashore, is dried and burned for the soda of the ashes. Hundreds of square miles in the equatorial Atlantic, at some seasons of the year, are covered with this marine vegetation. Some sea weeds, as the algæ, that grow as they float in the water, attain a length of several hundred feet. The rice plant of the East Indies and the Carolinas, is an aquatic plant, and probably contributes as much to human subsistence as any plant on the globe. The wild rice, *Zizania aquatica*, of our northern lakes and rivers, is of great service to the native tribes of those regions, feeding the immense quantities of water fowls of all kinds that visit and breed in those inhospitable climes, as well as furnishing food to the natives themselves when their usual supplies from other sources fail them. The flags, rushes, and other grasses that grow in the waters of the lakes, or other quiet waters, the pond lily, &c., are further examples of aquatic plants.

ARGILLACEOUS. A term applied to soils in which clay forms a principal ingredient. It was derived from *argil* or clayey, as aluminous from alumine. In agriculture, argillaceous and aluminous are words of the same import, and mean soils or earth in which clay predominates. "*Analysis*" shows how the proportion can be determined.

ARTESIAN. A kind of well made by boring through the successive strata of the earth until water is found. This name is derived from Artois in France, where the system of boring was first successfully adopted. By penetrating the rocky crust of earth in this way, the water frequently rises to the surface, and flows a living stream; in other cases it rises so as to be obtained without difficulty. In this country wells have been bored to the depth of a thousand feet, and those of 500 or 700 are not uncommon. Various products are obtained from the earth in this way. In Albany, a valuable mineral spring has been reached by boring. The great quantities of water at the Kenhawa salines are obtained from Artesian wells. Springs of carbonated hydrogen, that burn with a perpetual flame; and immense reservoirs of petroleum, (the Seneca oil of commerce,) have been discovered while boring for salt or for fresh water. Artesian wells have been sunk in the deserts between Cairo and Suez, and abundant supplies of water obtained; and wherever the borings have been properly and perseveringly conducted, either in this or foreign countries, water has usually been procured.

ARTICHOKE. Two plants of this name are cultivated for food; the first *Cyanara scolymus*, is chiefly cultivated in Europe for culinary purposes. The part that is eaten is the receptacle of the flower, divested of the unopened florets, and the bristles that separate them. The head thus prepared is boiled plain and eaten with melted butter and pepper, and is deemed wholesome and nutritious. These *bottoms*, as they are termed, are also made into a variety of dishes, stewed and highly seasoned. The other plant, is the one known as the Jerusalem artichoke, *Helianthus tuberosus*, and is cultivated for the root alone. It is a species of sunflower, grows wild in several parts of South America, and the root is potatoe shaped. The roots are valuable as a food for animals, and are not unpalatable to man. They are found in most of our gardens, an improper place for them, as they are apt to spread, and are somewhat difficult to eradicate. In this country, few attempts have been made at their field culture, but those have been profitable. In highly cultivated grounds in England and Holland, they have been found extremely productive, 70 or 80 tons of the roots having been gathered from a single acre. Their flavor is much like that of the former artichoke, when boiled and prepared for the table; and they are very valuable for feeding hogs and store pigs.

ASHES. When wood is burned in a position that excludes the air, the product is coal; if combustion is performed in the open air, the produce is ashes. Ashes by being leached, or having warm water passed through them, are deprived of the alkali they contain, and this is obtained in the shape of potash, or soda, by evaporation. Different woods, and plants, vary much in the quantity of ashes and alkali they produce; the fir, beech and poplar, ranking the lowest; and the box, willow, elm, wormwood, and fumitory, the highest. The leached ashes of several kinds of grain, were found, by Ruckert, to be constituted as follows:

		Silica.	*Lime.*	*Alumine.*
Ashes of	Wheat,........	48	37	15
"	Oats, ...	68	26	6
"	Barley, ...	69	16	15
"	Rye,..........	63	21	16
"	Potatoes,......	4	63	30
"	Red Clover,...	37	33	30

Leached ashes are found to be an excellent manure applied to soils that are light, or such as are inclining to be sour; the alkali correcting the acid with which such soils, as the vegetation proves, abound. In some instances, crops of grain, roots, and grass, have been nearly doubled by their use; and no skilful agriculturist permits their waste.

ASPARAGUS. A plant cultivated in gardens, and deservedly esteemed for its value as an article of food, when properly prepared. Its value is also greatly enhanced by the early season at which it is produced. It is the young shoots of the plant, as they attain the height of some four or six inches above the earth, that are used for food, and these are cut slanting upwards, about two inches below the surface. Asparagus is usually grown in beds, and requires a soil very rich and deep, and if not so naturally, it must be made so by trenching and manuring with fine manure or compost, before the plants, which are raised from the seed, are put into it. They may be set in rows eighteen inches distance, and ten inches in the row, or in squares at one foot distance. The beds during the winter are secured from frost, and the plants prepared for an early start, by a covering of straw or litter. The beds must be loosened in the spring, and a coating of mould, saturated with liquid manure, worked in, has been found a capital dressing. A few plants are not cut, but reserved for seed, to keep a supply of the young plants for beds. In a favorable soil, an asparagus bed when established, and properly attended to, will last many years. The plants are usually allowed to stand three years before they are cut; some, however, commence on them the second year. They are boiled and eaten with butter, as are green peas, &c. The asparagus offers a striking instance of the effect produced on plants by cultivation. In some parts of Europe it is found growing wild on the sea shore, its stem not thicker than a goose quill, and only a few inches in height. The cultivated plant is sometimes found three-fourths of an inch in diameter, and grows to six feet in height. In the neighborhood of cities or villages asparagus is cultivated as a source of great profit; and it should find a place in every kitchen garden.

Improvement of our Cattle.

We feel pleasure in giving place to the "Essay on Cattle," written by a gentleman who has not only taken much pains to inform himself fully on the subject of which he treats, but has also added considerable experience to the knowledge so gained. Those who remember the able paper of Mr. R. read before the State Agricultural Society, on the subject of Sheep, and published in the last volume of the Cultivator, will welcome the present paper on a kindred theme.

We agree, in the main, with the opinions of Mr. R. and think the course recommended by him the only one that can be relied on for the improvement of our stock. It is alleged, and with some appearance of truth, that the pure Durhams are rather delicate for our climate and pastures; but a cross between them and our native breeds, would, as experience has shown, give a breed of good form, and hardier qualities.

In the impropriety of going beyond a first cross, we fully agree with Mr. R. Within a few years, the public attention abroad, particularly in Scotland, has been turned to the effect of proceeding beyond a first cross in breeding, and the result is, that the practice has received the most unequivocal condemnation. At the last meeting of the Scotch Highland Agricultural Society, embracing the most skilful and influential breeders of the country, there seemed to be but one opinion on this point; and that was decidedly against the practice. Our whole observation and experience, goes to confirm us in the correctness of this opinion; and while we would strenuously urge upon farmers the necessity of improving their stock, we would insist on the fallacy of supposing such a result is to ensue from breeding from the first, second, or third cross, alone. The progeny in these cases *may* be good, but cannot be counted upon with any certainty. They are more likely to show the bad qualities, than the good ones, of their respective races; and experience has shown that to breed in this way, will surely deteriorate any breed or breeds. On our flocks and our herds much is depending. So far as animals are concerned, our sources of wealth are confined to cattle, sheep, horses, and swine; and the means of improving these should be watched with a corresponding care and anxiety.

Iron Manufacture.

There are few branches of the arts so closely connected with the progress of agriculture, as the making of iron, and any measures that shall facilitate the manufacture, or increase the quantity, will in the same ratio add to the means of improvement in the cultivation of the soil. One of the most serious inconveniences the American farmer has to encounter, is the want of the proper implements, and this want is in the main occasioned by the prices and scarcity of iron in the country, a want not experienced in foreign countries, as the extent to which iron is used in the construction of their implements fully proves.

That there is no part of the world more rich in iron ores than the United States, particularly some parts of New-York, New-Jersey and Pennsylvania, is well known to those who have paid attention to the geological researches that have been made in these states; and in Pennsylvania these ores are in the immediate vicinity of the most extensive and easily worked coal mines on the globe. The cost of charcoal has hitherto prevented the use of these ores, except in a very limited manner, and until the past year, all efforts to use the anthracite or mineral coal in their reduction has proved abortive. Mr. Crane had, after many trials, established an anthracite furnace in Wales, and Mr. Perry of Pennsylvisiting the works, conceived that improvements might be made, that would obviate most of the difficulties experienced by Mr. Crane, and we are happy to learn from the Miner's Journal, that he has been completely successful; his new furnace, worked wholly by anthracite coal, turning out from thirty-five to forty tons of good iron per week. As both the quantities of ore and coal in that region are apparently limitless, we can see no reason why iron to any desirable extent may not be produced, and thus our country relieved from one of its great sources of foreign dependence. The introduction of air, heated by passing through red hot iron tubes to a temperature that melts lead exposed to the current, instead of the cold air blast, was a great improvement in the making of iron, but so far as this country is concerned, it will not produce the effect of the anthracite furnace.

When we look at the immense quantities of iron required in this country annually, for agricultural purposes, for rail-roads, and the various uses to which it is applied in the manufactures and arts, this discovery will be viewed as justly a very important one. Illinois alone, has lately ordered 500,000 dollars worth of iron from Great Britain, for her rail-roads, and many times this amount will continue to be required for this use alone, in the public works of the states. We shall be gratified if any considerable part of this money can be kept at home.

Items from our Note-Book, No. 2.

Butter in Winter.

We find the following in the Yankee Farmer, and can recommend the practice, noticed in it, to the adoption of those who dislike butter of the color of lard. We have tried the carrot, and know it will perform what is here promised. An excess of carrot in the milk, would probably produce a bad taste in the butter:

"When cows are not fed on roots or other succulent food in winter, the cream generally produces butter of a light color, which greatly lessens the value of the article for the market. As the juice of carrots was recommended for giving a good color to butter, we made the experiment, supposing that it would be merely a matter of disguise, by improving its appearance, and injuring its flavor; but, to our surprise, we found that the carrot juice not only improved the appearance of the butter, but added to its quality, by rendering it more sweet, rich, and of a finer flavor. There was no taste of the carrot in the butter. It may be that butter, colored in this way, will not keep as well in hot weather, but this can be no objection to the making of winter butter, which is usually consumed in a short time. Altringham, Long Orange, or any other rich yellow carrots, are good for improving butter. Wash them clean, then grate them fine, and cover them with new milk; after they have stood ten or fifteen minutes, put them into a cloth, and squeeze the juice into the cream. Use one carrot, of middling size, to cream enough for two pounds of butter."

Mad Itch.

In a late number of the Cultivator, there appeared a communication from Mr. Harvey Dewey, of Indiana, describing a disease which was very prevalent, and very fatal among cattle in the west, and which was known by the above name; and requesting, if any cure should be discovered, it might be communicated for the benefit of the public. We copy, for the information of all interested, the following, communicated to the Sangamo Journal:

"The undersigned takes this method to inform the farmers, and others who raise cattle, that he has discovered a cure for the mad itch; a disease which is often fatally destructive to that species of stock. Last winter was two years, when I had four cows attacked with the above complaint, and I tried every thing I heard of, to cure them, but with no good effect. This winter another of my cows took the same disease, which I discovered early one morning. And as soon as I discovered it, I gave her as much salt and soot, as she would lick, and a few hours after, I gave her from three-fourths of a pound to a pound of pulverized brimstone. In the morning following, I gave her as much salts. The cow is now well, and as hearty as any of my cattle. It is my opinion that sulphur itself will cure, or sulphur and salts given in the way prescribed. The cure was affected in about a week. The remedy operates severely, for two or three days, as a purge on the animal.

"To those who are not acquainted with this disorder, I will inform them, that it first comes on with a kind of hiccough or jerk, at every breath. The brute jerks itself full of wind; frequently licking their sides and back, occasionally rubbing their heads; and if not stopped in five or six hours, they rub with apparent madness, and continue to swell until death takes place, which will be within ten or twelve hours after the attack. This cure is from experience, and I give it for the good of my fellow-citizens.

"David Simms."

Sugar Beet.

This root promises to become a general favorite, as, independent of its value in the manufacture of sugar, (of which the possibility and profit, in this country, will be pretty fully tested this season,) it is found that for the purposes of feeding, it has few rivals. It is, besides, on favorable soils, very productive; 600 or 700 bushels being not an uncommon yield. In the vicinity of Philadelphia, and in other places, it has been extensively used in feeding sheep—making mutton of the first quality. For milch-cows, experience shows it is exceeded by nothing, except the carrot; and the following extract from a letter, written by Mr. J. R. Caldwell, of New-Windsor, Otsego county, shows they are equally good for pigs:

"I feel much indebted to agricultural publications for the instructions and recommendations laid down in them, particularly on the cultivation of roots. I have this year 1,100 bushels of ruta baga; 200 bushels of sugar beet; 800 bushels of potatoes; and an acre of cabbages, which have afforded, and which still afford a great deal of the best food for milch-cows. *My hogs (Berkshires) are very fond of the sugar beet, on which they are fed, and thrive well on them.*"

Buckwheat Straw.

"A writer in the Farmer and Gardener, says that buckwheat straw is better for milch-cows than the best timothy hay, and that they eat it with avidity. But, in order to realize the above strong assertion, it is necessary that the straw be preserved by salting, housing or stacking, from the deteriorating influence of rain, &c."—*Practical Farmer.*

The value of buckwheat straw, we are confident, has been greatly underrated. If cut as soon as the seed is fit for cutting, and well cured, or threshed, and stacked while not cured, with layers of dry pea, oat, or wheat straw, it will be found an excellent food for cattle or sheep, and one which they will prefer to almost any other. A friend of ours, who raised a fine crop of buckwheat last season, threshed it in the field, and stacked it with alternate layers of dry pea straw. At this stack, he fed 100 of his sheep, and another hundred on good hay. He assured us that the sheep ate the buckwheat straw with the greatest avidity, and continued to improve so long as it lasted, but had sensibly fallen away, when allowed the pea straw and plenty of good hay. Those fed on the buckwheat, were superior in their keep, in all respects, to those fed on the hay. The buckwheat crop is a valuable one for the seed alone; it may be made still more so, by the preservation and use of the straw.

Le Conteur on Wheat.

No individual living, has made as many experiments with wheat, has done as much to determine the qualities and worth of the many varieties of this plant, or has so well shown its habits, and the soil required for its production in perfection, as Le Conteur of the Isle of Jersey. His essay on the several topics, connected with the management of the wheat crop, is of great value to the practical as well as scientific farmer; as showing some of the many results he arrived at, in the the course of his investigations. He says:

"It is perfectly true, however we may account for it, that all plants become tired of one soil, and one manure. They, like the human race, have their appetites and loathings, and a person that would be forced constantly to eat the same kind of food, would not only infallibly sicken of it, but would, most likely, suffer in his health. So it is with the cultivation of wheat, or any other plant. The best cultivator of Lucerne I have ever known, whose practice extended over forty years experience, assured me, that until he adopted the mode of giving the plant fresh food yearly, he was never able to make it produce as he has since done. One year it was dressed with decomposed manure; the next, with ashes; the third, with salt; and the fourth, with lime. I have applied this principle, and this system, to wheat. That which is grown on land manured from the mixon or dung heap one year, becomes seed for land prepared with lime; that again becomes seed for land dressed with ashes; then for land dressed with mixed manures, and so on. Vary the food or stimulants of the wheat plant, as much as possible, hence, giving a good variety every chance of finding a new soil, on each occasion, or sowing."

Churning Butter.

Every good housewife knows that at times, from some peculiar causes, most generally extra sourness or bitterness of the cream, much difficulty is experienced in making the cream into butter. A lady writer in the Indiana Farmer, recommends the following course in such cases. We have for years used soda, or saleratus, for the same purpose, and found them usually successful.

"I wish to inform my sister butter makers, of the means I used, which so successfully removed the difficulty. I churned perhaps three hours, to no purpose, and then tried to think of something that I had read in the Indiana Farmer, or some other periodical. I could not remember precisely, but I recollected the reason stated, was the cream being too sour. I then thought of soda, (pearl ash I presumed would do as well) and dissolved a large tea spoonful in a pint of warm water, and as I poured it in, churning at the same time, it changed in a moment, and gradually formed into a beautiful solid lump of sweet butter."

Hybrid Plants.

Few species or families of plants show such a disposition to intermix, and consequently to degenerate, as those of the Cucurbitæ, or melons, squashes, pumpkins, &c. and great care is necessary, where such vegetables are grown for seed, or for the market, to prevent such a result. When squashes, pumpkins, and water-melons are planted in the vicinity of each other, they are sure to intermix in such a manner that no dependence can be placed on the seeds for producing plants like the original one. Last year (1838) we planted on a piece of ground, containing only a few square rods, the common pumpkin, the seven year pumpkin, the Valparaiso, acorn, and crook-neck squashes, and a few hills of water and mush-melons. From the seeds of the two finest Valparaiso and acorn squashes, we have this year (1839) grown no less than five different varieties of squashes, which are evidently hybrids, or crosses of the different sorts that were planted on the piece of ground alluded to. This is clear, not only from the color and shape of the vegetables, but also from their taste and quality, which, with a single exception, are inferior to the original ones. In this case, from the number of varieties planted together, it was difficult to determine which kind predominated, or was the most effectual in determining the character of the seeds; still it was sufficient to prove that the utmost care should be taken to prevent such mixtures from taking place.

No where have the effects of these changes or crosses in deteriorating vegetables, been more apparent, than in the melon markets of our principal cities, particularly New-York and Philadelphia. Some of the varieties that when first introduced were highly esteemed, have become worthless; and the progress of deterioration is plainly seen on others. The long striped water-melon of Long-Island and New-Jersey, has been one of the most delicious of fruits; but a kind of citron, unfit for eating, but in great demand for preserves, has been planted with, or near it, until it has been seriously injured. The water-melon has become hard, and has lost much of its original flavor, while it has acquired, to many individuals at least, the disagreeable odor of the citron melon. Gardeners and seedsmen should pay particular attention to this point, and by planting varieties liable to intermix, at great distances, avoid a result which threatens to deprive us of some of our most valuable fruits.

Sound Advice.

The fault alluded to in the following, which we copy from an English agricultural work, is not by any means confined to that country; and the corrective recommended, will be found as valuable here as there. It is high time the farmer understood that for success he must depend, under providence, on himself, and that reliance on any government for the relief of his wants, is to rely on a broken reed.

"Every calm and thinking man must own, that the greatest fault at the present day in the English agriculturist, is the looking to or trusting to government, rather than each man to his own foresight and labor. We would assure our brethren of the plow, that it is not in the power of any government, to bolster up the state of agriculture. A wise and good government will not enact laws prejudicial to any part of the community, and they may be assured that it is not *forcing* wheat to be sold at a sovereign a bushel, or meat at five shillings per pound, that will ever make the agriculture of the country prosper, or the farmer rich. Is it by the manufacturer selling his prints at a sovereign per yard, that he has amassed a fortune? No—*it is the greatest quantity produced at the cheapest rate*, that makes a prosperous trade. If wheat is low in price, let the farmer bestir himself. Instead of setting whole evenings, (as many an English farmer does) soaking over a cup of cider, or a drop of home brewed, while he grumbles, and spells the columns of an old newspaper, and abuses the government for the 'great cry and little wool' in the way of help in the agricultural distress, let him toss aside the speeches of our would be patriots, and let him to the fields and his herds, and see if all be right there. Let him remember that if he can grow one or two quarters more per acre, he will be in a better position even with low prices, than he was before."

Cost of Fences.

"In a paper in the New-England Farmer, a few years since, Mr. Shurtleff estimated the cost of several kinds of fences, (and they were taken from his own experiments,) as follows:—

White cedar fence, made of posts and rails, five rails in height, three lengths to two rods nearly, cost 91 cents a rod.

White pine rails sawed two inches by eight, and chestnut posts, four rails high, three lengths to two rods nearly, cost 64 cents a rod. In both these instances the cost was exclusive of the setting.

Good four and a half feet stone wall varied from $1 to $2.50, a rod, according to the ease with which the stone could be procured, and the manner in which it was laid, whether by trenching or otherwise.

Hedge fences, made of Virginia thorn plants, (*Cratægus cordata,*) set twenty-one to a rod. cost at the end of the fourth year, including planting, trimming, &c. 40 cents a rod: and this agrees very well with the estimate made by Mr. Kirk, of Brandywine, Delaware, who has had more experience in hedge making, than almost any other man in the United States."

Fencing materials are becoming daily more scarce in large sections of our country, and the best methods of constructing fences is becoming yearly a question of greater importance. A common rail, or post and rail, or post and board fence, will not, on an averge, last over fifteen years, the rails decaying, or the posts rotting off at the ground. Red cedar, or yellow locust posts, would be more desirable, but they are with difficulty obtained, and cannot be calculated on by the common farmer for fence. We have found by considerable experience with the white cedar or cypress, that, for posts, sticks of considerable size are preferable, their durability apparently increasing in proportion to their thickness. And where gates are to be attached, or in other positions where renewal will be difficult, posts of eighteen or twenty inches in diameter will be found the cheapest in the end. Timely provision for suitable fencing materials, is one of the things which no farmer can neglect with impunity.

REMOVAL.

The office of the Cultivator will be removed early in this month, from Washington-streets, to room No. 7, (second floor) of the New-Exchange, corner of State and Market-streets.

Cultivator No. 12, vol. 6.

But a part of the subscribers to vol. 6, of the Cultivator, have as yet been supplied with the last number of the volume, owing to the delay occasioned by the copper-plate printers, who are executing the portrait of the late Judge Buel. The subscribers will be supplied as fast as the portraits can be procured.

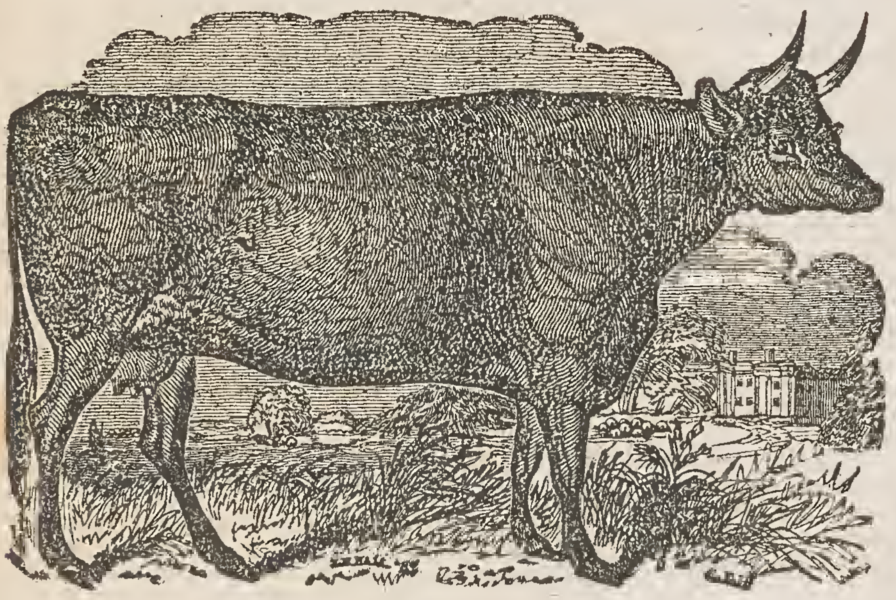
Communications.

ESSAY ON CATTLE.

The domestic ox, is not, as is well known, indigenous to America; but was introduced here by our European ancestors in the beginning of the 17th century. An attempt has been made to trace the origin of our common cattle, especially those of the northern states, exclusively to the English Devon; and it is probable that it did mingle largely in the early importations, from the fact that a large portion of the colonists were from the south of England, or embarked from ports in that district, where the Devon at that period was the prevailing breed. The characteristics of this variety also, as to horns, color, etc., have always been the favorite ones among the people of the United States. But at the time of the settlement of America, little attention, comparatively speaking, was paid to breeds, or purity of blood, and it is altogether incredible that the emigrants, to whose number almost every port in England and probably in the United Kingdom, furnished its quota, should have been at the pains to procure the Devons. To say nothing of the preferences which each would naturally have felt for the cattle of his own district, it would argue a degree of care and solicitude on a subject, then deemed of little importance, altogether incompatible with the character and motives of the men who colonized the new world. Many of them probably were scarcely aware that there was such a breed in existence! Besides, the Dutch in New-York, and the Swedes on the Delaware, introduced the cattle of their respective countries, which were subsequently incorporated with the common stock. Although, as we have before remarked, the Devon characteristics prevail, the practiced eye will readily detect traces of this varied lineage. Few or none of our common stock equal the North Devon, in the finish and beauty of their proportions, more generally perhaps resembling the coarser Sussex ox;* and our cows are better milkers. Our black polled cattle give indications of their Welsh and Galloway extraction, and it is but a few years since, on the Mohawk and Hudson rivers, there existed undoubted remnants of the stock imported by the Dutch settlers from Holland.

To speak of the merits of a race so varied, as a whole, would evidently be preposterous. Selections may be readily made from our common cattle, combining very considerable excellence for the dairy, the yoke, and the shambles; while another and a larger portion are destitute in a part or the whole of these qualifications. Their value to cross with the improved breeds, will be hereafter adverted to.

We shall proceed now to consider the breeds of later introduction, imported with the view of improving the common stock. These are the Devons, Herefords, New Leicesters, Ayrshires, Alderneys, and the Short Horn family. consisting of the "Improved Short Horn," or Durham, the Teeswater, Holderness, and a thick, heavy buttocked variety of Yorkshire cattle, which have provincially obtained the name of "Devonshires."



The Devon—(Fig. 10.)

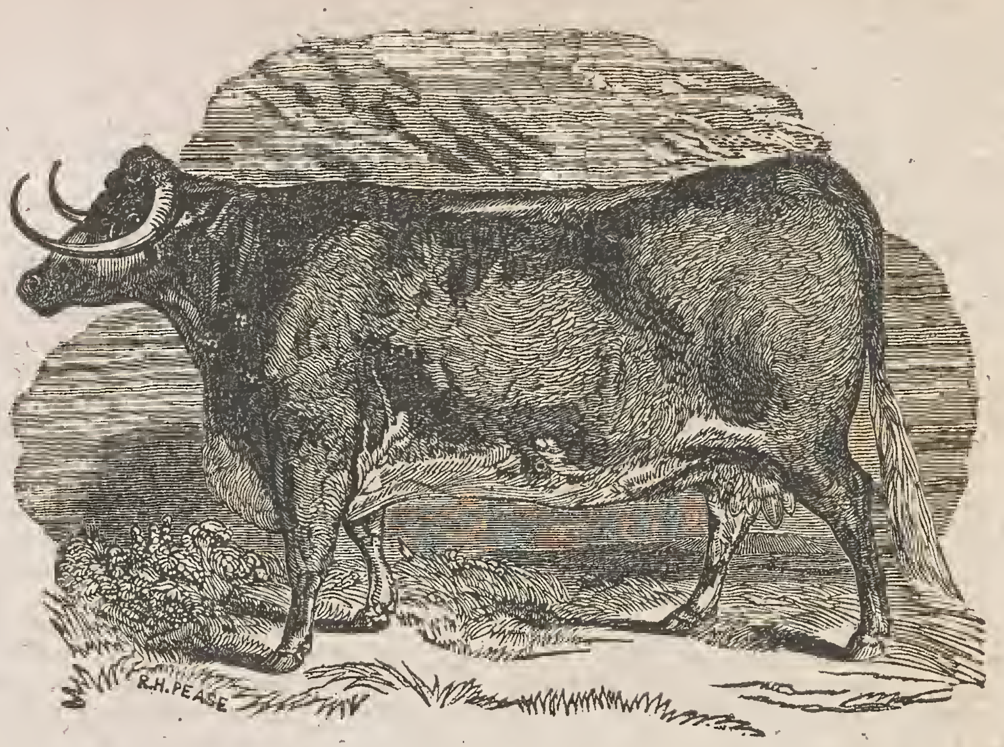
In symmetry and beauty of proportion, the high bred Devon scarcely acknowledges an equal. His delicate limbs, deep red color, beautifully tapering horns, high and spirited action, united with docility in the yoke, and a show of blood, falling little short of that of the thorough bred horse, have always rendered him a favorite with breeders of taste, in his native country. Favorable specimens of them were introduced into the United States in 1817, from the herd of the Earl of Leicester, (then Mr. Coke.) Notwithstanding his many excellencies, it cannot be said that the introduction of the Devon was attended with any striking benefits. Singularly suited, by his rapid gait for the plow, on the light lands of Norfolk, and some other parts of England, his peculiar excellence, his activity, has been found to avail him little on the more generally tenacious soils of the United States. In strength, the Devon ranks only in the fourth or fifth class of British oxen. The cross with our common cattle produced an animal somewhat improved from the latter in his points, but with no great additional value for the yoke, and decidedly inferior for the dairy. Yet a slight admixture of Devon blood, has been thought advantageous in modifying the coarseness of heavy, bony breeds, like the Holderness, and it has ever been strenuously advocated as a cross with the Improved Short Horn, by distinguished English breeders. But others object that the Durham gains nothing by the admixture in his propensity to take on flesh and fat; while size and milking properties are sensibly diminished. This was decidedly the opinion of Col. Powell, who instituted numerous experiments. The variety thus produced would doubtless be capable of enduring a shortness of keep, incompatible with the superior size of the pure Short Horn, and thus be better adapted to high and less fertile lands; but there are other breeds which as a cross with the Short Horn, would be as well calculated to attain this end, without so great a sacrifice of milking properties. The portrait above (fig. 10,) is that of a Devon cow, owned by Mr. Western, which we copy from the Farmers' Series

The Hereford.

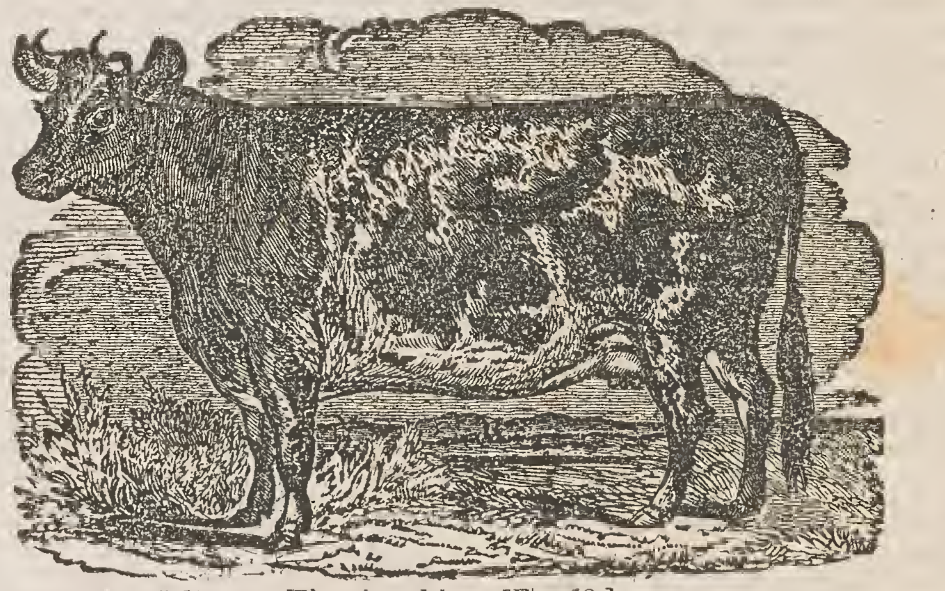
The Hereford ox is supposed to be descended from the same stock with the Devon, but is larger, heavier in the bone, usually of a darker red or brown color, with a white face, throat and belly. They are shorter legged than the Devon, hardier, and kindlier feeders, but less docile in temper, and even worse milkers. Indeed, a Hereford cow is rarely seen in an English dairy. Their hardihood and great muscular power give them the first rank among working cattle. This, together with their superior grazing qualities, has led to their introduction into the United States, by the Hon. Mr. Clay, of Kentucky, and several other individuals. But it is probable that their deficiency in milking properties will always prevent their very general adoption, either as a cross, or in a pure state.

The New Leicester—(Fig. 11.)

This breed, spoke into existence as it were, by the commanding genius of Bakewell, were derived from the original Long Horns, of the midland and north-western counties of England. The Lancashire or Craven, as this original variety is generally denominated, were characterized, at least the better portion of them, by their length and roundness of carcass, and by giving peculiarly rich milk, though in moderate quantities. They were large, coarse boned, but possessing a considerable, and sometimes a marked tendency to fatten. A smaller variety of the same breed, generally inhabiting mountain and moor lands, according to Mr. Youatt, gave milk as superior in quantity as quality. Out of these materials Bakewell formed the New Leicesters, which for aptitude to acquire external fat and early maturity, became almost unrivaled. He reduced the size, and especially the bone of the old Long Horns, and under his molding hand, the new variety reached a finish and beauty unknown in any other breed of the day. This is strikingly shown in the above portrait, (fig.11.) from Garrard's Views of British Oxen. Unfortunately, however, milking properties were, to a considerable extent, sacrificed by him. The Leicesters, or "Shakspeares," as they are more usually styled in the United States,* were of different colors, but more generally red, with finch or "lined" backs, as they are termed, in this country. Long, slim, tapering horns, projecting forward and downward, and turning up at the points—sometimes falling down the sides of the head in a curve, the points nearly meeting in front, is also characteristic of the race. The New Leicesters, owing to that cardinal defect in Bakewell's system, breeding from too close affinities, and to the appearance of a rival in the improved Short Horns, destined to sweep away all opposition, have nearly disappeared; but grades between them, and the old Long Horns are still cherished by many of the midland dairies of England. A cross between them and the Short Horn are still more common, and answer excellently for the purposes of the butter dairy. The milk of the Short Horn is improved in quality, though diminished considerably in amount, and the cross bred animals are supposed to be peculiarly hardy and unsubject to disease. Long Horns of various grades between the old Lancashire and the improved Leicester, have at various periods, been introduced into the United States, and specimens of them, crossed with the Durham, (with no admixture of other blood,) exist in this and one or two neighboring counties. They are a beautiful breed, possessing much of the substance of the Short Horn, with the peculiar fineness in the forend, characteristic of the New Leicester. Some of them are exceedingly delicate handlers, with thick, silky coats, and are rich, though not uncommonly deep milkers.



[Fig. 11.]



The Ayrshire—[Fig. 12.]

It is but a little more than fifty years since, according to Mr. Aiton, (the best authority on the subject,) the Ayrshire cows were "of diminutive size, ill-fed, ill-shaped, and they yielded but a scanty return of milk; * * * the chine of their backs stood up high and narrow, their sides were lank and short, their hides thick and adhering to their bones, and their pile coarse and open." In short, there can be but little doubt that they would gain nothing by comparison with the most ordinary American cows. We have adverted particularly to their then condition, because in following them up to their present high degree of excellence, we find a lesson fraught with peculiar value to the American farmer. Our breeders have certainly as good, or a better breed on which to commence their improvements, and the ameliorating crosses which made the Ayrshire cow, what she is, are equally within our reach. Though from the length of time which has elapsed, and the imperfect record, or rather the absence of all record, which is too generally kept of such transactions, little is known of the progressive steps attending the cross, and though there are some who seem disposed to call in question the fact, whether it ever took place, it is generally conceded that the pesent celebrated race were produced by a judicious admixture between the original cow of Cunningham, Kyle, and Ayrshire, (Mr. Aiton's description of which we have already quoted,) and some of the earlier Short Horns, from the banks of the Tees. The benefits attending the cross were accelerated, and no doubt much heightened by the moist, mild climate, and rich herbage of that district of Scotland where the Ayrshires principally prevail; pronounced by Mr. Youatt, "the finest dairy county in Scotland, and equal perhaps to any in Great Britain." This improved race is of a red and white color, beautifully mottled, short in the leg, the horns small and fine, the head and neck delicate, the latter thickening properly toward the shoulders, the carcass deep but inclining to be flat, and the loin and haunch, compared with the Short Horn, narrow. The accompanying portrait, (fig. 12,) gives a favorable idea of one of the cows. Five gallons of milk daily, for two or three months, after calving, three gallons for the next three months, and one gallon and a half for the remaining four months, in which she is milked, is stated as the *average* amount given by the Ayrshire cow.* As a milker, she of course, yields to the larger Short Horn, nor will she take on an equal amount of flesh and fat, on the richer soils of England; and on the bleak and heathery hills of Scotland, the various breeds of black cattle would thrive and fatten where the Ayrshire would scarcely obtain a subsistence. But on medium soils, there is perhaps no breed, size and the consumption of food being considered, which presents a much better combination of milking and grazing qualities. Of their value as working oxen, our authorities are silent, and we do not know that any experiments have been instituted among the few imported into the United States. If they are good in this respect, such a breed would be a desideratum in many portions of our country. But as we have before hinted, we believe this disideratum can be supplied more easily and cheaply by materials within our reach. This point will be discussed in its proper place.

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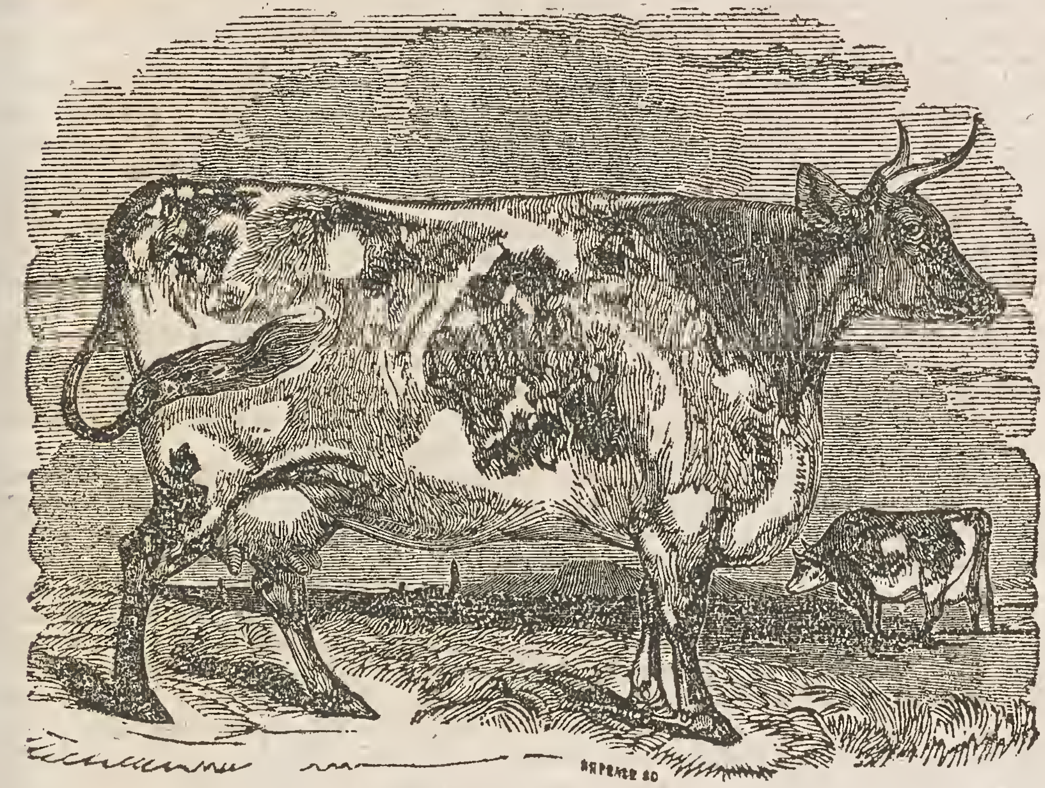
* The smaller variety of the old Sussex oxen.

*Probably from Mr. Forsbus' "Shakspeare," the most successful stock-getter of the L. H. breed.

The Alderney.

This small breed of French cattle, are fashionable in the parks and pleasure grounds of English gentlemen, on account of their diminutive size, and the peculiar richness of their milk. Col. Powell, after fifteen years experience with them, pronounces them, in his somewhat summary way, "an unthrifty, dwarfish, savage breed;" and Parkinson remarks, "they are of as bad a form as can possibly be described." Their appetite is voracious; an Alderney cow consuming nearly as much as a Short Horn, which is three times her size.† Some of them have been imported into our country, but probably with no very great general advantage.



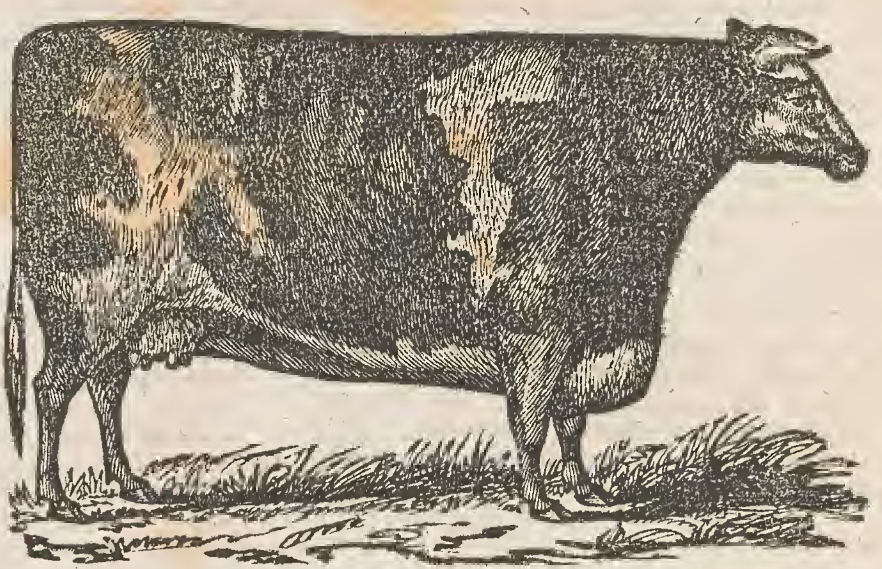
The Holderness—(Fig. 13.)

Sometime during the 18th century, Short Horned Cattle were introduced into the north-eastern counties of England, from the adjacent continent. They are indiscriminately termed *Yorkshire* or *Holderness* cattle, by the earlier writers; the former name derived from that of the county where they first began extensively to prevail; the latter from a town in the same county, where either they were originally introduced, or where, as tradition runs, certain improvements in the breed were first attempted. They subsequently, as we shall see, attained the name of Teeswater, and finally of Durham, or "Improved Short Horn."

Marshall describes the original Holderness as "thin quartered, too light behind and too coarse before, large shoulders, coarse necks and deep dewlaps." Lawrence, after passing a high encomium on a selection which might be made from them, describes the remainder as "long, gaunt, deep carcasses, without adequate substance, placed on high stilts, of the coarsest timber, slow feeders," &c. They were also, by the consent of all the English writers on the subject, thin skinned, inclined to be tender constitutioned, bad provers, their flesh coarse and often dark or "liery." In one particular, however, they were from the first pre-eminent, namely, in the amount of milk given by them, though it was not of so rich a quality as that yielded by some other breeds. In York, Durham, and the adjacent counties, over which this breed rapidly spread itself, early attempts were made to improve the form, without sacrificing their milking properties. Marshall gives a singular account of one of these efforts. After describing the Holderness, as we have already quoted, he says:—"This, from being found disadvantageous to the butcher, * * * the breeder attempted to enlarge the hind quarters; and had he stopped when he got to the happy medium, he would have wrought a good work; but the fashion was set—cloddy bullocks were in estimation. The first variety of this species of cattle, which I can recollect, was a thick, large boned, coarse, clumsy animal; remarkably large behind, with thick, gummy thighs; always fleshy, but never fat, and the flesh being of a bad quality. This, however, was not the worst: the monstrous size of the buttocks of the calf was frequently fatal to the cow. * * * They were probably the worst breed the vale ever knew." We have here an exact description of a variety existing in many parts of our own country, known popularly in this, and some of the adjacent counties, as "Devonshires," though their horns, to say nothing of their posterial deformity, proves this to be an entire misnomer. From the singular projection behind, they are commonly known also as "Pumpkin rumps;" and although large and rather showy, they are certainly the worst breed in the United States. The picture given above, (fig. 13,) is that of a Holderness or Teeswater cow, crossed with the Improved Short Horn.

The Teeswater.

In more judicious hands the Short Horns rapidly improved. Among the spirited breeders, on the banks of the Tees, (which divides York and Durham,) they rapidly assumed a distinctive character; shorter legged, more compact, the milk but slightly diminished, and this more than counterbalanced by its increased good quality,—better feeders, hardier, carrying more fat, and their flesh more marbled and finer in grain. This signal improvement was effected, it is generally supposed, by a system of judicious crosses. An importation of cows from Holland, is usually referred to as one of these, and Mr. Berry conjectures the wild white breed of England to have furnished another. Hence the strong admixture of white in the Teeswater and the Durham. The improved variety, denominated indiscriminately, Teeswater or Holderness, immediately became the general favorite in the large metropolitan dairies and milk establishments. For milking properties, and when no longer used for that purpose, aptitude to take on flesh, England had never possessed so valuable a breed.



The Durham, or Improved Short Horn—(Fig. 14.)

At this epoch, and with such materials, Mr. Charles Colling commenced his career as a breeder. His wonderful success has been ascribed by some, to chance; but the Rev. Henry Berry, the best possible authority on this subject, thinks otherwise. He pronounces it the result of "a deliberate and well considered plan." Mr. Colling found the Teeswater yet possessing some of the faults of the old Short Horns. From their overgrown size, they were too frequently coarsely and loosely formed, and they were yet entirely inferior to what the Durhams afterwards became, in aptitude to fatten and early maturity. Mr. Colling was remarkably favored in his efforts to counteract these defects, by the possession of the bull "Hubback," the great ancestor of the improved race. He was smaller than the Teeswater, while "his flesh, hide and hair," Mr. Berry remarks, "were seldom equalled". On account of his remarkable disposition to take on flesh, he soon became useless. The same qualities marked his dam. It is unnecessary for us, at this time, to follow the progressive steps which marked the onward career of the Improved Short Horns. While it is admitted that in the hands of some breeders whose attention has been turned exclusively to the carcass, their milking properties have deteriorated, it is well known that in other hands, they have fully maintained their equality with the Teeswaters as milkers, while in early maturity, kindly feeding, proof and quality of flesh, they decidedly surpass them. In early maturity they have, confessedly, no rivals, being ready for the butcher from two to four years earlier than the other English breeds.* It is not wonderful that a race, presenting such a rare combination of excellencies, should soon become the favorite of the English breeders. The Long Horns have disappeared before them, or been merged in them by repeated crosses in the northern and midland counties, while in the south they are rapidly superceding the Hereford and the Devon. They have been engrafted on the Holderness Short Horns of the city milk establishments almost universally, and with manifest advantage. The produce, with milk very slightly diminished, but of increased richness, yield as profitable return in the dairy, while the value of the carcass for the grazier is nearly double in value.

Short Horns, of every variety, from the gaunt, unsightly animals described by Lawrence, to the most finished specimens of the improved family, have been repeatedly imported into the United States. The miserable, heavy buttocked variety, known here provincially, as "Devonshires," we have already adverted to. There are also among us, large and not unsightly Short Horns, probably a modification of the above, poor milkers and bad provers, which are popularly known as "English cattle,"—though they sometimes borrow the name of Teeswater or Durham, to suit the purposes of the seller. They are usually red or brown, with dark muzzles, their horns short, fine and tipped with black. A Holderness bull from North Allerton, on the Arve, was imported from England a few years since, and finally was driven to Oneida county in this State, where he remained until he died. Though a monster in size, and marked with the characteristic defects of the earlier Short Horns in his form, his get, with the best common cows, were valuable as milkers, and not deficient in symmetry. Animals of various degrees of merit, bearing the name of Durhams, but not of pure blood, have also been introduced at various times, on speculation. And finally, pure Improved Short Horns,† in considerable numbers, have been imported by spirited breeders in several of the eastern, northern, and western states.

The most Profitable Breed.

Having thus given a hasty summary of the principal facts which tend to throw light on the main question before us, viz. "*what breed of cattle is most profitable,*" we proceed to state our convictions on the subject.

That the common cattle of the country do not possess the greatest attainable combination of excellencies, will readily be admitted. A selection of them present very desirable qualities for the dairy and the yoke; but in feeding properties, and especially in early maturity, they are deficient. A full blooded Durham bullock will go profitably to the butcher, at least two years earlier than the American, a decisive consideration to the grazier: and although the former is the greater consumer, the extra food required by him, will weigh but little against the two or even one year's additional keep of the latter.

But notwithstanding all that may be said for or against them, it is to the *best cross* with selected animals of the common race, feasibility and expense being taken into consideration, that the common American farmer must look for the most profitable breed of cattle. In this proposition we wish to be distinctly understood. We do not intend to assert that the produce of any cross we might thus make, would surpass in value breeds already in existence; but the entire substitution of a foreign variety for our own, presupposes an expenditure of time and funds utterly out of the question.

The question then is, with what breed is this ameliorating change to be effected? On a careful comparison of the characteristic merits and defects of our own cattle, with the corresponding ones of other varieties, we arrive unhesitatingly at the conclusion, that to the pure improved Durham, we must look for the basis of the desired improvement. A cross with the Devon or Hereford, would sacrifice milking properties: the dwarfish and ill-shaped Alderney, is not to be thought of: the Ayrshire or the Long Horn, possess no excellencies that the Durham does not possess in a greater degree: and the Holderness, and the Teeswater Short Horns, compared with the improved race, are as the crude ore to the manufactured and polished metal.

Experience has already proved, that the cross between the Durham and our common race, is a most judicious one, and examples are not wanting of it in our own county. A few years since, a bull, sired by Wye Comet, was introduced into Homer, and his progeny are remarkable for their size, beauty, and milking properties. They are but few, as most of our people at that period, who gave a thought to the subject of the improvement of their cattle, and they were not numerous, preferred the cloddy buttocked Yorkshires! Yet, there is perhaps not one of the immediate descendants of this bull, that would not be readily selected out of a large herd of the best common cattle, for its superior beauty of form.

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* British Cattle, Farmers' Series.

† Farmers' Series.

* Farmers' Series.

† There need be no confusion or uncertainty on the subject of blood, as those possessing animals of the pure, improved family, will, *of course*, be prepared to show their pedigrees in the "Herd Book."

The first cross between choice native cows and the improved Short Horn, has generally resulted equally favorably: indeed, the very beauty of the produce, has tended to prevent further attempts at improvement, by encouraging farmers to breed directly from half and three-quarter bred bulls. They frequently lack little of of the beauty of their sires, and their services are to be more cheaply procured. But the characteristics of a variety thus obtained, are not sufficiently stamped upon them in the first, second, or even third or fourth cross, to be perpetuated with any great degree of certainty in their offspring. In the language of the Rev. Henry Berry, "to breed from the produce of a cross *directly among themselves*, will lead to the results which have induced many persons, without due consideration, to believe conclusive against crossing; but to take one cross, and then return and adhere to one breed, will in the course of a few generations, be found to stamp a variety with sufficient certainty."

Repeated experiments have amply demonstrated, that interbreeding between the Durham and our common race, if conducted on the principles advocated by Mr. Berry, viz: by a constant resort to the pure blooded bull, is attended with a decided and manifest improvement of the produce in every successive generation. The bull selected, should be small of his kind; fine in the bone; unusually full in the crops and bosom, and wide in the loin and haunch—points in which the common breed are defective. He should be chosen too, from a family of decidedly good milkers. If the bull is large of his kind, the produce are generally coarse, and marked with the defects which attend great disparity in the size of the sire and dam. The dam should be as good in the points indicated in the bull, as our means of selection admits of: short legged, compact, deep in the girth, and a plentiful and steady milker. We have already alluded to the change effected by the farmers of Ayrshire *on a poorer breed*, by a Short Horn cross; and there can be no good reason why the American farmer, with the same skill and perseverance, may not be equally successful. Indeed there are grade Durhams already among us, which there can be no doubt equal or excel the Ayrshire in every desirable point.

The Durham, as we have before remarked, requires more feed than our small native cattle. This, his superior size, would lead us to expect. But though a greater, he is a more promiscuous consumer, the coarsest quality of hay or straw being readily devoured by him. In England, straw, with a very small allowance of turneps, constitute his exclusive store keep in winter. But to bring this matter to its true test, will the Durham yield as great a return in flesh, fat, or milk, for the amount of food consumed, as any given breed? That he will, repeated experiment, as well as his daily advancing popularity, in a country where there are many varieties greatly excelling our own in aptitude to fatten, and at least equaling them in milking properties, fully attest. The amount of food required by him, therefore, forms no objection to the improved Short Horn, on good soils, either in his pure state, or as a cross with others.

The only question now to be considered is, will the recommended cross, supply us with working cattle? It is asserted on the best authority, that the pure blooded Durham ox, will "work admirably;" and the reason assigned for his not being oftener used for that purpose in his native country, is, that his early maturity renders him too valuable at three, for the butcher, to be retained with profit until four or five, for the yoke. There can be but little doubt, that united with our smaller, but vigorous and active race, a heavy and powerful variety of working cattle will be produced. Those especially fed on upland and less nutritious pastures, whose labor *ought* to compensate for their tardier maturity, with size, feeding properties, and docility, increased by the cross, will lose little, and probably nothing of the activity and hardihood of the common race. To what precise extent interbreeding should be carried, to produce the most valuable breed of working cattle, experience can alone determine. HENRY S. RANDALL.

Cortlandville, January 21, 1840.

Mr. Garbutt's Premiums.

Mr. Jesse Buel—I was highly gratified on seeing the generous patriotism of your much esteemed father, in giving premiums for the improvement and introduction of useful agriculture. Being desirous of knowing the nett profit per acre from our best cultivated farms, and the system pursued in their cultivation, I, through the medium of the May number of the Cultivator, in 1837, offered six premiums amounting to forty-four dollars, for the most profitable farm for three years' cultivation; but did not designate whether the estimate should commence in the spring of 1837 or 1838; and as the season was some advanced before the proposition was made, there might be some difference of opinion as to the time of commencing the experiment. I therefore now state that if some commenced their estimate in 1837, and others in 1838, that they shall each have their premiums if deserving.

It was my intention to have forwarded the money on the first of November to the Editor of the Cultivator, for him to distribute; but the heavy dispensation which deprived you of a father, and our country of a highly valued friend, prevented me from doing so. I now appoint you, and my esteemed friend L. Tucker, judges on the successful competitors, if any there should be, and request that the necessary communications relative thereto be sent for publication in the Cultivator.

As soon as you decide who are the successful individuals, please notify me by letter, for weakness of my eyes has prevented me from perusing even the agricultural journals, and the money shall be forwarded immediately. Yours respectfully,

WILLIAM GARBUTT.

Wheatland, Dec. 10, 1839.

New Imported Boar Prince Regent.

Messrs. Editors—Permit me, through the columns of your widely disseminated journal, to give a description of the recent importation of the young boar Prince Regent. He was farrowed in June last, in the town of Reading, Berkshire county, England, and was the choice from a large lot of pigs, and said by his shipper to be unrelated to any thing before sent out to America, and on this account will prove a valuable cross on the old stock of Berkshires that we at present possess. His characteristics are the same as the best heretofore imported, viz. color, black, with the exception of a little flocking of white on the face and along the sides, and three white feet. His face is dished, the head fine, ears upright, and a trifle more pointed than those of Black Warrior. He has more length for his size and age than any boar I have bred from, and yet possesses the same good points in which long hogs are generally so deficient; a strong, slightly crowning back, and thick hams and shoulders. He suffered much from inattention on his voyage over here, but is now in fine thriving order. I am assured that his parents are of a large size, and I have no doubt he will be quite *big hog* enough when grown, to gratify the most cormorant appetites. I shall have a few pigs of his get in June, and a seasonable supply thereafter, as the sows now coming into season are more generally stinted to his *Royal Highness*.

I regret that you have decided against advertisements. To myself they are half the spirit and interest of the paper, and my friends generally express the same sentiments. I hope that you will eventually have encouragement enough to come out with a semi-annual advertising sheet, and then no one can have cause to grumble, for those that dont like to bind it up with the rest of the paper, can let it alone; but, to me, advertisements are of as permanent value as any other part of an agricultural work.

My rule for filling pig orders is, *those first remitting*, take precedence. Address, post paid,

A. B. ALLEN,
Buffalo, Erie County, New-York.

☞ We have received from Mr. Allen, a plan and description of an extensive piggery, built by him last fall, which will be published in the next number of this paper.

Chinese Tree Corn.

Messrs. Gaylord and Tucker—Permit me to say a few words by way of recommending the Chinese Tree Corn. And for fear that some of your readers may come to the conclusion that I have been bribed to come out in its favor, I therefore will barely remark that I was humbugged in the article to the tune of $1.50, for six ears of this reputed early corn. That it does not possess the good qualities recommended, appears quite evident, and the fact of its being a late variety of corn must have been well known to the person who gave it such an admirable recommendation. Now, as the old woman said, it is an ill wind that blows no where, so we say that it is a poor variety of corn, that possesses no good qualities. I fear that in exposing this splendid humbug, writers have overlooked any good qualities this corn may possess. With me it has not proved an entire failure. I planted on the fifth of May, and a considerable quantity has ripened sufficiently for seed. From information derived from several gentlemen, who have grown it the past season in Ohio, I am inclined to believe it will prove a valuable variety for a more southern latitude. H. Case, Esq. deputy post-master at Buffalo, informs me that he has grown about an acre of it on his farm, in Ohio, the past season, and that he considers it as an invaluable variety for that section of country. From these and other facts that have come under my own observation, I trust Ohio, Michigan, Indiana and Illinois, will derive advantage from the introduction of this corn among them. I therefore have determined that, in every bundle or box of trees or plants, that I shall send west next spring, to put up some of this corn, so that my customers, *nolens volens*, shall have it in their power to make a trial of the same.

I have an early variety of the white flint corn, which very much resembles the Chinese, only that it is about one half the size; I intend the next season to cross these two kinds together; this I shall do by planting the Chinese early, and the other some weeks later, and I am not without hopes, from this product, to obtain a variety of corn which will prove valuable in this climate.

I had intended to have made some remarks on the subject of swine, but this I must defer for the present; however, I would just say to gentlemen passing through Buffalo, fail not to call and take a look into the piggery of A. B. Allen, Esq. and if they do not say that one half of the good qualities of these pigs, over the common breed, has not been told them, then I will acknowledge at once that they have been brought up among fine pigs. However, after all, for a long or a short race, I would bet two to one, on Landpike over Seneca Chief or Black Warrior. B. H.

Buffalo Nursery, January, 1840.

Education of Farmers.

Messrs. Gaylord and Tucker—By your kindness I have already hazarded, before the public, through the Genesee Farmer, the assertions, that our republic must be, both in its character and destiny, what farmers make it, and what they say it shall be; that, as a means of this power, they already possess a greater amount of really useful knowledge, than any other class of the community; that their inducements and facilities for becoming men of sound and extensive knowledge, are greater than those of merchants, lawyers, physicians, clergymen or professors of colleges; that the teachers of our country schools should be practical farmers, who, for a course of years, should make teaching a winter profession, the same schools to be under the charge of ladies during the summer; that nine tenths of the members of legislatures, and the occupants of other offices, should be practical farmers and mechanics; and that American farmers were called upon, by their duty to themselves, to their country, and to the world, to take their own education and legislation into their own hands.

I will now present, with a word of explanation, one or two subjects, essential in the education of every man and woman, and of course of every farmer; for the double reason that they are essential, and at present almost entirely neglected.

No one can hesitate to acknowledge, that those subjects and those modes of teaching are of the first importance, which exercise most effectually and most harmoniously, the various powers and faculties conferred upon man by his Creator—that to call into action at the same time and on the same subject, the hand, eye, judgment, feelings, imagination, taste, and above all the heart, must be more effectual on any subject, than merely *committing to memory words without meaning*.

Grounded on this self-evident truth, I will venture a motto, alike applicable in the education of every child, whether of a farmer or any other member of the human family, viz: "NATURE BEFORE BOOKS, AND DRAWING BEFORE WRITING."

I present this motto with the greater confidence, as its common sense is corroborated, by the experience of the best schools at present in the world, and by many in ages long gone by. In the Prussian schools, previously to any attention given to reading or letters, children are occupied for six months or a year, in the examination and study of things—objects of nature and art, learning their names, properties, uses and relations. And letters and reading when commenced and pursued, are used almost entirely as aids in extending the knowledge of things—as instruments, not as sources, of knowledge. In so doing, they observe in the work of students, no less than of mechanics, the good old fashion of "*learning tools by their use.*" The result is that about one week only is required for a child to learn to read plain sentences, and that not as an irksome task, but as a delightful exercise; so delightful, that by it, any child will literally *learn himself* to read, also to spell, write and speak correctly, the teacher or parent only answering his questions, or removing the obstacles he may find in his way.

In view of these principles of common sense, corroborated by the experience of the present as of former ages, the first step for giving to education, especially the education of farmers, its proper character and elevation, is to furnish the seventy thousand schools and the two millions of families in our Republic, with "cabinets of nature and art," or collections of minerals, plants, shells, prints, drawings, penmanship, needlework, mechanism, &c. &c. The second step, intimately connected with the first, is the employment of children, by the use of the slate, pencil, paper, scissors, knife, &c. in drawing and otherwise representing the various specimens in their cabinets, and the objects of nature and art generally.

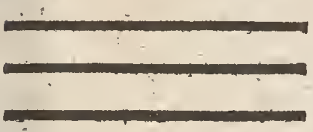
These two steps in elementary practical education, are as easy as they are important; as little more is necessary than *permission* for those to take them, who need their benefit. Every child, of his own accord, observes and collects specimens of the works of his Creator, scattered around him. If by any means he can obtain a slate and pencil, paper, or other appropriate instruments, he will be sure to make attempts at imitating or sketching the figures, representations or objects coming under his observation.

Whatever specimens or instruments are put into the hands of children to aid and encourage their efforts, ought to be, at the outset, few and simple, and of the most elementary character. Fifty well selected labelled specimens, are better than fifty hundred; and a slate and pencil with a graduated foot rule and a right angled triangle, both formed of wood one-sixth of an inch thick, are preferable for beginners, to an extensive case of mathematical or drawing instruments. A pair of dividers or compasses, fitted with a point, pencil and pen, are convenient, and even necessary for the full use of the rule and triangle.

Linear and perspective drawing is important, as one of the first exercises and elements of practical education, not merely for calling into action the hand, eye, judgment, taste, &c. but for its extensive and frequent application by persons in almost every pursuit, and especially by farmers and mechanics; also for its greatly accelerating the progress of children in all the branches now common in schools. Connected with it, very naturally and agreeably, are penmanship, (which by the way is but one species of drawing) composition and grammar, or exercises in the study of language, for which thousands and hundreds of thousands in our country have wasted, and much worse than wasted, several years of their precious time, in repeating, several thousand times, "prepositions govern the objective case; I might, could, would, or should have loved; prepositions are words prefixed to nouns to point them out and show how far their signification extends," and dozens of other phrases just as well calculated to give a pupil the "*Art of speaking and writing correctly*," as it would to give an apprentice to a blacksmith the art of axe-making, to repeat for three or seven years, "axes are made of iron, iron is heated in the fire, the fire is blown with the bellows," &c. without once taking into his hand or seeing a bar of iron, hammer, bellows, anvil, or any material or instrument used for making axes. A practice more supremely ridiculous, certainly more entirely abortive and mischievous, can probably not easily be imagined, than repeating the rules and definitions of grammar, or of *parsing*, for the purpose of acquiring the important art, and the elegant accomplishment of speaking and writing correctly. With Lord Kaimes, author of Elements of Criticism, Thomas Dick of Scotland, Rev. Orville Dewey of New-York, and all the intelligent educators, of the Prussian schools, every candid mind must agree that grammar is only the science or theory, and language the art of speaking and writing correctly. Hence, under the floods of grammars with which our country has, for years, been deluged, there is a general and constant bungling in the art of sentence making, while there is much skill, good workmanship, if not perfection, in the arts of making plows, axes, shoes, and various other kinds of mechanism.

A few cuts or figures may show more clearly the uses of linear drawing, both in its connection with other branches of instruction, and its direct application to the business of the farmer. The starting point for beginners is in parallel straight lines, in horizontal, vertical and oblique positions, thus:

[Fig. 15.] *Horizontal Lines.*



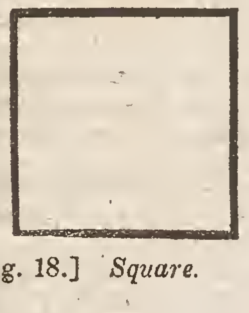
[Fig. 16.] *Vert. Lines.*

[Fig. 17.] *Oblique Lines.*

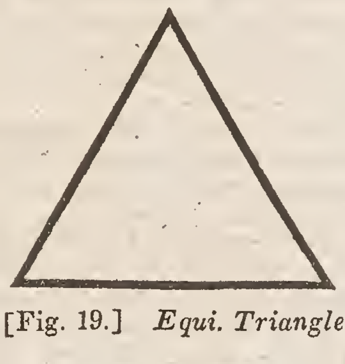
In connection with the drawing of these lines, whether upon the slate or paper, may be a description of their properties and uses, especially by pupils a little advanced, something as follows:

Parallel lines are at the same distance from each other at every point, and are extensively used by farmers, mechanics and scholars. In measuring, dividing, fencing and planting gardens and fields, in erecting houses and all other buildings, in weaving, printing, writing, engineering, surveying, navigation, and nearly every art and science, straight parallel lines are almost constantly used.

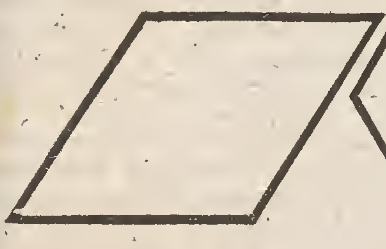
EQUILATERAL FIGURES.



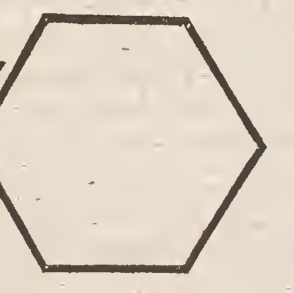
[Fig. 18.] *Square.*



[Fig. 19.] *Equi. Triangle.*



[Fig. 20.] *Rhombus.*



[Fig. 21.] *Hexagon.*

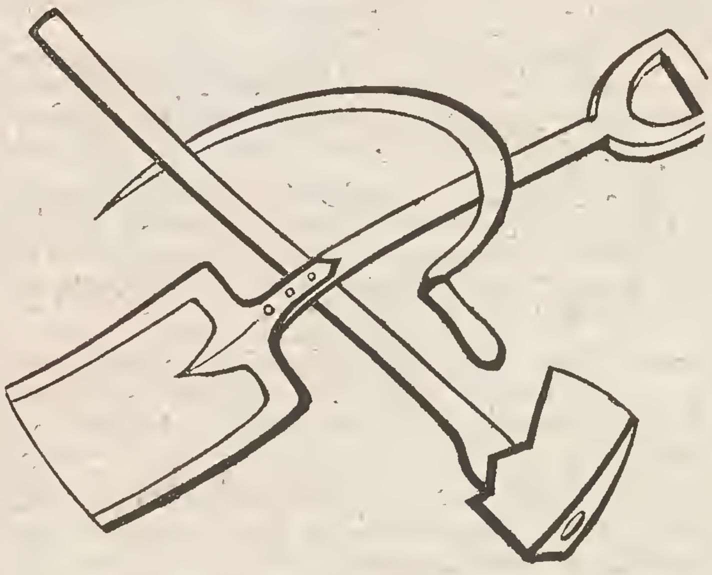
A square is a four sided figure with all its sides and angles equal. A rhombus has all its sides and its opposite angles equal. All three sided figures are called triangles; those having their three sides equal or of the same length are called equilateral. All six sided figures are called hexagons; when the six sides are all equal, they are equilateral hexagons.

By drawing these and various other geometrical figures upon a slate or paper, or cutting them with scissors or a knife from colored paper, and pasting them into a blank book, a "GEOMETRICAL ALBUM" is formed: the hand, eye, judgment and taste exercised; the mind stored with some of the most useful principles in the whole circle of science, and the application of those principles to agriculture and the mechanic arts illustrated, and the pupil of course amused and instructed.

Sketching various circular figures, also the geometrical solids, such as cubes, cones, cylinders, prisms, pyramids, &c. both from figures on paper, and from the solids themselves, is found to be highly profitable, as one of the first exercises in linear drawing. Delineating also, and at the same time describing various articles of household furniture, agricultural implements, animals, &c. especially from the objects themselves, greatly improves the powers of observing and describing objects, while they furnish the pupil with the laws and the practice of perspective drawing.

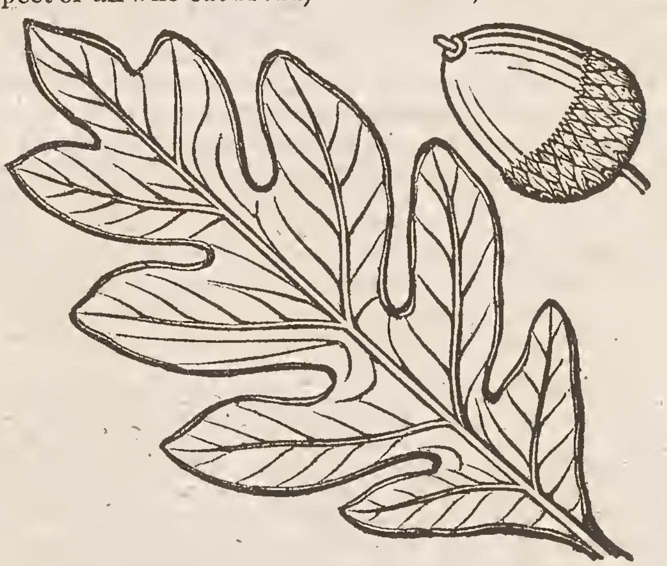
Some of the articles referred to are pitchers, lamps, candlesticks, pails, funnels, jugs, bottles, chairs, hammers, axes, spades, plows, rakes, forks, flails, horses, birds, fishes, insects, trees and other plants, machinery, houses, bridges, &c. &c.

A farm is a school of morals, industry and useful knowledge; for the study of botany, mineralogy, chemistry, entomology and the other sciences, it is among the best schools that ever were or ever can be provided. Farmers are hence the most virtuous, the most useful and the happiest people in the world. How foolish then are young farmers in leaving their farms for the profession of law, medicine or merchandize. Far better would it be for lawyers and merchants to exchange their business for that of the farmer.



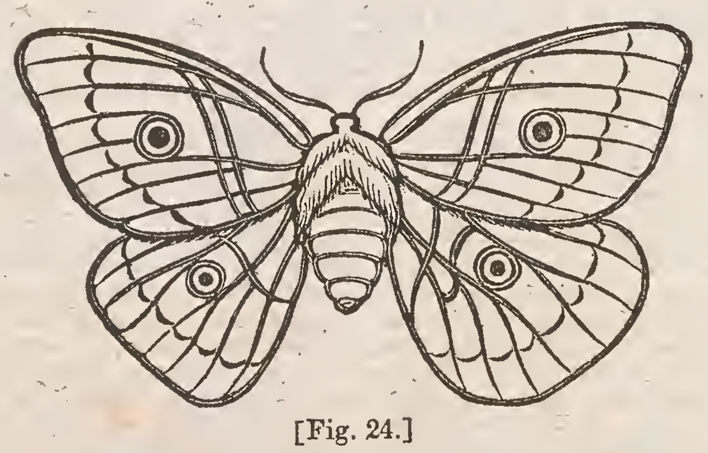
[Fig. 22.]

An axe for the forest, a spade for the garden, and the sickle for the wheat-field; and all for adding to the comforts of every person in the community. Those who use them, provide food, clothing, shelters or materials for all other classes, and are hence worthy of the respect of all who eat bread, wear clothes, or live in houses.



[Fig. 23.]

In American forests are forty-four different kinds of oak. Several of them grow to the height of eighty or a hundred feet; others grow but eight or ten feet high, and one kind, called the running oak, seldom rises more than twenty inches above the surface of the earth. The white oak is the most useful tree among the oaks, and perhaps the most valuable among all the trees that grow upon the earth. By some of the ancients it was made an object of worship.



[Fig. 24.]

Forty-four thousand different kinds of insects are already known, and many are supposed to exist which have not yet been discovered. Butterflies are among the most curious and beautiful of the insects, and display most strikingly, the wisdom of Him, who created and preserves, not only them, but men and angels.

Most insects exist in three different states, viz: in those of a butterfly, chrysalis, and a worm; by the last, most of the food is consumed, and the great ravages made, in the vegetable kingdom, by which the fruit and hard earnings of many industrious farmers are entirely destroyed. If farmers would study the habits, modes of existence, and powers of insects, they might avoid, in some measure at least, their ravages.

The above drawings and descriptions are given merely as specimens or examples, to show the mode in which this subject may be pursued by children. Almost every child, if encourged in it, and is furnished with a slate and pencil, and after he has made some progress in his work, with paper and lead pencil, will of his own accord, and nearly or entirely without the aid of a teacher, learn both drawing and writing, and with them of course, spelling and reading. For example, a little boy five or six years of age, having a slate and pencil, and an outline drawing of a bird, entirely of his own accord, attempted an imitation of the drawing, and then wrote in the printed character, birds fly in the air. It was his first attempt at drawing or writing, or at forming characters of any kind, either with a pencil or pen.

By these and kindred exercises, children are now to be found in nearly every part of the country, who have literally *learnt themselves* the arts of writing, spelling, reading and speaking correctly, and with those arts thus acquired, they never fail to acquire a love of *self-improvement*, which secures to them future progress, respectability and usefulness. While the seven years course of repeating "bla, ble, blo, and I might, could, would or should have loved," furnishes children with little more than a strong dislike, if not a disgust, for schools and books, and every thing under the name of study or learning.

Throughout Prussia and other parts of Germany, and in some sections of our own country, every school and every family is furnished with a cabinet of nature and art, and some articles of apparatus; especially a few instruments for drawing, and the figures and elements of practical geometry, which seldom fail to lay a strong foundation for *self-improvement* and substantial character. By these instruments and exercises, the schools in some sections of Pennsylvania, probably now stand the very first among American schools.

Drawing constitutes a *universal language*, by which all the nations of the earth may, and to a great extent do, already hold intercourse with each other. As such it may evidently be used as a most powerful, perhaps *the* most powerful, instrument for diffusing knowledge over the globe, and for the redemption of the human family from ignorance and vice. Already a system of "SCIENTIFIC EXCHANGES," has made great progress among the members and friends of American schools and lyceums, and between them and similar institutions in other parts of the world.

Hundreds, and probably thousands, of young ladies in our country, and many of them the daughters of farmers, who have closed their school education, are now most delightfully and profitably employed in studying and sketching the beauties and wonders of creation, for the double purpose of their own improvement, and aiding in the "*diffusion of knowledge over the globe.*" Specimens, many specimens, have already gone from their hands to nearly every Missionary station in the world, for which other specimens have been received in return. Many Sabbath schools have taken the spirit, and have formed their "*Missionary Cabinets*," and by the aid of drawings, executed by the hands of teachers and pupils, numerous Bible illustrations are prepared for enlivening, extending and enriching the instructions in their own schools; and by sending them abroad, they confer similar advantages to other schools in other states and countries.

As a means of *national defence*, a general system of scientific enterprise and intercourse among the nations of the earth, deserves particular consideration. During the wars of England and France, the scientific men in those countries, interrupted though they might be in their intercourse and co-operation with each other, were entirely preserved, both from the acts and feelings of hostility which convulsed the nations of which they were members.

Suppose that the seventy thousand American schools should enter upon a system of scientific exchanges with similar institutions in England, France and the other nations of the earth, must it not lessen the liabilities to war, and consequently the expense of arsenals, naval ships, and other munitions of war, rendered necessary by a real or supposed danger of national hostilities? But some will say that could not be done. When the question is put to the schools themselves, and their veto is received, such an objection will be in time, but not before.

The subject of drawing, though elementary and essential in the education of every child, and particularly useful to farmers, farmer's wives and daughters, is but one of the many subjects highly important, but entirely neglected, and even discouraged and forbidden, both in schools and families. On some future occasion I may attempt some illustrations in chemistry, as useful to farmers, and entirely within their reach; also geology, botany, entomology, &c. At present I can only add my highest respects and fullest and kindest sympathies for all American farmers, among whom I am proud, by my parentage and life, to claim a place, however humble it may be.

JOSIAH HOLBROOK.

New-York, *Dec.* 1839.

Report on the Culture of Silk.

BY CHARLES F. DURANT.

To the Cor. Secretary of the American Institute:—

The resolutions of the Kentucky Legislature, transmitted through Hon. C. A. Wickliffe, lieutenant and acting governor of that state, and his excellency the governor of the state of New-York, to the American Institute, requesting information on the culture of silk and the sugar-beet, are now before me.

A very limited and mere theoretical knowledge of the manufacture of sugar from the beet, obliges me to decline entering on the discussion of that subject. With the culture of silk I have a practical acquaintance of four or five years, and will cheerfully communicate the result of my experience and observation. The resolutions embrace a very extensive range of inquiry, and refer not only to the production of silk, but also to matters contingent thereto, such as, "Books, pamphlets, and written documents;" "what legislative encouragement has been given, and the effect of such encouragement;" "whether the capital and labor employed have been profitable or otherwise, and any other information on the subject which the governor may deem useful to the legislature or people of Kentucky."

A commentary on the *past* and *prospective* culture of silk in the states, may embrace all the information sought for in the resolutions; and, in this attempt, I would premise that a part must necessarily be drawn from history and tradition.

The silk, known in commerce, is the produce of the "*silk worm*," which Linnæus ranks in the fifth class of animals, and in Lepidoptera or third order of insects—genus *Phalena*—species *Bombyx*—variety *Mori*. It is a native of Asia, where, since a very remote period of time, it has been cultivated for its cocoon of silk, which encloses the chrysalis or middle state of existence.

The silk-worm was introduced into Europe early in the Christian era, and into the North American colonies early in the seventeenth century. Virginia, Georgia, and the Carolinas were the first to engage in the silk culture, and raw silk formed an important integer, in the total of their exports, one hundred years ago. Connecticut engaged in the silk culture about the year 1760; and about 1770, the people of all the northern colonies, (middle and eastern states,) generally, were roused to a sense of the importance of silk, in the domestic economy of the country. Dr. Franklin and cotemporaneous writers and philanthropists, urged the importance of a reeling establishment, which was erected at that time in Philadelphia, under the auspices of the "Philosophical Society of Pennsylvania."

In the summer and autumn of 1771, the reeling establishment or "*Filature*," received 2,300 pounds of cocoons, six hundred pounds of which were reeled for the owners, and 1,700 pounds were purchased by the managers, from the producers in Pennsylvania and New-Jersey. The first-named state furnishing about two-thirds, and the latter about one-third, of the whole quantity.

About ninety individuals furnished the cocoons, and in a list of their names and residences now before me, I find John Etwine, of Northampton county, Penn. furnished 110 pounds, being the largest quantity from any one person. At that period, and up to 1774, the colonial silk culture attained a rank of much importance—more on account of the large number of philanthropic individuals engaged and determined to persevere in it, than from the amount of silk produced in the aggregate; and it is *probable* that the impetus which the business then received, would, in a few years, under ordinary circumstances, have given it a rank in amount of exports, of still greater importance. But extraordinary circumstances suddenly arrested all advances in the arts of peace. The inherent rights, claimed by the colonies, and disputed by Great Britain, led to open hostilities. The conflict was long, obstinate, and deadly. On the return of peace, in 1783, poverty and a want of the necessaries of life, pervaded the states. Of the former silk culture no vestige remained, except in Connecticut, where, in one county, a little remote from the busy conflict, it continued and still continues to flourish, and increase in magnitude and importance.

Up to 1812, the silk of Connecticut was principally manufactured into sewings. The raw silk, employed for the manufacture of coach lace, tassels, and fringe, was imported at an average cost of about six dollars per pound. The war, between Great Britain and the States, cut off the supplies, and in 1814–15, raw silk rose to thirty dollars per pound. A gentleman of Newark, N. J., at that time employing about twenty hands, in the manufacture of coach lace, informs me that he obtained his supply of "gloss silk" (raw silk, freed from the natural gum) from Mansfield, Connecticut, and the quality, both in strength and lustre, was "much superior to the best imported silk."

Since the peace of 1815, the manufacture of "*Tuscan*" for hats, has materially increased the consumption of raw silk in the States, and the supplies are mostly drawn from abroad; a part coming direct from ports to the eastward of the Cape of Good Hope, and the remainder from the European continent, by the way of England, where it is *not* cultivated, but is manufactured to an amount of many millions of dollars annually.

From the commencement to the first quarter of the present century, occasional articles, through the periodical press, drew the attention of many to the importance of commencing or extending the silk culture. The subject was discussed in the national legislature—a voluminous report made to, and a manual on silk culture, issued by the Congress in 1826. The subject was also discussed in the state legislatures; and Massachusetts, as usual, was among the first to act in this patriotic cause: in 1831, the legislature appropriated six hundred dollars to compile and print a manual on the culture of silk, for distribution in the city of Boston, and in every town in the commonwealth. The work, by order of the governor, was prepared by J. H. Cobb, Esq. of Dedham, Mass.: it is known by the name of "Cobb's Manual," and is published by Carter, Hendee & Co., Boston. As a manual on silk culture, it is, by far, the best that I have seen, and is, intrinsically, worth more than all the other "books and pamphlets" on this subject, that have issued from the European or American press: it treats the subject in a plain, common sense style; is concise; has less than 100 pages 12mo.; contains full and ample information; can be read in one evening, and, from its perusal, all persons, of ordinary intelligence, may be fully competent to manage the culture and reeling of silk. The book also contains some *erroneous calculations* on the *profits* of silk culture, and it is to be regretted that a work, otherwise so accurate and useful, should have contained such extravagant *over-estimates* of the quantity of silk that can be produced on an acre, and the *profit* to be derived from it: such calculations are, however, mostly quoted by Mr. Cobb, from other authors; and, among them, it is not uncommon to estimate, from an acre of trees, 500 or 600 pounds of silk, an amount at least seven times greater than was ever produced from an English acre, under any circumstances, in any climate or country.

The Massachusetts legislature passed an act, to encourage the silk culture, in 1835, and repealed it, by a new act, in 1836, giving a bounty of ten cents per pound for cocoons, and one dollar per pound for raw silk, made in the state.

The legislature of Connecticut, in 1832, passed an act granting a bounty of one dollar for every 100 mulberry trees transplanted, and fifty cents per pound for all "reeled" (raw silk,) made in the state: this act was repealed in the winter of 1838–9.

Maine, in 1836, by legislative enactments, gives a bounty of five cents per pound for cocoons, and fifty cents per pound for raw silk, made in the state. Vermont gives, by enactment of the legislature, a bounty of ten cents per pound for cocoons; and New-Jersey, in 1836, enacted that, for five years, cocoons raised in the state, should receive a bounty of fifteen cents per pound: the act "excepted bodies corporate and politic," and was repealed the following year.

Acts, similar to the foregoing, were passed by other legislatures about that time, and many stock companies were incorporated for the manufacture of silk. The country was prosperous beyond any former precedent, and, in one year, (1836,) the importations of silk (mostly manufactured goods) amounted to twenty-two millions of dollars; more than two-fold greater than the average importation of the same article, in former years: other circumstances, also, assisted to render the present a very memorable epoch, in the history of silk, in America. The legislative bounties, incorporations of manufacturing companies, and general prosperity, raised up a new branch of the trade, inappropriately named the "*silk business*." It consisted of the growing, purchasing and selling of mulberry trees; fancy and captivating names were given to new varieties of old species; and individuals and periodicals were urgent in claiming superior excellence for some favorite species or variety. From various causes, the *Morus multicaulis*, (inferior to most all other kinds, for the silk culture,*) took precedence of all others in the "*silk business*," so called. Trees of one year's growth, which could be raised for one or two cents, were sold for one and two dollars each; and the sales amounted to several millions of dollars. To satisfy the demand, many thousand were imported, and like the memorable Holland "tulip business," sales, to the amount of many thousand dollars, were made for trees *to be* delivered in six months or a year. Other species and varieties of mulberry trees, sunk into comparative insignificance: the *Morus alba*, (common white mulberry) universally esteemed one of the best for feeding silk worms, could not be sold for one cent, or the price of transporting a few miles. The individuals, engaged in the new "silk business," had, generally, little or no connection with the silk culture, and, from a want of information on the subject, may have honestly assisted to increase the demand for some particular kind, of which they had the largest quantity for sale. Most of the purchases were made by persons engaging in the same business, and so extravagant were the estimates of profit, that, for each thousand dollars invested in multicaulis the past spring, even at the then high prices, it was generally supposed that fifty thousand dollars could be realized, by the sale of the increased buds in the autumn of 1839. A mulberry tree, called "*Sharp's variety*," exhibited at the annual fair of the American Institute, in October last, was represented to be a scion of a seedling raised by Mr. Sharp, who sold his interest in one-half of *the* parent tree, for *ten thousand dollars!*

This new "silk business" has probably reached its acme. There is now a sufficient stock of mulberry trees in the states, to supply all the silk culturists on the continents of Europe and America, for the remainder of the nineteenth century; and "silk business men" do not seem to increase in a ratio with trees; for the Morus multicaulis are now offered in great abundance, and find no buyers "at three cents per tree, healthy and well branched." A just estimate of their probable value in the autumn of 1840, I think would not exceed three dollars per cart load; for, on the present decline of the new "silk business," the demand for trees to supply the silk culture, can never be sensibly felt; as no prudent culturist will ever spend more than five or ten dollars, for a full and ample stock of any or every species of mulberry, which will increase in foliage, as fast as he will find hands to gather them, or accommodations for the valuable insect that is to consume them. All philanthropic silk culturists ever have, and still continue to make *presents* of mulbery trees, in sufficient quantities for commencing the silk culture, to all persons who apply for them. I have had no commerce in trees, but have derived much pleasure from contributing, and, at present, am always happy to contribute, *gratis*, one tree of each and every known species of mulberry, to every applicant who is desirous of commencing the culture of silk. Five or six trees, multiplied by cuttings, or layers, will, the first year, produce five or six hundred trees, and be amply sufficient for commencing this useful branch of domestic economy.

The joint stock companies, created within the past eight years, for the manufacture of silk, struggled for a while under the natural burden of difference in price, between the labor of the States and of Europe, and against the unnatural obstructions heaped on by our own government, in taxing the raw material, coming from eastward of the Cape of Good Hope, a duty of ten per cent., while the silk manufacturers of Europe, who obtained much of the raw material from the same source as ourselves, at a cost materially less, were permitted by the "French indemnity treaty," to crowd our market with manufactured silks, free of duty. The result was disastrous to the American silk manufacturers—all, or nearly all, became bankrupt, and ceased operations. The history of a few may serve for a history of the whole.

The "Atlantic Silk Company," at Nantucket, commenced manufacturing with a cash capital of forty thousand dollars, which is all lost, and the company have ceased operations.

The "Valentine Silk Company," at Providence, R. I. lost 20,000 dollars by manufacturing. They have ceased operations, and probably ceased to exist.

The "Poughkeepsie Silk Company" lost all that they risked in manufacturing; and their large, four story building, erected for that purpose, is now rented to others, for the manufacture of pins, buttons, and carpets.

The "Northampton Silk Company," at Northampton, Mass., commenced operations with a cash capital of eighty thousand dollars. They injudiciously added to their manufactures, the culture of silk, which they have since abandoned, and which never can be profitably conducted by incorporated companies, with high salaried agents. They also went largely into the new

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* We must beg leave to dissent from the opinion here expressed by Mr. Durant, respecting the inferiority of the Morus multicaulis for making silk; certainly until some evidence is adduced to prove that such is the fact. We take it for granted, that none of the late varieties of the tropical mulberries, introduced into this country, will endure our northern winters: all will need protection in the latitude of Boston and Albany—hence the question to the silk grower, (not the tree grower,) is, which will produce the earliest foliage, and which the greatest quantities, from trees planted every spring, as all these varieties must be. In the middle or southern states, of course, the matter is different. Now, we have the most conclusive evidence, that silk to any extent, may be made from the multicaulis planted in the spring, while there is yet no evidence, that it can be so produced from the other varieties. We do not say it cannot; but the evidence has not yet been furnished. Some of our readers may not be aware of what has been already done the past season, in producing silk from the multicaulis taken up in the fall of 1838, kept through the winter, and planted out in the spring of 1839. Every attempt, of which we have heard, has been most encouraging. We give two instances, as perfectly conclusive of the value of the multicaulis for making silk.

Mr. McLean, of New-Jersey, in April last, planted one quarter of an acre with the roots and cuttings of the multicaulis, on soil of moderate fertility. The trees produced were not large, and the number about 5,500. He commenced hatching and feeding his worms on the eighteenth of July, and continued to hatch till the twenty-seventh of August—feeding, in whole, some 40,000, and not stripping the trees closely. The silk crop was 130 lbs. of cocoons from the quarter of an acre, and these gave 12 lbs. of beautiful reeled silk, or at the rate of 50 lbs. per acre; worth, at present prices, some 300 dollars per acre. Every thing, connected with this experiment, was made with the greatest nicety and accuracy, and the details have been described by Mr. McLean, in a paper which we shall, at an early day, lay before our readers.

The other experiment was made by Mr. A. Clapp, of Hartford, Conn. He planted, the second week in May, one acre and a quarter of Morus multicaulis trees, laying down the trees whole, and covering them two inches deep, in rows three feet apart. Some failed, but those that came up did well. He says—"I raised fifty bushels of cocoons of excellent quality, and what I reeled, produced one pound of silk to the bushel, which is pronounced, by good judges, to be better than imported raw silk, and equally as good as any made from any other species of mulberry tree in our country." *Not one-half of the foliage was used;* and if 100 lbs. of silk can be made from $1\frac{1}{4}$ acre of land, of the multicaulis, which at present prices would be worth five or six hundred dollars, we think the tree is not to be contemned. What other tree in the country did this, last year?

As to the general remarks of Mr. Durant, on the mulberry speculation, we agree with him. The trees are now in the country; and, that they will produce the best silk, and in any quantity, we think, is demonstrated most fully. To cast these away for new and untried varieties, would, we humbly conceive, be consummate folly.—[EDS. CULT.

"silk business;" but, in that branch, they were not fortunate in the selection of attractive names to their trees; for, at the present time, after five years struggle with their combined operations, they have sunk the original capital, and are, besides, forty thousand dollars in debt.

Amidst all the trials and vicissitudes of the last fifty years, the legitimate silk culture, like some bright star, in a troubled atmosphere, has moved steadily onward; ever shining through the mist of doubt, that bedimmed the space between promise and hope. The germ, which eighty years since, commenced in Connecticut, passed unscathed through the time and form of chrysalis that "tried even men's souls," and is now an insect, winged and perfect; multiplying its species and usefulness in building a tower, that may withstand the combined opposition of over-reaching diplomacy from without, and misguided legislation from within.

(Remainder in our next.)

Burning Prairies, &c.

Editors of Cultivator—I have just read an account in the "Christian Keepsake, Philadelphia," of the "burning of a prairie, and a whole family that perished in the conflagration," that is going the round of papers that delight in the marvellous, and which is calculated to create a very erroneous impression in regard to a prairie country. Such tales as this are vastly amusing to us who dwell upon the great western prairies; but to those who know naught of them, it is a wonder how we escape from such "a vast sea of fire," as they suppose annually "rolls in terrific grandeur," over the whole face of the country. Let me assure you that all these wonderful fire stories are more smoke than fire.

The idea of burning men, oxen, wagons, horses, and every thing that happens to be in the way, belongs to the great humbug family.

The soil of prairies is as diversified in character as that of a timbered country, varying from dry and hilly, to deep and miry swamp. The great body is dry, tillable land, and in a state of nature, is covered with a thick short grass, that would, if closely mowed, afford about three-fourths of a ton to the acre. When dry and dead in the fall of the year, it is very easy to burn, and will make just such a "sea of fire" as would a late mown piece of timothy meadow. Unless the wind is blowing with great fury, it is easy to extinguish, by beating it with a bush, board, shovel, or even an old hat; and a man can pass across the line of fire with all ease, or ride through it, or run away from it. I have often done each, and I have seen hundreds of miles of rail fence built upon the prairie, through which the fire passed annually, without setting it on fire, except in rare instances.

'Tis only in the great marshes, where horses or wagons can not travel, and consequently can not be consumed, that the numerous poetical descriptions of a "burning prairie" have any application. Upon some of these grow a very rank growth of vegetation, six or eight feet high in places, but generally about equal to a very good piece of mowing meadow, which makes a great fire, and would endanger the life of man or beast to come in contact with it. The space between the wet and dry land affords the best grass for hay. In this county in particular, the quality is excellent, and if well put up, cattle and sheep will eat it in preference to timothy or red top. The dry prairie also affords good hay, but very tedious gathering. The common marsh hay is no better than the "bog meadow hay" of the east. For a grazing country, none can be superior to this. Prairie grass beef, butter and cheese, is equal to any other for sweetness and richness; sheep are ever fat. Hogs, I cannot tell what they would do, for there are no animals here but would disgrace the name. Horses do not do well upon prairie feed, summer or winter; but the way we can raise oats and wheat upon our prairie land, is more wonderful than all the great fires that I have ever seen. It seems to be the delight of some writers to propagate error; but no person who has ever traveled over a prairie country, will believe that man or beast ever lost life in the "great conflagration" of dry grass which covers the land, which will not average more than six inches high. If the growth was very great, it could not be turned under with the plow at midsummer, which is the time that it is sought to be done by every good farmer.

Speaking of plowing, reminds me that it may be amusing to eastern readers, to hear a description of a "prairie plow." Fancy, then, a plow share weighing 125lbs., the beam fourteen feet long, attached to a pair of cart wheels, to the tongue of which are hitched from three to seven yoke of oxen, turning an unbroken sod, eighteen to twenty-six inches wide, and sometimes a mile in length, and you have a picture of "breaking prairie," more true, and more interesting than some accounts of a "burning prairie."

The sod of the prairie grass is very tough, and sometimes full of the roots of a diminutive bush called "red root," that are exceeding strong, and which require a sharp plow and strong team. A great fault, in my opinion, in breaking prairie, is not plowing deep enough. I have seen thousands of acres plowed only from two to three inches deep. If the season is wet, the sods will rot, but if dry, they become hard, and are in the way for years. Corn is often planted by dropping in every third furrow as the plowing proceeds, and singular as it may appear to eastern cultivators, often produces twenty bushels to the acre without any after culture. Oats and wheat are often harrowed in upon the sod, and produce good crops. If plowed deep, that is, five or six inches at first, it is best to put in the second crop without disturbing the sod. The necessities of the new settler should be the only excuse for breaking prairie early in the spring, or late in the fall; and above all, the new settler should not attempt too much the first year. But the land is so inviting, that he often overtasks himself, and gets a large field in crop, but half fenced, and undue exertion and exposure of health brings on an attack of that universal malady in all new countries, the ague, and he is left worse off than ever any emigrant was from the "awful effects of a burning prairie."

For the amusement of some of your eastern readers who have forgot "auld lang syne," I intend in my next to illustrate life in a log cabin.

Respectfully, &c.
SOLON ROBINSON.
Lake C. H. Ia. Dec. 15, 1839.

Farm Account—Balance Sheet.

Messrs. Gaylord and Tucker—As I have leisure, I send you a short extract from my farm ledger. As it would take too much room to give a statement in full, of each crop raised, I will merely give you the footings of the accounts, with the different crops:

Spring Wheat in 1839—6½ Acres.

Dr.—To plowing, sowing, seed, harvesting, threshing and cleaning,......................	$51 50
Cr.—By straw, $10,—90 bushels wheat, 8s. $90,	100 00
Nett,..................	$48 50

Cost in labor and seed, 46 cts. per bushel.

Corn—3 Acres.

Dr.—To plowing, planting, hoeing, harvesting, seed and manure, $2,......................	$43 25
Cr.—By 138 bushels corn, at 4s. $69—stalks $14,............................	83 00
Nett,..................	$39 75

Cost in labor and seed, 24 cents per bushel.

Oats—3 Acres.

Dr.—To labor and seed,...........................	$18 13
Cr.—By 100 bushels oats, at 31¼ cts. $31 25—Straw, $3,..........................	34 25
Nett,..................	$16 12

Cost in labor and seed 15 cts. per bushel.

Potatoes—5 Acres.

Dr.—To labor $71 63—106 loads manure, 1s. $13 25—78 bushels seed, 3s. $29 25..........	$114 13
Cr.—By 915 bushels potatoes, at 25 cts......	228 75
Nett,..................	$114 52

Cost in labor in raising, and seed, exclusive of manure, 8¾ cts. per bushel.

Sugar Beet and Mangel Wurzel—¾ Acre.

Dr.—To labor, $10—21bs. seed, at 8s. $2,.....	$12 00
Cr.—By 225 bushels roots, at 18¾ cts.........	42 19
Nett,..................	$30 19

Cost in labor and seed per bushel, 5 3-10 cts.

You will perceive I have charged nothing for interest on the land, as it will be the same in each case; neither have I charged any manure, except where it has been applied directly to the crop this year; and in that case, I have charged only the expense of drawing, as my manure was all yard and stable manure of the last winter's make. My oats were on poor wet land; my wheat on strong land, but one half in an old orchard; my corn on good land, which had borne a crop of potatoes in 1838, and well manured; my potatoes were on land considerably worn, and a part of it wet; and you will perceive I had a poor crop, which added to the expense of raising at least one-third per bushel. My beets were on good land, heavily manured in 1838, and in that year bore a crop of corn. In gathering my beets, I used a subsoil plow, of the description of the one figured in the Genesee Farmer, and recommended by Mr. Garnett; and here I would recommend the inserting his communication, or at least the plate, in the Cultivator,* for I am sure any farmer with 50 acres of land, will find use enough for it to well pay the cost, even if he does not use it as a subsoil plow at all, in ditching, digging potatoes, sugar beets, and carrots. It is an excellent article, but it should be made twice as strong as recommended by Mr. G., or it will not answer in clay lands, where it is most needed.

If any man wishes to double the value of his colts or calves by next spring, let him buy some shorts, or have some oats ground, and feed them liberally in a warm place, and he will never repent the expense. A neighbor of mine, to whom I lent the Genesee Farmer last year, assured me to-day, that his six calves, to which he fed six dollars worth of shorts last winter, were worth $30 more last spring, than any he ever before raised; and that he took the hint of better feeding from the Farmer. And now I will ask any man, and he need not be very expert in figures, to calculate how long it will take that man to expend the money he gained by that one article, at one dollar per year? I regret I cannot furnish you a list of subscribers with this; my only excuse is, I have not had one moment of time, but I intend to spend a day in that matter as soon as the roads are passable, and before I can commence heavy work with my team. Respectfully yours, &c.

S. PORTER RHOADES.
Skaneateles, December 30th, 1839.

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* We shall comply with this suggestion in a future number.—Editors.

Management of Sheep—No. 9.

Messrs. Editors—As an important and indispensable feature of successful management of sheep during winter, I chose in my last to dwell very briefly on the necessity and advantages of *protection;* and, also, the kind of shelter of which I make use.

There are several other advantages of barns, besides the means they afford of shelter—if constructed according to the plan I have adopted—which can not be too highly appreciated. There is not a farmer in the land but whose temper has been fully tried by some sudden shower of rain when securing his hay, especially if when engaged in the process of building a stack; which, if it is half or two thirds completed, can not escape considerable injury. Now all this is entirely prevented by means of barns, for every load is of course secure from rain the moment it is under cover:—therefore, taking ten years together, I doubt not that the saving from this source alone, would reimburse the expense of a barn, as described in my last, to say nothing of the large quantity of hay which is inevitably injured on the tops and surface of stacks. An honest man, and first rate farmer, once observed to me, "that the man who *invented* stacks, ought to have been gibbeted." For my own part, I am not so much disposed to blame the *inventor*, as those who follow his wasteful example. Putting *all* the hay into stacks, and the *rest* in the barn, is wholly at variance with the enlightened spirit, and forward-march of agricultural improvement; and it is a matter of much regret to me that so few—if any—in our agricultural papers cry aloud for reform. It is a truth, that if the damaged hay of stacks of this state alone, for one year, could be gathered into one pile, its huge bulk would resemble, more than any thing else, a spur of the Allegany mountains. And it is this very trash which some farmers *compel* thier stock to eat, or starve, which causes very many of the cattle and sheep about the country to look as they do on the first day of May; not unlike those accurate representations of the alligator and landpike hogs in your last No. By the way, those pictures were so like life, and the description so amusingly graphic, that it causes a hearty laugh whenever I take up the Cultivator; those two portraits have immortalized Mr. Allen. Wont he get up something as accurate of some of our *native* cattle?

Allow me, my brother farmers, to recommend to you as soon as the hard times are over, to go to work and build yourselves barns, and every ounce of hay fed from them will be as bright and sweet as the day it was gathered. The great saving in this respect, and the greater facility of securing it, will repay the expense in a short time, with a handsome premium besides.

Connected with several of my barns—and I intend it shall be so with all—are yard fences, built of posts and boards; the boards nailed lengthwise and close, which is of much consequence when the sheep are feeding, by excluding the wind. I will further add, that the fences on the west side, are on a line with the buildings; this is mentioned as a caution to others, for if they are not so made, you may expect to have your yards filled with snow drifts; if done as I recommend, there will be none, as the drifting point is generally from the northwest, the snow striking that angle of the building, glances off by means of the fence, and the drift is formed beyond the precincts of the yard. Where I am not provided with yards, use is made of "wind breakers," for a description of which I refer to my last. The yards, to be sufficiently capacious for 100 sheep, which is as large a number as any farmer should allow to herd together, should extend 40 feet in front of the south side of the building, and about that number of feet from the east end. Aside from the benefit which yards afford as a means of protection from high winds when the sheep are feeding, is the quantity of manure which can be made, if properly littered with straw during the foddering season. Heretofore, from some of my sheep barns, I have carted away in the spring over 40 large loads of manure, all of it nicely cut up and ready for turning under by the plow; the difficulty of plowing under straw as it comes from the machine, every practical farmer knows. In a former number I asserted that protection was not only a means of saving provender, but *manure;* what is just mentioned is the proof; and if it were necessary, by detailing my experience before sheltering my sheep, enough testimony would be adduced to enlarge the proof to a demonstration. My barns stand on the borders of meadows, and through doors about 4½ feet square, the hay is stored. These doors are hung with strap hinges with hooks to fasten them when shut, and they are as firmly fastened when open; *slam bang, &c.* of doors, or any thing else, belongs not to my creed. Immediately under doors, in size the same as above mentioned, on the front side, is a moveable pen—say 3 feet in height, 5 feet in length, and the same in breadth, for the reception of hay when thrown from the building for foddering. Its construction is simple, being strips of board nailed to 4 pieces of scantling, which should be so close as to prevent sheep getting their heads between the slats. I note this for the reason that there is much waste of hay by throwing it on the ground, whether from stack or barn; for if the weather is moist, the sheep piling upon it with their dirty feet will cause more or less to be rejected. Aside from this, a pen will prevent the hay seed and dust from lodging in the wool; and if it be the chaff of clover hay, every experienced wool grower is aware how difficult at washing time it is to eradicate it from the fleece. It is hay seed and chaff which causes manufacturers very often to plead a reduction in price of fleece wool, and with good reason.

Another advantage of a pen is, that if too much hay is thrown down for a foddering, it can remain in it, and save the trouble of pitching it back. I choose to be thus particular, Messrs. Editors, about small matters. "Take care of the cents and the dollars will take care of themselves," is a proverb farmers too frequently forget to practice. Furthermore, inattention to *small things* is productive of more evil to farmers, in the long run, than any other cause within my knowledge; and to no branch of farming will this remark apply with greater force than in reference to sheep husbandry.

Having cleared the ground thus far, I proceed to speak of something of vast importance to the welfare of the sheep, viz: frequent littering of the sheds and yards with straw, for with no other domestic animal will a want of cleanliness, and consequently impurity of air, so soon induce disease. Recollect that aside from this, you are rewarded in other respects, for the sheep will consume more or less of the straw, and the residue is converted into manure. Said a brother farmer to me once, who had two or three ill constructed hovels for his sheep, "I am getting quite out of the notion of sheltering my sheep, for the place where they *roost* gets so nasty." Do you ever put any straw under your hovels? "Sometimes." How often? "Two or three times in the winter." Pray, how often do you clean out your horse stable? "Every morning;" and you littter the stalls every night, do you not? "Yes, of course." Well, sir, what sort of a place would it be if done no oftener than you litter your sheep hovels. Nasty enough, was his reply. Suffice it to say, he got himself into a corner, from which he did not escape till he was served right and left with knock-down arguments in support of the necessity of at least paying as much attention to his sheep as the rest of his stock. This occurred sometime ago; a few days since I met him again; he told me he had built better hovels—that he littered them once a week or fortnight, and his sheep never had done so well before; that it was a pleasure every morning to see them come out of their clean, warm nests; and further, was now well persuaded that increase of profits from sheep, like every other stock, must come from increase of attention. I grasped his hand with pleasure—told him he reasoned "like a book," and confirmed his good impressions, by assuring him, that sheep were the most grateful creatures on earth, by returning five dollars for every one expended in protecting them from the terrible storms of winter, good keeping, and attention the year round.

It will be inferred from the above, that it is my practice often to litter my sheds; it is done once a week, on an average, throughout the foddering season. And with a view to greater convenience in this, late in the fall, several loads of straw are drawn and deposited in a pen, for the purpose, adjoining each barn. I would have your inexperienced readers understand, that very little straw is necessary at a littering; just enough to cover the excrement is all that is necessary. I will add, that at the time of drawing the straw, a considerable quantity is scattered about the yards; by adopting this course you will save *all* the manure from your sheep, by being intermixed with the straw.

On reflection, so much occurs to me, yet unsaid, in reference to *winter management*, that I shall be obliged to trespass on the columns of the March No. before my subject can be completed.

I can not conclude, gentlemen, without expressing the unqualified pleasure, the perusal of the last number of the Cultivator afforded me. Think it not flattery, but a just compliment, when I say, that several of the articles, both editoral as well as communicated, in elegance of composition, would grace the columns of the first periodicals of our country; add to this, the useful knowledge imparted to the farmer, which, if carried into practice, would increase his gains some twenty fold, and how cheap is a year's subscription to your valuable paper. There is not a farmer in the land, but whose pride should prompt him to take an agricultural paper, to say nothing of the advantages of instruction derived from it, applicable to his calling. God speed you, in your honorable and useful vocation; may your zeal not abate; and I trust something more *solid*, than grateful hearts, will be your reward. Your friend. L. A. M.

Lansing, Tompkins co. New-York.

Soil and Climate of Florida.

To the Editors of the Cultivator:

You perceive that in this delightful tropical climate, we have a vegetating temperature on every day of the year. You also know that these exclusively calcareous islands, are covered with a luxuriant growth of native plants of the tropics. You farther know, that the Morus multicaulis is a tropical plant, from the tropical Phillippine islands, and that hence this Manilla mulberry is now naturalized in its native climate, on the tropical Florida Keys. You moreover know, that in this tropical climate the Manilla mulberry is an evergreen tree, which is propagated by its numerous buds, and which does re-produce its enormous leaves, on every day of every year. And you should hence know, that in this tropical climate, the silk-worms can be fed, and their silk-cocoons can be produced on every day of every year. But probably, even you have not duly reflected on the wonderful peculiarity of the only earth which constitutes these islands, and on hence the wonderful productiveness of their exclusively calcareous soils. I have repeatedly announced, that the long range of numerous islands from Cape Florida to the Tortugas Keys, is composed exclusively of the carbonate of lime; and that hence on all these Keys of exclusively calcareous materials, not a particle of silicious sand, or aluminous clay, has been created by nature.

Indeed, whence could be naturally supplied, either sand or clay, to coral rocks on a limestone foundation in the depths of the sea? As then these islands are merely vast beds of the great mineral manure of civilized agriculture, is it not as surprising that any plants are flourishing on these beds of exclusively mineral manure, as it would be to find any plants flourishing on any beds of exclusively vegetable, or exclusively animal manure?

All scientific vegeculturists, should hence feel great curiosity to learn not only what indigenous plants are really luxuriating on these exclusively calcareous soils, but also, what exotic plants may equally flourish on these arid calcareous Keys. Besides the Morus rubra, which is indigenous to the main land near Cape Florida, the exotic Morus alba, also flourishes on this little coral rock, called Indian Key. From the fruit of the Morus multicaulis, ripened on this islet last spring, my younger daughter has a vigorous seedling, which promises fairly to prove a very valuable variety, entitled to the distinctive epithet of multiramas, or many branches. From some mulberry seed imported direct from Canton, I have also one seedling, which also bids fair to become a very valuable variety—of which one distinctive characteristic in the leaves, is the convexity of their upper surfaces. (By the bye, this single plant may be the only compensating equivalent for the twenty-five dollars I paid to Thorburn in New-York, a year ago, for ten ounces of Chinese mulberry seed.)

Scientific horticulturists will hence perceive, that during the wintry weather of the northern states, the most valuable experiments can be made on this miniature island of Indian Key. The most intelligent patriots will best appreciate the national importance of speedy trials of all valuable seeds on these arid islands. The enlightened Commissioner of the Patent Office at Washington, has furnished the only practicable means for the direct transmission of valuable seeds to all sections of our extensive country. Need I say more to excite the immediate co-operation of all intelligent philanthropists, in my isolated endeavors to form a miniature collection of all possible varieties of valuable plants for future propagation over all the calcareous soils of Tropical Florida.

Very respectfully, your obedient servant,
HENRY PERRINE,
Sup. for the Trop. Plant Co. of Florida.

Indian Key, Tropical Florida, November, 1839.
[LAT. 24° 48.′ LONG. 80° 55′ W.]

Agriculture and its Improvement.

In reviewing the varied fruits of industry, and the aids it receives from the inventive genius of man, my mind has ever been attuned to the persuasion, that whatever we owe to the beneficial talents of others, our first gratitude is due to him who makes a blade of grass grow where grass grew not before. This sentiment calls to mind the late lamented Editor of the Cultivator, who, to the thorough study of the science of agriculture, added its most successful practice, in converting the sandy and barren plain into fields blooming and yielding, in rich abundance, almost all the varied productions of our climate. To one who had seen the soil of his farm, previous to his becoming its cultivator, it now seems to have been visited by some magic hand, and it would be incredible, that the work of man could have produced such a change, were it not that so many eyes have witnessed the astonishing fact. The fruits of his labor, with other kindred spirits, in advancing the cause of agriculture, are already seen in the general improvement of our farms; and the whitened fields of our country for generations to come, yielding their double and threble amount of annual crops, will be the ever blooming monuments of his skill and industry, and if honor be rendered to whom honor is due, his name will descend to posterity among the first benefactors of man. During the many years I have been engaged in commerce, I have ever had an eye to the superior importance of Agriculture; not by handling the plow, which my special avocation forbade, but by facilitating, as far as within me lay, the application of the most approved theories to practical, but often unskilful operations of the husbandman. My own practical knowledge was necessarily limited to Horticulture, on a small scale. In the management of my garden, I have paid much attention to the growth and propagation of vegetables, fruits, plants, and flowers, and by a free distribution of seeds and their products, carefully selected from the best stocks I could procure, and cultivated with assiduity, I have, I hope, done some good. Not confining myself to the larger opportunities which presented themselves, I availed myself occasionally of the smallest means that promised success. Of this latter, you will discover an evidence by an inspection of some razors recently presented for your acceptance. The words "Agriculture" and "Horticulture," etched on the blades, will show, that if they are of little intrinsic value, they are yet in character; I am desirous that the farmer, even when using this implement, should be held in mind, that we are his debtors; with this view, I ordered a quantity of these razors to be manufactured for sale in my store.

Of all civil occupations, that of agriculture should be regarded as foremost: It is the most indispensable, the best preserver of health, of morality, of virtue, and of religion; it was the occupation of our first parent, and has been that of the majority of his descendants in all past ages, and must necessarily so continue to time's end. How largely are we interested in its improvement and success! It is, however, a painful truth, that its progress in our country, is far from being exhilerating. Habits, venerated only for their antiquity, are obstinately adhered to, to the exclusion of "book farming," and this without any investigation into relative merits. Numerous are the deformities growing out of this error; slovenly managed farms, not arising from idleness; for idleness is not the besetting sin of the tillers of our soil; farms disproportionate to the means of proper cultivation; fields rendered unproductive by a succession of wasting crops, and then left to be resuscitated by the slow operation of nature. To these might be added other equally obvious defects, too numerous for present detail.

It is passing strange, that while the aid of the press is consulted in support of nearly every design, even of those of minor importance, or of doubtful policy, agriculture, the most important of all, seems alone to reject its influenee; this unhappy prejudice is gradually yielding to better judgment, and we may hope the day is not distant when the farmer will be no more without his agricultural hebdomadal, than he would be without his almanac.

There are certain primary principles so evident as to be within the unaided observation of every tiller of the soil, yet even these often require a friendly monitor to keep them present to the mind: others there are, dependent on scientific research, and seldom to be discovered except by the studious reader. The press, in these cases, is the best monitor, and the truest instructor. In truth, the few shillings annually charged for an agricultural journal, if properly attended to, are the most productive outlay of the farmer.

The proper selection of seed grain is an important consideration. The best if possible should alone be used. Grain is liable to degenerate by long succession of unchanged seed. An occasional change of seed for that of other farmers, will often be found beneficial, insomuch, that even that received in exchange, will, although apparently of an inferior quality, frequently yield a produce superior to that given in exchange, especially if the latter has exhibited any symptom of degeneracy. The potato is a very necessary and valuable esculent; there is perhaps no vegetable more liable to degenerate by a continued succession of the same stock in the same soil; were it not for the friendly agency of nature which annually scatters its seed on the ground, and thus gives birth to a new generation, this necessary article of food might be entirely lost. This effort of nature never fails in mild climates, but should not be relied on where the rigorous cold of our northern winter seldom fails to destroy delicate seeds when exposed to its action. An exchange of seed potatoes with a neighboring farmer, will generally check the menaced evil, but the true mode is to imitate nature; the farmer should every two or three years preserve a small quantity of the seed, which is contained in the balls growing on the green tops or stalks of the potatoes, and sow the same in a bed in his garden; the plants, when they appear over ground, should be transplanted, and placed at the usual proper distance. The produce of the first year's growth, generally of a size too small for use, may be reserved for the nexi year's planting. This is deemed an infallible remedy against degeneracy, and gives the best security for good and wholesome crops, in regard to abundance and quantity.

The improvement of his breed of cattle is an object of the greatest solicitude to every farmer. He does not always know how much is directly in his power, in regard to this object. The secret, if it be one, consists, in no small degree, in a plentiful supply of food to the young animal; the full grown beast will eat less and fatten sooner, than were he neglected while young. An early attention to abundant feeding, will improve the humblest stock of cattle, while the best breed, if neglected, or not sufficiently fed while young, will degenerate, and become, in their maturity, unsightly and profitless.

The overflow of the river Nile is a display of irrigation on a magnificent scale; on the subsiding of its waters, the agriculturist almost without an effort, raises an abundant crop. Egyptian grain has, by reason of its quality and abundance, become proverbial. Lands, adjoining rivers, or streams of water, where the overflows are periodical or occasional, and not too frequent, produce results proportionally similar to those of the Nile. I have seen no calculation made with a view to ascertain the utmost amount of money, or of labor as the equivalent of money, which a farmer may safely expend in the irrigation of his lands. I incline to the opinion that the outlay may profitably exceed the general apprehension. The watering of the kitchen garden is deemed by the horticulturist indispensable; the labor is generally performed by hand and watering-pot, the most expensive of all modes in use; yet, I believe that, on a minute calculation, it would appear that no equal extent of the farm yields so large, or, all matters considered, returns so large a per centage on the capital employed. This, if true, goes far to prove, that small farms, well cultivated, and irrigated, even at considerable expense, are more productive of profit, than large farms without the means of a thorough cultivation, and depending on casual falls of rain for the necessary moisture.

All lands, at all worthy of cultivation, contain the means of retaining them perpetually in a state of continual productiveness. Ignorance or prejudice alone would permit any part of the farm to be fallow. Compost is the common production of every farm, and is not the least valuable resuscitator of exhausted soils; it is usefully applicable to every soil, increasing in every instance the quantity of the crop. How strange that this valuable auxiliary to agriculture, should be disregarded and left scattered about the farm-yard to be trodden by man and beast, and thus rendered almost useless. I send you herewith an extract which, if new to you, may be deemed worthy of a place in your useful, and (I intend no flattery) truly well conducted paper.

Yours, &c. ALEXANDER WALSH.

The Place to Dig a Well.

Do you wish to dig a well? And do you know the best place to dig one? Why, the best place, to be sure, is where a well will be most convenient. But nay, friend, be not in haste; the very best place is where you will get plenty of water. Do you give it up? If so, I will proceed to tell what I know about finding the best place. There are certain persons who profess the skill of ascertaining where running water may be found under ground; and this is the way they proceed:—They cut a crotched twig from a living peach tree. The ends of this twig they hold in each hand, turning the palms of the hands upwards, and holding it sufficiently firm by pressing upon it the little finger and the two fingers next it. The largest end, or where it was cut from the tree, stands erect. Thus prepared, they walk along near the place where it is desirable the well should stand, and if they pass over any stream of running water, the top of the twig indicates it by turning down to the ground.

Now, reader, lest you make up your mind that this article was written for a hoax, or that I am myself a water witch, I disclaim all personal knowledge of the skill whatever, but I have known three persons who profess the art, all of them of the most repectable character, one a clergyman of superior talents, a classical education, and whom no one would ever accuse of intentionally deceiving the credulous. They have given abundant testimony that they themselves believed in the art. Some experiments have been tried, sufficient to satisfy the most incredulous. Once on a certain time, one of these men being at a distance from home, and where he was unacquainted with the ground, an experiment was tried to see if he could tell where an aqueduct run. He was accordingly blindfolded and followed it exactly, and would have plunged into the spring at the head of it had he not been restrained. Certainly they have been uniformly successful in finding water wherever they have been employed, and their services were always gratuitous.

There is, notwithstanding all the testimony that these men were sincere in their professions, and did accomplish what they attempted, much mystery attending it, and I have often been tempted to discard it altogether. Why take a twig from a peach tree in preference to one of oak or maple? Why turn in one man's hand and not in another? are questions I have never heard answered, or an explanation attempted. The hypothesis that they were born under the influence of a particular planet, or in a certain phase of the moon, might suffice in the by-gone days of blue laws and witch burning in old Connecticut, but in this enlightened age, such suppositions are hardly admissible. It is no doubt true that a close observer may become skilful in tracing currents of water by the make of the ground, appearance of vegetation, &c. but such indications can only be relied on in uncultivated lands.

I said I knew of three men who professed the art of finding water by means of a peach twig: I have known others, and have heard of many, in whose hands the twig would turn down in crossing currents of water. Very probably the number is not small. I selected these from their respectability. Had an ignorant juggler made pretensions to this art, no reliance could be placed upon it. These were not ignorant men; they were not visionary, but men in whose veracity this community had the utmost confidence. In hopes that some of your correspondents can unravel the mystery in which this subject is involved, or show its fallacy, I have drawn up this hasty sketch of a useful art, practiced by intelligent men, and believed in by the most respectable men of my acquaintance.

Yours, &c.
MYRON ADAMS.

Ontario co. Dec. 10, 1839.

Clover in the Southern States.

Messrs. Editors—When in Orange county, N. Y. a youth, I assisted my father, (one of the earliest clover cultivators in the state,) to raise clover; and having experimented with clover here, I concluded there were peculiar difficulties in a hot climate to ultimate success, in regard to burning out after a good start. One way to obviate this, I found, was that of sowing in the fall or last of September. But from a hint I got in the "Farmers' Register," about improving wheat culture, by covering it after sowing with pine leaves, (here called pine straw,) I think I have discovered an effectual remedy for the misfortune of burning out; and a remedy too, that in the use of it, for shading the ground, and the vegetable matter added thereby, more than pays for the trouble of applying it. After the wheat is sown, and (it may be after it comes up) in the fall, cover all over with pine straw, (other straw would do I presume,) an inch or more thick; and the following spring sow clover seed, (even in the hull will do, as I have also tried.) I have left out lands not covered with the straw, where no success—but adjoining, where covered with the straw, fine clover—or as good as in northern climes.

Rohan potatoes, (as well as multicaulis and grape vines, which I cultivate on a pretty large scale,) do well here. Yield of Rohans, at rates of a bushel for a single one planted. More particulars of all, when at leisure.

Yours, &c. in haste, SIDNEY WELLER.

Brinkleyville, Halifax county, N. C. Jan'y. 10th, 1840.

Russian Horses and Equipages.

The Imperial Empire has long been celebrated for the fleetness, elegance, and hardiness of its horses; and the means for rearing them are almost boundless, especially in the richer and more southern provinces. Here single noblemen possess them by thousands, and their breeding is a source of great profit and wealth to the extensive landholders. Russia has always been open to importations from Arabia, Persia, and Turkey; and the best crosses on the native stock, were undoubtedly derived from the east, till the noblemen found to their great mortification in 1825, how easily even a second rate English racer could beat the fleetest horses from the Cossacks of the Don. This gave a fresh impetus to the production of good horse stock, and the Emperor and nobility have since annually kept up their importations from England, for the purpose of greater improvement, with marked success. With the immense plains and wide frontier that in case of attack Russia would be called upon to defend, a swift and efficient cavalry is of paramount consequence to her: the same may be said in a measure of our own country; and though we are far superior to this great empire in point of water communication, still with a view of making us strong, and more efficient, even in a civilized view, too much attention cannot be paid to the rearing of a fleet, hardy, and enduring race of horses.

The manner of treating horses in Russia, is much more kind and familiar among the people in general, than in other parts of Europe, and, as in Arabia, he is rather the petted companion, than the abused drudge; and a fat horse, and a fat wife, are the neplus ultra of a Muscovite's pride. During a residence of eighteen months in Russia, I scarce ever saw a horse struck a blow—the drivers never carry a whip, unless a short braided thong at the end of the reins, that is totally powerless for any thing like punishment if it may be called such; indeed, instead of beating to obtain a great performance, he seems rather to depend upon plenty of feed, good grooming, and *large talk* to the sagacious animal; and it is quite amusing to the traveler who has learned to understand the *zvotshiks*, or driver's lingo, to hear how he gets on with the equestrian colloquy. Taking a rein in either hand, he commences with a gentle pull, and at the same time gives a long drawn and peculiar sort of grunt, which the horse seems to receive as very encouraging, and starts off at a rapid pace. Then begins the discourse, which generally sets out with an exordium of his superb shape, his splendid action, and the performance that is now expected from so celebrated a horse, not only by his master, who he well knows, but by the distinguished stranger, that he has now for the first time the honor to conduct through the great Imperial Empire. To this follows a recapitulation of what he has before so honorably achieved, interlarded with various episodes, and then a national song in a sonorous and well modulated voice, now spirited and cheering, anon plaintive and mild, and all wound up by a peroration of ejaculations to the traveler, with a half turn of the head, a comical and beseeching wink of the eye, and a respectful touch of his cap, to assent to the truth of all he may have said and sung.

This is for the country; in the city, the horse attendants are quite as well known to and familiar with their beasts, but more silent, generally confining their lungs to the encouraging grunt, and crying out at the top of the voice, *podé, podé*, get out of the way, to any thing likely in the least to obstruct their rapid career. A stranger would feel no little alarm, at the sight of four mettlesome and apparently uncontrolable horses, suddenly pulled up for a call of business or pleasure, from the noble occupant of the carriage to which they were attached, to see the little fellow of a postillion, when he knows that the stop is a seasonable time, dismount from one of the leaders, and curl himself up on the pavement at their feet for a profound nap, while the coachman, slacking the reins to the wheel pair, would as unhesitatingly nod responsively on his box, till aroused by the footman to again set out on their swift career; again when pausing at some open square, the coachman descends, and calling to his spirited coursers, they follow him all round as quiet and obedient as hounds in the leash.

It is to the cavalry, however, that we may look for the highest discipline and most imposing show, especially to the regiments of about fifteen thousand strong, composing part of the imperial guard, generally quartered in and about the city of St. Petersburgh. Here the horses move with the precision of highly disciplined men, and in all their evolutions seem to understand their part of the duty quite as well as the soldierly riders. Their appearance also is very imposing and warlike, with long flowing manes and tails, superb mountings and fiery action. Each regiment showed but one color, every horse in it being entirely bay, black, chestnut, and so on, and as nearly matched otherwise as possible. The Cossack regiments are mounted on their own peculiar breed, rather small in size, with yew neck, and cat hams, but fleet, hardy, sagacious and enduring, and most admirably adapted for the duty required of light troops—the sudden foray, skirmishing, leading on to the attack, or harrassing an enemy, or covering its friends in a retreat.

The style of traveling in the country is with from three to six horses abreast, with or without a pair of leaders as might be required, rope traces, and all the rest of the harness as rude as possible; the carriages, however, are comfortable. In the city the equipages are generally splendid, with showy harness, and the bridles universally without blinders. Four horses are the ton, with a postillion, a coachman, and two footmen to all that can afford them, the leaders being harnessed in with long traces, that placed them ten feet or so in advance of the pole horses, thus giving the whole equipage a much more dashy appearance. This was the usual style of the nobility; the Emperor Nicholas generally thus took his airings in an open barouche, with but a single footman, the Dowager Empress, and Georgian Queen, each in their own carriage with six horses, the servants in gaudy livery, with a company of out-riders in dashy uniform.

But the most common vehicle, and that which was used in the towns and their suburbs alike by all, from the Emperor down to the lowest citizen, whenever it suited their pleasure or convenience, was the single droshky. This is a mode of conveyance I believe unique to Russia, and is so cheap and agreeable, I wonder it has never been introduced into our own cities. For a description, let the reader imagine a bench about fifteen inches wide, and four feet long, elegantly cushioned, with a raised back to recline against, and a seat forward for the driver, all hung on easy springs, over very low wheels, with a boot on each side, and step at the bottom something like those attached to a city omnibus, curling over the rim of the low wheels, and serving the double purpose of a rest for the feet, and to keep the dust and dirt from being thrown on to the rider. A fast trotting horse is placed in the fills, and one moves round the wide streets at a cheap rate, and with great expedition. Aside from its being the common hack of the city, the droshky is frequently used as a highly stylish and fashionable vehicle, especially by dandy bachelors, and the gay officers of the imperial guards. In addition then to the fast trotter in the fills, another horse is added, trained to naggishly turn out his head and gallop alongside, and when one desires to be rather *outré* stylish, a galloper is harnessed on each side of the fill horse, making three abreast. I can conceive nothing more spirited or dashy in horse driving than this. The American supercargoes and ship captains patronized it with great glee. A single ride in this style seemed to make up for the deprivations of a whole voyage, and they significantly termed it a regular built clipper, scudding afore a gale of wind, with all her lower studding sails set.

The ezvotzhik of the establishment is hardly less unique than his droshky. He wears a splendid forked trimmed beard flowing nearly or quite down to his girdle, a scarlet checked shirt without collar and no cravat, a long blue caftan buckled round him with a highly polished leather belt, neat boots, and a low bell-crowned hat, with a wide ribbon, dashy buckle, and brim knowingly curled at the sides. Thus equipped, the rider throws himself astride the droshky bench, letting his feet rest easily in the boot on each side, and gracefully leaning back, gives the word *poscarrie*—go ahead. The ezvotzhik now seizes a rein with either hand, his horses seem to enter into the spirit of the thing, and he moves off like a second Phaeton, leaving the rider to the conviction that a droshky drive *en gallopade*, through the magnificent streets of St. Petersburg, along the banks of the clear Neva, and over the garden grounds of the superb neighboring palaces, on a quiet summer's day, is well worth the trouble and suffering of a long voyage across the Atlantic.

A. B. A.

Expense of Keeping Useless Horses.

Messrs. Gaylord and Tucker—I have long been satisfied, that many farmers keep useless horses; but had not been so forcibly impressed with the ruinous consequences, as to think of writing any thing on the subject, till I met with an article in a Pennsylvania paper, taken from the Farmer's Cabinet, estimating the expense of keeping extra horses. The article alluded to, makes a minute calculation on the difference of keeping seven extra horses, or fourteen cows, and irresistibly enforces upon the mind, the truth, that a few useless horses will eat up the income of any common farmer, who is guilty of such injudicious management. I write this, to call the attention of farmers to the subject, knowing that it needs but little reflection to satisfy them, that my calculations are correct; and that the consequences must be blighting to all their efforts for independence or affluence. As I am not so conversant with the expense of keeping cows, or the profits arising from them, as sheep, I shall substitute them for cows. I believe twenty sheep may be kept with less expense, less care, and less liability to disease or accident, than one horse; and the profits from twenty well selected, and well attended sheep, would not, on an average for the last ten years, have been less than three dollars a head, for wool and increase; making sixty dollars a year—and that sum, with the like added to it each year, and kept at annual interest for ten years, would amount to $828.94; and the difference of keeping the useless horses ten years, would be $2,486.82, and for fifteen years, it would be about $4,400; and for twenty years, about $7,200; and for thirty years, $16,560; and for forty years, $34,000.

Figures will not lie, and the conclusion is, that the difference between keeping one extra horse, or the same stock in sheep, makes, in the actual profits of the farmer in ten years, the sum of $825.94; or three useless horses in ten years $2,486.82; and in that ratio for forty years, $34,000. Will not the above calculation account for the unsuccessful, embarrassed, and even bankrupt condition of many, with whom we have been, or are acquainted? And is it not a fact, that many farmers in our country, have supported useless horses within the last thirty or forty years, the actual expense of which would amount to more than the value of their farms?

Yours respectfully,

DANIEL S. CURTIS.

Canaan Center, January 18th, 1840.

History of a “Comforter.”

I shall offer no apology to the editors of the Cultivator, for the following history of a “Comforter,” believing it to be their object to afford information in every department of out or in-door husbandry; and I shall offer none to their readers for illustrating, even in such a trifle, *the great science of economy*.

As winter gave indications of its approach, Mrs. ——, said to me—“We must have some additional bed clothing, my dear.” “And how much, and what kind, is wanted?” “Blankets sufficient for two or three beds.” “This seems rather formidable in these *excruciating* times, but we must lie warm through the cold weather, children, servants and all, and have a snug bed for a friend or two besides. What say you to some more comforters?” (We had half a dozen of the *thin kind* already.) “They may answer, if I can find time and strength to make them.” I thought this a good opportunity to get one made after my own fashion however; and accordingly I sent for a piece of calico and eight pounds of batting. To make this all up at once in the old fashion way, was of course not immediately to be expected. I stipulated therefore for *one*, *if* it should be made agreeable to my directions. The preliminaries agreed upon were—that it should be four breadths wide, two and a quarter yards long, and be filled with the whole quantity of batting; and as quilting was out of the question, knotting at a quarter of a yard distance was decided upon. This “unheard of quantity of stuffing” was finally distributed, and secured, and at once installed on our own bed. My wife was the first to retire, as I alleged some excuse for delaying till the experiment was tried, she having retained some additional covering despite my remonstrances to the contrary. In a few minutes the counterpane was thrown off, soon a blanket was laid aside, and finally, the only item remaining, save the sheet and comforter, was disposed of, and there was warmth to spare for that and every successive night this winter, the light and downy feeling, affording in addition, all the luxury of a summer atmosphere.

To come to the *arithmetic* of the thing:

18 yards calico, at 8 cts.	$1 44
8 lbs. cotton batting, at 1s.	1 00
Thread, say,	06
Sewing, 1 day,	50
Total,	$3 00

expended in a comforter, is worth three times the sum in blankets. A.

Buffalo, December 31, 1839.

Rearing Calves.

Messrs. Editors—It is a notorious fact, that cattle have not been reared of late, to meet the increased wants of society. It has been said that the high prices of butter, induced the farmer to kill his calves at birth, and feed them to his swine, to save the milk for butter. If this be true, the cruelty and waste might have been avoided, without diminishing the quantity of butter.

The cream may be skimmed off, and the skimmed milk fed to the calf, by adding meal from any grain; or by potatoes boiled, mashed, and mixed with the milk, and fed to the calf, more profitably than to give it the new milk. This mode of treatment will fatten the calf for the butcher, or for raising it, as well as by allowing the calf to suck or drink the new milk.

This has been tested by Mr. David Hearsey, the toll-gatherer at the Mohawk bridge here. He has practiced this mode of feeding his calves for some years, and no one has raised finer and better calves, nor so large and thrifty, that I have seen. He has usually made 7 to 8 lbs. of butter per week from the cow, at the time.

Remedy for the Turnep Flea.

The little black flea, resembling the common dog or hog flea, in size and color, are so plenty in this region, that they often destroy the whole crop of all sorts of cabbage, turneps and radishes, when they first appear above ground.

My neighbor, Mr. James Rosa, sowed the ruta baga in two pieces, on the alluvial island ground here, the last season. The one patch, the plants were all destroyed by the flea. The other piece, at the time the plants began to appear above ground, he sprinkled over with the *urate* manure, dissolved in water, as directed, and sprinkled over the plants, by the common tin watering pot, and saved a bountiful crop of the turneps.

Apples as Food for Stock.

I have been informed, that some farmers in Charlton, on becoming tee-total abstinence members of the Temperance Society, cut down their orchards of apple trees, thinking the apples would be of no value, since they could not drink cider. There are many useful proofs, by farmers, that apples are fed to horses, cattle, swine, geese, &c. to much greater profit than when converted into cider. Mr. David Reynolds of Galway, adjoining Charlton, informed me of experiments made by him, in feeding apples to his hogs. He fed a certain measure of apples daily for a given time, and they throve well. He then fed the same hogs with the same measure of potatoes, for an equal given time, and the animals showed an evident loss. He then fed apples and potates together, in equal quantities, and the hogs grew and improved better than on either separately. He boiled them, and found great advantage thereby, much above feeding the raw apples and potatoes. There can be no doubt of the profit in boiling all vegetables before they are fed to any cattle. It prepares them for digestion, and lets loose the nutricious parts, like as mashing prepares them for distilling; and more of the nutriment is taken up from the food on its passage through the alimentary canal.

Imposition in the Sale of Seeds.

The deceptions in selling falsely, new and approved seeds, have retarded many useful improvements. One of the Shakers, of the family at Hancock, told me, summer before last, that he knew a farmer, beyond the Mohawk, who raised a large field of wheat, of common kind, and retailed it at great prices, through Dutchess county, &c. for the new and approved kind of wheat.

It would be more safe to purchase seeds of regular dealers, who are responsible; and animals of regular breeders of them.

In your last number, in my observations on the mode of dressing fat hogs, by the peasants of Lower Canada, it reads—that they lit *feathers*, or other combustible matter, and singe off the hair. The word I wrote was *pea-straw*. Respectfully,

DAVID TOMLINSON.

Schenectady, January 11th, 1840.

On Rust in Wheat.

Messrs. Gaylord and Tucker—I have frequently heard farmers conversing on the subject of rust in wheat. In listening to these conversations, I have never heard one give, what I conceive to be, a correct opinion as respects its origin, its cause, or its properties; and have scarcely ever heard any two agree upon material facts respecting it, except this—when the straw is rusty, the wheat is sure to be shrunk. Before I attempt an explanation of my views upon this question, allow me to say I am one of that class of farmers who work for a living—one, the palm of whose hand is made callous by its familiarity with the plow, and if I should fail to convince my friend farmers so far as to induce them to follow my views and opinions respecting this subject, I hope no one will think me arrogant, in offering a few words by way of elucidation of this unexplained controversy. What we usually call rust in or on wheat, is positively known among botanists as a parasitic plant, of the class, *Cryptogamia;* order, *Fungi;* genus, *Uredo;* and species, *Linearis*. It is of that class of plants whose parts are not visible to the naked eye; (our common puff-balls belong to the same class and order, though infinitely larger.) Men of science have long known that what is termed rust, is occasioned by the growth of these parasitic Fungi, attaching themselves to the leaves, stems and glumes of living culmiferous plants. That these Fungi have perfect seeds, and are capable of reproducing their species, has by them been satisfactorily proved and explained. These seeds are but little heavier than air, (being smaller than the dust raised from treading on the common puff-ball, which are its seeds;) consequently the air may become charged to a considerable extent with this vegetative dust, already prepared by nature, when the gentle breeze, accompanied by suitable humidity, shall give the signal, to intrude itself into all the grain in the neighborhood; hence few fields escape, of those lying in one vicinity. It usually attacks by districts, and its deleterious effects are frequently felt through a wide spread of country. In order that we may arrive at an explanation easily understood, we will presume that the striped or speckled appearance of the surface of a straw infected with rust, is caused by alternate longitudinal partitions on the bark, one of which is sound and impenetrable, the other porous or with mouths, which are closed in dry and open in wet weather, and of course cannot fail to contract or inhale moisture when the straw is damp. By these pores, which exist plentifully on the leaves and glumes of culmiferous plants, it is believed the seeds of this Fungus gain admission, (a moist atmosphere greatly accelerating their union;) they germinate and push their minute roots through the tender stalk to the cellular texture from whence they draw their support, by interrupting that sap intended by nature for the nutriment of the grain, which becoming more and more shriveled in proportion as those Fungi are more or less abundant. The substantial or floury part of the grain is only abstracted; the cortical part, or bran, remains without diminution. It seems most likely the leaf is first infected in the early part of the season, before the plant rises into straw; it is then of a bright yellow color, and as the straw approaches maturity it assumes that brown appearance usually denominated rust. These plants, or Fungi, are so diminutive in size as to need a glass of high powers to enlarge them sufficient for observation. Each pore on a straw would produce at least twenty of these Fungi, and these again would produce seed without number: how soon after these seeds take root, the plant becomes perfect and sheds its seed, can not be easily ascertained; but the probability is, it is very short; a few days in very warm weather would most likely bring it to maturity. If the weather is dry, these pores are not sufficiently open to admit the seed; and if they are, there may not be moisture enough to promote germination. It would be presumptuous to offer a remedy for an evil so little understood; conjectures, founded upon the cause and origin here assigned, may, I think, be safely hazarded; and when practical men become scientific men, or when men of science become dependent upon the earth by their own labor, for the bread they eat, these things will be better understood—the sources of evils will be sought out with more avidity, and their remedies applied with greater certainty.

FARMER C.

Manlius, January, 1840.

The communication of “Farmer C.” intended for our January number, was not received till after the paper was issued.—*Eds.*

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THE CULTIVATOR,

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

Notice to Subscribers.

Our first edition of 12,000 having been entirely exhausted by the immense press of subscriptions, we are compelled to delay sending the January number until we can reprint it, which will be done as soon as stereotype plates can be procured for that purpose; when it will be forwarded to all who are entitled to it.

JESSE BUEL & CO.

☞ The continuation of Durand's Report, the Dictionary of Agricultural terms, and several papers, communications, &c., which we had intended for this month, have been omitted, to give our readers the early proceedings of the State Agricultural Society, and Convention, at Albany, on the 5th of February. These proceedings will be found of interest; and the Eulogy of Mr. Dean, on Judge Buel, who may be considered the founder of the Society, will be read with a feeling of regret proportioned to the loss sustained by the agricultural community, in the death of that eminent individual.

☞ We are gratified at being able to assure our readers and friends of the fair prospect of success, equal to our most sanguine expectations. Notwithstanding the iron pressure of the times, our subscription list exceeds by several thousands that of any previous year in the same period of time; and there is every indication that our endeavors to deserve, will be rewarded with an ample if not an unprecedented support, from the farmers of our broad and rich country. We are pleased to learn that our brethren of the agricultural press, generally, are on the full tide of successful experiment; a gratifying proof that the usefulness of such journals is beginning to be appreciated. The great addition of new correspondents to our list, and the continued favors of the former ones, gives the most ample guaranty that the friendly feelings cherished by the agricultural community towards this journal, have not decreased; and that its high eminence, in this respect at least, will be fully sustained.

Census of Agriculture in the United States.

We are happy to perceive that this important subject has been taken up in the proper quarter, and that we are at last to have such an enumeration of the agricultural products of this country, as will furnish some safe estimate of the quantity produced, and the districts in which they are grown. In reply to some suggestions made by us on this subject, Mr. Deberry, the chairman of the committee of agriculture, has kindly forwarded us a copy of the instructions for the use and direction of the marshalls and their assistants, from which we find that the following series of inquiries are to be propounded to every farmer. Although there are some products it would be perhaps desirable to have introduced into this list in order to render it complete, yet it contains all the most essential items, and if carried out in the spirit in which it seems to have been conceived, it will be a collection of vast importance and value to the country. Had such a census of our agriculture been taken at every ten years, the comparison of the tables at different times would be of the greatest interest, as determining the increase in the product of our fields, and the districts in which the greatest fluctuations have taken place.

We have one suggestion to make in regard to this matter, which we consider of very great importance. It is this. Let every printer of a newspaper in the country, and all in the cities that print journals for distribution in the country, give a place to the questions which we copy below, and which will be propounded to every farmer in the United States. As it is to be hoped that there are few or no farmers who do not receive some journal, agricultural or otherwise, such a course would be the means of bringing the subject to their notice, and enable them to prepare their answers with greater correctness than they might otherwise be able to do. If every farmer who receives a copy of these interrogatories, would at his leisure sit down, and write against each one the proper reply, not only would the labors of the marshalls be greatly expedited, but, which is of more consequence, a greater degree of accuracy would be secured. The marshalls will commence in June next, and proceed through their districts as soon as consistent with accuracy. The interrogatories refer to the crops of 1839, and to the products of that year must the answers relate.

AGRICULTURE—INTERROGATIONS.

What is the number of your horses and mules?
How many neat cattle have you?
How many sheep?
How many swine?
What is the estimated value of your poultry of all kinds?
How many bushels of wheat did you grow in 1839?
How many bushels of barley?
How many bushels of oats?
How many bushels of rye?
How many bushels of buckwheat?
How many bushels of Indian corn?
How many pounds of wool?
How many pounds of hops?
How many pounds of wax?
How many bushels of potatoes?
How many tons of hay?
How many tons of hemp and flax?
How many pounds of tobacco?
How many pounds of rice?
How many pounds of cotton have you gathered?
How many pounds of silk cocoons?
How many pounds of sugar?
How many cords of wood have you sold?
What is the value of the products of your dairy?
What is the value of the products of your orchard?
How many gallons of wine have you made?
What is the value of your home-made or family goods?

As intimately connected with these, may be added those relating to horticulture—which are as follows:

What was the value of the produce of your market garden in 1839?
What was the value of the produce of your nursery and green house?

It is hoped that editors friendly to the cause of agriculture, or who have readers in the agricultural districts, will give a place to the above interrogations, and invite the attention of those interested, that they may be in readiness with their replies. Let the first effort for an agricultural census of the United States, be met in a manner that shall ensure the desirable accuracy of the measure.

Working and Training Oxen.

The comparative profits of working horses or cattle on farms, has excited much attention and discussion on both sides the Atlantic; and as was to have been expected, has been answered as the experience or the prepossessions of the parties have dictated. In some few instances the advantages have been determined in favor of the horse team, but in most cases, oxen, all things considered, have been found preferable for farm labor. In the agricultural surveys made of the English counties, such as Berkshire, Sussex, and Hereford; and West Lothian in Scotland, we find the results of many experiments intended to elucidate this subject, made with great care, the various items of first cost and expense of keeping, &c. being detailed with great minuteness.

The general result would seem to be, that oxen cost less at first; that the annual expense for harness, farriery and food, is less for oxen than for horses; that they perform more work in proportion to their annual cost; that they increase in value from the beginning of working; are worth more at last than at first, going at last to the butcher, while the horse is good only for his skin. The ox is also much less liable to disease or accident than the horse, and if an accident does occur it rarely entirely destroys his value.

On the other hand it may be urged in favor of the horse, and very justly, that if more expensive, their work is performed generally better, and always more expeditiously; that they are more fit for use on roads or to encounter bad weather; that they suffer less from extraordinary exertion than oxen, and they are applicable to many purposes for which cattle are unfit.

Some few instances are on record, in which cattle have been able to work against horses on a farm, team for team, but every farmer is aware that such a result cannot be calculated upon with any confidence. On the contrary nearly double the number of oxen, will be required to accomplish a given piece of work, than of horses. Mr. Billingley, in the Minutes of Agriculture, has entered into a minute estimate of the comparative profit of ox and horse labor, and finds, that while it requires eight oxen to do the work of five horses, the balance of cost and expense, would be from twelve to fifteen dollars in favor of the ox teams per annum. According to a calculation in the Lothian report, made from many years experience on an extensive farm, where several teams of both cattle and horses were constantly employed, three oxen were found equal to a pair of horses at every kind of farm work, and the balance in favor of oxen in four teams for twelve years, was about two hundred and thirty dollars. In the North Wales Report, an Anglesey farmer, who says he worked twelve horses and twenty oxen during three years, and performed an equal quantity of work with that number of teams, states the difference in favor of the oxen, during that time at 236*l*. or $1,047.

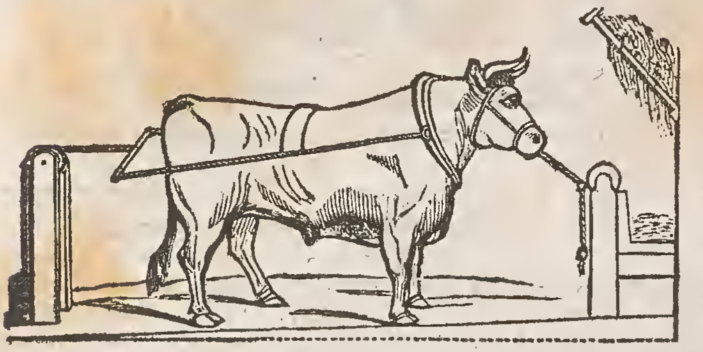
Thus it seems that for actual labor on the farm, there is a decided profit in using oxen; yet still the farmer will find horses indispensable, particularly on the wheat farms of this country, and on those that are at some distance from market. In making the comparison between horses and oxen for farm labor, the English farmer leaves out one of the most important items in the reckoning, so far as the American farmer is concerned, and that is the greater capability of the horse to endure heat. Here, during the intense heats of our summers, when a large portion of farm fallows must be fitted for wheat, the ox is almost incapacitated for labor; there, the lower temperature prevents any inconvenience from heat, except in rare cases. There can be no doubt however, but that on all farms where summer fallowing for wheat is not extensively practiced, or on such as are subjected to a course of mixed husbandry, and where of course most of the plowing is done in the spring and fall, cattle might to a great extent be most beneficially substituted for horses.

There are multitudes of small farmers about the country, with from 50 to 100 acres of land, who find it necessary or convenient to keep more than one team. We believe, that if such, instead of keeping two pair of horses would replace one of them with a yoke of oxen, the business of the farm would go on quite as well, and a respectable annual profit from the substitution be realized. A pair of horses may be necessary for work that the ox cannot so well perform, such as road travel, or plowing in extremely warm weather; but for the ordinary business of the farm, the ox, with less danger from disease or accident, with less expense for food, harness, &c. and with the certainty that his value is not lessening materially from age, may, and should take the place of the horse. It should also be remembered that cattle, as well kept as they usually are by our farmers, will thrive the better for being moderately worked.

The grand objection to the use of cattle is, they are so slow; and this is so true in most cases, as to prevent their use where a certain quantity of labor is to be performed in a short or limited time. But why are they so slow? The unbroken, unworked steer, walks about as fast as the unbroken horse. Whence, then, the difference when put in the team? The steer is broke to the yoke before his strength is matured, and compelled to draw burdens which he is unable to move except at a snail's pace; or he is put to labor with older cattle, broken down by the same treatment, and of course he is compelled to adapt his movement to theirs. The powers of the colt are rarely tested till he has reached maturity; light loads, easy carriages, and rapid driving fall to his lot, and his whole treatment is as well calculated to render him active, as that of the steer is to make him dull and heavy in his movements. By breaking the young steer to a lively step, by not tasking him so severely as to render such a step impossible, and by accustoming him to activity in his movements so as to form a habit, a thing every cattle breeder knows to be practicable, this complaint of slowness, might in a very great degree be remedied. No animal shows the treatment he has received in training more decidedly than the ox, nor is there any that acquires good or bad habits more quickly.

Every farmer, almost, has his peculiar mode of training steers. Some break them in pairs alone; some use a steady horse before them; some commence yoking them while very young, and if treated gently, and not put to labor too early, this is probably as good a way as any; while some pair them with older and steadier animals. Working steers with oxen has this disadvantage; it is apt to make them slow, while alone or with a horse before them they acquire a lighter and more active step. In order to induce steers to take kindly to their work, and to accustom them to the yoke or harness, some of the best foreign trainers of cattle adopt the method shown in the cut below, which we have copied from the British Husbandry, vol. 2, page 218.

"According to this plan the animal is harnessed; and fastened by the collar to a cord or chain, which runs in a ring, to which a weight is appended at the manger, which he can approach or retire from at pleasure. Another weight is then hung to his traces by the centre of the splinter bar, and rests upon the ground passing over a pulley on which it moves. The weight to which the steer is thus attached may be about a cwt. or more, and he is then placed at the full length of his chain from the manger, which is filled with provender, and he cannot approach to eat without drawing the weight after him. In this manner he soon accustoms himself to move the load, and in the course of a fortnight he will probably be



[Fig. 25.]

tamed without farther trouble." By pairing them in this way, they are soon made to act together, usually without those refractory symptoms that frequently show themselves in steers under training.

Work for the Month.

Comparatively little can be done in the fields at this season of the year, but the good farmer will find March any thing but an idle month. He will find it perhaps the most critical month in the year for his cattle and sheep, and that additional care will be required as the season advances, termed by farmers between hay and grass. Instead of lessening the quantity of feed his animals receive, he will increase it, and bring to his aid the roots he may have on hand. Where the straw and hay fed out are very dry, sprinkling brine over them will cause the animals to eat such food more freely. The weak animals should receive particular care, as should also cows, and ewes.

March is a good month to examine your orchards, to to free them from moss and loose bark, and thus expose to destruction the multitude of insects that harbor in these places. Orchards do not receive the attention they deserve, from most farmers. Since the worth of the apple for animals has been ascertained, it is found that orchards are not the least productive part of the farm, even where none are used for cider.

Do not believe those who tell you that green wood makes the hottest fire, and is cheaper to burn than dry. A man who preaches such a doctrine usually gets his wood a jag at a time, has a smoking fire, and a scolding wife; two evils of no little magnitude to a man who loves to stay within doors on rainy days. But the woman in this case, if in any, is excusable; for common sense should teach a farmer to have his wood cut and drawn during the winter, that the March winds may carry off the moisture, and fit it for packing in his wood house.

The month of March is usually the one in which water courses require the most careful looking too, to prevent the change of their courses, the wash of plowed lands, or the covering of meadows with gravel and sand. Since draining has commenced in this country to some extent, those who have drains lately made and covered, should look to them, as surface water is apt, before the earth is properly settled in them, to find its way, and if allowed to run long will most certainly render the drain useless, by injuring the channel for the water, or filling it up with earth.

Sir Humphrey Davy observes, "that manures from animal substances in general require no preparation to fit them for the soil." Should you therefore be so unfortunate as to lose any of your animals, do not cast them into the highway to offend every passer by, or into the brook to be worse than useless, but cut it up and mix it with earth in such a manner, that the decomposition will not be too rapid, and the particles fully blended with the earth. Thus there need be no loss without some small gain. One of the worst signs in passing a farm, is to see the apple or peach trees around the dwelling, hung over with dead lambs, &c. &c. It proves two things—first, that the man has not attended to his creatures as he ought, through the winter; and secondly, that he does not understand making the most of his ill luck, or profitting by his own negligence.

A good supply of seeds should be procured, assorted and labelled, that no loss of time, or mistake in planting, may occur. Attention to these small things will save much time and labor, and in a year the saving thus produced, amounts to a handsome sum. A farmer should always, as far as practicable, grow his own seeds, but where this cannot be, let him be careful to purchase where good ones can be had, and the character of the dealer is a sufficient guaranty that no inferior ones will be offered.

The spring of the year is the time in which the hardihood comparatively of different animals can be tested, when kept alike; and though it should form no part of the business of a good farmer to see on how little food he can keep or rather starve his animals; still hardihood, if combined with other good qualities, is a property that will not be overlooked in the selection of stock. Some animals will keep in good condition on the same food, that would barely keep others from starvation. March usually shows which are, and which are not such animals.

There are few fences in our country that do not require more or less repairs in the spring of the year. The common rail fence will be lifted or shoved from its proper place by the frost, and must be replaced; the winds of the winter will displace and throw down the boards or rails used, and these must be returned and secured; stone walls are the best of fences, but even these must be looked to, or the frost will in time play the mischief with them, giving them that "slantendicular" position, which is any thing but handsome or safe.

Where circumstances prevent meadows from being plowed, and dressing with manures is necessary, if it has not been done in the fall it may be done now, only more will be required. In dressing meadows, composts are better than other manures; and none that is not thoroughly rotted should be ever applied in the spring. Long manures so applied rise with the grass, prevent good mowing, and render raking difficult.

March is a good month for putting agricultural implements in order, and this is a point of the utmost importance in good husbandry. It is idle to expect good farming without tools capable of giving such a result; and when obtained they must be kept in order and preserved, or certain loss will ensue. Borrowing agricultural implements is a practice far too common, and one more honored in the breach than in the observance. Besides the man who borrows much, spends more time in going after and returning them, than it would take to make or purchase them, and the farmer who has a proper feeling of independence, which a farmer should have, will give him more pleasure in using his own implements than those of his neighbor.

The Garden—Hot-Beds.

Within a few years, since horticulture has begun to take its proper place, not only as a science but as a part of the business of every farmer, (although it is yet very far from being fully appreciated,) hot-beds have been introduced as the best means, not only of furnishing a supply of early vegetables for the table, but also of starting such as it is desirable to have planted out as early as is consistent with safety from our late spring frosts. Of this class are cabbages, tomatoes, and indeed if well managed, and not brought forward so early as to require planting out before the temperature of the earth and air is fit for the purpose, almost every vegetable usually grown in the garden. Independent of the value that may be attached to the hot-bed as forwarding vegetables for the table, the manure used for the bed when mixed with the earth that is always put upon it, forms an excellent and thoroughly rotted manure or compost for the garden, free from weeds and insects, the seeds and eggs of which have been destroyed by the process of fermentation and heating, the mass is obliged to undergo. It will be remembered that we are not now writing for the scientific gardener or horticulturist, but for the farmer; and in describing a hot-bed it must be one, both in its cost and construction, within the reach of limited skill and means. We, therefore, gladly avail ourselves of the following drawings and descriptions furnished by a friend, of one erected by himself, and which we know answered every end expected from such constructions.

"Messrs. Editors—The size of the hot-bed must of course be determined by the number and size of the sash to be used in covering it, or by the quantity of early vegetables which it is desirable to grow in it. It may be made with three or five sashes, and of any desired width; but as a general rule it should not be wider than will admit of easily reaching the middle of the bed from the sides when the sash is removed. I made me one last year of three sashes which answered an excellent purpose, and which in some respects differed from any I have elsewhere seen. The expense, exclusive of the sash, was a mere trifle, and I think every farmer who constructs one, should it succeed as well as did mine, will, the first year of its use, feel himself well rewarded for his pains.

The glass that I used was the common seven by nine, and the sash, from outside to outside, was four and a half feet by three feet. There are no cross bars to the sash, as in window sash, but the glass is laid in the sash lapping on each other about half an inch in the manner of shingles, that the rain may run over their sloping surface readily. The bars of the sash should be made at least one and a half inch, and if three inches they will be none the worse, as a greater length and of course capacity will be given the bed, at a slight addition of expense. By making my sash wider than common, I thus gained nearly two feet in length of my hot-bed, a space sufficient to grow lettuce or radishes enough for a small family, and the sash is besides stronger and better every way. The sash received six panes of glass in length.

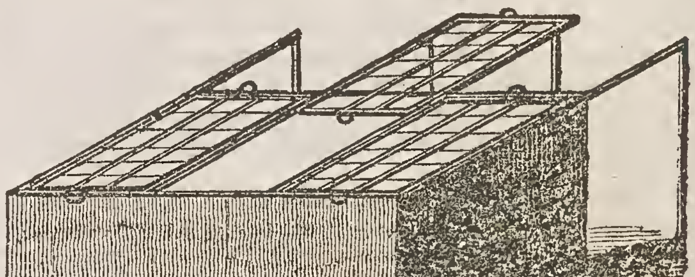
My hot-bed receptacle or frame, I made as follows: I constructed a box of boards, three feet high in front or the side facing the south, and three feet ten inches on the back or northern sides. Pieces of scantling, placed in the corners, served to nail the boards upon, and flat stones or blocks were placed under the corners for it to rest on. On the top of this box four narrow strips of boards, about eight feet in length, were nailed one at each end, and the other two at equal distances for the sashes to lie or slide upon. These pieces had the same angle of inclination as the top of the box, and projecting back some four feet, the ends rested on scantling well set in the ground, thus supporting the sash when thrown back, as will be sometimes necessary to avoid too great heat, or to air and water the plants. I had so often seen the glass of hot-beds shivered, when the sash was merely laid on without proper security, that I adopted this course which has proved entirely successful. To make a place for this sash to slide, on the top of the first narrow board I nailed another, a trifle thicker than the sash, but still narrower than the first board; and on this, but of the width of the under piece, was placed a thin board, thus making a slide for the sash, but from which it could not be removed except at the upper or lower extremity. On the upper sides of each sash, at each end, I screwed a piece of leather doubled into a loop which greatly facilitated sliding, or removing them when necessary. When completed, the box was about ten feet in length by five feet in width.

For making a hot-bed, horse stable manure is generally preferred, as it ferments more equally than any other, and of course retains its heating properties longer. Other stable manure will do, however, when horse manure can not conveniently be had. In making the bed, care must be taken to pack the manure as equally in every part as possible, as, if thrown in carelessly, it will ferment and settle unequally, cracking the earth, and in a great degree destroying the value of the bed. It is customary, after piling the manure, to let it remain some days before the earth is put upon it; it is supposed that thus a quicker fermentation is produced; I, however, put in my manure and covered it with rich garden mould the same day, which was about the fourteenth of March. When put in, the manure and earth was within eight or ten inches of the top of the box; the depth of earth put in might average ten inches. The mass however settled so considerably before fermentation ceased, that I shall this year leave less space between the earth and the glass, since it is well known that the less this space the greater the heat produced by the sun, and experience has proved that the settling of the earth in this case will usually be sufficient to prevent any contact between the plants and the glass, which they ought not to reach. In eight days after making my bed, I planted it with such seeds as I wished for early use, or for transplanting; but except the tomatoes and cabbages, I gained nothing by starting my plants, intended for removal, so soon, since the melons, cucumbers, peppers, &c. grew so fast, and became so large, that when the proper season for transplanting came, removal was fatal to most of them.

In planting a hot-bed with such things as are to be removed, it is a good plan to take pieces of clean turf, some four or five inches square, and putting these in the bed the grass side down, place the seeds on them and cover with fine mould to the depth of one and a half or two inches. The roots of the young plant spread in the turf which partially decays, and if carefully removed, and in season, the plant will feel but little injury from the process.

Much of the profit to be derived from a hot-bed is depending on having the seeds when planted so arranged, that the successive crops shall not interfere with one another, or those intended for removal with those that remain. Thus, where there is but a single hot-bed, the plants permanently grown in them are usually lettuces, radishes, and cucumbers. It takes but a few stalks of the cucumber to fill a hot bed, when the vines begin to run, and these if planted in separate places will not in the least interfere with the first crops of lettuce or radishes, and these but little, if the space is well managed, with the plants intended for removal. Last year I used half of my bed for starting some cuttings of the multicaulis; to make way for which I removed part of a luxuriant growth of radishes; yet on this limited space I grew two crops of the finest lettuce, a large supply of radishes, and after the transplanting of the multicaulis, by allowing the cucumbers to spread, I had not only cucumbers in plenty early, but the vines continued to produce those of good quality till late in the season. To those who are fond of seeing early vegetables on their tables, a bed of this description is indispensable; and after a long deprivation of fresh articles of this kind, heads of lettuce as large as small cabbages, and radishes an inch in diameter, are not apt to be looked upon with displeasure by any one, be he farmer or otherwise.

The annexed cut will give perhaps a sufficiently correct idea of the above described hot-bed, to enable any mechanic or farmer to construct one for himself. I have shown it with one of the sashes thrown back, to illustrate the benefit of the slide. By means of the leather loops, the sashes are moved with the greatest ease, and there is no danger of their falling or being blown off by the wind.



[*Fig.* 26.]

To manage a hot-bed requires some little attention; the heat requires to be graduated to the plants, and while the fermentation is the most active, a few hours of sun on the glass will raise the temperature so much as to injure the plants. Ventilation by moving the sashes must be now resorted to, until the temperature is regulated. Particular attention must be paid to watering the bed, as on the action of the two agents, heat and moisture, the forcing power depends. The earth used should be rich fine garden mould, and a quantity of it should be kept by the bed to use occasionally about the young plants. Stirring the earth about the plants in a hot-bed is as useful as in the garden.

Length,.....	10½	feet,
Breadth,..................	5	feet,
Heighth,..................	3	feet in front,
Backside,.................	4	feet.

It will thus be seen, that, by making the sash frame and bars wider than usual, and by the use of slides, I have a length of bed of over ten feet; whereas, by using common sash and no slides, it would have been but a little over eight; a gain of no trifling consequence. It will be seen that by adding to the number of sash, the bed may be made of any desired length.

Yours, &c. H. M. G."

Where sash can not conveniently be had, frames covered with oiled paper are said to have been used with success; but the glass is evidently far preferable, and if carefully used and housed when not wanted in the frame, sash will last many years.

There is also another way in which the heating properties of manure may be made available; and that is by piling quantities of it in the garden, either in a long or rounded form, and covering the heaps with earth to the depth of a foot or more. If these piles are not made so early as to bring plants started upon them within the reach of spring frosts, they are very useful and may be adopted by every farmer. If the soil is naturally dry, it will be better to put in the seeds around their base, but if the soil inclining to be retentive, they may be planted upon in any place, without danger of suffering from drought. We have in this way grown the finest of cucumbers, melons and squashes; when those not so planted were an entire failure. Like that fermented in a common hot-bed, such manure is in the best order for spreading on the garden the next season, being fine, and free from seeds, &c.

Little in our climate can be done in gardening in March, unless in the warmest situations, where lettuces, peas, and those few things that may appear without the certainty of destruction from frost, may be put in for early use. As a general rule, however, it may be stated, that unless some forcing process is used, and protection given the plants, there is but little if any thing gained by commencing gardening too early. There must be warmth to assist or cause germination, and where this aid is but scantily supplied, though they start, they will be feeble, and lack the vigor and rapidity of growth seen under more favorable circumstances.

Inquiries, Correspondence, &c.

A communication on peat earth, peat ashes, &c. from Mr. Seely, was given in the first number of volume 6 of this paper; and Mr. S. was pleased to promise more on the same subject. A correspondent in Virginia, requests us to remind Mr. Seely of his promise, and we heartily concur in the request "that he will give us more information on these matters."

Kendall's Rotary Pump.

We would inform our correspondent, who has inquired the price of this pump—"its power in throwing a jet of water; and whether it can be applied to a succession of upright conduits, for the purpose of dressing meadow land with water or liquid manure;" that we have no information on these points, but should any of our friends be able to supply an answer, we shall be pleased to give it a place in the Cultivator.

Meadows, Pastures, &c.

Our friend from Conway, Mass. will find the queries he has propounded, more fully answered in a former volume of the Cultivator, than our limits will at present permit. He inquires first:

"How can pasturing be improved on broken rocky land that cannot be plowed?" By a top dressing of manure only.

2. "A large part of my mowing is moist cold land, natural to grass. Shall I feed my mowing? Shall I put 30 loads of manure to the acre, and crop twice, or spread it over more land, and crop once?"

Moist cold land must be drained, and then it will be warm dry land. In this state, a rotation of crops will enrich it. Better cultivate a little land well, than half farm a larger quantity. The first will enable you gradually to improve the whole; the last will deteriorate the whole.

"Will good lands hold their own, mowed once and not fed?"

They will; but to have good grass, it is necessary to occasionally put on grass seeds, and scarify the surface with a light harrow.

"Is lime of any use on moist cold lands?" No, drain first, and use lime afterwards.

"What would be the effect to plaster good dryish land *without* manure, crop once, and *not feed any?*" In time, the land would deteriorate. In our wheat districts, we plaster clover, and crop wheat for years in succession; but the land rests two years in clover pasture, on which sheep and cattle are fed—which, with the decaying clover, and roots, gives a heavy manuring to the soil. Plaster and lime, are not properly manures.

"Are ashes and plaster similar in their effects on land?" Not precisely, as the one owes its efficacy principally to the nitrate of potash it contains—and the other, to its sulphuric acid and lime. Both, however, are good, and the best on dry, sandy, or gravelly soils. Swamp mud, will produce generally little effect on land, unless first made into compost, or used to absorb the liquid manure of the gravel. In either of these ways, it is invaluable.

"How should the Rohan potato be planted?" Three feet each way between the hills, will do well; or they may be planted in drills. This is a vigorous plant, and requires more room than some other potatoes. It is better to cut them. Double the quantity can be produced from a bushel cut, than from one uncut. We have found one eye to a piece succeed well; and if planted in hills, three pieces is abundance of seed; in drills they are placed singly. [See Mr. Bement's communication in another column.]

"Where can I get the brown corn?" In New-Hampshire, of Gen. Hill, editor of the Family Visitor; or of Mr. Cooke, of the Cheshire Farmer, we presume, as these gentlemen have this corn in their possession.

Cocooneries.

We have received from Mr. Benson, of Smyrna, Delaware, a description of his mode of feeding silk-worms on his patent revolving hurdle; and should think it a decided improvement on former methods, and worthy the attention of all in the silk business. Mr. Benson estimates the saving of expense in feeding a million of worms, at $420, besides insuring better silk, and health to the worms. Mr. Benson has ample testimonials of the superiority of his patent hurdle, from gentlemen who have seen or tested its usefulness, among whom are the Governor of the State, Hon. Judge Clayton, &c. &c. Mr. Benson may be addressed at Smyrna, State of Delaware.

Cooking and Steaming Apparatus.

"EDITORS OF THE CULTIVATOR—I have been looking about for a long time for some apparatus for steaming or cooking roots or other food, in an expeditious and cheap manner. Can not you give us something of this kind that will not cost too much either for the article itself, or what is of quite as much consequence, consume too much fuel in cooking. With the common potash kettle, the wood required costs us as much as the benefit derived from cooking. Coal would be economical here. *New-Windsor, Orange co.* J. R. CALDWELL."

The *best* and *cheapest* apparatus for steaming roots, &c. we have yet seen, is made, by putting to a box of the required dimensions for cooking or steaming, a bottom of sheet iron, and setting this box on an arch of brick or stone work, allowing about four inches of each side of the box to rest on the brick work. Let the box be made of inch and a half or two inch plank; the sheet iron with a double row of holes for nails, secured to the bottom of this, will be water tight, and a false bottom made of a board, and perforated with numerous holes, with cleats nailed on it to lie on the iron bottom, and prevent the roots burning on it, completes the steamer. We have used one made on this principle, for several years, and know of no plan which will cook food with equal rapidity and cheapness. Our steamer holds 15 bushels, and the fuel required is but a trifle.

Carpenter's Harvesting Machine.

Mr. T. F. Lambson, of Salem, N. Jersey, sends us the following queries in relation to the above machine, a cut of which appeared in the Genesee Farmer, of October, 1839. We are unable to answer them; but should be pleased to receive a reply from Mr. Carpenter, or any gentleman who has tested the machine.

"What would be the cost of the machine? What number of hands is necessary to attend it? Would the wheels of the car be likely to sink so deep into the earth as to render the machine useless when the ground is very wet? and lastly, could the thresher be dispensed with, and *the machine taught to mow?*"

Gourd Seed Corn—Pheasants.

"Mr. Hagner, of Schuylkill Falls, Pa. inquires about the 'tea cob gourd seed corn,' whether it is grown with us, and its general produce per acre," &c. This corn is not a favorite in the north, as it does not ripen sufficiently early to be secure against frost; where it ripens, we have heard it spoken of as an excellent variety, and justifying the encomiums of Mr. Hagner.

Mr. H. also asks, "Do you, or any of your correspondents know where the golden pheasant fowl, and the silver pheasant, or creole fowl originally came from? I have them both, and they are most prolific layers of eggs."

The golden pheasant, (*phasianus pictus,*) is a native of China, and according to Teneminck, is remarkable for the beauty of its plumage. He says, another fine species of pheasant is found in China, called the silver pheasant, (*p. nycthemerus.*) The genus *phasianus*, not only includes the pheasants proper, but also the domestic fowl. Their habits are similar.

Potatoes.

A correspondent in Tioga county, Pa. writes us as follows:—"Of the six eyes of the Rohan potato, you were so kind as to send me last year, four of them lived, and from the four hills, I obtained about one-third of a bushel of potatoes. Valuable as this variety promises to be, reckoning by the hill, my kidney potatoes beat them considerably—but then, the kidneys had the advantage of one large potato in each hill. From different measurements, of a square rod, I found the kidneys would fairly average 600 bushels per acre, the greatest yield I have ever had, and that off the same ground, where last year they were scarcely worth digging. Were not my page out, I would say something on the disputed question of hilling, or not hilling potatoes. They are both right, and both wrong, it depending entirely on the kinds cultivated: No two varieties of plants differing more in the manner of their growth above ground, than the different kinds of potatoes do under ground."

We hope our correspondent will favor us with his views on this topic, illustrating them by reference to the several cultivated varieties of the potato.

Threshing Machines.

A "Subscriber" at Baltimore, who inquires respecting threshing machines, particularly those suitable for small farmers, cost, &c. is informed that there are a great variety of them in use, and most of them answering well the purposes intended. One of the best kinds we have noticed, is one moved by one horse, treading on a revolving floor, to tend which, two men and two boys are sufficient, and which will thresh from 50 to 100 bushels of grain in a day with ease. Such machines are not liable to get out of order—can be repaired by a common machinist, and cost from $110 to $130.

Windmills.

Mr. John Coulson, of Baltimore county, Md. has asked for information with regard to the windmill patented by Mr. Keys, of Vermont; and that built by E. S. Andrews, of Pittsford, Monroe county, and the evidences of their success and utility. If either of these gentlemen will favor us with the information sought, it shall have a place in the Cultivator.

Silk.

We make the following extract from the letter of a correspondent, of Macedon, Wayne county. The yield of silk was a good one; but experiments made on a small scale, are apt to exhibit higher results than on a more extensive one. It shows, however, the ease with which silk can be grown; and adds another to the many proofs that it can, and will be a profitable business. The length of the thread of silk is, I think, not often exceeded, equalling about 1900 feet.

"In May last, I had a present of a few silk-worm eggs, which hatched 150 worms, which formed their cocoons in a little short of six weeks. One hundred of them weighed 5½ ounces. Ninety were reeled a few days since, and produced 1½ ounce of silk reeled. When the first cocoon had run off, they had reeled on a common reel eight knots."

☞ Our friends who make inquiries of us, will pardon us if we are at times more brief than they could desire; as many of these subjects are fully discussed in the former volumes of the Cultivator; and justice to former subscribers demands, that too much space be not occupied with matter already in their possession.

Notices, &c.

OSWEGO COUNTY AGRICULTURAL SOCIETY.

We have received from our friends in Oswego, the proceedings of a meeting of the farmers of that county, held on the first of February, which resulted in the formation of County Agricultural Society, with the constitution of the society, officers, &c. We should have been happy to have laid the whole before our readers this month, but the space occupied by the proceedings of the State Agricultural Society and Convention, forbid. We shall make room for these at the earliest opportunity.

A meeting has been held at Syracuse to receive the report of a committee appointed to prepare a more effective organization of the Agricultural Society of that rich county. The result we have not learned; but trust it will be such as will unite all hearts and hands in an efficient and cordial support. Nothing is wanting but the disposition, to give Onondaga a Society that shall be an example to the state, and an honor to the farmers of that county. This disposition we believe will be found to exist where the subject is properly presented to them.

Alpaca Wool.

At the late meeting of the British Association for the advancement of science, Mr. Dawson made a communication on the introduction of a species of *Auchenia*, (the Llama of South America,) into Great Britain, and presented specimens and samples of Alpaca wool, native and manufactured in imitation of silk, and without dye, as black as jet. Zoologists enumerate five species of the Llama, all of which afford wool; but the Alpaca alone has fine wool, from six to twelve inches long, and the *Vicema* wool like the fur of the beaver at the base of its coarse hair. The Alpaca wool is already becoming an object of interest and importation to England, where, it seems not so much to enter into competition with the wool of sheep, as with silks. It is capable of the finest manufacture, and is especially suited to such fabrics as the finest shawls. The yarns spun in England are mostly sold in France for the shawl trade, at from $1.50 to $3.50 per lb. according to quality, the price of the Alpaca wool being from 55 to 65 cents per lb.

We cannot conceive there is any thing to prevent the naturalization of the Alpaca in the United States, and the attempt, if successful, might add an important item to our catalogue of ways and means. Although found under the equator, it lives and thrives on the highest inhabited districts of the Andes, where the cold is more severe than in any part of our country. The Llama is the camel of this continent, and the Alpaca variety is about four feet in height and six feet in length. Like the camel they are very hardy, subsisting on the coarsest and scantiest food. The flesh is considered by the South Americans as the best kind for food, and they are raised in large numbers for this purpose, as sheep for mutton are with us.

Highland Agricultural Society.

BREEDING CATTLE.

At the late meeting of this noble institution, probably the most efficient and best conducted agricultural associations in any country after an able address from the Marquis of Tweeddale, the following questions were proposed to be discussed, and the individuals named were selected for the purpose.

"I. How far is it a wise and prudent measure to cultivate so largely the southern breed of cattle, to the risk of entire loss, or at any rate to the deterioration of the fine native breeds of cattle?"

Mr. Heriot and Mr. Craig were appointed to discuss this question.

"II. Would it be better to feed sheep fat for market, or bestow the extra keep raised in this northern district of the country upon the young stocks: and how far crossing different breeds of sheep may be carried on with advantage?',

Mr. Dudgeon and Mr. Horne were appointed to speak to this question.

The remaining questions were, 3d, "What is the best method of thorough draining?" 4th, "What is the best and most economical method of destroying thistles, ragweed, ferns, and other noxious weeds?" 5th, "Can bone manure be considered effectual for a crop, succeeding turnep, without being a second time manured, or ate off by sheep; and if so what quantity will the acre require?" and 6th, "the advantage and economy to a farmer in using machinery for cutting turneps, hay and straw, and in bruising grain for stock?"—and were spoken to in their order by the Marquis of Tweeddale, Dr. Nicols, Mr. Sim and Mr. Davidson.

In the speeches made, and papers read, on these several topics much valuable information was communicated, and many important truths stated. From the decisive advantages of this mode of proceeding, we think a profitable hint may be derived for the future meetings of our agricultural societies.

Mr. Heriot gave an interesting account of the rise and present state of improved Durhams, and their introduction into Scotland; correcting a statement of Lord Spencer, that the best short horns were the result of a cross between a Durham bull and a Galloway cow, made by Mr. Colling; whereas the cross alluded to was between a Galloway bull and short horn cows; and though the result of this cross was several splendid cows, "eventually Mr. C. gained neither fame nor profit by the experiment; and though by this time the stain is probably washed out, breeders who possess the best herds have always carefully guarded against the blood thrown in by this cross, which has ever since been technically termed the 'alloy.'"

Respecting the much controverted point of breeding *in and in*, Mr. Heriot remarks—

"It is certainly an undoubted fact, that the splendid and beautiful animals in the possession of Messrs. Collings and a few others, thirty years ago, were produced, as I already mentioned, by putting the sire to his own progeny. But with those animals, the success of that extraordinary mode of breeding appeared to stop—for, by unfortunately pursuing a similar course, for eight years, the fine stock (pure short horns) brought to the Tweed side by Mr. Robertson, became not only extremely delicate, but many died of consumption, so that he was obliged again to apply to the Messrs. Coilings for fresh and more distant blood than his own. By hireing the bulls Wellington, Maidas, and Brampton, and using them during ten years, his herd, altogether clear of the "alloy,' again became superb."

Mr. Heriot had no fears from the spread of the Improved Short Horns, and thought them admirable for their size, early maturity and fattening qualities.

Mr. Craig's paper related to the effects of the Short Horns on the native breeds. His remarks related to Scotland; but as they are applicable to the native breeds of all countries, we make the following liberal extract, since few subjects can be of more importance than a correct understanding of this question.

"First, he contended that crossing [with the short horns] must deteriorate the native breeds. That this must ultimately happen is beyond a doubt. At present the rage over all Scotland is to cross the cows and heifers of the Scotch breeds of all sorts with short horn bulls. The consequence of this is, that parties will see their error when it is too late; as the excellent and hardy beasts of Galloway, Fife, Angus, Aberdeen, and the West Highlands will be gone: and the whole of Scotland will be filled with a mixed and spurious race of cattle. That parties will in the first instance select the finest cows and heifers to put to the short horn bulls, and that the *first* cross will in most instances be large and handsome is not doubted; but then, from the neglect that must ensue (and it has already begun) of keeping bulls of the native breed, the supply of pure Scotch cows and heifers must run out, and the consequence will be that people must and will breed from crosses, and it is generally allowed that a second cross is a failure. But in case the native breeds are destroyed, many people say we can breed pure short horns. So we can, but will that be for our interest? The short horn breed is soft, delicate, and liable to many casualties in our country and climate, to which Scotch cattle are not; and let it be kept in mind that short horn cattle, or even crosses from them, are very inferior beef, generally selling at 6d. to 2s. a stone less than the fine grained and beautifully mixed beef of Scotland. It is not denied that well bred short horn cattle are very handsome to look at, but they are made so at great expense. Earl Spencer, who is allowed to be one of the best breeders in England, has a herd of very fine animals of this description, but how are they kept? Why, they are fed, groomed and clothed like race-horses, and it is very questionable if there are many farmers in Scotland disposed to be at that expense, and, if they were so inclined, would it not be wiser to give the extra feeding to the best Scotch cattle, which invariably fetch a higher price per stone in market. But the English do not run upon short horn cattle as we are inclined to do, though England is the native place of these cattle, and the climate is much better suited to the breed, than that of Scotland. Many of the English farmers would not for any consideration, contaminate their fine Devons, Herefords, Long Horns, &c. by infusing one drop of short horn blood into them. It may also be observed, that short horn cattle are to Scotch cattle something as Liecester sheep are to Cheviot sheep. Now there is not a Cheviot sheep farmer who knows his own business, in the Highlands of Scotland, but would say that by crossing his hardy Cheviot ewes with the finest and highest bred Liecester tups, his flocks would be ruined, and his own ruin would soon follow. If individuals only were likely to suffer from the propagation of this soft and delicate breed, no one would mind; as it is, he submitted if the subject, important as it was to the whole of Scotland, was not worthy of attention."

Mr. Wetherell of Durham, corrected the statement of Mr. Craig, respecting Earl Spencer's cattle, saying he was personally aware of the fact, that his Lordship's stock was "badly kept on bad land."

This question of the effect of crossing the short horns with our native stock of cattle and then breeding from this mixture, is one of great interest to this country and particularly to the northern states. The produce of the first cross is good; there can be no doubt of that; but the opinion is becoming general, not only in Europe but in this country, that the progeny of these crosses are inferior to either of the original stocks, possessing few of the good qualities, and most of the bad ones of both races. The true course in crossing with animals, is by many of the best breeders supposed to be, to keep the original stocks pure, and cross with these alone; recourse being had to selection, to correct any tendency to deteriorate that may be discovered.

Breeding Sheep.

The discussion respecting sheep was principally on the merits of the different systems of feeding sheep for market adopted in Scotland, systems so much at variance with ours, as to have little interest to the American readers. An incidental remark of Mr. Horne, on the crossing of sheep, appears worthy of notice, as crosses of the Leicester and Merino are very fashionable at present in this country.

"With regard to the crossing of sheep, it must depend upon locality where climate, land and food were favorable for Cheviot and Liecester sheep, he would advise them to get a cross as fast as possible, and then they would get the most valuable animal that could be produced, and one that could be brought to market at as low an expense as the pure Liecesters. Another cross was between the Cheviot, and black faced sheep. How has it been introduced? It was introduced in consequence of farmers thinking the hills too good for black-faced, and not good enough for Cheviot. He believed they were all well aware that in crossing sheep it was *necessary to take care never to exceed the first cross*, otherwise, according to every information he had obtained, they were doing what was not a wise thing."

Draining.

The paper on draining by the Marquis of Tweeddale, was a valuable exposition of the benefits of thorough draining, and the best mode of effecting it; with a description of the soils where it most required, and the expense of performing it. Here we are met at once by the fact that outlays are proper there that would be ruinous here; the expense of draining, according to our accurate tables of the Marquis, exceeding the value of the best lands in the country. Still the advantages of draining, even in the manner in which it can be conducted in this country, are rendered perfectly apparent, and should attract the notice of every farmer.

We shall give a few extracts best calculated to develop the system recommended, and the mode pursued.

"Experience has taught me that the drains ought to be made longitudinally and in the furrows; the distance of the drains from one another ought to depend upon the quality of the subsoil; in those subsoils which I have experienced, 15, 18, and 30 feet are the distances I have found most efficient. Where the ridges are 15 feet, and the drains at the same distance from one another, the depth of the drain should be 24 inches—at 18 feet, 30 inches—at 30 feet, 36 inches.

"In filling up the drains above the tiles, [or the covering of the water course] several plans have been adopted, depending on the locality of the farm; gravel, sand, small field stones, quarried stones broken small, or the surface soil is generally used. Gravel or sand appears to me to be the best covering to place on the straw placed over the tiles, as the water filters through either, taking nothing along with it, but what tho farmer wishes to get rid of! The surface soil is what is next best, then the small land stones, and lastly quarried stones broken small. If the drain is three feet deep, it is frequently filled with a foot of stones above the tile, a sod is placed above the stones, the remainder of the drain is filled up with surface earth. The subsoil that comes out of the drain, should be spread equally over the ridge, or the space between the drains.

"The system I have adopted for the treatment of the lands on my own farm, where the soil and subsoil are of the weakest quality, such as I have previously described much [resembling, what is called the hardpan lands of this country.—*Eds. of Cult.*] is as follows. After it is drained in grass, the land is trench plowed, making the furrow from 14 to 16 inches; the sod, of course, is turned into the bottom of the furrow. The plowing is done by two plows, each having a pair of horses, and as the work is harder upon the horses that turn up the subsoil, or till, they every hour change with the plow that turns over the sod. The till remains exposed to the frost during the winter; in the spring the land is cross plowed, the sod is found quite rotten, and mixes with the till. Oats are sown—the crop is considerably better than before the land was drained; after the crop is cut, the land is ridged up with a winter furrow—turneps are sown in spring; in ridging up the land for turneps, there is little or no appearance of till. The best crop of turneps to be found in the same district of country is not superior to those grown after this management of the land; the land after the turneps are off is plowed for barley; no appearance is now to be seen of till; there is an excellent crop of barley, and the grass seeds are always well planted during the two years of grass which follow the barley—the fields have the earliest grass in the district of the country, the largest number of sheep per acre to feed on them, and the produce are the fattest animals. The grass that formerly grew in these fields was of the worst quality, and sheep would barely eat it. No extra manure or lime has been applied to these fields. * * * *

"In conclusion, I think it will be satisfactory to state, I have an equal dread with other farmers, to bring till, such as I have described, to the surface before the land is drained. It is only after that operation has been effectually executed, that I consider the till or subsoil, when properly pulverized, forms a new soil, the most valuable and easy to work of any I know; for in a wet season the water escapes by the drains, and in a dry season, the till or clay subsoil that has not been removed, retains sufficient moisture for the plants growing in the pulverized surface soil, to supply food for them by the exhalations caused by the heat of the weather."

Manures.

The paper of Mr. Sims on the use of bone dust shows the excellence of that substance as manure, particularly for drilled crops, turneps, &c. The following paragraph struck us as showing the impropriety of relying on any single manure, to retain land in a state fit for cropping. In our agriculture, while we imitate the valuable, we should carefully avoid what experience has proved to be faulty or injurious.

"Many of us know that lime, when frequently repeated, ceases to operate so advantageously as at first; nay, that it may be, and becomes, absolutely hurtful; and I apprehend that such has already been the case with bone manure, in places where it has been long in use; and that it may come to be so with us."

We think there is abundant evidence, that where mineral manures are alone used, the soil will become exhausted and incapable of producing vegetation; and that where animal or vegetable manure is continually applied, though the vegetation may be luxuriant, the seeds are rarely perfected, particularly those of the cereal grains. A mixture of the two, with crops that require both, seems to be what is required in good farming.

Economy of Fuel.

The necessity of economy in the use of fuel is daily becoming more apparent to every one who looks at the state of the country with respect to this article. Our forests are fast disappearing; to our rich coal mines multitudes can have no ready access, and the prices are such as to place it almost beyond the reach of the poor; there seems therefore no way but to economize the wood that remains, and by using it in the most available manner, give time for new woodlands to take the place of the old. That stoves give out much more heat from the same quantity of fuel than fire-places is evident, as in the last a very large portion escapes up the chimney without the least benefit. There is also a great difference in stoves giving out heat, and much is depending on the manner in which the smoke is allowed to pass from them into the chimney or air. With many the draft is so strong, and the conducting pipe so short, that nearly as much heat is lost, as in the old fireplace. Where practicable, stoves should always be in the lowest rooms, and the length of pipe should be such, or arrangements should be so made, that the heat may all be given out before the smoke escapes. If the wood is good, what may be called air-tight stoves, or stoves provided with a close damper to the flue above the fire, and furnished with the means of closing it tight to prevent the access of air below, are found very economical. The Yankee Farmer says:

"We have used a common box stove in this way. We filled it with hard wood, and when well on fire, we shut the door closely, and then turned the damper in the funnel, and it would burn nearly a whole day without further attention, keeping the room warm. Had the stove shut almost perfectly tight, the fire would have lasted a whole day; when with the funnel and draft open, the wood would have been consumed in less than one hour. When fuel is burned in a close apparatus, confined as we have named, it consumes very slowly, and yet it warms a room well, as it spreads, instead of passing out of the chimney, as is the case where there is a strong draft and rapid consumption of fuel."

This is correctly stated, as wood cannot consume rapidly without a constant supply of oxygen, which in this case is partially cut off by preventing the admission. The wood in this case instead of going off in flame burns as would charcoal, or wood that is being charred in a common coal-pit. Good wood only can be depended on in the air-tight stove, as with green or half rotted wood there would be more smoke than coals, even admitting a fire in such a stove could be kept up with such wood, which is, to say the least, problematical. In all cases where wood or coal is burned in close stoves, care must be taken to prevent a fatal deterioration of air in the room; and a vessel of water should be on the stove to prevent that peculiar dryness of the air so injurious in confined and stove-heated rooms.

There can be no question but that properly managed, one half the fuel now used for warming rooms might be dispensed with; as also might much of that used for culinary purposes, if the most improved modes, and the proper fixtures for economizing it were adopted. Let the farmer plant trees, while the man of science improves the methods of burning them when wanted for fuel, and we may yet bid successful defiance to the frozen north.

Large Litters of Pigs.

We much question whether two litters of pigs, bred for slaughtering alone, from one sow, can be produced in the country, exceeding the ones given below, in weight or value. Our host of the Syracuse House has fine cattle as well as good pigs, and obtained some of the premiums awarded at the Onondaga Agricultural Fair. We copy from the Syracuse Journal.

"Mr. Rust, of the Syracuse House, killed, the present week two litters of pigs from the same breeding sow; one of 12 in number, 15 months old; and the other 11, eight months old. The first averaged 313 lbs. each, making a total of 3,756 lbs. weight; and the latter 207 lbs. each, making a total of 2,277 lbs. weight. The whole amounted to 6,033 lbs. or a little over *three tons*, which, at the present low price of pork, is worth $301 65."

The number of pigs which have been produced at a litter does not seem to be generally known by farmers. The average number, as proved by the records of many breeders, is from seven to eight at a litter, but this number is sometimes greatly exceeded. The greatest number on record, we believe, in this country, previous to the present year, as the product of a single litter, was twenty-three; but the following, from a Hartford journal, shows that even on this point there has been room for improvement.

"Messrs. Cheney and Shepherd, of Chatham, Middlesex county, were favored with a litter of Berkshire pigs, from one sow, amounting to twenty-eight in number. We took the trouble to ascertain the fact, found that it was correct, and think it will outdo any thing of the kind on record."

This is indeed, pretty well for brother Jonathan; but he must try again, or John Bull will still bear away the palm of producing the most, as well as the biggest hogs, as the following extract from the British Husbandry will show:

"Twenty swine are estimated to produce 150 pigs, or on an average, seven and a half pigs each, for their first litter. Instances are indeed on record, of a sow, which in 20 litters, produced the extraordinary number of 355 pigs; as well as of another having farrowed 37 at one birth, and from 15 to 20 are not uncommon. Large litters are not always the most profitable, as they usually have among them many weakly individuals, which can never be reared with advantage."

Ice Houses.

Although we do not consider ice houses as absolutely essential to the health or comfort of the farmer, yet as a little ice water in the fervid heats of summer is certainly refreshing, and if properly regulated in quantity, perfectly safe, a few hints respecting the best mode of preserving ice or snow may be acceptable. In making an ice house, two things must be kept in view; first, that the vault or pit be dry; and secondly, that its walls be constructed of some non-conducting material. A northern exposure will be the best for the ice house, but this is not absolutely essential. Protection from the sun by trees or buildings, is also an advantage where convenient. If the pit dug for the house is not in gravel that will admit the water that drains from the ice to pass off freely, a drain must be made, and it should be so constructed, that all access of the external air through it should be cut off. The frame of the building should not touch the sides of the pit, and on the bottom the points of contact should be as few as possible. The space between the outer and inner boarding of the building should be filled with tan, to exclude the air, and a double roof well filled in with the same material will be advisable Doors, convenient for the reception of the ice, and also for procuring it when wanted, must be made so as to perfectly exclude the external air, and prevent all circulation within. If the vault will admit of it, double doors, with a space of several feet between will be best; and this space will be an excellent place for preserving fresh meat, keeping butter cool, &c. Whether ice or snow be used, it will gradually give way on the sides and top, and these spaces as fast as they enlarge, should be filled with clean straw, which is one of the best of substances for this purpose. Formerly it was thought that ice alone would answer for preservation, and it was always procured, though sometimes at considerable expense. Now, it is said that snow is far superior, and if it will keep as well, it must be; as much of the ice obtained from rivers and ponds is very far from being in that state of purity which is desirable for summer drink.

Nothing more is necessary, than to gather the snow when compact and dry, throw it into the pit, and pound or tread it down as firmly as possible, keeping all moisture from it during the operation. As the snow contracts during the summer, clean straw must take its place, and in this way the purest of snow or ice may be had the whole [illegible] All that part of the building above ground, roof and all, should be painted white, or whitewashed, as often as is necessary to ensure a perfect whiteness. The necessity of this precaution will be obvious to all.

Making Pork.

The Quarterly Journal of Agriculture contains the record of some experiments made by M. Bengtrapp, to test the value of several articles in fattening swine. He brought up separately, five couples of pigs, and obtained after a certain length of time, the following results:

Couples.		*Food.*	*Increase of weight.*
1st, got	55	decalitres of peas,.........	22 st. 7 lbs.
2d, "	283	" balls of wheat,	24 st. 3 lbs.
3d, "	96	" buckwheat,....	26 st. 10 lbs.
4th, "	98	" boiled potatoes,	20 st. 4 lbs.
5th, "	175	" " carrots,..	28 st. 2 lbs.

The decalitre is equal to 15 pints, or nearly a peck of our measure. What is meant by the *balls* of wheat, unless it be what we term bran or shorts, we are unable to determine. On these experiments the editor of the Journal remarks:—

"These results, though interesting, are not entirely satisfactory, because it is not mentioned whether the pigs were all of the same age and weight, nor is it stated whether the quantity of food marked in the table was as much as the pigs could consume. We have always believed that peas were the most nutritious food that could be given to pigs; [It must be remembered that Indian corn is not grown in Great Britain, and therefore unknown for feeding pigs.—*Eds. of Cult.*] and this experiment confirms the belief, as may be seen by comparing the relative increase of weight obtained from the various kinds of food, viz; 55 decalitres of peas gave 22 stone 7 lbs., or nearly 6 lbs. of pork for one decalitre of peas; whereas from 28 st. 2 lbs. were only obtained from 175 decalitres, or about two and a half lbs of pork to each: giving the peas the advantage of two and a half to one. Next to the pea, the most nourishing food is the buckwheat, which gives nearly four lbs. of pork to every decalitre. The lowest produce was from the wheat balls, which was only one and one-fifth lb. of pork to a decalitre. The boiled potatoes gave three lbs. of pork to one decalitre."

The relative value of the kinds of food here enumerated, would stand as follows:

1	peck of	peas will make..........	6	lbs. of pork.
1	"	buckwheat.............	4	"
1	"	boiled potatoes.........	3	"
1	"	" carrots..........	2½	"
1	"	wheat balls............	1 1-5	"

The relative value however, of the several articles, after all, must be determined in part, by the quantity that can be grown on an acre, and the expense of feeding each kind of food. Thus, if 500 bushels of carrots can be grown on an acre, and but 25 or 30 of peas, the acre of carrots will make, at the rate calculated, above 5,000 lbs. of pork, and the acre of peas 720 lbs.; thus giving the carrots, after deducting the expense of cooking, greatly the preference. The same remarks will hold true of the boiled potatoes, which are much cheaper than either corn or peas. There can be no doubt, however, that the product stated from each kind of food in the above table, will be found to greatly exceed the amount usually obtained by the farmer in the common mode of feeding

Mutual Insurance on Cows.

There are multitudes of honest, poor laboring men in this country, particularly in the neighborhood of cities, or where the population is mostly mechanical or manufacturing, whose main reliance for support, after their daily labor, and certainly that of their children is depending on their single cow, which the law has secured beyond the reach of the rich or the grasping creditor. But the law does not guarantee them against disease, and very often the unfortunate poor man, by the loss of his cow, finds himself and his children at once reduced to want, and at the same time without any means of repairing his loss. Every one is aware that such is the case in every part of our country—and appeals to the benevolent not unfrequently arise from this source.

The same state of things has long existed in England and Scotland, among the small farmers, the cottagers, and manufacturers; and the evil was so severely felt, that public attention was at last turned to the subject, and associations called cow clubs, conducted on the principles of mutual insurance, have been introduced, and wherever tried, are spoken of in the most laudatory terms.

The principle on which these associations are formed, is exceedingly simple; consisting in the main of only insuring members, who become such, by contributing to the funds of the association such a sum annually, as shall be deemed proper, or which an experiment shall prove necessary, in order to meet any loss that may occur. The rate of contribution in the different societies, varies somewhat; as the liability to loss, owing to severity of winter and other causes, is greater in some districts than in others. The rates of annual subscription, range from 50 cents to $1 25 per annum; and the range of loss per cent, from 2½ to 4½. If the cow of a member of the association dies, the committee of the body examine the case, and if the loss is not owing to wilful carelessness or neglect, the individual is awarded a sum usually sufficient to purchase a good cow, which must be appropriated to this use and no other. A certain sum is however fixed upon in the regulations of the society, which is not to be in any case exceeded; and the age of the animal is also determined, beyond which no premium can be given.

We think there are many places in this country, where similar associations might be instituted with decided advantage, and the payment of a trifling annual premium, not in ordinary cases exceeding the value of a day's labor, secure the poor man against a loss which is always a serious one, and in the ordinary state of things is irretrievable, without great inconvenience and sacrifices.

Green Vegetable matter for Manure.

The value of green vegetables, when put under the soil and submitted to the process of decomposition, does not appear to be fully appreciated by the farmer. The more rapid the growth of a plant, the more efficacious is it in restoring exhausted soils, a result, perhaps depending on the fact, that such plants derive a large portion of their support from the atmosphere, and of course return to the earth more than they take from it. Buckwheat and clover are striking instances of this power in green crops to fertilize soils, and both have been extensively used for this purpose. Green manuring has been more used for grain crops than for roots, but the following experiment made by Prof. Parks, in 1839, will show that the good effects are not less conspicuous on roots than on grain.

"I had a trench opened of sufficient length to receive six sets of potatoes, under three of which I placed green cabbage leaves, while the other three had nothing but the soil. When the crop was dug up, the plants over the cabbage leaves yielded about double the produce of the other."

Experiment with Wheat.

The following results of an experiment made with several varieties of wheat, we condense from the London Express, and consider interesting as showing several particulars in the English mode of cultivating this grain, such as manuring, time of sowing, quantity of seed, and the yield per acre:

	Varieties.	Number of rods sown.	When sown. Decem.	Quantity sown.	Total produce.	Produce per acre.	Weight per bushel.	Time of harvest.
1	Jersey Dantzic,	286	10	4	65	36½	60	Sep 7,
2	Round White,	581	9	8	124	35½	60½	Au. 28
3	Coturianum,	543	10	8	116	35	60	Sep. 10
4	Jersey Hoary,	283	10	4	71	40	59	" 7,
5	Wellington White,	804	9	12	190	38	60¼	Au. 23
6	Golden Drop Red,	189	9	2½	47	40	61¾	Sept.7.

Mr. Clarke, the experimenter, says—"The soil on which these wheats were grown, is an alluvial loam of medium quality, well fallowed, and manured with 14 good loads of rotten dung, 5 bushels of crushed bones, and forty-five bushels of sod ashes per acre, sown with Swedish turneps on ridges, which were drawn and carted into graves or heaps the two or three first days in December, the land immediately plowed and the wheat drilled in with a common Suffolk drill, at the time stated in the table."

We imagine that were almost any of our western farmers to treat their wheat lands to such a manuring as Mr. Clarke gave his, their crops would not suffer in a comparison; but the fact of his wheat being sown on the 9th or 10th of December, shows that a course of culture admissible there, would be impracticable here, a truth applicable in more instances than this.

New Silk Worms.

The British have recently added to their already overgrown East India possessions, the province of Assam, and the exploration of the country has brought to light, many rare, and some before unknown productions. Among these, a Calcutta journal describes some half a dozen varieties of silk-worms, which produce large quantities of silk used in the manufacture of fabrics. One of these, the *muga worm*, is never reared in the house. It is fed on the trees where they are reared, and when one tree is stripped of its foliage, the worms by a simple and expeditious process are removed to another. Their term of feeding is about thirty days, when they descend, are secured on plantain leaves, on the dry leaves of which they spin their cocoons. The silk is not in one continuous thread, but has to be spun as cotton or worsted. Three crops in a year are produced. The *arinda worm*, is another of these new worms. Like the former, the silk is coarse, but very strong and durable. It has sometimes in that warm climate produced ten or twelve crops in a year. The silk of these two species of worms, constitutes much of the clothing material of the Assamese, being preferred as cheaper, because more lasting than cotton. Some of the other kinds spin a thread like the common silk-worm, but of great strength and lustre; and the moths of one of the species measures not less than ten inches across its wings.

There is in the United States, a large green worm, the larvæ of a species of *saturnia*, and frequently called the apple-tree worm, that spins a cocoon producing silk much resembling the kinds described above. A year or two since, we detected two of them on a gooseberry hedge, where they fed till they spun their cocoons.

From one of these, we succeeded in procuring the perfect insect, a beautiful moth, between six and seven inches across its wings, and resembling in every respect, except that it was larger, the one figured as 25, in Wilson's Lepidoptera. The silk from these cocoons was coarse, but almost as strong as wire, and could it be procured in sufficient quantity, would make the most durable of cloths.

Items from our Note-Book, No. 3.

Grass Seeds.

A writer in the Farmer's Cabinet, desirous of ascertaining the number of seeds contained in a bushel of some of the commonest kinds of cultivated grass seeds, from the process described, arrived at the results given in the table.

He caused, he says, "one-sixteenth part of an ounce avoirdupois of the kinds noted to be accurately weighed. The seeds in each parcel were then carefully counted, from which it was ascertained the number of them contained in a pound, and also the number contained in a bushel, the weight of which was known. The seeds were all perfectly clean and of the best quality.

"Timothy seed, rated at 40 lbs. per bushel, number of seeds in a bushel, 60,600,320; Red Clover seed, (American,) 60 lbs. per bushel, number of seeds, 24,084,480; Dutch Red Clover seed, imported, 60 lbs. per bushel, number of seeds, 16,819,200; Dutch White Clover seed, imported, 60 lbs. to the bushel, number of seeds, 43,829,600; Orchard Grass seed, 12 lbs. per bushel, number of seeds, 5,818,380."

It will be seen that the imported Dutch Red Clover is larger than the American Red Clover seed, and to have the plants equally thick, one and a half bushels of the imported would be required to one of the American.

—

"Chevalier Barley."

As a proof of the great ease with which new and productive varieties of grain may be introduced, and the advantges which would result from such a course, we extract from a work on the "Present state of the Agriculture of England," the account of the barley named at the head of this note, and which is rapidly superseding in cultivation most others in that kingdom. Of its discovery, Dr. Chevalier, on whose farm it originated, gives the following account:

> "An extraordinary fine ear of barley was observed and selected by a laborer of mine in the parish of Debenham, in 1819; in the spring of 1820, I planted 27 grains in my garden; in 1825 I planted half an acre of this species, and half an acre of the common species, the land under precisely similar cultivation. The product of the first amounted to eight and a half coombs; and of the last to six and a half coombs; (34 and 26 bushels.) The ears of the first averaged 34 grains, the second 30; the grains of the first heavier as four to five. In the course of 5 or 6 years it was generally accepted and approved in my neighborhood, and I promoted its fair trial, charging only the current market price for it."

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Bees.

Mr. Keith, of Maine, in a communication to the Monthly Visitor, after describing several modes of managing bees, and the ill success that attended them, thus in substance gives the result of an experiment made by placing them in a garret. He finished a room in his garret impervious to rats and mice, to which was a door secured against children and intruders. In this room was placed a swarm of bees, the hive on a level with and near the places made for their egress and ingress. The young swarm soon filled their hive and then commenced building all around it, filling in with the finest comb, and without the support of slats or bars, the space from the roof to the floor of their room. Mr. Keith, by the aid of a candle was able at any time to inspect the progress of his apiary, and witness the formations of the column of comb. There was no swarming, and of course the work had the benefit of all their increase in numbers. After the second year of their operations, Mr. Keith commenced taking honey from the room, doing it in the winter when the bees were dormant, in the central parts of the mass; these external combs always composing the best and purest part of the store. For many years Mr. Keith's table was abundantly supplied in this way with the choicest of sweets, until in 18—, his dwelling house was destroyed by fire, and his bee-hive "containing at the least eight hundred pounds of honey, and of living beings a multitude which no man could number," shared the common fate.

From what we have seen, and have been able to learn on this subject, the mode of treating bees as above described is superior to most others, for the following reasons. It prevents in most cases any swarming; the bees are not as frequently attacked and destroyed by the bee-moth; there is no necessity of destroying the bee as is the common but cruel practice; and the store of honey is always at command. The honey bee is one of the most valuable of our manufactures; and that and the silk-worm almost the only insects that contribute by their industry to the comfort of man.

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Sorrel.

A great pest on the farm is the common sorrel, not only being useless in itself, but occupying ground which might be filled with profitable herbage. Sorrel too, while it springs from sour soils, contributes to increase that sourness, by depositing in the earth, the acid which the plant has the power of secreting. To destroy sorrel it is only necessary to destroy or neutralize the acid essential to its growth; and this is fortunately within the power of every farmer by the application of lime. Lime and sorrel cannot exist together; the alkali of the one is fatal to the acid of the other, and where the sourness of the soil is corrected, the sorrel will disappear as a matter of course. A writer in the Cabinet says:

> "We had a few acres infested with sorrel, much to our inconvenience; on a part of this we spread sixty-six bushels and two thirds of lime to the acre, on the balance we spread two hundred bushels of ashes. The sorrel on the limed part has nearly disappeared, while on the portion on which ashes were spread, it is as thick as ever."

Tompkins County Agricultural and Horticultural Society.

In pursuance of the recommendation of the Court and Grand Jury, issued in September last, and in public notice, a large and very spirited convention of the farming population of this county, was held at the Clinton House, in the village of Ithaca, on Wednesday last, February 12, to take into consideration the propriety of forming an agricultural and horticultural society for this county.

At 7 o'clock, P. M. the convention was called to order by Mr. W. A. Woodward, on whose motion W. R. Collins, Esq. was called to the chair, and on motion of Mr. L. A. Morrell, R. Halsey was appointed secretary.

On motion of Mr. W. A. Woodward,

Resolved, That this meeting form itself into a society to be called the Tompkins County Agricultural and Horticultural Society.

The following gentlemen were appointed by the chairman, a committee to recommend a constitution for the consideration and adoption of this convention, to wit: W. A. Woodward, Caleb Smith, and Lewis A. Morrell.

On motion of Mr. L. A. Morrell, the chairman appointed a committee consisting of one from each town represented in this convention, to recommend to the convention a board of officers for the society, as follows: L. A. Morrell, Lansing; J. Wallenback, Enfield; W. Pugsley, Danby; John Boynton, Groton; Caleb Smith, Hector; W. T. Lawrence, Newfield; Wm. Cobb, Dryden; Reuben Judd, Ithaca.

Mr. Woodward, from the committee on a constitution, made the following report:

Constitution of the Tompkins County Agricultural and Horticultural Society.

Sec. 1. This society shall be called the Tompkins County Agricultural and Horticultural Society.

Sec. 2. The object of this society shall be to advance agriculture and horticulture in this county.

Sec. 3. Every person desirous of connecting himself with this society, shall pay to the treasurer one dollar at the time of his becoming a member, and one dollar annually thereafter, on the first Wednesday in October, during his continuance as a member. Any member wishing to withdraw from the society must pay all dues and give a written notice to the recording secretary of his intention.

Sec. 4. The officers of the society shall consist of a President, nine Vice-Presidents, a Recording Secretary, a Corresponding Secretary, a Treasurer, and an Executive Committee consisting of one member from each town in the county—all of whom shall be elected by ballot on the first Wednesday in October, annually, and shall continue in office one year, or until others shall be chosen in their stead.

Sec. 5. There shall be an annual meeting on the first Wednesday in October, at Ithaca, (or at such place as the board of managers shall direct,) for the purpose of holding the regular fair and exhibition of domestic animals, manufactures, and articles the produce of the farm and garden. Fifteen members shall constitute a quorum at all meetings of the society.

Sec. 6. The officers of the society, five of whom shall form a quorum, shall constitute a Board of Managers for the general administration of the affairs of the society. They shall have full power to enact such by-laws as may be deemed expedient, to appropriate the funds of the society to the proper objects of the institution—to appoint committees—to convene special meetings of the society—to hold the Annual Exhibitions and make all arrangements necessary therefor; to award such premiums as may be offered by the society, and determine all matters connected therewith; to take charge of and distribute plants, seeds, books, &c. or whatever may be transmitted to the society; and to correct, arrange and publish addresses and other communications, together with the proceedings of the society, at such time and in such form as they shall deem best calculated to promote the objects of the society.

It shall be their duty to appoint yearly, two members from each town, who with the member of the executive committee from the same town as chairman, shall be standing committees to superintend the concerns of the society in their respective towns, whose correspondence shall be addressed to the corresponding secretary, and who may be requested by the treasurer to collect money due the society in their respective towns.

Sec. 7. The President, or, in his absence, one of the Vice-Presidents, shall preside at all meetings of the Board of Managers, or the society, and at all exhibitions or fairs held by the society.

Sec. 8. The corresponding secretary shall, under the direction of the Board of Managers, receive and answer all communications addressed to the society or any of its officers, and perform such other duties as may from time to time be assigned to him by the Board of Managers.

Sec. 9. The recording secretary shall keep a record of the proceedings of the society; he shall also be recording secretary of the Board of Managers, keep a record of their transactions, and perform such other duties as may be assigned to him from time to time by the Board of Managers.

Sec. 10. The treasurer shall receive all sums due the society, and all donations in money made for its benefit, and disburse them only on the orders of the President. He shall keep an account of his receipts and disbursements, and report the same annually to the Board of Managers, and oftener if required. He shall execute a bond to the society for the faithful performance of his duties, in such penalty and with such securities as the Board of Managers shall require.

Sec. 11. The Board of Managers shall have full power to fill all vacancies that may occur, by death, resignation or otherwise, among the officers of the society, and the persons so appointed shall hold their respective offices, until the next annual meeting of the society, or until others are elected in their stead.

Sec. 12. No persons but such as have been members for thirty days previous to the annual fair, and continue to pay their annual dues, shall be permitted to compete for premiums.

Sec. 13. The constitution may be altered or amended by a vote of two-thirds of the members present at any stated meeting of the society.

On motion of Mr. W. G. Grant, the report of the committee was unanimously adopted.

Mr. Morrell, from the committee on officers, reported the following: Nicoll Halsey, of Ulysses, President. W. T. Lawrence, of Newfield; Peter Hager, of Hector; Luther Hedden, of Lansing; A. B. Pugsley, of Caroline; Julius Ackley, of Ithaca; Henry Brewer, of Enfield; Sylvester Nash, of Groton; Benj. Wood, of Dryden; and J. C. Mandeville, of Danby, Vice-Presidents. W. A. Woodward, of Ithaca, Recording Secretary. L. A. Morrell, of Lansing, Corresponding Secretary. W. R. Collins, of Ithaca, Treasurer.

On motion of Mr. E. Cornell, the report of the committee was unanimously adopted.

On motion of Mr. E. Cornell, *Resolved*—That an executive committee, consisting of three in each town in the county, be appointed to obtain members to this society; and that the president and vice-presidents be one of said committee in their respective towns, when the following were appointed: *Ulysses*, Nicoll Halsey, Elias J. Ayers, Horace Cooper. *Hector*, Peter Hager, John Sayler, Thomas B. Sears. *Dryden*, Benj Wood, E. W. Cady, R. C. Ellis. *Groton*, S. Nash, Joseph Pennoyer, Nathan Benson. *Danby*, J. C. Mandeville, Elbert Curtis, Francis Nurse. *Newfield*, W. T. Lawrence, Isaac S. Smith, Hobert Estabrook. *Enfield*, H. Brewer, B. V. Gould, Jared Treman. *Ithaca*, J. Ackley, E. Cornell, R. Halsey. *Caroline*, A. B. Pugsley, L. W. Kingman, S. B. Green. *Lansing*, L. Hedden, L. A. Morrell, Charles Davis.

On motion of Mr. Morrell, *Resolved*—That a general meeting of the officers, and of the town executive committee of this society, be held at the Clinton House Ithaca, on Tuesday, March 3d, at 1 o'clock, P. M. at which time a prompt and full attendance is desired.

On motion of Mr. Morrell, *Resolved*—That as the sense of this convention, agricultural papers are invaluable as a medium of conveying intelligence of improvements which are being made, connected with tilling the soil, of domestic stock, and in short, of every thing pertaining to the interest of the farmer, therefore a subscription to the Cultivator, published at Albany, is recommended to the farmers of this county.

On motion of Mr. Cornell, *Resolved*—That the president and recording secretary have 1,000 copies of the proceedings of this convention, and of the constitution published in pamphlet form, for the use of this society.

On motion of Mr. Woodward, *Resolved*—That the proceedings of this convention be signed by the chairman and secretary, and a copy handed to all the papers in this county, and to the editors of the Cultivator at Albany, for publication.

On motion, *Resolved*—That this convention now adjourn. WM. R. COLLINS, *Chairman.*

Robert Halsey, *Secretary.*

All communications addressed to the corresponding secretary, must be directed to Lake Ridge, P. O. Lansing.

Remedy for the Bots.

Messrs. Editors—In looking over the January number of the Cultivator, I was surprised, in reading the article on bots in horses, although the subject was ably treated, that there was no remedy pointed out to relieve the noble animul from suffering and death. Having seen many horses die with bots, and many remedies given without effect, I was induced by a merchant in Cambridge, to try the following for a horse of my own, after I had tried most of the remedies in common use without effect, and had given him up for lost:

Half pint vinegar, half pint soft soap, half pint gin, and half pint molasses, well shaken together, and poured down while foaming. To my great surprise, the horse was in five minutes wholly free from pain, and ate freely—the next morning I was on my journey. I have since recommended and given the same in perhaps fifty cases, with the same good effect; not in one instance has it failed to effect a perfect cure.

Troy, Jan. 29, 1840. ISAAC LOVEJOY.

N. Y. State Agricultural Society.

Albany, Tuesday, Feb. 4, 1840.

The Society met pursuant to adjournment, at the City Hotel in Albany, on Tuesday, Feb. 4, 1840. The President, Anthony Van Bergen, of Greene, took the chair, and Jesse Buel, of Albany, was appointed Secretary pro. tem. After the disposal of the usual preliminary business,

On motion of Mr. Beekman,

Resolved, That a committee of five be appointed to report the names of suitable persons, for officers of the Society for the ensuing year.

The Chair appointed Messrs. J. P. Beekman, of Columbia, J. B. Nott, of Schenectady, J. J. Viele, of Rensselaer, J. L'Amereux, of Albany, and T. St. John, of Fulton, on said committee.

The report of the Treasurer, was then read, accepted, and ordered filed, showing a balance remaining in the treasury, of $84 03.

Mr. Nott, from the committee appointed at the last meeting to memoralize the Legislature at its last session, for an appropriation in aid of the cause of agriculture, reported that all the duties devolving on that committee had been performed.

On motion, a committee, consisting of Messrs. Nott, Beekman, and Walsh, was appointed to select subjects to be reported on at the next annual meeting of the Society.

Adjourned till to-morrow at 11 o'clock, A. M.

Wednesday, Feb. 5, 1840.

The Society met pursuant to adjournment. The minutes of the previous meeting were read and approved.

On motion of Mr. J. B. Nott,

Resolved, That this Society will hold a semi-annual meeting on the —— day of —— in the town of —— in the county of ——; and that the Executive Committee make the requisite arrangements for that purpose, and give suitable notice of the time and place at which the meeting will be held, provided they receive sufficient encouragement from any county to induce them to believe that the objects of the Society will be advanced by such meeting, and that they will use their utmost endeavors to induce the farmers of the neighborhood, to meet the Society on that occasion; and also to secure the exhibition of farm stock and implements, as well as plowing matches.

Resolved, That the committees appointed on Agricultural subjects, be requested to report as far as practicable at said semi-annual meeting.

The following preamble and resolution, offered by Mr. J. J. Viele, were adopted:

Whereas, the present is a crisis in the history of our Agricultural Society requiring the most jealous and active exertions of the friends of improvement; and whereas we are fully persuaded that much good may be effected not only to individuals but to the community at large, by the united association and joint efforts of enlightened and patriotic individuals—thereupon

Resolved, That we, as a Society and as individuals, pledge to each other and to the community at large, our renewed exertions to build up and extend the influence of this association.

On motion of Mr. J. P. Beekman,

Resolved, That the Executive Committee of this Society be requested to draw public attention to the annual meeting of this Society, to be held in February next, and that they take active measures for that purpose, by publications or otherwise, and that they report to the next meeting, the steps they have taken to carry into effect this resolution.

On motion of Mr. J. B. Duane,

Resolved, That this Society most earnestly recommend to the friends of Agriculture throughout the counties of this State, immediately to organize county societies, and to send delegates to the State Agricultural Society the ensuing year.

The Society then adjourned to meet at the Capitol at 3 o'clock, P. M.

Assembly Chamber, 3 o'clock, P. M.

The Society met pursuant to adjournment. J. P. Beekman, Esq., from the committee to report the names of officers of the Society for the ensuing year, made the following report which was unanimously adopted:

FRANCIS ROTCH, of Otsego, *President.*

J. B. Duane, of Schenectady,
H. D. Grove, of Rensselaer,
A. Walsh, do. } *Vice Presidents.*
J. J. Viele, do.
S. Van Rensselaer, Albany,

Luther Tucker, of Albany, *Cor. Secretary.*

W. Cooper, of Albany, *Rec. Secretary.*

C. N. Bement, of Albany, *Treasurer.*

J. B. Nott, of Schenectady,
J. P. Beekman, of Columbia, } *Ex. Committee.*
A. Van Bergen, of Greene,

The President delivered the following

Address.

Fellow-Citizens—Cultivators of the Soil:

For the honor of being called to the Presidency of this Society, and to the duty of addressing you on this occasion, I would render to you my unfeigned thanks. This is an honor to which, among so many of my fellow-agriculturists, older and more experienced than myself, I could have but a feeble claim, and this is a duty of such extent and importance, and one that has been heretofore discharged with such ability and research, that I feel *very great* diffidence in entering upon it.

Having, for many years, been nothing more than a plain, practical farmer, to digest a treatise on any subject, even on my own business, has not fallen in the range of my occupations, and to make addresses, other than to my workmen and my neighbors, has not entered into my habits. But, gentlemen, it does not become a plain-hearted yeoman to make apologies, and therefore I proceed to my duty, relying with confidence on your forbearance and good sense.

It would be unpardonable in any one occupying this place on this occasion, neither will my feelings permit me, to pass in silence, the lamented removal, by death, of one of my predecessor presidents of this Society, the veteran and venerable patron, and almost the pioneer in agricultural improvements in this state, Jesse Buel, Esq. Like good old Cincinnatus, he left the field of politics and the cares of the state, to hold the plow and direct the labors of the field. In manners, plain and unassuming—in intercourse, open and conciliating—in knowledge of agriculture and the kindred sciences, various and profound—in labor for the common good, prompt, self-denying, and energetic—in theory, the farthest from visionary and speculative—in experiment, cautious and persevering—in his qualities as a man, a citizen and a politician, frank, honest, independent, unimpeachable, Judge Buel was a pattern of worth, whose like we can not often find—whose loss will be severely felt, not only by his afflicted family, with whom we sincerely sympathise, but by a discerning public and an extended community. But as an able and adequate pen is engaged to prepare a memorial of his worth and our esteem, I forbear from saying more.

Gentlemen, the burden of our intercourse to-day, is, the tillage of the ground, and this shall also be the burden of this address. This employment has been degraded by the proud and the indolent—regarded as secondary by the learned, and the mercantile classes, and all who found it easier to live by their wits or by speculation, than by labor or frugality—and it has been undervalued by the community very generally. I can not deny that there have been some just grounds for considering this occupation as connected with low thoughts and narrow views; for too often have farmers neglected the cultivation of their minds—the study of the constitution and laws of the country—even the news of the day—and thus have sunk to the humblest level of the community, and their transactions have been marked by an entire want of liberality and enterprise; and so their business has been identified with themselves, and comparatively degraded. But this inference is exceedingly unfair. For, by this rule, we might degrade the vocation of the lawyer, the physician. and even the minister of religion; for often there have been low and unworthy members of these professions. But if we judge of the employment of the agriculturist, by the testimony and action of the wisest and best of men, we shall conclude that it is as honorable as it is independent and profitable. In ancient times, not a few men of patriarchal renown, and of senatorial dignity, were tillers of the soil; and this vocation has the example of the first of men, and the seal of the Creator himself. When he created man, he made him not a student, a philosopher, a statesman, a manufacturer—but a tiller of the ground. He placed him in a beautiful garden, studded on every side with trees that were attractive to the sight, and good for fruit, and bade him dress it and keep it. Here is a fine example of taste, for the walks of rural life. How appropriate for a farmer to have his habitation encompassed with trees that are pleasant to the eye and good for fruit, situated in the midst of a garden, where the fruits of his labor may smile upon him, as at noon, amidst the heat of the mid-day sun, he rests awhile from his toil; or in the morning or evening, within his piazza, trellised with vines, he reads the daily news, studies useful books, or meditates on the wonders and mercies of his God.

I ask whether an employment thus directed, by the greatest and best of beings—exemplified by the worthiest of men—calculated to purify the heart, cultivate taste, and nurse devotion, can be wanting in dignity, although its votary may go forth to his work in the broad-brimmed hat of straw, or in the soiled and unsightly frock of hemp or tow. I do not undervalue any honest and honorable walk of life; but I may affirm, that all are dependent upon and therefore subordinate to the business of the cultivator. The powers of the mind cannot be exerted without strength in the body. However the man of simple study may think himself raised above the gross connections of sense, yet he must eat—he cannot subsist on the unsubstantial productions of his genius—he must have that bread which is gotten by the sweat of the farmer's brow.

However the merchant, with bleached hands and well lined purse, may contemn the hard toil, brown visage, and moderate gains of the farmer, yet would his store-houses contain "a beggarly account of empty boxes," if it were not for the grain and raw material, which the strong sinews and diligent exertions of the husbandman had produced. The mechanic, as he plies his profitable toil in the well enclosed shop, shielded from heat in summer and cold in winter, may congratulate himself that he escapes the hardships of the farmer, as in summer he pants under the direct rays of the sun, or amid winter's snow he cuts his wood or quarries his stone, or carries his products to market; but equally destitute would the mechanic be of the materials he works, or the food that keeps him alive, if the tiller of the ground should cease his labor. This is, then, manifestly the primary employment of man—first in order—first in necessity and importance. Before science had struggled into birth—before mechanics had studied out the form of the spade, or the invention of the plow, husbandry had begun to supply the wants of man. And as science and mechanical skill arise, it challenges for itself a study profound as theirs, and claims them not as leaders but as mere auxiliaries.

Agriculture implies and subjects the sciences and the arts. The farmer by vocation, also partly a shepherd, as at early dawn he goes forth, when the stars are still shining, or at eve when he houses his flocks and herds, and as he finds that certain influences of the heavens modify things on earth, becomes a practical astronomer, and ought to be a scientific one His business involves the laws of chemistry, botany and geology. By the last, he is to judge of soils and their fitness for certain products; by the second he must determine what plants are most suitable to his soil and climate; by the first he must be instructed in that most important branch of knowledge to the farmer, the nature and composition of manures, and their fitness to the several kinds of grain and fruits he proposes to cultivate. The laws of mechanics are before his eyes every day. With the crowbar in hand, he daily employs the lever; under his barrack you will find the screw, which he uses every day when he elevates its roof. Go with him to the forest and see him use the inclined plane and pulley, as he heaves the rail cut on his sleigh or wagon, or the wedge as he cleaves it into fencing stuff. At the pent stock, near his door, where he waters his cattle, he studies the first problem of hydrostatics. Perhaps by the sulphur spring that bubbles along the margin of the meadow, he may be led to think on mineralogy. Thus does his science stand at the head of the honored catalogue: or if there is a circle of the sciences, ours is the centre around which the rest are ranged.

The profession of the farmer has suffered by both extremes of theory and of practice. Some mere theoretical farmers have pursued their visionary notions of book farmers so far, as to make themselves the laughing stock of all sensible men, and have, in the end, brought ruin upon themselves and disgrace upon theory. Others who have been mere practical farmers, have so stubbornly adhered to the customs of past generations, as to reject the valuable discoveries of science, proved by experiments, and thus have dragged half a century behind the age, and lost half the profits they might have made. It will be evident that the perfection of our art lies in the golden medium between these extremes. Let all theoretical suggestions be tested by experiments on such a scale as to show their value, without endangering the main interest of the farmer; and then when their own observation shall have distinguished between the visionary and the valuable. they will be prepared with confidence to reject the one and to adopt the other. Then only, when agriculture shall have the boundaries of theory and practice well defined, the laws of each well understood, and the system distinctly settled and set forth, will it rise in the estimation of a discerning public, to the level of the professions of law, physic and theology.

But this great object can be effected only by liberal, energetic and concerted action. The patrons, admirers and friends of agricultural improvements, must unite with the practical farmers of the state, in endowing a normal school and farm in which all the sciences connected with husbandry shall be taught, and where the best modes of tillage shall be exemplified. I could not give a suggestion as to the size of the farm, or the scale of expenditures in the school, but I may observe in general, that the location should be central and easy of access; the land should be so chosen as to unite specimens of the several soils from the pure sand to the pure clay; the buildings should be models for a farming establishment, only that they should be sufficiently extensive to accommodate professors, students, and laborers. To commence, one professor of the theoretical branches, and one able practical farmer might be sufficient. Here, young gentlemen intended for agricultural pursuits should spend a year or more, studying and laboring alternately, until they were masters of the theory and practice. To accomplish this project, all necessary legislative aid would be readily granted, whenever the legislature should perceive by the liberality of private donations, and the earnestness and number of petitions, that a great body of their constituents demanded such a measure. Of the necessity and benign effects of such an institution there can be no reasonable doubt. For if skill in farming is no more intuitive to man than dexterity in mechanical operations, then it is as necessary that he should be carefully taught the one as the other. And if knowledge and competence be important elements in our temporal happiness. then the institution which furnishes the surest means of attaining them is one of the highest interest to man. And how many blessings would it diffuse through society, if a cultivated mind should elevate the laboring man above low pursuits; and well directed industry should fill his barn and his larder with plenty.

The success of this Society must be a source of pride and gratification to us all. The position it has assumed in the community—the interest it imparts to the cultivator of the soil, may well inspire emotions of exultation. It is an object of too great importance to be suffered to decline. But on us, fellow-members, the charge especially devolves; and we are called upon to cherish its interests, to promote its prosperity. But the progress of the time, and other exercises which will claim attention, admonish me to close this address.

It only remains, gentlemen, that I should congratulate you on the abundant encouragement with which a benign Providence has crowned our labors through the past year. Our country overflows with the productions of the farm. Our barns are pressing out, our store-houses are filled with plenty. The voice of gladness has rung through the land. Gentlemen, I have no doubt you will cordially join with me in giving thanks to that Almighty Parent who rules the changing year, makes the sun to shine, the rain to descend, clothes the fields with beauty and abundance, and fills our houses with comfort. Gentlemen, I fervently wish that He may grant many blessings to you, and prosperity to our cause.

Professor Amos Dean, of Albany, having been selected by the Society, to prepare a Memoir of the late Hon. Jesse Buel, pronounced the following

Eulogy.

The treasures of the Republic are to be found in the worth, the virtues, the intelligence, and the integrity of the citizen. He alone sustains the burdens, as he receives the benefits, of all our institutions, our frames of government, our plans of policy.

The mere citizen, uncontrolled by higher powers, and unaided by adventitious circumstances, has been, in truth, but a recent actor in the affairs of our world. The great instruments of change in the political condition of nations, have been principally the slave and the subject. In the revolutions that have waited upon human affairs, we have witnessed almost every thing dominant in its turn. The despot, the demagogue, the monarch, the aristocrat, have each and all had their day of trial and of triumph. Let the honest, intelligent, unpretending citizen now have his. He claims it in view of his importance in our social, civil, and political edifice; in virtue of the policy and spirit of our institutions; and in consequence of the many examples of real worth and merit which he is enabled to bring forward.

Among the most prominent of these, is the name of the late esteemed and lamented Jesse Buel; a name which must ever furnish a fitting theme for eulogy wherever intelligence is prized, or well directed industry respected, or high moral worth meets with its due appreciation. Since the last annual meeting of your Society, he, who so justly constituted its pride and its ornament, has passed from among us. It has been deemed proper at this time and place, to pay a tribute of respect to his memory; and surely, if his name and deserving worth be any where entitled to consideration, it is *here* and by *you*.

In reference to his individual history, I propose to be brief and general, conscious that although the partiality of friends may dwell with deep and intense interest on minute particulars, yet that the attention of the public generally, ought rather to be directed to such facts as may instruct by their practical application to the common affairs of life.

The subject of these remarks was born in Coventry, in the State of Connecticut, on the fourth day of January, 1778. He was the last born, and the last that has died, of a family of fourteen children. His father, Elias Buel, held the commission of Major in the war of our revolution, and was a fair sample of the plain, unassuming, straight-forward character of the New-England farmer.

As an instance in proof that the end of the good man is peace, it deserves to be mentioned, that the advanced years and declining strength of this excellent sample of New-England's earlier population, together with his aged consort, received for the last five years of their lives, their stay and support from the filial affections of their youngest child; until, fully matured, and at the advanced age of 86 years, they both left this world, and as if their union had become indissoluble by bonds that had been tightened by nearly three-fourths of a century, they left it within the brief period of six weeks of each other.

From early boyhood, Judge Buel seems to have had the direction of his own course; his parents wisely leaving to his own disposition and inclinations, the choice of that which should mainly constitute the business of his life. In this it is to be hoped they have many imitators. Let young, unsophisticated nature always speak its own language, and follow its own original bias, and success will be likely to reward its exertions. When he had arrived at the age of twelve years, the family, including himself, moved from Coventry to Rutland, Vermont, and two years afterwards, when he had completed the age of fourteen, he became an apprentice to the printing business, in the office of Mr. Lyons of Rutland.

When the youth, possessing the qualities that are to enoble the future man, has silenced all mental debate by his irrevocable determination as to what particular pursuit or calling the great energies of his life shall be devoted, he immediately applies himself with unwearied ardor and assidui ty, to carry into full effect his firm, high, undeviating resolve.

The young apprentice distinguished the first four years of his term by a close, assiduous, and unremitted attention to the attainment of the printing art. At the end of that period, such had been his devotion to business, that he had acquired as perfect a knowledge and mastery of the routine and all the details of that art, as are ordinarily acquired by others during the entire term of their apprenticeship. Conscious of the sufficiency of these attainments, and entertaining a realizing sense of the immense value of time, especially to the young, he succeeded, at the expiration of the first four years, in purchasing of Mr. Lyons the unexpired three years of his regular term, and thus at the age of eighteen he was ready to exchange the apprentice for the journeyman; and to earn, in the latter capacity, sufficient to pay the expense of the exchange. He immediately found his way to the city of New-York, and was there laboring as a journeyman during the desolating ravages of the yellow fever. He subsequently worked as a journeyman with Mr. McDonald of this city, and was a short time at Waterford and Lansingburgh, until June 1797, when he formed a connection in business with Mr. Moffit, of Troy, and commenced the publication of the Troy Budget. This was continued until September, 1801, when, at the age of twenty-three, he married Miss Susan Pierce, of Troy, and immediately removed to Poughkeepsie, where, in connexion with Mr. Joiner, he commenced the publication of a weekly paper, called the Guardian. This was continued about a year; after which, he entered into another co-partnership, and commenced the publication of the Political Banner. This last proved to be an unfortunate business connection; and after about a year's continuance, either through the mismanagement or dishonesty of his partner, he found himself reduced to utter bankruptcy.

This is, I am sorry to say, rather a common history; and many, thus situated, abandon hope, and yield themselves up to fatal despondency. Not so Judge Buel. With the unshaken assurance of success which naturally results from the firm determination to deserve it, he saw, with apparent indifference, the slow, labored, and rather scanty accumulations of some six or seven years suddenly swept from him; and read, in this lesson of mutability, at least the chance of elevation, as well as depression, in individual condition. He never, for one moment, lost confidence in the general integrity of men, nor in the ultimate success of industry and application. He left Poughkeepsie and removed to Kingston, where he established a weekly paper called The Plebian. Here he continued during the period of ten years, from 1803 to 1813, applying himself with diligence and activity to his business. During a part of this time, he sustained with reputation the office of Judge, in the Ulster county court; and by his persevering industry, and well directed application, he not only retrieved his losses, but also acquired some considerable real and personal estate.

In 1813, his reputation as an editor and a man having made him favorably known to the public, he was induced, through the exertions of Judge Spencer and some others, to remove to the city of Albany, and to commence the Albany Argus. The next succeeding year, 1814, he was appointed printer to the State, the duties of which, together with the editorship of the Argus, he continued to discharge until the year 1820; at which time he sold out with the determination to abandon the printing business.

It is worthy of remark, that while engaged in this business he always performed himself the labor essential to its successful prosecution. He was always the setter of his own type, and, until he came to Albany, the worker of his own press. Is there not something in the very nature of the printing art, that tends to originate and perpetuate habits of severer industry than any other occupation or calling?

After disposing of his printing establishment and business, he purchased a farm of eighty-five acres of land near the city of Albany, which then helped to compose that tract of land lying west of the city, and appropriately denominated the "Sandy Barrens." That which, for some years past, has been so extensively and favorably known as the "Albany Nursery," then lay an open common, unimproved, covered with bushes, and apparently doomed to everlasting sterility. These unpromising appearances, which, to a common mind, would have presented insuperable obstacles, served to increase the efforts, rather than damp the ardor, of Judge Buel. Difficulties, hindrances, obstructions, were with him every day familiars. His mind had been, in some measure, formed under their influence. He recognized and acted on the doctrine, that where God has done little it is incumbent on man to do much; and that nothing in this world is ever lost by courting situations, that require the expenditure of unremitted effort. Man was made to labor, both corporeally and mentally, and his happiness in life depends much more than he is generally aware of, on the strict obedience which he yields to this primal law of his being.

On this farm he continued to reside until the time of his death. Under his untiring and well directed industry, the most unpromising indications soon disappeared, and as a practical commentary upon the truth of his agricultural doctrine, and in proof that he in reality practised what he preached, it may be mentioned that the same acre of land, which in 1821 he purchased for $30, is now worth, at a moderate estimate, $200.

While residing on his farm, since 1821, he has several times represented the city and county of Albany in the popular branch of the legislature of this State; has been for several years, and was at the time of his death, a Regent of the University; and in the fall of 1836, received the whig support as their candidate for the office of Governor of the State of New-York.

On the political course of Judge Buel, I do not design to enlarge. He was a believer in the old fashioned doctrine, that office, instead of being made *for men*, should be made *by them;* that it conferred far less *privileges* than it imposed *duties;* that it was a *trust* reposed, and the incumbent a *trustee*, and responsible for the proper performance of the trust; that instead of operating as a license to live and fatten on the public spoil, without the necessity of labor, it imposed the severe obligations of more incessant effort, and of acting under deeper and heavier responsibilities; and that it was no further *honorable* than as an indication of *trust* and *confidence* on the part of those, whose intelligence and moral worth were the vouchers for its value. The introduction of many modern *improvements*, is tending to render that doctrine somewhat antiquated, and to diminish the number of its adherents.

Mere political pre-eminence is, at best, extremely equivocal. It may be enobled by the solid qualities of the statesman, or debased by the crafty arts of the politician. Its highest attainable summit, has been not inaptly compared to the apex of a pyramid, which can be reached by the soaring eagle, or the crawling reptile. The durable reputation of Jesse Buel depends on that which politics can neither give nor withhold; which is at a high remove above the little tricks of little men; which is far beyond the reach of the aristocrat, and above the highest possible conceptions of the mere demagogue. It reposes on that strong sense of obligation which a people feel themselves under, to a high and gifted mind exerted for their benefit. It is the grateful homage rendered by mind to mind; the most desirable, the most enduring, the most esteemed, of earthly homage. It arises from the feeling of benefits conferred on the one side, and received on the other. It serves to connect the great mass of man with the few master spirits, who are pioneering onward in advance of their age. The highest mere political distinctions dwindle into insignificance, when compared and contrasted with this highest attainment of a laudable ambition. To those acquainted with the arcana of politics, it will be sufficient to observe, that Jesse Buel never merged the man in the politician; that he never gave up his independence of thought, of expression, or of action; and that he preserved throughout that perfect integrity of purpose, that never, through his whole life, ceased to be the guide of his action. To those ignorant of such arcana, I can only say, that,

> "Where ignorance is bliss, 'twere folly to be wise."

It is in the labors of Judge Buel in the advancement of agricultural and horticultural pursuits, particularly the former, that the people of this Union have a deep and abiding interest. He retired to his farm at the age of forty-three; a period of life when the mind has attained the full maturity of its varied powers. He carried with him a sound body, the result of a good original constitution, of strictly temperate habits, and much active exercise in the prosecution of his business; and a mind well stored with valuable information of a character the most available for the common uses and purposes of life. So far as his pecuniary circumstances were concerned, he might, at this period of time, have been justified in dispensing with further labor either of body or mind. He was no longer compelled to act under the spur of necessity. But his ready perceptions, and accurate feelings, convinced him of a truth, which others are often doomed to acquire from sad experience—that a life of labor is, of all other kinds of life, the last that should be terminated by an age of inactivity. Men violate the laws impressed by God upon the condition of things, when they assign to their declining years an inglorious ease in the expenditure of that fortune, which the successful industry of their manhood had accumulated. There is also in all highly gifted minds, that are endowed with clear, strong intellect combined with conscientiousness, a deep feeling of responsibility for the due exercise of their powers, in a manner the most advantageous to their fellow-men. God has placed a double safeguard over the advancement of man, by leaving the means that conduce to it, in charge both of the impulses that originate from self, and of the promptings derived from his high moral nature.

The mind of Judge Buel fortunately had the sagacity to perceive both where his industry was the most required, and could be rendered the most available. Of the three great interests that divide between them the labors of men, viz:—the agricultural, the mechanical and manufacturing, and the commercial; it is not difficult to perceive that the first has long been the most important, and the most neglected. The last, or commerce, is much dependent on the other two, and may always be expected to flourish where either agriculture, or mechanical and manufacturing arts yield their multitude of products. Between the other two, there is a mutual dependence; agriculture furnishing the supports of life, and the mechanic arts, in their turn, supplying the instruments of agriculture. Of these two, the mechanic arts had received relatively much the most attention. To advance them, man's ingenuity and inventive powers had been severely tasked; and science was required to furnish its contributions; and the devising and employment of labor-saving machinery attested in a variety of instances, the triumphs of mind over the inert materials every where abounding in nature. But while the mechanic and manufacturing arts were thus prospering, agriculture was allowed to labor on unaided, and unenlightened in the knowledge of itself. The new and virgin earth on this continent, that had been for ages rearing and receiving back into its bosom the tall tree of the forest, and the waving grass of the prairie, required, at first, in many places, but a small quantity of labor to ensure ample returns. When the soil began to give evidence of exhaustion, instead of attempting its restoration, new fields were brought under the dominion of the plow. The great mass of agricultural population, so far as their business was concerned, were little more than creatures of habit. Men lived, and labored, and trod the same paths, and performed the same circles of action, with scarcely a single well settled principle for their guide, except that the same field ought not to be taxed to grow two successive crops of flax. The principal, and almost the sole object in view, was to realize as great immediate returns as possible from the smallest amount of labor, without any regard whatever to the exhausted condition in which they might leave the soil; much like the traveler, who seeks the accomplishment of a long journey, by driving so far the first day as to destroy his horse.

The new system of agriculture, with which the name and reputation of Judge Buel is essentially identified, consists in sustaining and strengthening the soil, while its productive qualities are put into requisition; in rendering the farm every year more valuable, by annually increasing both its products and its power of producing; like the traveler, who instead of destroying his horse the first day, should so regulate his motion, and administer his supplies of food, as to enable him to make additional progress every successive day, until the completion of his journey. This new system—new I mean in this country—has been principally carried into effect by manuring, by draining, by good tillage, by alternating crops, by root curture, and by the substitution of fallow crops for naked fallows.

In testing the principles embraced in the new system, Judge Buel first made the practical application to his own farm. He compelled his sand-hills to stay at home, and be less obedient to commotions in the atmosphere. He was particular in observing the effect produced upon the soil by his mode of management. After satisfying himself by actual experiment, of the truth and advantages of the new system, he became desirous of rendering it as generally known as possible. With that view, the paper, now so well known as "*The Cultivator*," was first commenced under the auspices of the State Agricultural Society, in March, 1834. A committee of publication, consisting of Jesse Buel, Doctor James P. Beekman, and James D. Wasson, were appointed by the society, and under their direction, Judge Buel being the real editor, "*The Cultivator*" first made its appearance in the form of a small sheet, issued monthly, and at the very moderate price of twenty-five cents a year. So little, however, did it become known; so very deficient was the taste for reading on agricultural subjects; and, consequently, so extremely limited was its circulation, that the same volume, which has since passed through three editions, and now reposes on the shelves of more than 24,000 American farmers, was found, at the end of the year, to have accumulated a debt, over and above its receipts, of nearly five hundred dollars. Entertaining, however, a thorough conviction of the utility of the undertaking, and never doubting its ultimate success, he made an arrangement with the society, by which he became sole proprietor of "*The Cultivator*," assuming the payment of all its debts and liabilities. The superior merits of the paper soon began to render it more generally known. It was found necessary to enlarge it, and to increase the price to fifty cents per annum. Nothwithstanding the increase in price, the subscription list for the fourth volume, published from March 1837, to March 1838, amounted to 23,000. It was then deemed expedient, still further to enlarge and improve, and accordingly in March 1838, at the commencement of the fifth volume—a larger, more expensive, and better executed sheet was issued at the subscription price of one dollar per annum. This increase in price, at first diminished, very considerably the number of subscribers. They were, however, gradually increasing, and, at the time of his death, amounted to about 16,000.

We might naturally expect that a mind thus active and gifted, could not long continue to exercise its powers, without acquiring a more or less extended and solid reputation. The new and vigorous impulse he was giving to agriculture and horticulture, awoke to activity a kindred spirit in the breasts of his countrymen. This call to renewed agricultural efforts, met with a corresponding response from many portions of the Union. Societies, devoted to agriculture and horticulture, originated in various sections of our country; and among their first acts has usually been the recognition of their obligations to Jesse Buel, by electing him an honorary member. As examples of this, and also to show the laudable efforts that have been made to form agricultural and horticultural societies, I would mention the following:

In 1821, he was elected a member of the Massachusetts Agricultural Society; in 1829, of the Horticultural Society of that state: in 1839, of the Monroe Horticultural Society at Rochester; in 1831, of the Charleston Horticultural Society, in South Carolina; in 1832, of the Hampshire Franklin and Hampden Society, in Massachusetts, and of the Hamilton County Agricultural Society, at Cincinnatti; in

1833, of the Tennessee Agricultural and Horticultural Societies; in 1834, of the Horticultural Society of the District of Columbia; in 1838, of the Philadelphia Society of Agriculture, and in 1839, of the Albemarle Agricultural Society. In 1838, he was chosen President of the Horticultural Society of the Valley of the Hudson. He has several times been elected President of the State Agricultural Society.

Distinctions, similar to those already mentioned, have been conferred upon him by foreign and trans-atlantic Societies. In 1833, he was chosen a corresponding member of the Lower Canada Agricultural Society; in 1834, of the London and New-York Horticultural Societies. In 1830, he was chosen an honorary member of the State Society of Statisques Universelles, at Paris; and in 1836, he was chosen a corresponding member of the Royal and Central Society of Agriculture, at Paris.

Let it, however, by no means be supposed that Judge Buel's mental efforts were confined exclusively to agriculture and horticulture. In his view, man was born for higher purposes than merely to produce and consume the products of the earth. The motto to his Cultivator, was "To improve the soil, *and the mind*." Of what real utility are all the enjoyments of mere physical existence, unaccompanied by the higher delights of a mental being? No man more fully realized the force of this than Judge Buel. His system of education, however, like his system of agriculture, was eminently practical; and like that, too, it would endeavor to strengthten the producing power while it developed its products. He would guide the effort of muscle by the direction of mind. While cultivating the land, he would enjoy the landscape. While caging the bird, he would not be insensible to its music. The numerous valuable hints and suggestions on the subject of education, that occur in his Cultivator and other writings, evidence the soundness and correctness of his views on that all important subject.

The efforts of Judge Buel have greatly tended to make honorable, as well as profitable and improving, the pursuits of agriculture. He clearly perceived that to render the farming interest prosperous, it must stand high in the public estimation. So long as it was conceded to be an occupation that required little more than mere habit to follow, and that it was indifferent to success, whether the man possessed great intellectual power, or a mind on a level with the ox he drove, it could not be expected that any would embark in it unless necessity compelled them, or the very moderate extent of their mental bestowment, precluded any reasonable chance of success in any other. He taught men that agricultural prosperity resulted neither from habit nor chance; that success was subject to the same law in this, as in other departments of industry, and before it could be secured, must be deserved; that mind, intellectual power, and moral purpose, constituted as essential parts in the elements of agricultural prosperity, as in those of any other; and all these truths he enforced by precept, and illustrated by practice. By these means he has called into the field of agricultural labor a higher order of mind; has elevated the standard of agricultural attainment; and has tended to render this extensive department of industry as intelligent, respected, and honorable, as it ever has been conceded to be useful, healthy, and independent.

Thus gifted, esteemed, beloved, distinguished, and in the enjoyment of a reputation co-extensive with the agricultural interest in this country, it would seem, that if life were a boon worth possessing, he had almost earned a long and undisturbed enjoyment of it. But the dispensations of God to man are full of mystery. Religion and reason here teach the same lesson—to observe, adore, and submit.

He had accepted invitations to deliver addresses before the agricultural and horticultural societies of Norwich and New-Haven, Connecticut, on the 25th and 27th of September last. About the middle of that month, he left this city for that purpose, accompanied by his only daughter. On Saturday night, the 22d of September, at Danbury, Connecticut, he was seized with the bilious cholic. This was extremely distressing, but yielded, within three days, to the force of medical treatment. A bilious fever then supervened, unaccompanied, however, by any alarming symptoms until Friday the fourth of October. His disease then assumed a serious aspect, and a change was obviously perceptible, particularly in his voice. He had occasionally, during his sickness, expressed doubts of his recovery, although his physicians up to the fourth of October, entertained no serious apprehensions that his disease would terminate fatally. He retained throughout the full possession of his mental faculties, and expressed his entire resignation to the will of Heaven. He continued gradually to decline from Friday until about three o'clock in the afternoon of Sunday, when, after faintly uttering the name of his absent companion, with whom he had shared the toils, and troubles, and triumphs, of almost forty years, he calmly, and without a groan or a struggle, cancelled the debt which his birth had created, and "yielded up his spirit to God who gave it."

We involuntarily pause at the termination of the good man's earthly career, and almost imagine ourselves entitled to catch some feeble or imperfect glimpse of his departing spirit, as it speeds its way to the source of light and of love. He died in the very field of his labors; in the midst of his usefulness; in the full maturity of his mental faculties. No symptom of decline had evidenced a waning spirit, nor had the touch of decay impaired the strength, or disturbed the harmony, of his mind.

He left behind him the companion of his earlier and later years, and four children to mourn their bereavement; an extensive circle of warmly attached and devoted friends to deplore their loss; a whole community deeply to regret his removal, and entire interest, constituting the key stone in our social and civil arch, to lose the benefits of his untiring efforts. Such a death succeeding such a life, occurring at such a time, and under such circumstances, most forcibly exemplifies that beautiful sentiment of the poet, that

"Life lies in embryo, never free,
Till nature yields her breath;
Till time becomes eternity,
And man is *born* in *death*."

All that remains for us is to cherish his memory; to imitate his virtues; and to avail ourselves of his labors. He was himself a practical illustration of republican simplicity. Always plain in his dress and appearance; unassuming in his manners; unostentatious in the extreme; he was hospitable, without display; pious, without pretension; and learned without any mixture of pedantry. His was a character of the olden time, and formed on a noble model. With a proper estimate of what was due to others, he united accurate conceptions of what he was justly entitled to receive from them. His principles of politeness were not learned from the writings of Lord Chesterfield; nor were they derived from those higher circles in society, where, too frequently, artificial rules chill the warmth of social feeling, and the play of our faculties, which, beyond all other things, should claim exemption from restraint, is reduced under the worse than iron bondage of heartless forms; where a mistake in manners is even less pardonable than a fault in morals. His politeness flowed directly from his character; and was the natural expression of a happy combination of faculties. He was frank in his communications, because he was so constituted by nature, and had, in fact, nothing to conceal. Although more than threescore years had passed over him, yet the consciousness of a blameless life removed all restraint upon the freedom of his intercourse.

The character and general habit of his mind was, in the highest degree, practical. The value and importance he attached to a thing, were deduced from his estimate of its uses; and those uses consisted of the number and importance of the applications which he perceived could be made of it, to the common purposes of life. He regarded life as being more made up of daily duties, than of remarkable events: and his estimate of the value of a principle, or proposed plan of operations, was derived from the extent to which application could be made of it to life's every day matters. He presented the rare occurrence of a mind originally conversant with the most common concerns, arising, by its own inherent energies, from them to the comprehension of principles, and coming back and applying those principles to the objects of its earlier knowledge.

As a writer, the merits of Judge Buel have already been determined by a discerning public. It is here worthy of remark, that he never had but six months schooling, having enjoyed fewer advantages, in that respect, than most of our farmers' and mechanics' sons. He, however, had the good fortune to possess a mind that could improve itself by its own action. Although, therefore, he lacked the advantages of that early education, which can polish, point, and refine good sense where it happens to be found, and endeavors to supply its absence by some imperfect substitute, where it is wanting; yet by dint of study and practice, and of strong original endowment, he succeeded in the attainment of a style excellently well adapted to the nature of his communications. It consisted simply in his telling, in plain language, just the thing he thought. The arts of rhetoric; the advantages of skilful arrangement in language; the abundant use of tropes and figures; he never resorted to. He seemed neither to expect or desire, that his communications would possess with other minds any more weight than the ideas, contained in them, would justly entitle them to. With him words meant things, and not simply their shadows. He came to the common mind like an old familiar acquaintance; and although he brought to it new ideas, yet they consisted in conceptions clearly comprehensible in themselves, and conveyed in the plainest and most intelligible terms.

His writings are principally to be found in the many addresses he has delivered; in the six volumes of his Cultivator; in the small volume (made up, however, principally, or entirely, from materials taken from the Cultivator,) published by the Harpers of New-York; and the "Farmers' Companion," the last and most perfect of his works, containing within a small compass, the embodied results of his agricultural experience, a rich legacy to which the great extent of our farming interest cannot remain insensible. This work was written expressly for the Massachusetts Board of Education, and constitutes one of the numbers of the second series of that truly invaluable District School Library, now issuing, under the sanction of that Board, from the press of Marsh, Capen, Lyon & Webb, of Boston; which for the extent of the undertaking; the great caution exercised in selecting the material; the talent enlisted in furnishing it: and the durable manner in which the books are executed; so richly deserves the patronage of the whole American Nation. I deem it really the most fortunate circumstance in his life, that he should have been permitted, so immediately previous to his departure, to furnish just this volume, for just this purpose; and I shall confidently expect that the coming generation will be better farmers, better citizens, and better men, from having had the formation of their young minds influenced, to some extent, by the lessons of experience and practical wisdom, derived from the last, best, most mature production of this excellent man. The several district schools throughout our state, will, undoubtedly, feel it due to the important trusts they have in charge, to secure this among other valuable publications, to aid in composing their respective District School Libraries, from which so much good is expected to be derived.

The example of Judge Buel affords practical instruction as well as his works. There is hardly a situation or condition in life, to which some incident, event, or portion of his existence, does not apply with peculiar force, and afford much encouragement. To the wealthy; those who by successful industry, have accumulated competent fortunes, it teaches the salutary lesson that continued happiness can only be secured, by continued industry: that the highly gifted mind must feel a responsibility for the legitimate exercise of its powers; and that, when the requisite capacity is possessed, the one can be the most effectually secured, and the other satisfied, by communicating to the minds of the young, the results of a long experience, of much varied observation and accumulated knowledge, and many original and profound reflections upon men and things.

To those who have sustained losses, been unfortunate in business, and had the slow accumulations of years suddenly swept away by accident, misfortune or fraud; it teaches the important truth, that,

"In the lexicon of youth, which fate reserves
"For a bright manhood, there is no such word
"As FAIL:"

that undaunted resolution, rigid economy, close calculation, prudent management, aided by renewed application, and well directed, persevering industry, can never fail, except in cases very uncommon, to retrieve their circumstances, restore their condition, and, by the excellent habits they create, to send them forward on the mutable course of life, with fresh assurance, renewed hope, and more confident anticipations.

To the youth, who has just commenced threading the devious paths of young existence; who is beginning to open his senses and his faculties to the appreciation and enjoyment of the aliment with which God has furnished them; it speaks a language at once impressive and inviting. It presents the instance of one from among them, born in poverty, having all the hardships, obstacles, and disadvantages so frequently occurring in early life to contend with; with no other inheritance than a sound mind in a sound body, working his way onward and upward to the esteem, respect and confidence of his fellow-men. There have been no peculiarly favorable combinations of circumstances, to contribute to his progress and advancement. No miracle has been wrought in his favor, nor arts of magic enlisted in his aid. Nothing whatever has contributed to remove his case out of the empire of that same cause and effect, in subjection to which, all the phenomena of life are evolved. It is the obvious case of distinction and a high reputation, acquired and earned by the most persevering industry; the most scrupulous regard for right; the exercise of superior intellect; the practice of every virtue; and its plain, practical language to the youth of our land is—"*Go thou and do likewise.*" You are supported by the same soil; overhung by the same heavens; surrounded by the same classes of objects, and subjected to the action of the same all-pervading laws. Would you possess the same good? Acquire it by a resort to similar means.

To all, it addresses a consoling language, in the fact that we here see industry recompensed; unobtrusive merit rewarded; intellectual action accomplishing its objects; high moral worth appreciated; and the unostentatious virtues of a life, held in due esteem, respect and consideration. This tends to create a strong confidence in the benignity of the laws that regulate human affairs; to inspire a higher degree of respect and reverence for the constituent elements of human nature; and to give birth to that sentiment strongly embodied in the language—*God I thank thee that I am a man.*

On motion of Mr. J. J. Viele,

Resolved, That the thanks of the Society are due to the Hon. Mr. Van Bergen, for his interesting Address, and to Professor Amos Dean, for his able Eulogy, this day pronounced, upon the late Jesse Buel; and that a committee of three be appointed to communicate with them, and to solicit copies of the same for publication.

The chair appointed Messrs. Viele, Walsh and Beekman a committee for that purpose.

On motion of Mr. A. Walsh,

Resolved, That a committee of three be appointed to address the widow of our late revered and lamented President, Judge Buel, a letter of condolence, expressive of our deep sympathy in her bereavement, and our sense of the great loss which this Society, our whole country, and the world, have sustained by that dispensation which has removed him from the midst of us, at the period of his greatest usefulness to mankind.

Messrs. Walsh, Dean, and Beekman were appointed on said committee.

Mr. J. P. Beekman, of Columbia, from the committee to report on the tillage proper for the different kinds of soils, made the following report, which was read, and ordered published:

Management of Gravelly Soils.

Mr. President:—At the last meeting of the Society I was appointed with yourself and the deceased Judge Buel, to report "on the tillage proper for the different kinds of soils, such as Clay, Sand, and Gravel." The last, of the different kind of soils, having been assigned to me to report upon separately, I beg leave to present this as my report. The term gravel, in agriculture, is commonly applied to a well known material of the small stony kind, the size of the particles of which, vary from those of small peas to large lumps. A gravelly soil is always intermixed with other matters, such as sand, clay, loam, flint, or iron ochres. The tillage, proper for a gravelly soil, depends not alone on the superfices of that soil, but in a great measure, on the peculiar circumstances, and the localities in which that soil is placed. For instance, if by the term is meant an open soil, made up of small and rounded stones, which are found scattered on high situations upon the surface of the earth, such a soil may require one kind of management; but if is meant, these same kind of stones near the margin of streams—they will, in the first instance, require a different kind of management; and then again, if, by a gravelly soil, is meant, where the stones are mostly of a small size, with their edges ground smooth by attrition, and intermixed with sand or clay, each of these kinds will require a tillage peculiar to itself. In some instances, I have known even gravelly soils in peculiar localities, to require draining from superabundance of wet, (by being situated in low places, or in the neighborhood of springs,) before they could be tilled with any kind of advantage. I do not think that it is expected from me, to treat of the most profitable tillage, each of these different kinds of gravelly soils may require. I will therefore treat of the tillage of that peculiar kind of gravelly soil, with which I am most familiar, which is a mixture of sand and gravel, and which enters into the composition of the plain north of the village of Kinderhook.

On this plain, which is several miles in extent, and generally level, yet tolerably well watered in the low spots, the soil is a mixture of sand and gravel. In some places, on the surface, the one kind predominating, and in other places the other; but proportionably valuable for cultivation, as the sand predominates over the gravel. The whole stratum rests first, on coarser gravel, and next, on a stiff blue clay. This land was originally considered very sterile. The first crop, taken after a clearing, was generally one of wheat, which was commonly light: then it was succeeded by crops of rye for succeeding years, until the soil became perfectly exhausted, when its cultivation was entirely suspended, from the fact that, it would produce little else than wild vines and sorrel. The land was then considered almost valueless, and it was sold at about two dollars per acre.

All the varieties of stable manure, we know are valuable to all kinds of soil, and can reclaim the most sterile, if only enough is applied; but to make it, requires not only animals, but hay and straw on which to feed them, and litter the yards. As upon this soil, little straw could be raised, and it was too dry and poor for grass, it required no little skill and ingenuity, even to commence the raising of a sufficiency of food for animals, from which even a small quantity of manure could be made. Under any circumstances, the small quantities that could be collected, would go but a little way to reclaim a large tract of land. Under these circumstances, and just at this time, ground gypsum, sown upon the surface, at from one to three bushels to the acre, was introduced to the farmers. It was observed that it was particularly valuable, when applied to the soil, after the sowing of the different kinds of clover; that it not only caused the more sure germination of the seeds, but that the produce from it, was very greatly increased. The experiment was made with the peculiar kind of soil now under notice, and clover and plaister were found to answer the purpose remarkably well. The quantity of clover, so raised, gave abundance of food to stock in summer, through all, but very dry weather, and much could easily be collected for winter use. It was soon ascertained likewise, that this crop of grass had a peculiarly favorable effect in fertilizing the soil, and preparing and cleaning it for a grain crop. A clover tilth, turned under with the plow, and the more of it the better, was a good preparation for a wheat, or any other grain crop; and by adopting the plan of yearly dressings with ground gypsum, the frequent seeding down with grass seed, particularly clover, this poor, unproductive and gravelly soil became profitable land for cultivation, particularly if the increased quantity of stable manure, that could now under more propitious circumstances be collected, was carefully gathered and prudently applied. The first impulses towards the regeneration of this soil, was given by the gypsum, that, acting favorably upon the clover, all the subsequent good effects naturally followed. It is a remarkable fact, that gypsum produces the most marked effects on the poorest sand or gravelly soil, and upon plains, where it has not been previously applied. As the land improves from its use and that of other manures, its good effects are not so discernable, until ultimately, from frequent repetition, doubts arise, whether its fertilizing powers have not entirely ceased. Under these circumstances, as it is always a great object that this naturally light land shall be in a constant course of progressive improvement, you must aid it by the application of the increased quantity of stable manures, that previous good crops have enabled you to make. You must likewise relieve it, all in your power, by a judicious rotation of crops; and let not your grain crops follow in too rapid a succession, but give the soil time to recover from its exhaustion occasioned by them. Preserve your pasture lands, as long as they are profitable, for that purpose. Use irrigation, whenever it can be done, as one of the most effectual means to promote vegetation. The free use of marl, whenever it can easily and cheaply be obtained, likewise promises much benefit, as it affords a new stimulus to the growing plant; and by all means, and under all circumstances, practice that judicious and cleanly cultivation, which even the richest soils require to render them sources of comfort and revenue to their owners. The effect of these applications (excepting marl) and this management, I have seen produce the most wonderful effect upon the land I have designated. From its being the most unproductive soil in the country, it is now the most desirable and profitable, and from its being easily worked, and yielding abundantly, its owners, in process of time, have become respectable, intelligent, rich; and it would be a difficult task, even in England, to find, as you may for miles on that plain, in the same distance, better cultivated fields, more comfortable tenements, or more independent persons that fill them. True, in their fences, they cannot compete with the English farmer, but in general appearance, comfort, and easy circumstances, and made so by their own good management and industry, I have not seen the district of country abroad that surpasses them.

That agriculture, in this district of country, can not be farther improved, I do not pretend to affirm: on the contrary, much may yet be done, to make this sandy, gravelly soil more productive, and there may be districts in our state, which yield much more abundantly, even from natural causes, but when we see, that what has been done here, is the work of art, it is a conclusive proof that where man applies his abilities faithfully to the melioration of the soil, a good Providence will watch over and reward him for his perseverance and toil. Lime, to a great extent, has not, to my knowledge, been used as a manure to this gravelly soil. I tried a few loads, a short time since, to test its effects, but as it was difficult of procurement, and its operation, the three years in which it has been applied, not answering my expectations, I have not progressed any farther with it. I saw no benefit from it whatever. Bone, as a manure, has been serviceable, but not to the extent to which European farmers estimate it. My own experience tells me, that when sheep have been littered and fed in a yard, that litter and dung will produce an effect as decided and satisfactory, as any application of manures I have ever tried. If you can winter a suitable number in a field, so as to keep them constantly there, (having both provender and beds,) it is the best preparative to a crop of corn, inasmuch as no portion of the urine, as well as dung, is lost. This kind of manure is decidedly stronger and better than either fresh or compost manures, made by the other kinds of common farm stock—so much so, that I look upon it as a great desideratum to keep in winter, as many sheep upon it, as I have the means of feeding there. The rotation I have commonly used, has been clover with oats. The next year pasture on the clover—the third year, corn in the spring, or wheat in the fall, on the sod. If put in corn, the succeeding year, oats or barley with clover; or if in wheat on the sod, follow it with corn, potatoes, or turneps, and in the succeeding spring, with clover and oats or barley, and seed down as before. In the one instance, you have two crops before you seed down; in the other, three. The stable manure is commonly applied, upon the wheat stubble, for either corn or roots. Mangel Wurtzel is a better crop, on this soil, than Swedish turneps: the first is sown early in the spring, and the plants have commonly obtained their growth, when the dry weather of summer commences; whereas turneps by being sown in June, July, and August, being generally dry months, their growth is most retarded, when they are most subject to the ravages of the fly, and, from these two causes, they are uncertain crops. I will here state my opinion, that turnep husbandry will not be as profitable here, as in England. I ground it on the fact, that our summers are dry in comparison with theirs, and we all know the great effect that rain and humidity have on vegetation.

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Mr. J. B. Nott, from the committee appointed to examine and report on Agricultural Implements, made a Report, which was accepted, and ordered to be published. [It will be given in a future number.]

Mr. Nott, from the committee to select subjects to be reported on at the next meeting of the Society, made the following report, which was adopted, viz:

1. On the most approved method of stall-feeding oxen and other neat cattle. [Committee, Wm. H. Strong of Seneca, and A. Van Bergen of Greene.]
2. On converting green crops and other vegetable matters into manure. [Committee, Messrs. Ball and Walsh, of Rensselaer.]
3. On the tillage proper for the different kinds of soils—as clay, sand, and gravel. [Each soil to form the subject of a distinct report, and A. Van Bergen to report on clay, and J. Buel on sand and gravel.]
4. On the proper time to cut timothy and clover, and the most approved method of curing the same. [Committee, J. P. Beekman of Columbia, and W. Salisbury of Greene.]
5. On the effects of lime, and its application to different soils. [Committee, Messrs. Viele and Mather.]
6. On the best means of eradicating the Canada thistle. [Committee, Messrs. North and Duane.]
7. On the manufacture of sugar from beets. [Committee, Messrs. Cheever of Albany, and Smith of Washington.]
8. On the comparative economy of employing oxen and horses, in the usual business of the farm. [Committee, Messrs. L. F. & R. L. Allen of Erie.]
9. On the best mode of cultivating the potato. [Committee, Messrs. Whiteside, and Bement of Albany.]
10. On the comparative value of potatoes, ruta baga, and mangel wurtzel, as food for cattle and sheep. [Committee, Messrs. Grove and Rotch.]
11. On the value of apples for neat cattle, sheep and hogs. [Committee, Messrs. Mather and Ball of Rensselaer.]
12. On the adaptation of the Windsor or other foreign beans, to the purposes of the American farmer. [Committee, Messrs. Bement, Nott and Bullock.]

The Society then adjourned to the second Tuesday of February, 1841. A. VAN BERGEN, *Pres't.*

JESSE BUEL, *Sec'y.*

—

☞ Gentlemen wishing to become members of the State Agricultural Society, can do so by leaving their names with WM. THORBURN, at his seed store, North Market-street, Albany. Initiation fee, only $1.00. Members who have not paid their annual dues, can also pay their arrearages to Mr. Thorburn.

N. Y. State Agricultural Convention.

Assembly Chamber, February 4, 1840.

The Convention was called to order by Mr. J. J. Viele, of Rensselaer, on whose motion the Hon. GEORGE W. PATTERSON, of Livingston, was called to the chair, and JESSE BUEL appointed Secretary pro tem.

On motion of Mr. A. Van Bergen of Greene,

Resolved, That a committee of five be appointed to report suitable names for officers of this Convention.

The chair appointed Messrs. Van Bergen of Greene, Beekman of Columbia, Viele of Rensselaer, Tucker of Albany, and Johnson of Kings, said committee, on whose report the following gentlemen were unanimously appointed officers of the Convention:

ROBERT DENNISTON, of Orange, *President.*
CHARLES E. CLARKE, of Jefferson, }
JEREMIAH JOHNSON, of Kings, } *Vice Presidents.*
DANIEL TOFFEY, of Dutchess, }
BENJAMIN ENOS, of Madison, }
LUTHER TUCKER, of Albany, }
HENRY D. GROVE, of Rensselaer, } *Secretaries.*

The counties being called over, about one hundred delegates enrolled their names as members of the Convention.

On motion *Resolved*, That Messrs. Beekman, Bement, Van Bergen, Nott and Bergen, be a committee to report the business to be presented to the Convention.

On motion of Mr. Beekman, Messrs. Duane, Viele, and Buel, were appointed a committee to examine a book called the Farmers' Library, and report upon its merits as a common school book—the book having been submitted by the author for that purpose.

The following preamble and resolution was introduced by Mr. Nott:

Whereas, a bequest has been made to the people of the United States, by the late Mr. Smithson of England, for the purpose of improving the intellectual and moral condition of mankind, leaving it to the Congress of the United States to designate the mode of its application; therefore

Resolved, That a petition, signed by the President and Secretary of this Convention, be presented to Congress, praying an appropriation of a portion of said bequest, for the establishment of an Agricultural School. [Referred to Messrs. Beekman, Morris and Nott.]

The Convention then adjourned to 4 o'clock, P. M. to-morrow.

Assembly Chamber, Feb. 5, 1840.

Mr. Beekman, from the business committee, reported the following resolutions:

1. *Resolved*, That in the opinion of this committee, the culture of silk is an object well worthy its attention, and that a committee be appointed to report upon its present state, and what advancement has been made in it in the United States, in the last six years. [Committee Messrs. C. E. Clarke of Jefferson, and C. Bergen of Kings.]

2. *Resolved*, That this Convention regard the culture of the sugar beet, with the view to the production of sugar and the feeding of stock, as a branch of agriculture that may be rendered very profitable to the farmer, and that a committee be appointed to ascertain what advances, if any, have been made in the culture of the beet and the making of sugar therefrom, in the United States, and how far it may enter into competition with other vegetables or grains, in the feeding of stock. [Committee, Messrs. J. B. Nott and Wendell.]

3. *Resolved*, That this Convention cause a committee to be appointed, whose duty it shall be to report at a subsequent meeting, if any, and what improvements have been made in the last twenty years in the management of farms, and if so, to what extent it has added to the resources of the state, or the wealth, respectability, intelligence, and comfort of our population. [Committee, Messrs. Beekman and Van Bergen.]

4. *Resolved*, That a committee be appointed to inquire into and report upon the particular method of farming adapted in some of the best cultivated counties of this state, and how far that method would be applicable to other portions of the state. [Committee, Messrs. Viele and Knickerbacker.]

Whereas, doubts have arisen in the minds of some, as to whether there has been any improvement in farming in the last twenty years, and if there has, that it has been owing to natural causes, and not to the advancement of the art; therefore,

5. *Resolved*, That a committee be appointed, whose duty it shall be to investigate this subject, and to report what would now be the profits and value of two farms, (say of 100 acres each,) the one cultivated under the present, and the other under the old system. [Committee, Messrs. Gaylord and Bement.]

6. *Resolved*, That this Convention would respectfully urge upon the public, and especially farmers, the great practical utility of reading agricultural papers, as it would add much to their usefulness as farmers and their intelligence as citizens.

The Convention then took a recess to hear Mr. Van Bergen's Address, and Professor Dean's Eulogy before the State Agricultural Society, after which it adjourned to 7 o'clock in the evening.

Assembly Chamber, 7 o'clock, P. M.

The preceding resolutions, from the business committee, from 1 to 6, were severally taken up, and after discussion, adopted, and the several committees annexed to each, appointed.

On motion of Mr. A. Walsh,

Resolved, That a committee be appointed to prepare and present a petition, on the part of this Convention, to the Legislature now in session, for a law to organise a Board of Agriculture, to consist of eight members, one from each Senate District, with an appropriation of $5.000, for the use of such Board, to be expended in such manner as it may deem most likely to advance the interests of Agriculture.

Messrs. Duane, Walsh, Van Bergen, Beekman and Tucker, were appointed a committee to memorialize the Legislature, pursuant to the above resolution.

On motion of Mr. C. Bergen, of Kings,

Resolved, That as numerous and incontrovertible evidence has been given the past year, of the practicability in this country, to produce silk, to a great and advantageous extent, as evidenced by exhibitions at the American Institute, in the city of New-York, as well as elsewhere; and as the importations for the *past*, in that article, clearly exhibit that it is one of the greatest drains of our wealth and probably the greatest means of extracting specie from our country—and as it is highly important for the American people to prevent these evils, it is therefore recommended that some action should be had by the Legislature now in session, to do something more effectually to encourage the production of this elegant article, either by directly offering a proper stimulous to exertion, or by passing resolutions requesting Congress to impose suitable duties, that will afford ample protection to those engaged in this branch of Agriculture.

Resolved, That as the American Institute, of the city of New-York, has, ever since its existence, greatly evinced its usefulness and benefits to the interest of Agriculture, as well as to mechanical skill and the arts, it is therefore recommended that this Convention respectfully suggest to the Legislature the propriety of making at least, a small appropriation to that very useful institution—without which its existence must either be abandoned, or its benefits and usefulness very much diminished.

Mr. Morris, of Westchester, from the committee to whom was referred the resolution relative to the Smithsonian bequest, reported the following resolution, which was adopted:

Resolved, That a committee be appointed to procure the passage of a resolution by the Senate and Assembly of this state, requesting Congress to appropriate a portion of the Smithsonian bequest to the establishment of an Agricultural School, in the city of Washington.

Messrs. J. B. Nott and C. E. Clarke, were appointed said committee.

Mr. Bergen, of Kings, offered the following resolution, which was adopted, and Messrs. T. B. Wakeman of New-York, C. Bergen and Gen. Johnson of Kings, P. Potter of Dutchess, J. J. Viele of Rensselaer, and A. Van Bergen of Greene, were appointed a committee to prepare the report.

Resolved, That a committee of six be appointed to prepare a report on the future prospects of Agriculture, Manufactures and the Mechanic Arts of this state, to be illustrated by such statistics as the committee may deem appropriate, and that the report, when completed, be published in the Cultivator and the Journal of the American Institute.

On motion of Mr. Beekman,

Resolved, That the thanks of this Convention be tendered to the President, for the dignified and able manner in which he has presided over its deliberations.

The President responded to this resolution as follows:

President's Address.

Gentlemen of the Convention—The vote which you have just passed, and the unexpected honor which you have conferred, in calling me to preside over your deliberations, make it necessary for me to return my thanks for this flattering evidence of your consideration.

That agriculture is an unfailing source of individual wealth and happiness, and lies at the very foundation of our national prosperity, all will concede. But while this opinion in the abstract, is readily granted, it must be perceived by all, who have observed the course of events for the last few years, that it has been practically denied.

Commercial pursuits, mercantile business, buying and selling and getting gain, have absorbed the attention of our enterprising youth, and our ambitious men. The occupation of cultivating the soil, though eminently prosperous, has been too tame a pursuit to gratify the excited temperament of the times. Hence our large cities and towns have been constantly draining from the country the choicest of our youth. The old homestead had lost its attractions. The whistling of the ploughman had ceased; discontentment had unnerved his arm and choked his utterance, as he followed his sluggish team. His mind wandered from his business, and dwelt with fondness upon the money-making projects of the age.

But in the course of events, we are called to witness a violent re-action. Mercantile pursuits, overrun and inflated, have proved visionary and fruitless.

We think we do not mistake the signs of the times, when we say, that public opinion, although through much tribulation, begins once more to dwell with peculiar favor upon the occupations of the farm.

The prodigals in business, care-worn and oppressed, are beginning to learn, that there is hidden wealth, solid happiness, and enduring prosperity clustered around their paternal acres.

Let us, gentlemen, who have never wavered in our attachment to the soil, who have never deserted the busines we love—and which has been so faithful to us, let us at this time indulge in mutual congratulation, that our favorite pursuit is once more eliciting songs of praise from all men. Be it our ambition to improve the occasion—while many of our fellow-citizens are returning from a career of folly, shorn of their strength, with hopes prostrated and spirits subdued, let us point them, with cheering voice, to one occupation where their feet may rest in quiet, where they may yet attain and secure for themselves and their families the greatest blessings of human life—health, peace and competency.

Be it our ambition to prove to the world by the purity of our lives, and the wisdom of our conduct, that happiness is not to be sought in the wild and visionary schemes which from time to time afflict mankind, but will readily be found in the retired and peaceful cultivation of the mind and the soil.

Gentlemen, I trust you will pardon me for reminding you, that you owe a duty to your country in another point of view, which I hope will always press with force upon your conscience. The political duties of farmers should he discharged with great intelligence and care.

Their individual prosperity is identified with the prosperity of their country. They form the great moral balance wheel of our political machine.

The people of our cities and large towns are comparatively unsafe depositories of political power. They are too much influenced by the passing events of the day. They live and move in the midst of excitement.

But the American farmer who walks in freedom upon his own soil, acknowledging no superiority but what justice, intelligence and virtue confer, whose interest is identified with no polluting associations, whose mind contemplates in undisturbed calmness the political measures of the times—having no inducement to do otherwise, he ought to exercise his political power for his country's good.

How important is it that the public opinion which dwells in the distant hamlet, which inhabits the hills and valleys of our land, and when concentrated controls the destinies of our beloved country—how important is it, this that public opinion should be enlightened and virtuous.

The circumstances connected with our meeting together on this occasion, remind us of one whose life was devoted to the work of elevating and chastening that public opinion—whose attachment to the cause of agriculture, and whose honest and successful efforts in disseminating useful knowledge, had acquired for him a strong hold on the affections of the farmer. We have felt his absence on this occasion—for he was ever present, with zeal to encourage and wisdom to direct our proceedings.

He has gone down to his grave with a reputation which the most ambitious may well covet. Let the sons of our farmers witness in his life a full exemplification that the pursuit of agriculture may be the means of eminent usefulness and distinguished honor.

As it is said of Washington, that his virtues are embalmed in the hearts of his countrymen, it may be said of Jesse Buel, that his *tomb* is the *memory* of the cultivators of the soil.

Permit me, once more gentlemen, to thank you for the manifestations of kindness contained in the vote which you have just passed.

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After the appointment of a committee to prepare the proceedings of the Convention for publication, the Convention, on motion of Judge Knickerbacker, adjourned sine die.

The Convention, in the course of its deliberations, was addressed by Messrs. Beekman of Columbia, Bergen of Kings, Nott and Duane of Schenectady, Mc Gowan of Tompkins, Knickerbacker and Viele of Rensselaer, Morris of Westchester, and others.

Communications.

Importance of Water in Stock Yards.

Few persons are aware of the great importance of a supply of running water in yards, where cattle and sheep are confined in winter, unless they have enjoyed that privilege, and afterwards been deprived of it.

Great losses are often sustained by accidents, when cattle are compelled to go any distance from the yard for their daily supply of water, that great restorative and corrective of dry fodder; and, besides, much manure is also lost

My experience teaches me the fact, that where dry fodder is dealt out, they drink, when water is convenient, from six to eight times a day; and I find, by an examination of the stock throughout the country, that their good or bad condition is generally, if not invariably, in proportion to the facility of obtaining water.

Their timidity in overcoming trifling obstacles in order to obtain water, is no less observable. I have known them to endure thirst and cold with apparent indifference, rather than encounter or make any attempts to pass over ice or snow drifts.

Often have I seen them stand on the brink of a small stream, the banks of which were covered with ice, and a little higher than the stream—look wishfully at the water, shake their heads in doubt, make an attempt to reach the water, slip a little, shake their heads again, then turn and hook the first animal that unfortunately happens to be in their way, and go off, until thirst urged them to encounter every difficulty; when they would fill themselves nearly to bursting, and return to the yard, shaking and shivering as though attacked with an ague fit.

It was but a few days since the well in my cattle yard failed to furnish a supply of water; in consequence of which, I was obliged to drive my cattle to a small pond, where I had cut several holes through the ice for them to drink. They could not be satisfied to drink from the holes cut for them, but must, forsooth, wander about in every direction. It was but a few moments, before down went one of my oxen, up to his back in the water. Fortunately it was not very deep, and after three or four attempts he made out to extricate himself. Soon after, further up, and where the stream enters the pond, splash, splash, went one of the calves, up to his ears in water, and struggling a few moments, regained the bank. This animal had but just recovered itself, before my attention was attracted to that part of the pond, where the ox had broken in. One of the other calves had been forced into the hole, by one of the larger animals, and came very near being drowned. Had the water been a little deeper, both the ox and calves might have been lost.

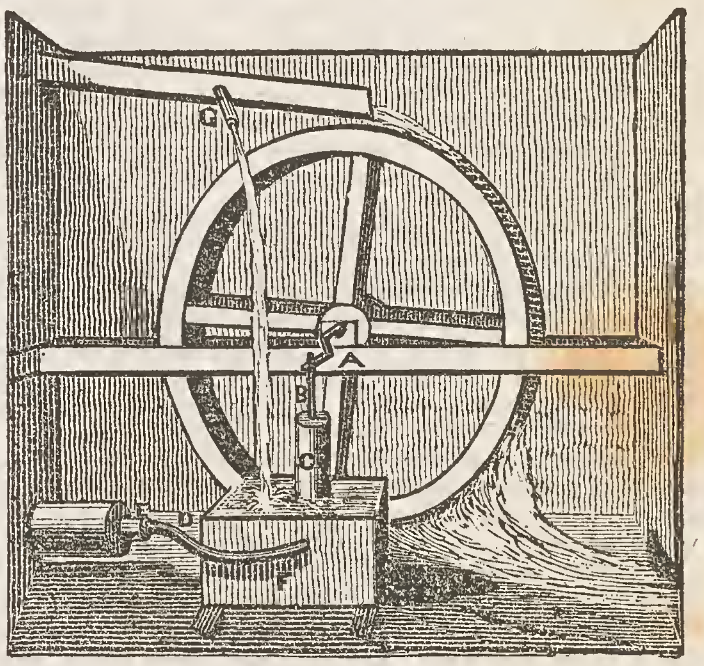
Now, a well of water, in a stock yard, is far preferable to no water, *but cattle can not pump,* at least mine can not, and those who have charge of them do not always know when the animals are in want, consequently they must sometimes suffer; but where a stream of water is constantly running in the yard, they can drink when and as often as they desire it.

The Shakers, at Watervliet, formerly had their cattle yards supplied with water, conducted from a spring some eighty or ninety rods distant from their yards, and, if I am not much mistaken, it was conducted in a lead tube. Some obstruction (possibly air) has caused it to stop, and they were obliged to drive their cattle to a small stream to drink. I am informed by a gentleman who lately visited them, that their cattle do not keep in as good order, as when they had a constant supply in the yard.

When I purchased my farm, I was very particular to ascertain that there was a full supply of good water on the premises, both for domestic use, as well as for stock. In addition to one well of very superior water, there are two of inferior, besides a never failing stream of pure, soft water, which passes through the centre of the farm, supplying eight lots; but the stream runs in a valley thirty-five feet below the level of the barn yard, and fifty feet below, and forty-two rods distant from my house. Now, it occurred to me that a dam might be erected, and a small apparatus applied, something on the principle of the "Fair Mount Works," at Philadelphia, by which the water could be forced up to my house; but the difficulty and trouble of procuring the necessary machinery, as different mechanics would have to be employed, prevented me from making the attempt, until chance threw in my way Messrs. Goey and Ireland, of Watervliet.

At the farm of the latter gentleman an apparatus, very simple in construction, had been erected, and had been in operation for some time, which forced the water sixty rods up a rise of fifty-eight feet.

After taking a survey of my premises, I engaged them to erect a similar apparatus, of which the following cut and description may give some idea:



[Fig. 27.]

In the first place, a dam was made sufficiently high to give a head of three feet; below which, and on one side of the stream, a cistern was sunk, the top being even with the surface of the earth, five feet deep and four feet square, in which was placed an over-shot water-wheel two feet and eight inches in diameter, with buckets twelve inches long. To the crank (A) on the shaft of the water-wheel, is attached the piston rod (B) of a small cast iron forcing pump, (C) eight inches long and one and three-fourths of an inch in diameter, moving on two gudgeons near the bottom. To one of the gudgeons, which is hollow, and on which the pump works, is attached a leathern hose or tube, (F) carefully fitted and secured by winding a small cord tight around it, which being elastic, allows the lateral motion of the pump, and conducts the water to a lead tube (D) inserted in the log. The pump is set in a water-tight box, one foot square and eight inches deep, which is supplied with water from the trunk, (G,) that conducts the water on to the wheel. This trunk is four by six inches diameter, and affords sufficient water on the wheel to force from twelve to fourteen hundred gallons per day to my house, which is fifty feet above the level of the creek.

From the resorvoir near my house, into which the water is discharged, is conveyed in half inch lead tubes to my cattle and sheep yards, which are ten feet lower than the reservoir.

This furnished a supply of water for my house and stock, until the great freshet in January, 1839, which carried off the dam, and put a stop to the works until spring. As soon as the frost was out of the ground, I repaired the dam and set it in motion again, but it had been in operation only a few days, before the water was let off by a muskrat, that tapped it by digging a hole through the dam. Nothing daunted by these misfortunes, I again repaired the breach and started the pump once more, since which it has continued to work well, and much to my satisfaction.

I have said that the water was conducted from the reservoir to my stock yards, in lead tubes of half inch calibre, which afforded a supply until late in the fall, when it ceased running. Had logs of one and a quarter inch bore been used in the place of lead tubes, I am confident it would have continued to run freely.

Water pipes, and more particularly leaden tubes, are liable to be obstructed by the deposition of sand in the lower parts of the tube, and by the collection of air in the upper parts of the bendings. This is a serious evil, and may take place in all pipes, which have an undulating course, or more vertical curves than one. When air is thus confined in the pipes, the water will not rise to the same height at the discharging end, as at the fountain head. The air being the lighter fluid, tends to occupy the highest part of the bendings. Any pressure applied at the fountain head tends to push the air a little beyond the highest part, so as to make it occupy a portion of the descending side of the curve.

The preventive of this evil consists in avoiding vertical curves, and in laying the pipe, if possible, with an uninterrupted slope, or at least with only one slope, in each direction. When this is done, the air will escape at one or both ends of the pipe.

My object in communicating the above, is to aid those who may be situated as I was—to answer repeated inquiries by letter, and to announce that by applying to Messrs. Goey and Ireland of Watervliet, three miles north of Albany, who own the patent, that they may have an apparatus erected at a moderate expense. Mine cost me about one hundred and fifty dollars, and I consider my farm worth, at least, one thousand dollars more in consequence of it; in fact, two thousand dollars would not tempt me to abandon it.

Should any gentleman deem it of sufficient importance to call on me, I will take great pleasure in exhibiting the machinery, and giving all the information I possess in regard to the name.

CALEB N. BEMENT.

Three-Hills Farm, Jan. 7, 1840.

Sore Mouth in Sheep.

MESSRS. GAYLORD AND TUCKER—Being something in the line of sheep farming, and feeling that farmers are under mutual obligations to communicate to each other whatever comes within their knowledge of the diseases, and cure of distempers, that may make their appearance in our flocks, I take the liberty of communicating what was to me a new disease among sheep. Sometime in January, 1839, a number of my sheep were attacked with a sore mouth. It generally commenced in one corner of the mouth and spread over both lips, and the lips swelled to the thickness of a man's hand. I examined all the books and periodicals that I could find, but found no description of such a disease. I found one man who told me that his father had a flock similarly attacked, but could find no relief, and lost the most of his flock. My flock, on that farm, consisted of about 300, and in the space of three weeks, about forty died with the distemper, and not one had recovered. By this time at least one half of the remainder of the flock were attacked. It occurred to me that tar would be as likely as any thing to give relief. I accordingly had my sheep all brought together; and filled their mouths, and daubed on to their lips all that could be made to stick; and to my surprise it effected an immediate cure. I lost but two or three after this, and these were nearly dead when I made the application. In a very few days, every sheep was well. The swelling went down, and after a few days the lips healed, and became perfectly clean.

JABEZ BURROWS.

Chautauque, January 14, 1840.

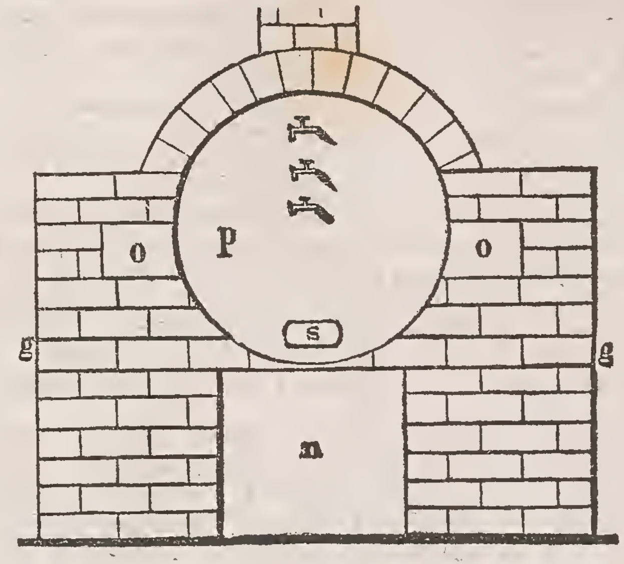
Plan of Piggery.

MESSRS. EDITORS—Accompanying this, you have a plan and explanation of a piggery constructed last fall, which I conceive to be, so far as it goes, *as perfect as it can be made.* It will accommodate sixteen breeding sows with a litter of pigs each, and afford them ample room in doors and out, and have each one separate, and unmolested by any thing else; and all within a compass of less than fifty feet, and when not required for sows heavy in pig, or with pigs, it will comfortably accommodate *three* times this number. It can be indefinitely enlarged with entire convenience, by adding to either end in a continuous range, thus affording all the additional yard room required. A valuable addition to this would be *a cellar* to hold roots, which might be easily constructed under the pens adjoining the furnace and vats, taking care to have it properly guarded against leakage into it from the pens above, by tight plank or board floors sloped so as to carry off the water. The steaming arrangement is unexceptionable. Sixty bushels of roots can be steamed in *three hours,* and at a more moderate expense for fuel than one could hardly conceive of. Corn or any grain in the circular vat can be cooked effectually, without the trouble and expense of going to mill, at a small expenditure of time and fuel.

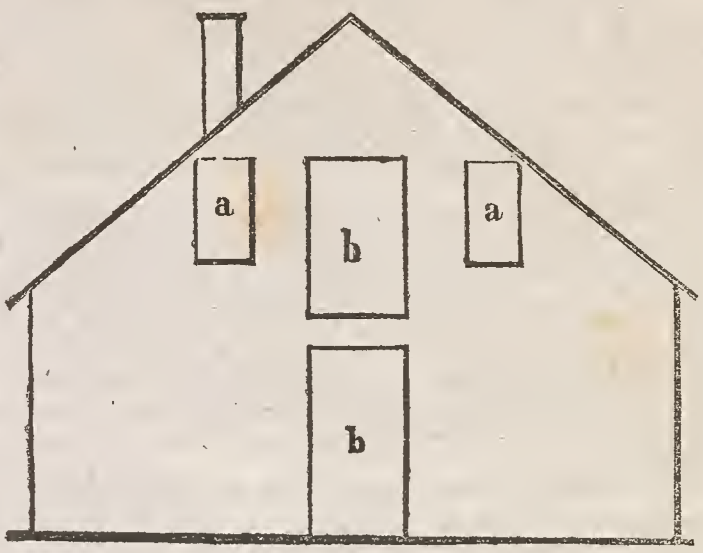
The expense, roughly estimated, is—frame, covering with double board, so as to be perfectly tight, shingling, partitions, eave-troughs, doors, windows, feeding troughs

with swing doors, &c. &c. &c.	$250
Boiler complete, with steam pipe,	40
Setting ditto. with materials,	25
Two vats,	20
One cistern,	20
Pump for ditto.,	10
Total,	$365

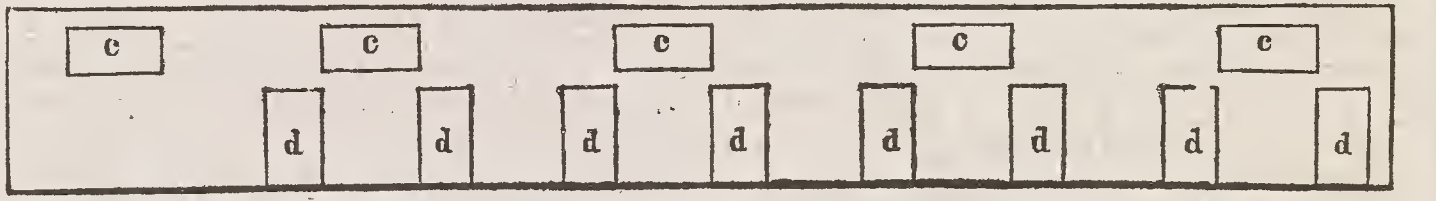
[Fig. 31.]



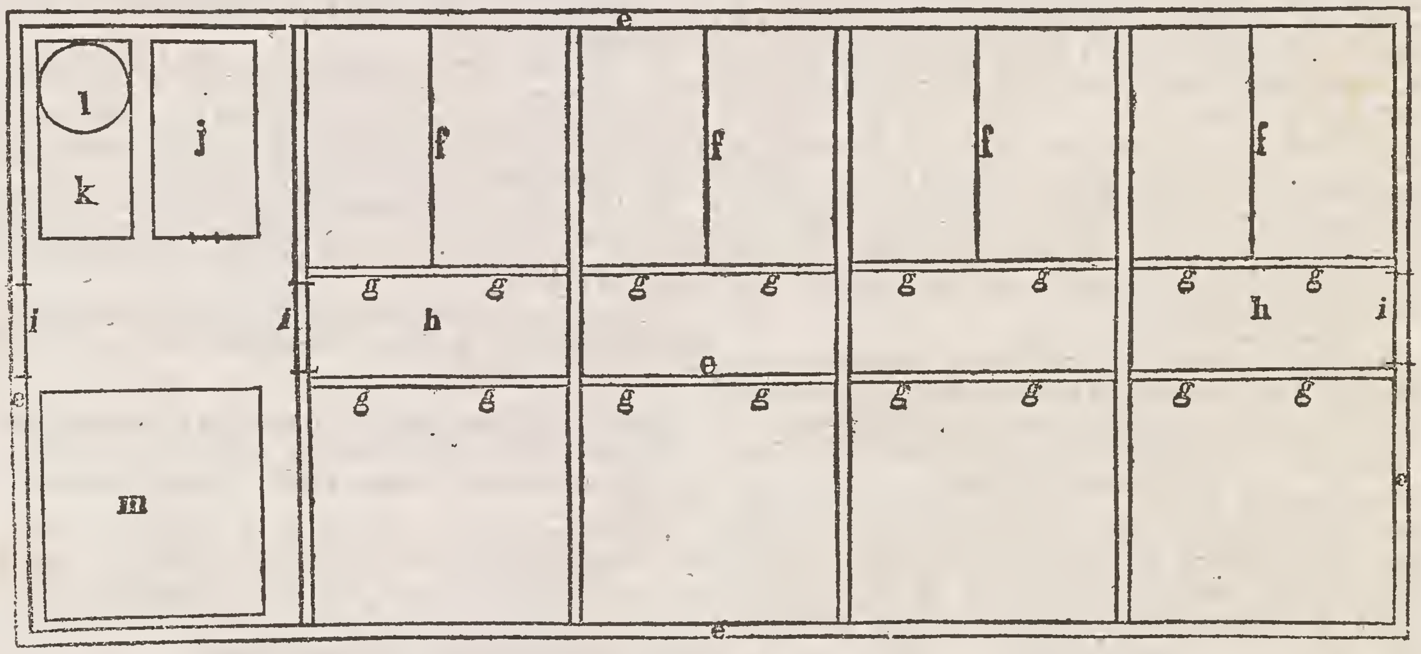
[Fig. 28.]



[Fig. 29.]



[Fig. 30.]



[*Fig.* 28.]—End view of piggery, 60 feet long, 20 feet wide, and 8½ feet posts, alike at both ends.

a a, 2 twelve light windows, 7 by 9.

b b, 2 doors, 4 feet wide and 7 feet long.

[*Fig.* 29.]—Side view of piggery.

c c c, 5 windows, 15 light, 7 by 9, on south side; five boards ditto. to slide on north side.

d d d, 8 doors, 2 feet by 4½, on south and north side for ingress and egress of pigs to the yards.

[*Fig.* 30.]—Ground plan.

e e e, ground plan of frame.

f f f, plank partitions—same to be added on south side when required.

g g g, 16 troughs, with door hung to girt 2½ feet above with staple to fasten on both sides, so as to feed and clear trough free from pig interference.

h h, passage way 4 feet wide running whole length and giving access to every trough and pen.

i i i, 3 doors 4 feet wide and 7 feet high.

j, furnace and boiler.

k, oblong box, for steaming roots, 4 feet wide, 3½ feet high, and 7 feet long inside, secured by 4 joice curbs with keys, and holds about 60 bushels, and heated by steam taken through a lead pipe, from boiler *j* adjoining.

l, circular tub, 3½ feet diameter by 4 feet high inside, standing on top of steam vat and used for boiling corn, &c. by means of a copper pipe entering at the side near the bottom, and running to top inside, then turning and delivering the steam at the bottom. Food can be cooked in only one of these vats at a time.

m, cistern 9 feet square and 6 feet deep—holds upwards of 100 bbls. of water, and over it is stove room.

[*Fig.* 31.]—Furnace and boiler—end view.

n, iron door hung in cast iron frame 16 by 14 inches through, which the fuel is put in, and the fire passes the length of the furnace 6 feet, and returns the whole length through the pockets *o o*, by the side and contiguous to the boiler, and passes by the chimney built directly over the end.

p, boiler, made of thin boiler iron 20 inches diameter, and 5½ feet long, with 3 small cocks *r r r*, to show the quantity of water. It has two large brass cocks on top to receive water and deliver steam, also a safety valve.

q q, brick work around boiler, built on stone foundation.

s, hand hob, to clean boiler whenever it becomes foul.

Respectfully your obedient servant,

P. B. ALLEN.

The Extirpation of Weeds.

It may be doubted if any branch of agriculture, is more indifferently conducted in this land, than the EXTIRPATION OF WEEDS. In the corn field and in the potato patch, indeed, the hoe may perform its part tolerably well; and in the summer fallow, the plow turns over and smothers many of these noxious incumbrances; but traces of that vigilance which should mark their first encroachment, and of that perseverance which should return to its task till the work of destruction is completed—are too rare amongst us. How many honorable exceptions to this charge of negligence, can be found on a hundred adjoining farms? We put this question without rigidly insisting on the rule, that "good farmers suffer nothing to grow but their crops."

Let a careful observer traverse the country in summer, and he will find in many places, the *St. John's Wort* extending its yellow bloom over the fields and meadows without one effort to check its progress. *Here* the *wild teasel* is slowly advancing without interruption from the road side into the pastures; and *there* the sulphur blossoms of the *field mustard* amongst the oats and barley, show it already in possession, far and wide. The *quitch grass*, the *dock*, the *ox-eye daisy*, the *horse-thistle*, the *mullein*, the *milk weed*, the *yarrow*, and others of less importance,—if they do not, like a neighbor's pigs and geese, devour the pasture, at least they occupy the space where grass ought to grow, and rob it of the nutriment which ought to increase its growth. We are mistaken, if more loss is not sustained from vegetable, than from animal, intruders.

The above list is long, but we have not yet done. The *burdoc*, the *tory weed*, and the *cockle bur*, are most injurious to wool; and the *stein kraut*, (red root, or pigeon weed,) and *biennial chamomile* seem to poison the growing wheat. The two last of those weeds come in so slyly, or rather without observation, that the farmer is sometimes taken by surprise when he beholds the ruin of his crop.

There is one weed, however, so formidable, that all others, bad as they are, seem to shrink into insignificance before it. This is the Canada thistle—"the cursed thistle" of England, and if any plant can deserve such a name, this is the one. It is in a fair way to cost us more than the Florida war—but description would be useless to those who have marked its progress in spreading over the fields, or whose fingers have been pricked by it when securing their crops.

The Canada thistle effected a lodgment in this town, more than 35 years ago; but its progress within the last five years has been more rapid than at any former period. Fields that had not been previously encumbered with it, have had of late so many new seedlings, that the land is rendered almost unfit to be sown with wheat; and without much perseverance it will be entirely so in a few years.

In pastures and meadows, indeed, the progress of this thistle is comparatively slow, being checked by the grass and the compactness of the soil; but when the ground has been plowed for oats, spring wheat, and barley, or even for a summer fallow, if not more than three times, it spreads out in every direction; and a patch, that might be covered with a sieve, in one or two years, will increase to several rods in diameter. Into these circles, if the growth is rank, many farmers are unwilling to enter, leaving the crop as well as the thistles, to stand undisturbed.

Now, what are we to do? becomes a very important question. In answering it, we should say that the farmer ought to be very watchful in passing over his fields, both before and after plowing, so as to mark every new patch that appears; and then, without the delay of a single week, he ought to *dose* the root of every seperate stem with strong brine. A dry day is the best for this purpose. We have generally made a hole large enough to hold a gill or more, with the corner of a hoe, cutting the stem as far down as that instrument reaches. When we have used old brine, one application has always been enough to destroy them; and in this way, *taking them in time*, a little attention, and a little labor, would prevent great damage.

If the patch, however, has become too large to be treated in this way, its further progress may be checked by applying brine in the manner proposed, to all such as stand near the circumference.

It should be remembered, however, that most of these patches consist of a single plant with many stems, unless broken by the plow; and that we cannot destroy them unless we attack the whole. If, therefore, they are protected by fences or other obstructions, these ought to be removed; and then by perseverance and frequency in either plowing or hoeing, their destruction may always be accomplished,—sometimes in one, but in two without failure. D. T.

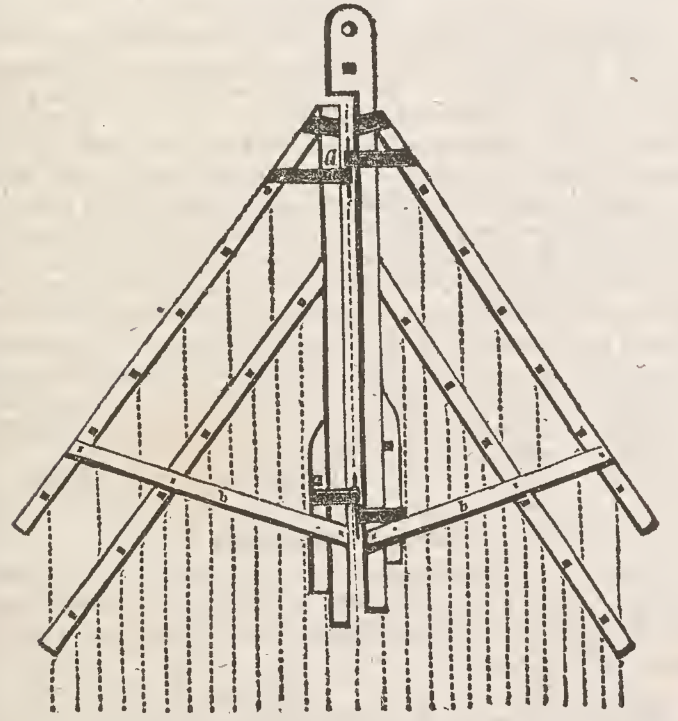
Cayuga Co. 1 *mo.* 30, 1840.

The Sugar Beet.

Messrs. Editors—I have raised the sugar beet three years, and believe them to be the best root raised to winter farm stock of every description—hogs in particular are exceedingly fond of them. They are of great use in fattening pork. My best crop was raised in the following manner:—

To make sure of a good crop, a rich, clean, well pulverized soil is absolutely necessary. I plow my land deep in the fall; cross plow and pulverize with a fine drag in the spring; throw it into one bout ridges two and a half feet apart; rake the ridge lengthwise; plant ten or twelve inches apart; keep the ridge as large and broad as possible; destroy all weeds; three hoeings are sufficient. I believe these directions will answer for the northern and eastern States at least. I soak my seed in strong nitre water, and roll in plaster. They are superior for milch cows. They increase the milk and give a pleasant flavor, and are excellent for ewes that have early lambs.

Improved Harrow.—[Fig. 32.]



I send you a rough draft of a drag. I have one in use. It clogs less and works the land better than any drag I ever used. The placing of the teeth is certainly necessary to prevent the drag from clogging, and to make it work the land equally. Oak timber, three inches square, for the sides and centre pieces; one and a half inch plank, five inches wide, locked half an inch deep, and bolted through with half inch bolts, make a firm drag. Fig. 32, *a.* represents the hinges—a hook and eye made of stout bars of iron, bolted with half inch bolts—*b.* the cross pieces bolted as above. It may be made from five to six feet wide, and any number of teeth wanted, used.

Yours, with respect,
EDMUND WELLS.

Harmony, Dec. 10, 1839.

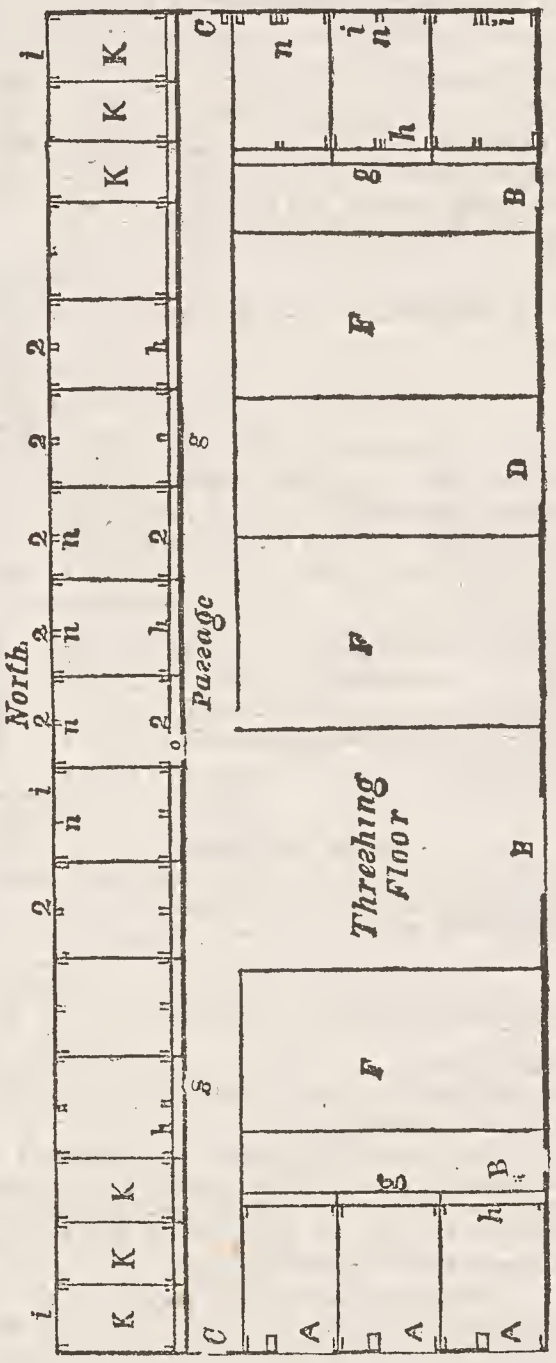
Farm Buildings.

J. Buel, Esq.—Sir—I have been reading the fifth volumes of the Cultivator that you sent to me. I find therein much useful information; but my corn grounds are yet too rich to profit by your mode of culture. I tried the experiment this year on two acres; I hauled, in the spring, from my barn yard, forty good ox cart loads of manure; spread it well on two acres; then took two acres by the side of it; plowed the four acres well; planted in one day; tended well, all alike, with hoe and cultivator; cut it to the ground the 1st of this month. I cannot perceive any difference in the crop at present, but may when I come to husking. The ground is a sandy loam, with gravel two or three feet from the surface; six feet to permanent water; very limy; was thirteen years in corn, with one or two changes in wheat; then three years a meadow, and three years in pasture. I broke it up in April, 1837, and planted it in corn; eighty-one bushels of shelled corn per acre, which was measured in 1838; about sixty bushels were not measured, but judged to be that quantity. This year I planted about the same, may be a little more. The two last seasons have been bad years for corn.

I will try your Dutton next year; as it can be planted so much closer than our large corn, perhaps it will produce more; but to plant our corn three feet apart, we should get nothing but fodder and nubbins.

I send you the ground plan of my barn; I think my stables an improvement; if you think so you can tell others of it; if not, say nothing about it.

[Fig. 33.]



A A A. Broad doors to feed working oxen with the yoke on.

B B. Doors into the passage.

C C. Windows for light and air, hung at the top; and when open, to form a roof over the opening.

D. Broad door to drive in, to unload hay or grain; also used for horse stable.

E. Door to threshing floor.

F F F. Places for hay and grain.

g. Breastwork three feet nine inches high, forming one side of the feed trough.

h. Inside of feed trough, 23 inches high.

i i i. Doors to the stalls, every animal having a door to his own stall.

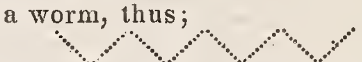
K K. Single stalls for large or troublesome stock; all the rest are double; to be used for one or two, as may be wanted. A temporary partition to be slipped in between the studs 2 2 2, when two are put in; the double stalls are very useful for milch cows, and for cows to calve in; when the weather is bad, I put in the partition and house all; the studs are framed in pairs, n n, which space between is to receive the plank, forming the permanent and temporary partition.

o. Is a door through the breatwork to go through the stall out doors, and to go in to milk.

Nine feet over the threshing floor is another threshing floor which I use for flail threshing, and various other purposes. You will observe that as my barn will hardly hold feed for my stock, I have grain and hay houses built in the field convenient to the crop; the benefit of which I have lately experienced by having one of 24 by 36 feet full of wheat burnt. I don't like to have my whole crop in one place; besides, I prefer short hauling in harvest, and rehauling at a more leisure time. I send you a plan of my barn and stables, not because I think it is the best, except the stalls, which I think are a great improvement. The extra expense of doors is mostly saved by the gain of room, as the passage for the cattle is saved; and the convenience of housing is great, as every animal soon knows his own door, and no runuing and pushing each other, and can lie down without being confined with halter or bows.

My barn stands in the central part of the yard; I prefer the north for entrance to stalls in this climate, when the winters are open; and the north is the hardest side of the barn it keeps the sun off, which makes the north dry and hard when the mud is six inches deep on the south. I have no open sheds because I find them more expensive than shut ones. The strong cattle drive the weak ones out, and the open shed that would serve ten head, would make abundance of room for 25 or 30 put up in the way that I do.

Seven years ago I built considerable board fence, 13 rods of which I made with posts not set in the ground but gave it a worm, thus;



which has stood all storms unharmed, and without repairs; whereas the straight fence posts have many of them rotted off this year, and will need much repairing soon, while the worm fence is as good as new.

Respectfully yours,
HORACE WELLS.

Oxford, O. Sept. 10th, 1839.

Curing and Smoking Hams.

Messrs. Gaylord & Tucker—Permit me to offer a few observations on the subject of curing and smoking hams. Whatever abridges labor and expense, is useful to the agriculturist. I have tried several methods of preserving hams, and among others, the celebrated Knickerbocker pickle—but for a number of years past, I have employed the method stated below—and I must say, I have never tasted as good hams, cured in any other manner. Besides being the best method, it requires the least labor, and is the cheapest.

I take a clean oak cask—cover the bottom with a thin coat of fine salt, then pack in as many hams as will lay singly on the bottom; I then put about half a table spoonful of pulverized salt petre to each ham, then cover them slightly with salt; I then put to each ham about a gill of molasses, and proceed in this manner till the cask is filled. I let them lie for 8 or 10 days, until the salt petre is dissolved, and has penetrated the meat; I then cover the whole with a strong pickle of salt and water; in 15 or 20 days they are fit to smoke.

In smoking, I am very particular as to the material employed in making a smoke.

I prefer green hickory, or sugar maple chips, when these cannot be had, white ash or cobs answer an excellent purpose. Any kind of hard wood, provided it is sound, will answer; but soft wood, such as pine or hemlock, should never be used, as they impart a bad taste to the ham. After the hams are well smoked, they can be preserved for summer use, in the most approved manner.

A very tight, or close smoke house, which excludes atmospheric air, is apt to cause the hams to sweat, and has a tendency to injure them near the bone.

The above method I have never seen published; if you think it worth a trial, it is at your disposal.

Respectfully, &c. T. ROBINSON.

Binghamton, January 21, 1840.

Gypsum—Phosphate of Lime.

Messrs. Editors—I have been engaged in farming for about a year past, and being nearly destitute of experience, have read much, and reflected some, in order to qualify myself for my new pursuit. I have had, thus far, no great success. Nevertheless, I feel persuaded that I have discovered some facts, that may be made useful in the hands of those possessing more science and more leisure than fall to my share. I regret, however, that I cannot explain my subject without using chemical terms, that may not be understood by a portion of your readers.

Agricultural Chemistry seems to be imperfectly understood, even by the most scientific. What we most require to know, for practical purposes, is, the constituent elements of the useful plants, and how and whence they are or may be obtained for their nourishment. The publications to which I have had access, do not appear to me to furnish accurate information. The reason probably is, that chemists of the highest attainments, have made agriculture a secondary object of research.

Gypsum being extensively used in agriculture, the laws by which it operates ought to be well ascertained. None of the publications that I am acquainted with, satisfactorily explain its principal phenomena. The truth might have been discovered by attending to facts already known, but which appear never to have been applied to this subject. *Gypsum is* DECOMPOSED *in the soil by carbonate of potash.* The two substances are changed by double electric affinity, forming carbonate of lime and *sulphate of potash.* Now, as the soil (with some exceptions, noticed hereafter) contains carbonate of potash, and as decaying vegetables contain it, the gypsum, as it slowly dissolves and reaches the alkali, must be decomposed. Such is the law of chemical affinity. I consider the fact as demonstrated.

Chaptal says, page 175, that "the most abundant salts in plants, are *sulphate of potash* common salts, the phosphate of lime, and the nitrate of potash." Now, if the sulphate of potash is "an abundant salt in plants," it may be highly useful to furnish it for their nourish ment, in suitable quantities. Gypsum effects this object in any soil containing carbonate of potash. But in wet, sour soils the carbonic acid is expelled by the acetic and other acids, the gypsum remains without change, and therefore produces no beneficial results. So, also, near the sea coast, the alkalis have become muriates, and the gypsum has no effect. Probably the application of potash with the gypsum, might render it efficient in both cases.

Gypsum is found to have the greatest effect on sandy, or silicious soils. The reason is obvious. Silex is generally combined with potash, which is freed by attracting carbonic acid from the atmosphere. It exchanges acids with the gypsum, and becomes sulphate of potash.

If my reasoning be correct, it follows that the constant use of gypsum may impoverish soils by abstracting the potash they contain, unless it be in excess, or be restored by the application of other manures. I mean to say, that it will use up the fertilizing ingredients of the soil, if the vegetation be removed without any thing being returned.

Gypsum is understood to migitate the effects of drought. Yet we know that it solidifies water, and does not attract it more rapidly than common salts. But the sulphate of potash, the indirect product of gypsum, is deliquescent, and powerfully attracts moisture. The effect is not accounted for by former theories.

Although *phosphate of lime* is a salt which enters into the composition of most of the useful plants, the fact appears to have received very little attention. The kernels of wheat contain, according to the tables of M. The de Saussure, over 5 per cent of it. Every twenty bushels of wheat require over one bushel of the phosphate; yet our chemists have not inquired how it is to be supplied to the plant or to the soil. Chaptal recommends the use of bones as a manure, on account of the gelatin and other animal matters they contain; but seems to consider the phosphate of lime, which they contain in great abundance, as insoluble, and therefore useless. But the substance *is* soluble in excess of phosphoric acid, and in most of the acids. No doubt nature finds means of dissolving it for the use of those plants that require it. The ashes of wood contain phosphate of lime in considerable quantity. They also contain much finely divided silex. Whether the latter substance would be useful or injurious to wheat, I am unable to say.

I will remark, in conclusion, that barn yard manure contains phosphate and carbonate of lime, sulphate of potash, and indeed all the salts required for vegetables. It will answer our purpose very well, if we can get enough of it. If not, it is an object to increase its effects by other manures—the means and manner of applying which, ought to be discovered by chemical analysis, and well conducted agricultural experiments.

Very respectfully,
U. F. DOUBLEDAY.

Scipioville, Feb. 1840.

Expense and Profit of different Crops.

Messrs. Gaylord & Tucker—As I have leisure at present, I will give you a statement of some of my crops the past year. I expected to raise the heaviest crop of corn that was in the state, by the acre. But I find by Mr. Ingles' statement, I am far short of it. I planted adjoining my premium piece last year, an excellent clover lay of four years' standing, soil sandy loam with a little gravel. I drew on twenty-five loads of barn-yard manure to the acre, (six in number,) plowed once, rolled and dragged, planted 10th and 11th of May, with a drill, three feet by one and a half to two feet apart; hoed three times, used a cultivator each time twice in a rod; took care to leave but three and four stalks in a hill; cut it at the ground about the middle of September; set it up in small stooks, measured one acre accurately, in one corner of the lot, supposing it to be the best; but on husking found that we might have chosen a better acre. We measured and weighed accurately; had 87 bushels 33 lbs.; we were quite certain that the six acres would yield at that rate. My land was equally good as last year, but only half as much manure was applied, and the season has not been near as good as 183; in this region. My corn is quite sound, and I could have contracted it at five shillings per bushel; it is the 12 rowed variety, yellow. I have been quite successful with my sugar beets and ruta baga. I chose a piece for beets near my house, that was formerly a very springy spot; no less than eight springs on less than three-fourths of an acre. I have had about 30 rods of blind ditches made on it, with two open ditches through it; planted with potatoes, in 1838 had a very good crop; the soil is very changeable, muck, sandy loam, gravel, clay, &c. Stiff clay gravel proves the poorest of any for beets, stiff clay next; very little difference between the other soils; I put no manure on any except the sandy loam. I carted a little sand on a part of the stiff clay, spread three inches thick; the effect was great; it produced three times as much as where there was no sand. The ground was plowed twice, dragged and rolled, then ridged with a small corn plow, about 22 inches from the centre of each ridge; planted by hand, 6th and 8th of June, eight inches apart, with seed that had been soaked several days previous; sprouted some roots more than an inch long; came up well, except a few papers from a box of garden seeds, (yellow sugar beets,) but we was careful to transplant all that failed. I think the white beet the best; some weighed 9 or 10 pounds, most of them large; there is in the patch 117 rods and 63 feet of land; the two open ditches deducted, 112 rods remain; gathered 774¾ bushels; I find them excellent food for cattle, hogs, &c. I have raised 1264½ bushels of ruta bagas on one acre: the soil sandy loam; had spring wheat on the year before; put 20 loads of sheep manure on; plowed twice, dragged and sowed on the level surface, 18th of June, with a drill 2 feet 2 inches apart; the ground was very mellow and all vegetation completely dead; we hoed as soon as we could see the rows after they came up, without using the cultivator; the second time in the same way, taking care to leave but one plant in a hill, from 8 to 14 inches apart, generally 12 inches. Gathered in November.

Expense of an acre of Corn.

25 loads of manure, at 4s.	$12 50
1 day plowing,	2 00
½ " rolling and harrowing,	1 00
⅓ " planting, with boy to drop pumpkin seed,	38
8 " hoeing, thinning, &c. at 6s.	6 00
2 " with horse and cultivator,	2 00
4 " cutting and shooking, at 6s.	3 00
8 " husking, housing, &c. at 6s,	6 00
1 bushel plaster, sowed broad cast,	38
¾ bushel seed corn at 8s.	75
Board included.	$34 01

Value of Crop.

87½ bushels at 5s.	$58 38
8 loads of stalks, at 6s.	6 00
6 loads of pumpkins, at 8s.	6 00
Turneps enough to pay interest on land.	
	$70 38
Manure for after crop,	8 00
	$78 38
Expense,	34 01
Nett profit,	$46 37

Expense of one acre of Ruta Bagas.

2 days' plowing, at 16s.	$4 00
¼ " dragging,	75
20 loads of manure, at 4s.	10 00
1 pound of seed,	1 00
Planting with drill,	50
8 days hoeing first time,	6 00
10 " second time, at 6s.	7 50
Transplanting,	1 00
7 days' harvesting and housing,	5 25
Interest on land,	3 50
	$39 50

Value of Crop.

1264½ bushels, at 1s.	$150 06
Tops for cattle and sheep,	4 00
Manure for after crops,	6 00
	$168 06
Expense deducted,	39 50
Nett profit,	$128 56

I will mention that the transplanting was done in showers, or wet weather.

I have just measured my crop of oats that grew on a little less than one and three-fourths of an acre of my corn stubble of 1838; we had 230½ bushels that is over 130 bushels to the acre, of first rate black oats. Thus we see what manure is for after crops.

Expense of 112 rods Beets.

5 loads of manure, at 4s.	$2 50
1 " sand,	50
3½ days' plowing and rolling,	3 00
1 " ridging, &c.	1 00
4 " planting with boys,	2 00
2 pounds seed, at 8s.	2 00
4 papers, at 6p.	0 25
10 days' hoeing, thinning, &c. at 6s.	7 50
6 " with boys, at 4s.	3 00
Transplanting, odd spells,	1 00
6 days gathering, at 6s.	4 50
Interest on land,	2 00
Board included.	$29 25

Value of Crop.

774¾ bushels, at 1s.	$96 59
Expense deducted,	29 25
Nett profit,	$67 37

I could sell many of them at two shillings per bushel, and the tops were eat greedily by the cows.

I am able to prove, by substantial witnesses, the correctness of the above statements, if it is called for.

J. F. OSBORN.

Port-Byron, January 22, 1840.

Roads.

Doctor Humphrey, in his admirable letters from Europe, remarked that America has not yet learnt, in laying out her roads, that it was as long *over* a hill as *round* it; and this just observation I generally found true to the sore trial of my patience, and the weariness of my horse, in a journey through the southern tiers of counties last summer. The pioneers of these settlements seemed determined to make the highways as straight as possible, and had they calculated on balloon traveling, no doubt their engineering was eminently just; but to crawl up to the peak of one great long hill, from one side, just to be able to descend to the bottom of it, on the other; and be obliged to cross over fifty pitches, more or less, to accomplish this in addition, I opine, reasoning mathematically, is somewhat *crooked*, and that going round the base of the hill is but little or no further, than going over it. The pace of my horse on a level road, I found, was about seven miles an hour. And he would easily accomplish fifty to sixty a day, but up hill, it was hard work at three miles an hour, and descending at four, making only about thirty a day.

In laying out the new roads, in this section of the country, I find this great mistake by the first settlers, is fast being rectified; and the slopes and curves of the hills, and the windings of the valleys, are skillfully seized upon by the surveyors, to obtain levels, and, at most, to have the ascents and descents as gradual as possible. I would particularly point out, as an admirable example of skill in turning hills, the new turnpike, leading from New-Berlin, Otsego county, on to Catskill; and I rely upon the improving genius of my countrymen, to see many more such to add to the comfort and convenience of the weary traveler.

Milking.

Massachusetts' shrewd, observing agricultural surveyor, Mr. Coleman, says that milking is no longer in fashion, by the fair fingers of America. I only wish he had passed through the beautiful village of Hamilton with me last summer. He would have found at least one exception to this remark. After seeing my steed well cared for, and laying in pretty bountifully with provender on my own behalf, I sallied out, as is my usual mode, for a view of the town, and whatever curious might be contained therein. Taking the southern side of the nice Park, that the good taste of the inhabitants has reserved for an agreeable airing, gazing now on the romantic grouping of the distant hills beyond, and then on the pretty architecture of the houses fronting the open space, with their charming door yards; all at once I was brought up by the sight of a noble cow showing at least three parts of the Durham breed in her fine muzzle short horns, thick loins, and large distended udder, the milk oozing out in great fresh globules from the almost bursting teats. This was attraction enough to make a person of my taste in kine flesh, halt for a profound view. But I had hardly given a second look, when out trips from the next white cottage in front to the grass enclosure, a charming, rosy cheeked girl, with a garland of flowers round her head, and a pail painted green without, and as white within as the plump, alabaster arm, bared nearly to the elbow, from which it was suspended. Gracefully seating herself on a three-legged stool, and uttering in a sweet, subduing accent, So, my gentle mully, so," she commenced stripping away. I declare, the sight made my bachelor heart almost leap from within me, and I thought to myself, as did Cobbett, when he fell in love with his future wife, wringing clothes at a wash tub, "that 's the girl for me."

Straw.

I am paying at the rate of three dollars per ton, for straw delivered at my stock yard, solely to keep my stock clean, dry and warm in their stables. I think, indeed I *know*, it it is worth the money for this purpose alone, to say nothing of its value as manure, and assistance, when plowed into a heavy soil, to lighten and pulverize it; and yet on hundreds of farms that I passed during my journey, I saw heaps upon heaps of valuable straw transported from the barn to the field, not for the purpose of being plowed into the ground, to decompose and again make more straw, but to be burned, and its ashes scattered to the four winds of heaven. Oh, wasteful extravagance, that will be mourned over and regretted by future generations! that can only get ten and fifteen bushels of wheat from the acre, that now produces its thirty and forty. Yours,

THOMAS TRAVELER.

Diseases of Sheep.

Editors of Cultivator—Please have the goodness to publish, in your paper, the following letter addressed to H. D. Grove, Esq. of Rensselaer county, and oblige your ob't serv't, J. V. H. Clark.

Manlius, Feb. 3, 1840.

To H. D. Grove, Esq.—Knowing your willingness at all times to subserve the cause and best interests of agriculture, and most especially that branch of it connected with sheep husbandry, and knowing, also, your great personal experience in the business of rearing and managing sheep, and in the treatment of the various diseases to which they are subject, I take the liberty of setting *"a case"* before you, through the columns of the Cultivator—presuming you will have the goodness to respond to it through the same channel, that our neighbors may also reap some fruits from your observations.

Last September, I purchased about forty lambs apparently in perfect health: soon after, I observed one lamb occasionally nibbling at different parts of his body—at each nibble he would draw out a small lock of wool. I then supposed he was biting off some burrs, of which there were a few scattered over the body. I thought little or nothing more of it, though I occasionally saw others in the like condition, till after they were brought to the barn for winter, when I found, by more particular observation, that something unusual must be the matter. I now took exact note of their motions.

It seems that, in most individuals, the attack commences on the shoulders, and in some just above the roots of the tail; though it seems there is no part of the body exempt. On opening the wool there appears nothing in the shape of a sore, or a scab, but a sort of sweating or greasiness of the skin, which in many instances extends to the outside of the wool. The skin appears somewhat inflamed or irritated from the disorder, or it may be caused by the continual application of *"tooth and nail"* to the effected part—the virulent character of the disease is evidently increasing. The sheep eat well—their feed has been good fine hay—there is little appearance of ill health other than that mentioned. The flock from which these lambs were taken, are in the same condition, and one other in the neighborhood.

In your answer, please give us your opinion as to the *name* of the disease, which appears evidently to be strictly cutaneous, its probable origin, and its treatment to effect a cure;-and whether it may have been of long standing in the flock from whence they were purchased.

Yours &c. most respectfully,
J. V. H. CLARK.

Rohan Potatoes.

It is conceded, I believe, by every one who has cultivated the Rohan potato, that they are all " that they have been cracked up to be," and no " humbug." From every section of the country we have very flattering accounts of their great and extraordinary yield; more particularly the large quantity obtained from the small quantity of seed planted. Some have measured the ground where a small patch has been harvested, weighed and measured the produce, and then made a calculation of what an acre would produce *at the same rate*, which exceeded 1400 bushels! Now, allowing them to yield only one-half that amount, they would then exceed any other variety that has ever fallen under my observation. It is true, they require good soil, good treatment, and a liberal allowance of manures; and let me ask what variety does not require the same treatment to ensure a good crop?

Some contend that they are nothing more nor less than the "Merino," under a new name. An examination of the tubers, would, I think, convince the greatest sceptic, that they are quite a different variety. The color, I readily admit, is very similar to the "Merino," as they are called, but the form of the tubers are quite different; being generally something in the shape of the pine apple; besides, there are many more eyes, and more deeply indented, in which respect they more closely resemble the " Lady's Fingers," than any other variety I have seen.

The advantages this potato possescses over other varieties, are economy of seed, and the great facility with which they can be harvested. From four to five bushels per acre are deemed sufficient, when it takes about twenty bushels of the Pinkeyes to plant the same amount of land. Here is a saving at once of seventy-five per cent. The difference in gathering the crop is still greater. I have had 120 bushels dug and picked up, in the same time, by the same number of hands it took them to dig and pick up fifteen bushels of the Pinkeyes. This may appear strange to some, but it is no less strange than true.

From my experience for the last two years, I am convinced that three feet and six inches each way, from hill to hill, and two sets with at least two good eyes, is the proper distance, and the requisite quantity of seed to be used. This will admit air, heat and give room to work with the cultivator, and earth up with the plow, without making the furrows or trenches too deep.

For manure I have used that taken immediately from my cattle yard, spread broad cast, about twenty loads to the acre, and immediately plowed under.

My crop, the past season, amounted to more than four hundred bushels, some of which are now for sale, at five dollars per barrel, delivered at Albany.

For the table, they have been rated as second and third qualities. I consider them equal to the Mercers.

Judge Buel recommended them as a valuable acquisition to our husbandry:

"*First*, Because their quality for the table, will justify it. If not superior, they are good. The flesh is yellow, solid, and of good flavor.

"*Secondly*, Because they admit of a great saving in seed—two eyes sufficing (and many of the tubers have thirty to forty eyes,) to plant a hill, and three or four bushels to plant an acre of ground.

"*Thirdly*, Because they require comparatively little labor in harvesting—a man being able to dig thrice as many of them in a day, as of ordinary kinds. The tubers are very large, one hundred and ten of the largest of our crop, completely filling a flour barrel. Twenty-seven bushels were dug in our presence in one hour, the tops being pulled by one man at moderate labor.

"*Fourthly*, Because they yield an abundant crop. From eighty-five rods of ground, we gathered one hundred and seventy-five bushels, while our common cultivated kinds did not give us a half a crop. One case has been stated to us, of a single potato producing a bushel, and another, of its having produced a barrel at harvest.

" This potato sends out laterals from the main stem, which grow to great length; and the roots which feed it, strike deep, are numerous and strong. Hence, the ground in which they are to be planted, should be plowed deep, and the hills should be placed wide apart, that the soil may acquire solar heat. We ought further to remark, that they should be planted early, in our climate, as early as the ground is sufficiently warmed for their reception, as they seem to require the whole season to grow their large tubers, and mature the crops."

CALEB N. BEMENT.

Three-Hills Farm, Feb. 1840.

Advantages and Pleasures derived from a Study of Natural History.

In a country where nature has been so liberal in her productions, and so prolific in internal resources, few objects can be of greater importance than natural history. Yet unhappily, there is no branch of useful knowledge so little studied. The cultivation of this department of science will open to our view the immense treasury we possess unenjoyed, and which must, as they develop themselves, eventually tend to the security and welfare of our citizens; the extension of their commerce, advancement in mechanics and manufactures; improvement in agriculture, and a general expansion of all those arts which adorn and embellish life. The little progress we as a community of farmers, have made in exploring the vegetable kingdom, ought of itself to convince us that our country is well stored with plants, which are capable of being greatly improved, not only for the benefit of individuals, but as national advantages. The almost total neglect of botanical inquiry in this part of the country, may be imputed in part to the fact, that until lately it has not been a subject of instruction in our high schools and to the insuperable difficulties that are supposed to attend it, but principally to the mistaken opinion of its inutility in common life. This opinion being so generally prevalent, it may be necessary to observe that though all the medical properties and economical uses of plants are not discoverable by those characters by which they are systematically arranged; yet the celebrated Linnæus has found that the characters of plants may be, in a considerable degree, and most safely determined by their natural organization. Plants of the same natural class, are in some measure similar; those of the same natural order bear a still nearer affinity, and those of the same genus are seldom found to differ in their medical properties. Thus, according to the natural system, plants of the second order in the third class are all esculent, affording food for man and beasts, or birds; and no one sprig of all these numerous genera, have been found to be poisonous. Plants in the thirteenth class are chiefly poisonous. Those of the first order in the fourteenth are odoriferous and not poisonous. There are no poisonous plants belonging to the fifteenth class; but those of the twenty-fourth class of Linnæus, are mostly suspected or dangerous plants, and so of others. By a knowledge of the classification of plants, in meeting with a strange one, we are enabled with very accurate certainty to determine its properties, by comparing it with those of the same class and order to which it belongs; a great advantage in having a knowledge of botany, is the certainty of knowing the right name, for then every plant tells its own name; for instance, in meeting a lily, a botanist, or one acquainted with the first principles, observes it has six stamens; it therefore belongs to the sixth class called *Hexandria*. It has one pistil, first order, called *Monoginia*, genus *Libinum;* and the species may be found by comparison. Now these names are the same in all countries and languages for the same plant, where botany is attended to as a science. From a want of botanical knowledge, the grossest mistakes have been made by applying the names of plants belonging in Europe to those growing in America. Botanical inquiries will enable us to correct those mistakes and to distinguish exotics from indigenous plants. Was the theory of this science united with its practical uses and employed in procuring the nurseries and adding to the conveniences and ornaments of life, the vulgar opinion of its being merely speculation would be removed, and could not fail of engaging a more general attention. It is well known that the economical uses of the vegetable kingdom are exceedingly numerous, not only furnishing food and medicine for man and beast, materials for agriculture, arts and manufactures, but we are to look to it for many of the delights and ornaments of life. It supplies important articles of commerce, and in some countries is the greatest source of inter-national wealth. We are no doubt ignorant of many productions, well adapted to those purposes; and to what class of men does it belong to inquire into these things, and bring them to their proper light. Is it not to those who would be called upon to produce them, should their usefulness be ascertained? Certainly it is. Then why should not that class of men be prepared to make discoveries in a science, when their interests might be so much advanced. Who has more leisure, or greater opportunity than the cultivator of the soil, to promote inquiries. Think not that every thing valuable is yet discovered in all the varieties of plants growing in our wide spread country; our progress may be slow, but to the *young men* of the country, let them say it must be certain.

The other branches of natual history are equally important in elevating the character of the good farmer. He who rears all the animals for domestic uses, should he know nothing of zoology? In the pursuit of this branch of the science, our motives should extend beyond the *"auri fames"* [love of gold.] It should be cultivated for the sources of pleasure it opens to the mind, for the benefit it extends to agriculture, and it should act as an assistant in bringing systematic, scientific agriculture to perfection; a little reflection will arouse the most fastidious, and convince every intelligent mind that a knowledge of the first principles of zoology may be pursued, without interfering with those avocations employing the bodily powers. The body, after some exercise requires rest; at such times, and in the long winter evenings the mind may be profitably employed treasuring up knowledge, and unquestionably it could not be better engaged than in pursuing the study of natural history. Taking this view of the subject, the argument of *"time lost"* falls to the ground. The study of natural history tends most powerfully to strengthen the memory, exercise the judgment, discipline the mind, and bring every intellectual faculty into a state of the greatest activity and subjection. The great variety of facts learned from this study, and the necessity of classing them in the mind begets a habit of mental activity and order, that is of incalculable benefit to the possessor in the common business of life, enabling him to arrange, distinguish and disentangle the most confused and chaotic matters with readiness, certainty and despatch. The man whose business it is to cultivate the earth, it ought also to be expected should know something of mineralogy. That branch of the science which treats of the earth's stones and other unorganized masses of the globe. Perhaps there is nothing which will serve so much to assist us in the progress of natural history and its various branches, as a cultivation of a correct taste. Taste may with propriety be imparted to knowledge, and diffused through the practical sciences, and connected with objects of improvement. Many a patriot bosom has burned to raise the fabric of his country's prosperity on the firmest foundation—rural thrift. But even patriotism, supported by talents, and sustained by money, is better calculated to exert her influence in storms and commotions, than in the still scenes of retirement, and calm quietness of rural pursuits. It must be left to pure unadulterated taste to exert her potent influence necessary to the permanent advancement of science connected with the rural arts. By this a permanent foundation will be secured; such is the true basis upon which to rear this superstructure; without it our exertions proceed from mere excitement, and consequently can not be lasting. FARMER C.

Manlius, Jan. 28, 1840.

Experiment in Planting Potatoes.

Messrs. Gaylord & Tucker—I noticed an article in the Poughkeepsie Journal, of Oct. 30, credited to the Yankee Farmer, on the cultivation of the Rohan potatoe; as I am in possession of the information called for in that paper, I give my experiments and the result. If you think they will benefit your patrons, you will give them a place in your paper. The Farmer says,—"The extraordinary prolific nature of the Rohans, as stated in many papers, is likely to deceive those farmers who are unacquainted with them, and know not that this potato needs much more ground than our common kinds; and it would be more satisfactory and useful too, as it would lead to a correct view of the subject, if those who publish accounts of their great yield, would have the goodness to state the quantity of ground or the number of hills planted, as well as the quantity of seed, for this is surely of superior importance." I planted six rows of Rohans, of thirty hills each, with the following quantity of seed:

No. 1, one eye in a hill,	produced	120	pounds,
No. 2, two eyes in a hill,	do.	130	do.
No. 3, three eyes in a hill,	do.	151	do.
No. 4, four eyes in a hill,	do.	139	do.
No. 5, five eyes in a hill,	do.	155	do.
No. 6, six eyes in a hill,	do.	155	do.

The soil a dry gravel, well manured, planted the first of May, and precisely five rows to a rod, equal to 4,000 hills to the acre; the greatest yield being equal to 344 bushels (of 60 lbs. to the bushel) to the acre. The common varieties do not yield, this year, on dry soils, but little more than half the usual quantity to the acre. It is reasonable, therefore, to suppose that the Rohans do not yield a full average crop—my largest potato weighed three pounds five ounces. To judge from the size of the potatoes and the size of the tops, I am inclined to believe that it is unnecessary to plant them more than three feet three inches asunder, or five rows to the rod, the same distance that I plant my common varieties. I regret that I did not weigh my common potatoes, planted by the side of the Rohans, and cultivated the same in every respect—but should judge they did not yield more than half the quantity to the acre.

I also tried an experiment with the common potato, planting two rows of thirty-three hills each, with one middling sized potato in a hill; and two rows of thirty-three hills each, with two middling sized potatoes in a hill, and placed from four to six inches apart, the potatoes of a size as near as we could judge, planted precisely five rows to the rod. The two rows, with one in a hill, yielded 251 lbs. or 253½ bushels of 60 lbs. to the bushel, to the acre: the two rows with two in a hill, yielded 300 lbs. or 303 bushels to the acre, making a difference of fifty bushels, in round numbers, to the acre, in favor of two potatoes in a hill. The soil a moist loam, and in an extra state of cultivation.

Perhaps I ought to say a few words about Grant Thorburn's " Charity Corn," as I was one of the many who purchased this highly recommended variety of early corn. In the 5th volume of the Cultivator, page 157, Mr. Thorburn says: " I planted this corn on the 10th of May; it had ears fit for boiling the 10th of July!!" I planted this corn on the *first of May*, on a gravel soil, highly manured; and on the *tenth of September*, I do not think an ear could have been found too hard to boil. So much for the early corn: I will say to friend Thorburn—you are entirely welcome to the few pennys you have filched from my pocket.

Your constant reader,
SHERMAN BASSETT.
North-East, Dutchess Co., Dec. 17, 1839.

Cheap Sheds for Cattle—cheap Gates—and other Matters.

"A merciful man is merciful to his beast."

Editors of the Cultivator—I wish your correspondent, "L. A. M.," would write his name in full. Not that it would add value to his valuable essays upon sheep husbandry; but a man, possessed of such benevolent feelings towards the brute creation, must be a valuable acquaintance: and one great advantage, derived from such a work as the Cultivator, or your late Genesee Farmer, is, that it adds many valuable acquaintances to our present stock, from which a reciprocal benefit is often derived. Now, sirs, if were passing through Tompkins county, I should no more think of passing the house of "L. A. M." (if I could find him out,) than I should think of passing my own brother. Indeed, all the pioneers in agricultural improvement should feel like brothers. Money could not buy the enjoyment I have derived from circumstances which have grown out of my correspondence with agricultural papers. If flattering eulogies can advance one's happiness, the few trifling efforts of mine to be useful, have certainly increased my happiness, in a manner that riches cannot afford; and I hope the happiness of "L. A. M." may be increased, by knowing that there is one who appreciates his merciful feelings towards domestic animals, as shown in his communication in the January number.

The temporary protection to cattle, noticed by "L. A. M.," or something similar, is all that can be given in a new settled country like many parts of the West. And here, it often pains me to see such a want of forethought, want of energy, want of mercy towards stock, or else a most lamentable want of "the know how." If it is the want of "know how," I should be happy to bestow knowledge, gratis. I have good, warm stabling for some forty head of cattle and sheep, that did not cost ten dollars. The sides are built with rails laid up in pens about two or three feet wide, supported of course by cross pieces, and the space filled in with old hay, straw, turfs, or small bushes with the leaves on, until the requisite height is attained, and then covered with poles, rails, and coarse hay. Any quantity of hay for covering can be had in a prairie country, for a small amount of labor. A small ditch or bank on the upper side, keeps the water from the bank inside, which, well covered with straw, makes an excellent floor. Such a stable will last with slight repairs, three or four years; and yet how many expose their whole stock, winter after winter, by the side of a stack on the open prairie, where the north-west wind sometimes blows almost hard enough to take their hides from their backs, were it not for the natural adhesiveness between "skin and bone." Others make vast improvement upon such "tender mercy," and shut them up in a "log stable without chinking or daubing," with two rails crosswise for a door, and through which the wind whistles loud enough to break the heart of a man possessed of a tithe of the kind feelings of "L. A. M." Here, fed upon a scanty allowance of prairie hay, (which, by-the-bye, is good or bad, as it is cut and cured,) the poor creatures drag out a miserable existence. And, do you inquire, do they live? Yes, sometimes: for nature, more provident than their cruel masters, provides them with a coat of hair, that would do honor to "Nick Bradshaw's wooly horse." In the spring, the cows bring forth a poor "runt of a calf"—the owner curses the bad breed of bulls, and the wife wonders why her cows don't give milk like some of her neighbors. The sheep, like the cattle, shed their winter coat, and without the trouble of shearing; furnishing, however, a rare opportunity for the exercise of industry to the "wool gatherers."

Can a man be a good man, who so treats his domestic animals? I fear such treatment is not confined to this country. If agricultural schools are ever established, I hope one of the first principles taught, will be that "a merciful man is merciful to his beast."

But enough of cheap stables, sheds, &c. Now, about Cheap Gates. I write for the poor—the new beginner.

I have some two dozen gates on my place, and not a scrap of iron, except the nails, about them. I can make and hang one, cheaper than I can made a set of bars. In fact, I would not have the latter on my farm.

The hanging post of the gate projects two or three inches below the bottom slat, and is rounded off to a point which stands in a hole bored about an inch deep in a block, set nearly even with the surface next to the post which the gate hangs to, or if that post is hewed, a shoulder may be left, in which a hole can be bored with a very short handle auger. The top of the hanging post projects six inches above the upper slat, and is made round, and is kept to its place by a tough hoop, nailed to the gate post. I can make and hang two or three such gates in a day, and the expense is very trifling. When a hinge breaks, it is easily repaired without running to the blacksmith. I consider a gate, "a labor-saving piece of machinery," and I think none would do without them, if they knew how cheap they could have them.

There is another great labor-saving machine, that I am astonished how any farmer can do without. It is the humble wheelbarrow. If this was some new invention, every one would be running after it—at all events, when he used it.

Forgive me, if I have become tedious, and accept the kind respects of your friend,

SOLON ROBINSON.
Lake Court-House, Ind'a, Jan. 24, 1840.

Cankerworm—Manning's Book of Fruits.

Gentlemen—I am very desirous to ascertain, whether you or your correspondents, can inform me of the best mode of protecting fruit trees against the ravages of the cankerworm. It almost literally destroyed our apples here the past season, and threatens, unless some effectual remedy can be found less troublesome and expensive than the tedious process of tarring, to render the raising of apples here hardly worth attempting. Will you or some one of your correspondents give an account of the mode that is esteemed the most effectual, that has hitherto been tried, and also if any new method is suggested, and if by lead or tin troughs, what is the best mode of construction, with what filled, and when put up, &c. It is very desirable to have the information in season, to prevent their attacks the ensuing spring.

Last year, I purchased a copy of "Manning's Book of Fruits," and was very much pleased with it, as the reputation of the author in that department of horticulture, had prepared me to be. The beautiful lithographic figures of fruits with which it is embellished, unlike any thing I have seen heretofore published in this country, add greatly to its value. I was also gratified in noticing, that it was styled No. 1; and that a promise was given, that a supplement would be published, at the close of each year. Accordingly, I sent to Boston in the course of last summer, expecting to obtain a No. 2, but learnt to my great disappointment, that no supplement had been published for the season of 1838, and the reason assigned by the bookseller was, that Mr. Sayres' books had superseded Mr. Manning's, or superseded the necessity of publishing the supplement; (for I had it second-handed.) I had indulged hopes, that Mr. Manning's publications would in some measure answer in lieu of a Pomolocical Magazine, or a horticultural periodical, in which the description, modes of cultivation, uses, &c., and figures of the best fruits, and especially the new ones continually coming into estimation and cultivation, should form a prominent part. Such a publication I think the country much needs; and the greatly increased attention to the cultivation of good fruit, would create a fair demand for. At present, I know of no such work, though there may be. If there is, I should be glad to be informed. I subscribed for the Horticultural Register, published at Boston, the first year of its publication, and for Hovey's Gardener's Magazine, the second year; and found much the greatest part of both of them, if I mistake not, devoted to the cultivation of flowers; and of the figures, with which one of them, only, was embellished, there was not a single instance of the representation of a fruit. I indulged the hope that Mr. Manning's yearly publications, eminently skilled as he is known to be, on the subject of fruits, would supply this deficiency, until some more frequent periodical should be issued. Should this meet his eye, (as I trust it will,) he will learn that to one person, at least, and I trust to hundreds, and perhaps thousands of others, Mr. Sayres' publications did supersede the want of his. I mean no disparagement to Mr. Sayres' book. I have but just glanced at it, not read it; but I knew the reputation of Mr. Manning, and did not so well know that of Mr. Sayres, and I knew the value of Mr. Manning's first book. May I be permitted to suggest lo you, that it might render the Cultivator more acceptable to some persons, valuable as it already is, to insert more frequent notices of the monthly periodicals on the subject of agriculture and horticulture, somewhat in the manner of the newspaper notices of the literary periodicals. S. MOORE.

Berlin, Ct. Jan. 20, 1840.

Produce of Four Cows.

Messrs. Gaylord & Tucker—Having seen some statements in your paper of the products of cows, I herewith send you a statement of the product of four cows for the month of June last. They were mostly of the native breed, with a cross of the Devon, wintered in the common manner, and kept wholly on grass at the time, with plenty of water and shade. The first week, forty-six pounds—the second week, forty-six pounds—third week, forty-nine and four ounces; the remaining nine days, sixty-three pounds and eight ounces; making in all two hundred and four pounds and twelve ounces, after using what milk was necessary for two families of nine persons.

NOAH BLAKSLEE.
Perryville, Jan. 4, 1840.

Patent Sausage Machine.

Messrs. Editors—I have been gratified to discover in the columns of your valuable periodical, a note of Mr. M. W. Weathers, respecting a patent sausage machine of my invention, for which I feel very much obliged to him. But as he failed to make any distinction in the price of those with the stuffing apparatus, and those without, I feel it due to myself and the public to state that those without the stuffers, cost ten dollars, (the amount he annexed,) while those with the stuffer appended, have an additional charge of two dollars. Yours,

New Market, Va. Dec. 24, 1840. A. HENKEL.

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PRICE CURRENT.

ARTICLES.	New-York, Feb. 22.	Boston. Feb. 20.	Philadelphia. Feb. 22.	Baltimore. Feb. 22.
Beans, white, per bushel,	1 25— 1 50	1 75— 2 00	1 25— 1 50	1 50— 1 75
Beef, per cwt.	6 50— 7 00	5 75— 6 75	7 00— 9 00	6 25— 7.50
Bacon, western, per lb.	0 09— 0 10	0 08— 0 10	7 50— 8 00	0 09— 0 10
Butter, fresh, per lb.	0 15— 0 21	0 11— 0 23	0 14— 0 16	0 15— 0 22
Cheese, per lb.	0 08— 0 10	0 10— 0 12	0 10— 0 11	0 09— 0 10
Cotton, best per lb.	0 07— 0 11	0 11— 0 16	0 13— 0 16	0 14— 0 15
Flour, best, per barrel,	6 00— 6 50	6 25— 6 50	6 00— 6 25	5 50— 5 68
Grain—Wheat, per bushel,	1 10— 1 15	1 28— 1 33	1 18— 1 22	1 00— 1 13
Rye, per bushel,	0 70— 0 71	0 83— 0 90	0 70— 0 71	0 73— 0 75
Oats, per bushel,	0 31— 0 41	0 40— 0 45	0 63— 0 73	0 30— 0 31
Corn, per bushel,	0 56— 0 63	0 78— 0 86	0 68— 0 75	0 67— 0 73
Hams, pork, per lb.	0 10— 0 13	0 10— 0 11	0 09— 0 11	0 12— 0 13
Pork, in hog, per cwt.	6 50— 7 25	5 50— 7 00	7 00— 8 00	7 00— 7 50
Seeds—Red Clover, per bushel,	....	8 00— 9 00	5 25— 5 75	2 00— 2 50
Timothy, per bushel,	2 75— 3 00	2 75— 3 00	2 75— 3 00	2 00— 2 50
Wool—Saxony, fleece, per lb.	0 55— 0 60	0 50— 0 62	0 55— 0 60	0 60— 0 70
Merino, per lb.	0 50— 0 55	0 55— 0 68	0 50— 0 55	0 50— 0 55
¼ and common, per lb.	0 37— 0 40	0 45— 0 48	0 37— 0 50	0 47— 0 42
Sheep, per head,	2 00— 5 50	1 50— 2 50	2 50— 5 60	1 50— 3 25
Cows and Calves, each,	28 00—30 00	35 00—55 00	28 00—35 00	34 00—40 00

THE CULTIVATOR,

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

Advertising Sheet.

The exclusion of Advertisements from the Cultivator has called forth a very general expression of regret; and we are strongly urged, notwithstanding the determination expressed in our first number, to issue a quarterly advertising sheet, as a matter of general interest both to readers and dealers, and of great importance to those who wish to know where the several implements, seeds, books, animals, &c. noticed in the Cultivator, can be procured. The objection to publishing such a sheet, consisted in the expense of a sufficient number to supply all our subscribers, which would render it necessary for us to charge such prices for advertising as might, under other circumstances, be deemed exorbitant. We have, however, determined to make the experiment; and should the receipts for advertisements amount to a sum sufficient to cover the actual expense of the publication, we shall hereafter issue it at stated and regular periods. It will be issued as a "CULTIVATOR EXTRA," and consist of four pages of the same size as the paper. It will contain, besides the Advertisements, a Table of Contents for the three preceding numbers of the Cultivator, and will make a handsome cover in which the papers for each quarter may be preserved.

☞ The first number of the Advertising Sheet will be issued on the FIRST OF MAY. The terms for advertising will be $2.00 per square of 12 lines (equal to 120 words) or less, for each insertion, and in the same proportion for advertisements of greater length—the money in all cases to accompany the advertisements.

☞ Advertisements for the May number, of which 20,000 copies, at least, will be circulated, should be sent in as speedily as possible.

Agricultural Geology.

Perhaps there is no branch of general science, especially among those that are comparatively new, if we make chemistry an exception, that has had so direct and influential a bearing on agriculture as geology. By a careful examination of the surface of the earth, its mountains, hills, plains, and ravines; its rocks and precipices; those places that exhibit the greatest proofs of disturbance and disruption of the strata, a theory of the formation of the earth, and the general principles that have governed the changes it has evidently undergone, has been produced, most interesting to the theologian, the man of science, and, in its results, to the agriculturist. It has been demonstrated that however broken and deranged the crust of the earth may be, there is a regularity in the strata that compose it—a sameness in the order of position wherever they occur, that conclusively proves the uniformity and universality of the causes that have produced the appearances we now witness. If we can not go back to a period in the history of the earth, when nothing was, we can clearly and satisfactorily mark the points where vegetable and animal life commenced, and of course the time when darkness and silence brooded over the earth—a time, since which, we are authorized to say, all the various, and beautiful, and useful forms of organized life, that now appear around us, have had their commencement. In the strata of the earth, modern science has discovered a mighty volume, on which are inscribed in stone, durable as the mountains, the characters that reveal the beginning of the present order of things, as well as exhibit the most striking proofs of the power and wisdom of the Almighty Architect. Here, as leaf after leaf of the pages are unfolded, we see how the earth, by its numerous gradations and successive changes, has been prepared for the residence of man; and can trace the formation of those soils, without which the plants necessary to his subsistence could not have existed. Many good men have apprehended that the discoveries connected with geology, were of a nature to conflict with the truths of revelation. Such a supposition we consider groundless; truth can never come in conflict with, or contradict itself; and however much our commonly received interpretations may be shaken, truth itself can never be disturbed, and science can never be legitimately made subservient to the disparagement or overthrow of sound morals and virtue.

In the investigations necessary to show the connection between a proper understanding of geology and agriculture, the origin of the planet on which we live, and its consistence or temperature, in the earlier periods of its formation, are comparatively of little consequence. That the earth was once in a semi-fluid state, the greater equatorial diameter would seem to prove, as the present form is precisely the one which a revolving body in such a state would assume; and that the mass was subjected to an intense heat, seems equally clear from the crystalline character of the oldest rocks of the globe. That the interior of the earth is at present subject to the same heat, seems probable, from the law that regulates the distribution of heat, and the increase of temperature shown to exist in the interior of the earth, by Artesian wells, and wherever the surface has been penetrated to any considerable depth. Some sections of the globe seem to be more influenced by the central heat of the earth than others, producing in the same latitude a widely different temperature; and giving to the vegetation, and to the surface, a marked character of comparatively recent origin. As an instance of this, we may mention the country between the Rocky Mountains and the Pacific, where a temperature higher than on any other part of the globe, in the same parallel, prevails, and the whole country seems but recently to have been subjected to vulcanian agency.

The most common division of the materials that constitute the crust of our planet, has been into *primary*, *transition*, *secondary*, and *tertiary* formations, and, though capable of some modifications, it is probable this arrangement is as satisfactory as any other, for popular purposes. Underneath the whole surface of the earth, at various depths, and every where the lowest of the rocks, so far as science has been able to ascertain, lies the first of the above divisions. These rocks are unstratified, or contain no traces of deposition, until the upper part of the mass is approached. The agency of heat, and the admission of water to the metallic basis of the earths and alkalies, offer two causes, which either singly or conjointly, seem sufficient to explain the production and state of the mineral ingredients of these rocks. Prof. Buckland states, the number of distinct varieties of the crystalline unstratified rocks to be eight; and that there are twenty-eight well defined divisions of the stratified or superior formations. As however the soils produced from every variety of the primary rocks, (unless we except the primitive limestone,) possess in general the same essential properties, the distinctions are more in name than reality, so far as the purpose of this paper is concerned. The most remarkable features of the primary rocks is, their crystalline character, and the total absence in them of all organic remains. Nothing having life, vegetable or animal, seems to have been capable of enduring the heat that prevailed at the time of their formation. Thus geology has established two facts of the most important kind, the first proving that existing species have had a beginning at a comparatively recent period of our globe; and the second, that these have been preceded by several other systems of animal and vegetable life—and as the beginning of these is also demonstrated, the theory of infinite succession is clearly untenable, when applied to plants and animals.

In the transition series of rocks, is included all kinds of stratified rocks, from the slates in which the first traces of animal or vegetable remains are discovered, to the termination of the great coal formation. Lyell and Buckland remark, that the animal remains in the more ancient of these rocks, or the slate group, differ in species from those in later or carboniferous rocks of the same series. The transition rocks present alternations of slate and shales, sandstones, limestones, and conglomerate rocks, all showing, by their composition and structure, and the remains of organic life they contain, that they were deposited in form of mud, sand, or pebbles in deep waters, or in some cases those that were violently agitated. A very large proportion of all soils is made from the disintegration of the transition series of rocks, and a knowledge of the nature of those belonging to this class is particularly needful to the agriculturist.

The secondary series of rocks are composed of those that lie above the great coal formations; and are composed of extensive beds of sand or sandstone, alternating with pebbles, clay, marl, and limestones. These strata have evidently been derived from the destruction of older, or primary and transition strata, and it is not uncommon in these successive layers to be able to trace the origin of the materials from which they were constituted. The scale on which this disintegration or breaking up of the older masses, the distance of their transportation, and the vast amount of their deposition, prove the action of disturbing causes of the greatest force and magnitude. It is to the secondary formation that we owe most of the soils adapted to human industry, and the arrangement of the strata seems admirably adapted to the wants of the occupiers of the surface. In the language of Dr. Buckland, "the movements of the waters, by which the materials of strata have been transported to their present place, have caused them to be intermixed in such a manner, and in such proportions, as are in various degrees favorable to the growth of the different vegetable productions which man requires for himself and the domestic animals he has collected around him." One of the most beneficial results of this intermixture of permeable and impermeable strata, is the providing a plentiful supply of water for our wells, springs, and rivers, without which a country must be uninhabitable, and which could not exist, were it not for this formation and arrangement of the earth's surface.

The tertiary formations, are chiefly distinguished from those of the secondary class, by the repeated alternations of marine deposits with those of fresh water. Attention to these facts was first induced by an examination of the deports above the chalk or lime formation of Paris, and for some time were supposed to be peculiar to that neighborhood. A comparison of the strata there, and fossils embedded in them, with others in different parts of the world, bearing the same relative position to the other formations, has, however, shown that this formation is of great extent, and that a large part of the earth has been subjected to several successive revolutions and submersions—part of the time in waters salt, and part in those that were fresh.

Above these formations lie two others, more or less extensively diffused—the first, is that coating of boulders, gravel, and sand, mixed with clay or loam, which is spread over almost every part of the earth's surface, and which has been obviously mingled confusedly together by powerful currents of water, subsequent to the deposition of the regular strata, and this is called *diluvium*. The deposition of this mass, from its containing materials from all the other strata, and its consequent lateness of formation, has by many been considered as the effect of the Noahian deluge, how correctly we do not pretend to say. The other formation to which we have alluded, is that which is now constantly going on from the deposition matter brought down by streams from mountains and hills, and carried by floods to valleys, or the sea, and there left—constituting the richest and most fertile of soils. This is called *alluvium*; but in extent as compared with diluvium, or any other of the previous formations, must be considered as very limited.

Until within a few years, the study and comparison of the remains of former vegetable and animal life, called fossils, abounding in most of the strata above the primary series, though their existence was well understood, had received very little attention; and it is to Cuvier that the world is principally indebted for the discovery and exploration of this new world. Many able men have followed in the path pointed out by him, and the result has been that each of the series we have named, and many of the most prominent strata in each series, have their peculiar fossil plants and animals, marking the separation and distinct age of these series or strata, from the others. So marked are these remains, that the geologist is now able, from the inspection of a fossil or boulder, to assign it its place in the series, with as much certainty and accuracy, as the anatomist disposes of the separate and displaced bones of a skeleton. The most beautiful and striking results of the study of organic remains may be found in the geological works of Buckland or Lyell.

"All geologists and chemists are agreed in considering soils as resulting from the abrasion, disintegration, and decomposition of rocks, with the addition of certain saline, vegetable, and animal substances. Ever since the deposition of rocks, various agents have been operating upon them to wear them down, to cause them to crumble or disintegrate, and often to decompose them into their proximate or ultimate principles, while they have been continually receiving vegetable and animal substances with soluble salts. * * * Now we find, that nearly all the rocks which exist in large quantity, are composed chiefly of silica, alumina, lime, and oxide of iron, and these are the ingredients that are found almost invariably in soils. Silica is in the largest quantity both in rocks and in soils, alumina next, while the other ingredients are in much smaller proportions. * * * To give a numerical statement, derived from numerous analysis, such rocks as most of those in New-England, contain 66 per cent of silica, 16 per cent of alumina, 6 or 7 per cent of potassa, 5 per cent of oxide of iron, and of lime and magnesia, a much less quantity;

and the composition of our soils will probably be found to correspond very nearly with these numbers, with the exception perhaps of the potassa, which may in a good measure have disappeared by the operation of vegetation."* That this is in the main, a correct representation of the manner in which soils are formed, and of their general composition, no one who is in the habit of observing the action of the agents now at work on the crust of the earth, can doubt.

Where the soil is mostly based on the primitive rocks, or where these approach the surface over considerable tracts of country, the soil will partake of the character of the rocks below, and may therefore be properly termed primitive. As an example of a primitive region, we refer to New-England, the most of which is decidedly of that class—the tracts of transition, secondary, or tertiary, being of limited extent. Of the primitive soils, that formed from gneiss may be considered the poorest, and that from rocks in which feldspar abounds the best. Perhaps the difference may be found in the greater quantity of alumina the latter contains, rendering the soil more tenacious than that formed of a greater proportion of silex. Feldspar also contains large quantities of potassa, in some instances equaling 14 or 15 per cent, and this, unquestionably, exercises a powerful influence on the fertility of the lands produced by its decomposition. Primitive soils are less fertile, naturally, than those on the other stratas; since, as the fertility of all soils is owing to the quantity of animal and vegetable matter combined with the original earths, it is clear that the others, containing in their substance much of their fertilizing matter, must by their disintegration produce soils more readily productive than such as have originated at once from rocks destitute of these ingredients. There are sections, however, of all primitive districts, that are of the most fertile description; and in all cases where the earth is of sufficient depth, it can be brought by the application of manures to any desirable degree of productiveness. Primitive regions are noted for their salubrity, for the abundance and purity of their waters, and for their exemption from those sources of malaria and death, that render a settlement in some of the other districts, only a certain approach to the grave. Primitive regions are the most difficult to cultivate; but the population of such sections, have always been remarkable in all parts of the world for their energetic, active dispositions, and their elevated moral standing. We need not go beyond the limits of the United States for satisfactory illustrations of these statements.

Soils formed from the different strata, are not always accurately defined by the rocks they cover. Examination shows, that during the abrasion and wearing to which they have been subjected by the strong currents of water passing over them, the detritus has generally been moved to some considerable distance in a direction with the current; and in many instances rocks of a rare kind or limited extent, have been discovered by tracing back to their origin the fragments so removed. Of this kind of facts, numberless instances may be adduced in the northern states, where the diluvium is evidently the result of a current flowing from the north. Of course the soils to the south of any class or strata of rock, feel its influence more or less as they are removed from it in that direction to a greater or less distance. If the strata is sandstone, silex will predominate in the soil above, or in that made from the disintegration: if of limestone, the earth will be filled with blocks or boulders of that stone, or of limestone gravel, the quantity diminishing as we recede from the place of outcrop; and if of clay shale, the soil above will abound in clay in proportion to the quantity contained in the decomposed or worn out rock of that species. To the agriculturist, the knowledge of these facts is important, as enabling him to determine with great certainty the qualities of the soils he cultivates, or the character of the farm he is intending to purchase.

The transition class of rocks succeed the primitive, and as a greater surface of this rock is exposed, and the class is composed of more easily disintegrated materials, it exercises a greater influence on agriculture than the other. In addition to these things the transition strata contain portions of animal and vegetable matter, which, when combined with the original earths, contribute much to the fertility of the soils so produced. That these rocks are rich in animal remains, the multitude of fossils found in them most abundantly prove. One of the best defined tracts of transition to be found perhaps in the world, may perhaps be seen in western New-York. The same strata indeed occupies part of Ohio, the southwestern part of Upper Canada, Michigan, Wisconsin, and probably stretches to the Rocky Mountains, but no where in the whole extent can it be so well observed as in New-York. Here the whole series, from the stratified primitive rocks of gneiss and limestone upwards, to within a short distance of the coal formation lying above in Pennsylvania, can be distinctly observed, and the effects of the different kinds of rocks, sandstones, limestones, clay-slate, &c. &c. most satisfactorily traced. The thickness of the transition strata in New-York, or from the primitive rocks to the coal formation, is probably eight or ten thousand feet; and where the same strata out crops, in Penn. it has been estimated at seventeen thousand feet; showing that some of the strata are thinner at the north than at the south. That such is the case, the example of the rock called by our state geologists, the Oriskany sandstone, conclusively proves. This strata, easily distinguished by its structure and its fossils wherever it appears, has a thickness in Pennsylvania, of about 700 feet, while in Oneida, Onondaga and Cayuga counties in New-York, it is found from 18 inches (or in one case, at the celebrated Split Rock limestone quarry near Syracuse it is only a thin layer of sand) to 30 feet. The effect of the several limestone strata are very distinctly marked on the soils of this series, and give to what has been termed the northeren slope of New-York, its peculiar character for fertilty. The soils above the sandstones of the strata, except in some places too level for draining, are dry: those above the limestones, are dry and warm; above the shales, varying in their quality according to the nature of the rock below, but always more compact than the others owing to the larger amount of clay the decomposition of such shales is sure to produce. It may be remarked too, that the influence of these rocks are uniformly felt to the south instead of north of the places where they appear, thus showing that the abrading agent acted from north to south. That this immense mass of rocks, of such different materials, and each strata of such uniform and great extent, was deposited in still waters, and at widely separated intervals of time, the perfect state of the fossils they contain, as various and as well defined as the strata in which they are found, most clearly demonstrates. Much the larger part of this vast area of transition is marked by a descent or dip of the strata to the south, of from 30 to 50 feet in a mile, owing to which cause the streams flowing north abound in falls as they pass from one strata to another, while those flowing from the south, glide along over an unbroken surface and are boatable almost to their sources. The best wheat regions in the United States and probably in the world, are found on the transition strata; and for proof of this, so far this continent is concerned, it is only necessary to refer to the transition districts of Virginia, Pennsylvania, New-York, Ohio, and Michigan. For all the ordinary purposes of farming, soils based on the transition series of rocks, are found preferable to most others, easily cultivated, and very productive. Every person acquainted with the character of these rocks, will be able to distinguish the general characteristics of the soil near them, and can regulate his choice accordingly. As a general rule it may be observed that the excellence and depth of fertile soil, will depend on the permeable nature of the subsoil, and its freedom from surplus or stagnant water. Soils too porous or too dense, are alike objectionable to the agriculturist; the first allowing manures to pass beyond the reach of plants, and the last being hard to work, and till their character is partially changed, improper for some crops.

Immediately above the transition appears the secondary rocks, embracing the coal formations of this country, and reaching to the south of the great transition belt, from the Alleganies to the Rocky mountains, covering a large part of the Ohio and Mississippi valleys, besides considerable districts in other parts of the United States. The interspersed strata of this formation are shale, slate, limestone, coal, and the disintegration of these, as in the case of the transition class, produces soil of various conditions and qualities. No where can a soil of greater fertility be found than is embraced in the immense basin bounded by transition of the north, the Rocky mountains of the west, the Ozark and Tennessee ranges to the south, and the Alleganies to the east, including the greater parts of Ohio, Indiana, Illinois, all of Missouri and Arkansas, and the most of Tennessee and Kentucky; and perhaps no where in the world can a district of the the same dimensions be pointed out, capable of supporting so large a population as this secondary region. For all the purposes of agriculture, the upper transition and the secondary, may be considered the same, as the soil, products, &c. do not essentially vary, the one from the other. The principal difference existing is found in the fossils which mark a new and later era, and those vast beds of coal so abundantly adapted to, and apparently expressly provided for, the wants of the future millions of the human race. When we look at the manner in which these beds of coal are diffused; the influence this mineral has exerted, and is destined to exert on the sciences and arts; and its indispensable nature in the economy and comfort of yearly increasing millions, the mind can scarcely refrain from admitting the evidences of wisdom and design this formation presents.

The last and upper series of rocks, is termed the tertiary, and bear, in their constitution and fossils, every mark of comparatively recent origin. These rocks abound in marls, easily disintegrated rocks, and the soils originating from them generally partake of the character of the rocks beneath. A broad belt of tertiary may be found in the United States, considered as beginning at Long-Island, embracing the greater part of New-Jersey, a considerable portion of Maryland, and the States still farther south, and terminating on the Gulf of Mexico. The general character of the soils is sandy, and until within a few years has been considered of an inferior description. The united advances, however, of geology and agriculture, have shown that these nearly worthless districts, as they were thought, contain below the surface, the elements of the greatest fertility, and that nothing but knowledge to appreciate the fact, and well applied labor to avail the farmer of the provided treasure, was necessary to render these sterile plains eminently productive. The marls, and the green sand found but a few feet below the surface of most of these tertiary tracts, are invaluable sources of fertility when raised from their beds and applied to the sandy earths. The marls are strongly calcareous, and abound in animal and vegetable matter, while the green sand contains according the report of Prof. Rogers no less than ten per cent of potassa, sufficient of itself to constitute this substance one of the most efficient fertilizers. The clay combined with the marl, when spread on the soil, gives the power of retaining moisture, and thus corrects one of the greatest difficulties in the cultivation of this class of soils. The discovery and application of these substances has produced an entire change in the agriculture of a large part of New-Jersey, and as beds are opened in the States further south, and the attention of the cultivator there is directed to the subject, we may reasonably expect the same beneficial results will ensue on the tertiary sands of the south, that have been produced by the same agents on those of the north.

Above the rock formations we have named, occur the masses of earths called *diluvium* and *alluvium*, on which all the operations of husbandry are conducted, and on the material of which, and their proportions, the fertility or sterility of soils depend. Diluvium occupies more of the surface of almost every country than any other. It is composed of boulders, pebbles, clay, gravel and sand in ever varying proportions, furnished by disintegrated or broken up strata; the boulders and pebbles usually rounded by attrition, and bearing in their appearance every mark of transportation and deposition. It has resulted from the action of powerful currents, and no existing causes seem capable of producing such effects; at least none such are now active. It is spread over nearly all the strata; is found covering with its masses high mountains, and most of the rounded hills and elevations spread over the country, owe their origin entirely to accumulations of this material. In some parts this covering is composed of gravel or pebbles so loosely put together as to be unfit for agriculture; in other places these pebbles are cemented with clay, and produce a subsoil impervious to water and improper for some kinds of vegetation. This compact mass is called till or hardpan. We are frequently able to trace the materials that constitute a bed or covering of diluvium to their source, and where this is the case, the course of the currents producing it, and its value to the agriculturist, can in a great degree be determined. The diluvium produced by the breaking up of limestone strata will usually be found equal to any other, and the position of the strata, and course of the currents, will enable the observer to determine where such will be likely to exist.

Alluvium, where it is found, lies above all other soils, and is the richest of all that have been produced. This soil is made from lightest, richest and most valuable parts of all others, being washed from the surface by rains, carried down by the rains; and deposited in slow moving or stagnant waters. The deltas of the Ganges, Nile and Mississippi; the valleys of the Missouri, Connecticut and Genesee, furnish some of the most striking and familiar examples of this soil. Where not liable to destructive inundation, alluvium forms the most desirable of soils, being of almost inexhaustible fertility, and easily worked. The greatest drawback on such districts is a tendency in them to generate malaria, or the agent that produces fever and ague, billous fevers, or yellow fevers, according to its intensity and duration. In conclusion we would say, if the farmer would understand the nature of the soil he cultivates, he should be able to trace its origin; and to do this geology furnishes the key and the guide. Let them be improved.

Culture of the Potato.

By common consent the potato has been placed at the head of all the edible roots, wherever it has been introduced, and the climate would admit of its cultivation. Originating from an obscure and worthless root among the Cordilleras of South America, in spite of prejudice and opposition, it has spread with a rapidity unknown to any other vegetable, and is doubtless destined to make the circuit of the globe, adding in an incalculable degree to the means of subsistence. There are few if any vegetables grown in the temperate zone that yield so great an amount of food per acre as the potato. Wheat, according to Sir H. Davy, contains 950 parts of nutritious matter in 1000; and the potato 250; but when it is remembered that the yield of the potato on an average is from ten to fifteen times as much per acre as wheat, the advantage in favor of the potato is manifest. Besides such is the human organization that pure nutritive matter is injurious to its healthy functions, and the stomach requires to be more or less distended with other matter before the excitement necessary to nutrition takes place. We are, therefore, justified in supposing that good potatoes used exclusively as an article of food, would be less injurious than pure wheat flour. Be this as it may, the potato in most civilized countries now ranks next as an article of food to the rice of the tropics; and the wheat and maize of the more temparate regions. To Europe is America indebted for the Graminæ, and had we returned them nothing more than the potato and maize, the debt must have been considered as cancelled.

The potato is usually propagated by the tubers or roots, but new varieties are obtained or old ones that have partially degenerated restored, by cultivating them from seed. There are few plants that show more decisively the improvement that may be made by cultivation than the potato. In 1838. a quantity of the original roots were brought from South America to England, and carefully planted. The result was a small inferior root, more resembling the ground nut than the potato;

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* Prof. Hitchcock's Economical Geology of Massachusetts, 7.

and not widely differing in appearance from those of the first year's growth from seeds. There is an idea prevalent among many farmers that potatoes are mixed, or what by the breeder of animals would be called crossed, by having several kinds planted in the vicinity of each other. This is an erroneous opinion. The crossing takes place in the flowers or seeds and not in the roots; and hence there is the same uncertainty that the seeds of any given variety of this root will produce potatoes of the parent kind, that there is that the apple seeds will give apples like those from which they are taken, a thing of very rare occurence.

Every farmer who has paid attention to the manner of growth in the potato, is aware that the tubers are not produced from the roots proper, these being, as in other plants, used solely for the purpose of nutrition, but on shoots thrown out above these, and nearer the surface of the earth. It was the opinion of Decandolle that by repeated coverings of the stem such shoots, and of course potatoes could be produced the whole length of the stalk, and some experiments that he made seemed to favor such a supposition; still we must be permitted to say, that having in part repeated his experiments, we have found nothing to justify the opinion that such a result would be effected by this treatment of the stem.

The propriety of cutting the tubers or planting them whole has been much discussed, and the multitude of experiments on record would seem to show by their conflicting results, that at least as much is depending on other circumstances, as on the root being planted in a whole or cut state. If an acre of ground be planted in hills or drills with whole potatoes, and another acre be planted with setts or cuttings at equal distances with the other, the experiments made by the London Horticultural Society would go to prove that the acre planted with whole potatoes would yield the most, but not much if any more than the additional quantity of seed required in planting. If whole potatoes are used, from twenty-five to thirty bushels will be used; If cut, not more than half that quantity will be required. In both cases, however, much will be depending on the size of the whole potatoes, and the number of eyes in those cut. The distance between the rows must be determined by the length of stem produced by the potato, and the several varieties vary much in this respect.

In cultivating the potato a climate rather cool and moist is found most preferable to any other. Of course the root succeeds much better in the northern states and in the adjoining British provinces than in the southern parts of our country. In the north, parts of Maine and New-Hampshire, and the Province of New-Brunswick, are celebrated for the excellence of their potatoes. In New-York, the tract lying east of Lake Ontario, between that and the Mohawk and Black rivers produces good potatoes; and the elevated lands in the south of New-York and the north of Pennsylvania are noted not only for the quality of their potatoes but the large crops they annually produce. The potato will succeed well on almost any kind of land provided it is rich, and is not wet and clayey; but for this, as for most other crops, a friable loam of sufficient consistence to prevent drouth will be found superior to any other. Swamps containing large quantities of vegetable matter, when sufficiently drained, have produced great crops, and what in new countries is termed muck land, is also favorable to their growth. Two things in a potato soil seem to be indispensable; it must be rich, or a crop can not be expected; and it must be sufficiently loose to allow the shoots that form the tubers to spread and enlarge freely. In Europe the British islands are justly famed for their root culture, and the introduction of the potato into Ireland has enabled that country to double its population; if it has not banished want and distress, these evils are not of as frequent recurrence now as formerly, notwithstanding the increase of consumers. Cobbett, indeed, charged upon the potato all the evils of Ireland; and Dr. Tissot has demonstrated to his own satisfaction, that no potato eating nation has ever produced a great man.

The greatest crops of potatoes on record are those grown by General Barnum of Vermont, which reached from 1,500 to 1,800 bushels per acre; and he gives it as his opinion, that in a good soil, and with his mode of culture, from 800 to 1000 bushels per acre may be safely calculated upon. The reports of the agricultural societies of our country show that from 500 to 700 bushels per acre are not uncommon. Mr. Bache, of Wellsborough, Pa. in 1839, raised 600 bushels to the acre, and the crop of Mr. Morris, of Cattaraugus, in this State, fell but little short. The average crop in the country can not we think be estimated at more than from 175 to 250 bushels, the influence of the seasons being more felt on this crop than many others.

The methods of planting are various. Gen. Barnum's mode, after a careful and thorough preparation of his land is to plant in drills 22 inches appart, and the setts in the drills 10 inches from each other. The drills are kept clean, but the earth is hilled around the plants only once in the season; as he considers there is much danger of disturbing the young tubers by removing the earth, or causing the formation of new shoots for tubers by repeated hoeings or hillings. The secret of his great crops appears to consist, in his bringing rich fresh earths, the scraping of the ditches or streets, or earth from the barn-yard, or the mould deposited in swamps, and giving each hill a shovel full, as a top dressing. He does this with the aid of a horse and cart, the horse and the wheels passing between the rows.

We have seen very good potatoes grown by simply dropping the seed on a clean turf, and spreading over them a covering of straw six oreight inches in thickness. The straw must be evenly placed, and if moved by the wind before it gets settled together, which it will soon do, it must be carefully replaced. This covering of straw keeps the surface moist, the grass can not spring up through it, and in the fall the potatoes are found on the surface of the turf, and perfectly clean when the straw is removed. The danger in this mode of planting would seem to lie in a dry season which is frequently fatal to the crop; and a *heavy* crop is rarely in this way produced.

In the Monthly Visitor, for February, 1840, is an account of an experiment with potatoes, which was eminently successful, and deserving of notice. In the spring of 1839, Mr. Whitney of Craftsbury, Vt. "broke up a piece of green sward, harrowed it thoroughly, carted upon it manure from the yard at the rate of 32 loads to the acre, cross plowed it, harrowed it again, and planted it in the usual manner in hills. At the proper plowing between the rows, the piece was well hoed, and at the proper time was repeated. In the fall he dug from this piece at the rate of 300 bushels to the acre, which for this year, on account of the rust, was considered a good yield. By the side of this piece, on precisely the same quality of soil, manure was carted and spread at the rate of 32 loads to the acre; the sward was then carefully turned over, and the furrows laid flat with a roller. Between every other furrow, where they came together, (that is between the first and second, and between the third and fourth and so on) holes two feet apart, were made with a sharpened stick, about three inches deep, large enough to receive the seed. Into each hole one piece of potato was put, and the holes filled up with mellow soil, even with the general surface of the field. There was no further labor bestowed upon the crop till the digging, when the quantity produced was a little over 400 bushels per acre Although never hoed not a weed was seen in it. Before digging, the field had the appearance of having been well hoed, the potatoes having raised upt he ground above them."

The Rohan Potato is an instance of the fortunate production of a new and valuable variety from seeds. This root which, wherever it has been tried in our country, seems to have satisfied all reasonable expectations that had been formed, is destined doubtless to add much to the vulue of the potato crop: and no good reason can be given why other; and still more productive kinds may not be produced by the same methods. A comparison of a crop of Rohans with one of the original wild potato, would seem to justify expectations of still further improvement, from the combined agencies of cultivation and reproduction from the true seeds.

In all cases the value of early potatoes is great; and particularly so in the vicinity of cities, where a constant demand, and ready market for such vegetables, always exists. Experience has taught the growers of potatoes for the London market that ripe potatoes can be found from ten to fourteen days earlier in hills or drills planted with setts from the top end (the one that has the most eyes) than in those planted from the root end of the tuber. The Lancashire gardners therefore assort their setts, so as to have them ripen at the same time, and thus obtain roots for market sooner than they otherwise could do. It is probable that quite an improvement might in this country be effected in the same way.

Grafting—Apples.

The best and most certain methods of propagating any desirable kind of fruit is by grafting, or by inoculation. The first is performed in the spring, the last in summer or autumn, or when the bark of the tree will leave the wood freely. Grafts, or scions, must be cut as early as February, when they are to be kept any time, or removed any distance; but if they are to be inserted at once, they may be cut when wanted for setting, unless the vegetation is too far advanced to render the operation proper.

Next to the scoins, the wax for excluding the air and completing the union of the parts is to be attended to. Several modes of preparing this composition have been published, but a very good wax may be made of two parts rosin, one of beeswax, and one of tallow. These are to be melted together, and may be made into rolls by turning the melted mass into water, and working it as shoemaker's wax is prepared; or it may be laid on hot with a brush, as soon as the scion is put in its place. For nursery grafting, or on small branches it will be found most convenient to have the wax spread on strips of cotton cloth, which can be applied with great facility.

The operation of grafting is founded on obvious principles, and is so simple in itself, that it may be performed by any one. When a tree is cut down in the spring, if it is young and vigorous, a series of granulations or prominences will be seen in a few days or weeks forming themselves around the stump at the junction of the bark and the wood. When a tree is partly cut down, but the circulation is not wholly interrupted, similar granulations will form on the upper part, and if these meet, a union of parts will take place. On the stump of the young trees of the elm or beech, these granulations frequently push up into sprouts, and we have seen the top of a stump circled with a row of such. Grafting is only performing by art, what in such cases is done by nature; or in other words it consists in placing the divided parts of the stem and scion, in such a position that the granulations as they form may unite without difficulty. This is most generally done by splitting the stock with a sharp knife, giving a wedge like form to the lower end of the scion, and carefully inserting this in the cleft, in such a way that the bark of the stock and scion shall come in contact. Wax is then applied to exclude the air, and secure the scion in its place till the union takes effect.

Where an orchard is to be planted anew, the better way is, at the present time, to apply to some nurseryman, and make a selection of such fruits as are the best adapted to the purposes for which the orchard is designed; but in far the greater number of cases the orchards of the farmer have been planted from nurseries of ungrafted trees and of the natural or inferior fruit, and in such instances the only way to change the products from poor to good is to graft. Those most experienced in grafting consider the best time for the insertion of scions to be when the buds have swollen and are just beginning to open; a little earlier or a little later will do, but if so early as to freeze the exuding sap it will be fatal; and if too late, the bark is apt to start from the stock, and the union, if effected at all, must be delayed and imperfect.

Great care in selecting or grafting fruit trees should be used, not only that the varieties be of the most valuable kinds, but that they should succeed each other, so as to keep a supply for the longest possible period. Thus a little attention to this point will give a supply of apples the year round, peaches for several weeks or months, and cherries and plums for a long time. It must always be remembered that a good tree occupies no more space than a poor one, while the difference in profit is very great. The rich Bough, Swaar or Pippin, requires no more room or care than the most inferior varieties; and though many of our farmers are so negligent as to be content with the last, we have never seen one that would not gladly accept of the better kinds of fruit, when placed within his reach.

The best kind of apples for the table are rarely first rate for cider; and where an orchard is intended for the production of that article, particular reference must be had to it in the selection of trees. The easiest way of determining the relative value of apples for cider is to observe the depth to which they sink when placed in water. It is well known that the more saccharine matter the juice of an apple contains, the heavier it will be, and the richer the liquor produced from it; of course the sinking of an apple in the water serves to indicate its value, or its weight. Testing the liquor from apples, by the hydrometer, is the most accurate mode of determining the worth of the fruit for cider, and the results thus obtained are found to agree with experience. The Harrison, Winesap, Hagloe crab, and similar apples are proved to be the best for cider. The Downton Pippin, an apple produced by Mr. Knight, from an artificial impregnation, is highly esteemed in England, and has been well spoken of by those who have tried the variety for cider in this country.

When the feeding of apples to animals first began to be practiced to any extent, it was supposed that sweet apples were far the most valuable; but more experience seems to show that their worth is more depending on their ripeness or the development of their saccharine properties, than on any thing denoted by mere sweetness or sourness. If animals are allowed to feed on them before they are ripe, sweet apples are the best, as the acid of an unripe apple injuriously affects the teeth, making them sore, which a sweet apple will not do. By a strange oversight in rural economy, many farmers during the earlier progress of the temperance movement, not aware that apples were of so great value for animals, making pork, &c. were guilty of the folly of cutting down their orchards, an act which most of them have since had leisure to abundantly regret; and which will not probably be soon repeated, as experience shows that few parts of a farm yield a better revenue than the orchard.

We add a few of the most approved varieties of apples, such as will furnish in the smallest space, the succession of good fruit, the greater part or the whole of the year, so desirable to every farmer.

The *Juneatings* are the earliest of our apples ripening in June. There are two kinds, one of a yellow color and the other red striped. They are small round fruits, of a pleasant flavor.

Prince's Yellow Harvest, and the *Sinequanon* are excellent apples, ripe in July. The first is a pale yellow, sub-acid, and of fine flavor. The last of a greener color, and very highly flavored. Both are of a medium size.

The *Sweet Bough*, and *Toole's Indian Apple*, are our best August apples. There are two kinds of the first, one white, ovate, and the other oblong and red striped This last is sometimes called the red and green sweeting. They are both very superior apples and should have a place in every orchard. Toole's apple originated in Wayne county, and is a beautiful apple for the table or for cooking.

Of what are termed fall apples there are many varieties, all good, and the preference must be determined by the taste of the individual, or the use to which the fruit is to be put. The *Golden Pippin* and the *Fall Pippin*, both ripen in September and are fine fruits.

Of the winter apples, those that ripen from October to December, and keep until June, we have the *Spitzenbergs* three varieties, the Newtown, Esopus, and Flushing; *Seek-no-further*, two varieties, red and green, and dark red or black. Several kinds of Pippins, excellent apples, and some of them keeping till June; the Green ings two kinds, one large and ripening in October, the other of medium size, deeper green, and ripening too late for exposed situations; the *Gill-flowers*, white and black, good apples; the *Pearmains*, generally known and esteemed; the *Swaar* apple, one of the finest of fruits, large and high flavored, and deserving a place in every orchard; the *Roxbury Russet*, keeping well and of good flavor; with others that are known and esteemed in particular sections of the country.

To the cider apples mentioned above may be added the *Golden Harvey*, called the *brandy apple* on account of the flavor of the liquor made from it; *Knight's Siberian* Harvey, from the Golden Harvey and Siberian crab, and produces liquor of the extraordinary gravity of 1091; and *Hewes' Virginia Crab*, the qualities of which are much the same as Hagloe's, and from which the highly prized Crab cider is made.

It will be seen at once that there is a great variety of excellent apples to select from, and that while grafting is so easily performed, and the best kinds of fruit are accessible, there can be no excuse for growing fruit that hogs will not eat, or encumbering the ground with trees that bear little or no fruit.

Work for the Month.

If the meadow grounds of the farmer are not naturally free from stones, one of the first things that require his attention, after the frost has left the ground, and it has become settled, is carefully to pick up all stones that appear, and which if left will be in the way of the scythe or the rake. Besides the vexation and loss of having your man half the time employed in grinding or sharpening *stoned* scythes, there will be the additional loss arising from these stones not permitting the mower to approach the surface with his implement, where, if the bottom is white clover, the best of the grass is found. Gather all these stones, and use them in filling in blind drains, for which there is much necessity on almost every farm; but if you do not want them in drains, pile them; they are less hurtful almost any where than in the meadow.

In the spring of the year much benefit may be derived from what is termed waste water; that is the water that flows over the surface without being absorbed. All such waters contain more or less vegetable and animal matter which if allowed to subside, forms one of the most fertilizing materials. As proof of this, we need only refer to the sediment deposited by large rivers, as the Nile or the Mississippi. If such spring waters are allowed to flow off rapidly, they carry these fertilizing matters with them; if they are made to pass off slowly, or are spread over a large surface, these particles are deposited or intercepted, and their value retained. The wash of roads in the spring is peculiarly rich, and every precaution should be taken to secure the advantage they afford. It is almost a criminal negligence in the farmer to allow the waste of the roads, yards, &c. to be lost to the farm. A thorough irrigation with such waters will hardly fail of leaving as large a quantity of the salts of lime and fertilizing matter on the soil, as an ordinary dressing with manure. In this way every farmer may and should make important savings.

Dairy cows demand particular attention this month, to keep them from falling away. A cow that is turned into the pastures in May in good flesh and condition, is worth one month more to the dairyman than another cow equally good for milk, that has lived through the winter by hook or by crook, and which instead of giving the product of the first month's feed in milk, is obliged to appropriate it to the formation of flesh and the gaining of strength lost by the poverty of the winter's keeping. Roots now show their value. Half a bushel of carrots, ruta baga, and we presume sugar beet, though we have never tried them, will materially aid the animal, and daily add to the quantity of milk. Carrots we like the best of any roots for milch cows; but ruta baga, if the roots are sound and fresh, and given with a little salt, will not injure dairy products.

Trees may be transplanted in this month with every prospect of success, where reasonable attention is paid to them. As the nourishment of trees is derived from the fibrous roots, as many of these must be left as possible when the tree is taken up. The practice is too common in transplanting trees to dig a small hole, and then cut off the roots in order to force the tree in. The fine roots are lost in this way, except in very young or small trees, and a failure of many must be expected. The root of a tree should never be dried from the time it is taken from the earth till it is re-planted. To prevent drying, nursery men in packing them use moss, saw-dust, &c., substances that retain water with great tenacity, and thus preserve the roots moist for a long period.

April is a good month for the application of plaster to plants. Experience serves to show that profuse applications of this substance are useless, and that a bushel and a half, or two bushels, will usually produce as much effect as five or ten. The finer it is ground the better; and there is always the most effect observable when the grains or the grasses on which it is used, have started sufficiently to cause a considerable part of the dust to be deposited on the leaves. Plaster is of no value on wet clay lands. Sandy or gravelly soils feel plaster the most, and it is on such too that ashes do the most good. On such soils the growth of clover and its kindred grasses, lucerne and sainfoin, is astonishingly increased by plaster, and no good farmer will deprive himself of its aid.

Sowing grass-seeds on winter grain is generally performed this month, and is perhaps as well as if done earlier. The ground is now moist, there are frequent rains that assist in covering the seeds, the spring soon begins to have some influence, and the vegetation is more likely to succeed than if delayed until the young plants, before being rooted, would be exposed to the heat and drouth of summer. Farmers are rarely liberal enough in the use of grass seeds. Lands but half seeded can give but half a crop of meadow or pasture; and as a large portion of the soil is left uncovered, the seeds of noxious weeds find a resting place and get root where they would not, if occupied by useful plants.

One of the most essential operations of the farm is plowing, and on most farms the greater part of this is performed for spring crops, as they are called. If this business is not done well, or if the soil is not in a proper condition for plowing, poor crops may be expected.—Soils that are gravelly or sandy may be plowed almost at any time, but those that are retentive or clayey, should never be plowed for crops while wet, as a part is converted into mortar in the operation, and does not recover itself from this state till some months have elapsed, and frosts and atmospheric changes have acted upon it. It is not uncommon where clay soils have been cultivated a long time, to find a stratum of earth at the depth to which the plow usually penetrates almost as hard and impenetrable as stone. This is occasioned by the repeated action of the plow, where the soil was too wet, in compressing and smoothing the particles below the share. In England it has been found very useful to break up this *pan* with a plow running deeper than ordinary ones. If this is thrown up when dry, and pulverized by frosts in the coming winter, a greater depth is given to the soil; and when properly manured, the crops are materially improved. Such deep plowing has in some respects the effect of spading; but neither deep plowing or spading the soil, can produce good crops in the first instance, unless all is rendered fine and thoroughly incorporated with manures.

Spring wheat is one of the crops that must be attended to this month. It must be sown as soon as the ground can be fitted for its reception. It grows best on lands new and rich, but land that will grow good winter wheat will also grow good spring wheat. The land should be clean, and it therefore does best after well manured hoed crops. It does very well after peas, or on a clover ley, if clean and rich. Heavy manuring the crop itself is prejudicial, as it gives more straw than will fill well; the manure therefore intended for a spring wheat crop should be given to the preceding crop of corn or roots. Spring wheat does best on a dry soil when turned in with a light furrow, harrowed smooth, and rolled. The cultivator is a good instrument to cover spring wheat; but on all grounds where there is the least danger of surface water from spring rains, furrows must be made by the plow to conduct it off, as few crops are more fatally injured by standing water than spring wheat.

The Garden.

Though the month of April is too early for much gardening in the open air, still there are many operations which may be advantageously performed, and some seeds should be planted, particularly such as are not liable to be injured by frosts. If the ground is of the nature most proper for a garden, or if it has been brought into such a state by skilful cultivation, it will be in a condition in the course of the month to receive some seeds, and be partially fitted for the reception of others. As a general rule, however, nothing is gained by putting seeds into the ground too early in the season, or before the temperature is sufficient to promote ordinary vegetation. Seeds put in early may eventually vegetate, but they rarely produce as vigorous, thrifty plants as those that spring quick and under a more favorable temperature.

Lettuces may be sowed early, and some English gardeners have recommended that a bed be fitted and sowed as late in the fall as possible, as such seeds will appear and grow on the first opening of the spring. We have not found such plants, or those that are self-sown, materially earlier than those grown from seeds planted in the spring on ground fitted for their reception at the time. Lettuces require little attention, other than being kept clean, and when heads are desired, properly thinning the plants for this purpose. All farmers, however, should have a small forcing or hot bed to grow early lettuces, &c. The expense is little, and the value of early vegetables in the family great.

Radishes are a plant that will admit of early sowing, and very desirable for the table. It is not as safe from frosts as lettuce, but if such are apprehended a covering of matting on these or other similar plants will secure them. A radish bed should be made with horse manure, fresh from the stables, well mixed with good garden mould. While growing the ground must be frequently stirred and kept loose about them, as well as carefully free from weeds. The more rapid the growth of a radish the more crisp and excellent it of course will be.

Carrots too, are plants the seeds of which for garden culture may be sown early. The ground must be made fine, and the seeds sown in drills ten or twelve inches apart. The seed must be covered half an inch deep in the earth. Carrots require a deep soil, or the roots will be branched and inferior. Beets require similar treatment with carrots; but it is better to sow the last at different times, as the later sown ones, if matured, will be kept over the winter for culinary purposes the best. Beets and carrots will sometimes shoot up for seed the first season. When this occurs, they should at once be pulled and given to cattle or pigs, as they are unfit for the table, all such plants being hard and woody.

Onions should be cultivated in every kitchen garden; they must like carrots be sown in drills twelve inches apart, the ground very fine, and the seeds put in shallow, simple covering being all that is required. If manure is used on the beds, it must be thoroughly rotted, and the ground worked fine at least five inches deep. If the seed is good and they are well sown, they are usually up in about a fortnight. We have known a farmer who raised very fine onions, who made his beds early, and let them remain until all the seeds of weeds near the surface had sprouted. He then covered the beds with straw about a foot in depth as evenly as possible, and then burnt it over. The result was a fine dressing of charcoal and ashes, and a complete destruction of all surface weeds or seeds, and such insects as were present. The onion seeds were immediately put in in shallow drills, and the weeds at subsequent dressings were easily subdued. Onions are one of the few things that seem to contradict the theory of rotation. In Scotland they have been grown for more than a century on the same spot, without any diminution of crop; and the experience of the Weathersfield onion growers would seem to prove that a change of location is not best for this plant. In a good soil, onions should be thick in the drill, as they crowd one another from the ground, do not grow as large, and ripen earlier and better than when at greater distances.

A few potatoes may be usually put in the ground the latter part of this month without much danger of their being nipped by frost; although to risque any considerable quantity would be unadvisable. If planted it should be done pretty deep, as the plants will take a firm root, and be longer in showing themselves than when shallow planting is used.

Peas should be sown this month, and as they are generally much esteemed, considerable space may be allotted to them. A moderately rich soil is best for peas; in one too rich there will be more vines than pods, and the pea will not be as productive. Garden peas must be sown in drills, covered 2½ or 3 inches deep; the distance between the rows to be determined by the height to which the kind sown usually grows. Thus the tall marrowfat should be four feet apart; the dwarf marrowfat three feet; early frame pea two and a half feet; and the dwarf blue Prussian two feet. There can be no great advantage in sowing many kinds, but some two or three may be advisable. Repeated sowings of the best kinds will secure a continued supply.

Where there is no forcing beds for cabbages, a piece of ground in a warm and sheltered situation may be dug up, thoroughly incorporated with manure, and seeds to produce plants for transplanting sown upon it. They will rarely be injured by frosts after coming up, and will be much earlier than if let alone till the usual time of planting. There are many varieties of this plant, and pains should be taken to have a succession of them from the earliest fit for culinary purposes to those intended for fall or winter's use. A late variety of cabbage if sown early, or an early variety allowed to stand after maturity, is apt to crack open and become worthless. This is perhaps more the case with the drumhead, which is the common kind, than any other. The early York, imperial, sugar loaf, &c. are good varieties for the table, and valuable vegetables to cultivate. The cabbage plat is an important part of the kitchen garden, and should receive particular attention.

In this month strawberries, gooseberries, raspberries and currants should be removed when necessary, trimmed or transplanted, as is required. A strawberry bed is an essential requisite in every garden, and the farmer who loves a supply of this delicious fruit, or does not wish to have his grass lands trampled over by children in pursuit of the inferior wild varieties, will not neglect to allot a part of his garden to this fruit. As a market fruit perhaps there is none equal to it for certainty of growth and profit. A hedge of the common black raspberry on one side of a garden, will furnish a supply of good fruit, in most cases earlier, and by some preferred to the kinds usually cultivated in gardens. Neither, however, should be neglected.

The transplanting of trees is an important part of the operations of the spring, though not strictly appertaining to the garden, except so far as fruit trees are concerned. Few are aware of the value given to a place by having the grounds planted with useful or ornamental trees, independent of the pleasure which every person of taste must feel in their observation. The spring is the best time for the removal of most trees, and transplanting should be performed before the leaves have expanded or the circulation complete, as in such case the quantity of sap required is more than the disturbed and mutilated roots can supply. Trees taken from the forest require more care than from nurseries or open fields. Evergreens must be removed later than other kinds, or the operation is not apt to succeed. The fruit garden is one of the most useful and profitable parts of the farm, when the trees are well selected and cultivated, and particular pains should be taken to secure this result by selections from the best nurseries and varieties.

Currants and Gooseberries.

A supply of this valuable fruit contributes much to the comfort of the farmer, and its cultivation should not be neglected. Currants are good made into pies, served up with sugar, the juice may be converted into wine, and they require little skill or care in the management after planting. In planting them the buds should be cut from the shoots from the lowest part to several inches above the ground; this will prevent the multitude of suckers or shoots that usually spring up from the roots, and giving a tree-like form to the shrub, enable the fruit to ripen better, and give a better flavor. There are three kinds of the currant grown, the red, white and black. The last is principally cultivated for medicinal purposes; the red is the most common; but we prefer the white, as the fruit is usually larger, sweeter, and has a finer appearance when placed on the table. Red or white currants make one of the richest of jellies, useful in cookery, and valuable for medicinal purposes. A border of such bushes around a garden, while they occupy little space, will be found of essential use, and if not already on the farm should be introduced without delay.

Several varieties of Gooseberries are also known; the larger and more valuable kinds of which have been introduced from abroad. They are, however, more subject to disease, than the native kinds, and are not in general as finely flavored. There are two kinds of the native varieties easily grown, not subject to disease, and great bearers, the smooth and the prickly varieties. The first is a rich flavored fruit but small; the last is larger, of equal flavor, but covered with prickles that detract largely from its value. Gooseberry bushes may be raised from seeds, or grown from cuttings or suckers. They should be produced in such a way as to keep the stem clear from shoots ten or twelve inches above the ground. Gooseberries make a fine wine, the best of jams, and a sweetmeat or preserve of the most delicate quality.

Culture of the Pea.

Mr. E. Bishop, of Washington co. Md., has requested some information on the culture of the pea—"the best kind for field cultivation—the time of sowing—the quantity of seed per acre—the best mode of preparing the land—the best mode of harvesting—and the best mode of feeding."

The pea is one of the most valuable crops grown in the country, not only on account of its own intrinsic worth, but for its use as a preparation for othor crops, particularly wheat. In all our wheat districts it is therefore extensively cultivated, and here as in England is considered next to the root crops as a preparative for that grain. The soil best adapted to the pea is one that is good for wheat, and where that grain is certain, peas may be considered so. The preparation of the soil demands nothing peculiar; it must only be made in good order for seed, in the manner required for other spring crops, by being well plowed, harrowed, and if necessary manured. If manured too highly, however, the vine or haulm is apt to be too abundant, and the pea itself inferior in quantity and quality. In this as in most other cases too great a growth of vine or straw is incompatible with great crops of pulse or grain. Lime in all countries has been found an essential ingredient of pea or wheat soils; and where it does not naturally exist in them, should be applied previous to attempting the culture of these crops.

The kinds of pea most usually cultivated as a field crop, are the small yellow pea and the marrowfat. We prefer the latter; as it is equally certain with the other, is excellent for the table as well as for feeding, is as nutritious for animals, and generally more productive. In some situations, or in exhausted soils, the small yellow pea may however be preferable. From thirty to forty bushels per acre is not an uncommon crop, and this highest amount is often exceeded. The quantity of seed required per acre may be stated at two and a half bushels, although some use only two, and some put on three bushels per acre. For covering the pea the cultivator is a very good implement, as it gives them more earth than the harrow and less than the common plow. The ground should be left smooth by the roller or otherwise, as the ease of gathering is greatly depending on the state of the surface.

In harvesting the pea some farmers hook them up with a scythe, some rake them by hand with the common hay rake, but the most expeditious method by far is to use the horse-rake in gathering this crop. In whatever way peas are gathered, it is necessary they should be ripe, and of course if very dry at the time, there will be some loss by shelling, but not perhaps more by the horse-rake than by the other methods, and four-fifths of the time required by the two first methods is saved. This, where the land is to be put into wheat, is frequently of great consequence. Once gathered, there is no crop so easily thrashed and prepared for market as the pea, and few that better reward the cultivator.

There is no plant cultivated which will bring pigs forward more rapidly than the pea, if the feeding is commenced as soon as the peas begin to harden, and the whole plant is fed out to them. When gathered and hard, two methods of feeding have been adopted, both of which are far preferable to the barbarous practice of giving swine the pea without any preparation. The first is to soak and swell the pea in milk if it can be had, if not, in water, and feed it to them in that state. The second is to grind the pea, either alone or with other coarse grain, and feed it to animals in that way. This is preferable to feeding whole, as in corn or any other food, the finer it is made the more readily it will be assimilated, and in all cases if cooked into pudding the advantage will be decisive. In England where corn can not be grown, a mixture of peas and barley is considered superior to any other food for making pork; here, closing the process of fattening with Indian corn as giving more firmness to the pork, is preferred.

The greatest enemy the pea has to encounter is the *Bruchus pisa*, or pea-bug, which deposits its egg in the young pea by perforating the pod, and the larvæ or grub of which remains in the pea till the period of transformation. To avoid this enemy some have proposed to use seed that was two years old, as in this case the seed must be free from the insect. Others have proposed to sow so late in the season as to have the period in which the bug deposits its egg pass before the plant blossoms or the pod forms. To do this the pea must be sown as late as the 10th or 15th of June. The pea is a very hardy plant, little liable to be injured by late spring frosts, and hence when intended to be followed by wheat or required for an early market, they should be sowed as soon as the ground can be fitted for their reception in the spring.

Notices of Publications for the Farmer.

The American Swine Breeder.

The want of such a manual as the one now before us has long been felt by the farmer, and we are glad the work of preparing it was undertaken by one so competent. Mr. Ellsworth, the writer or compiler of the treatise, is a resident of the Upper Valley of the Wabash in Indiana, with which fertile district of our country his book on the Wabash had made us acquainted. Indiana is the paradise of pigs, if we are to credit the accounts given of the quantities of corn raised there, and the liberality with which the pigs of that region are allowed to feed upon it; and Mr. Ellsworth has turned to very good account not only what may be learned from personal observation with regard to the qualities, habits, and diseases of these animals, but appears also to have consulted some of the best sources of information on these topics both foreign and domestic.

Mr. Ellsworth has given us a volume of about 300 pages, divided into six chapters that treat successively of the different breeds of swine in Europe and in this country—best means of improving the stock, rules of breeding, and general treatment—styes with reference to convenience, feeding, troughs, and making manures—the comparative advantages of raw and cooked food; theory of nutrition, and description of several kinds of apparatus for the preparation of food—best modes of feeding, best kinds of food for making pork, treatment in fatting, killing, salting and smoking—diseases of swine and their remedies, with general remarks on killing hogs and curing hams.

It will be seen from this imperfect notice of its contents, that this volume occupies the whole ground in the growth, treatment, and fattening of pigs; and it is one which we have no doubt will be found very useful to every swine breeder or pork maker in the country. On one point, however, we must caution the American reader. In the modes of feeding recommended from European writers, is one spoken of very highly by a Mr. Saunders, that of using *hay tea*. Mr. Burnham of Roxbury, the present season, acting on this suggestion in this volume, has tried hay tea, and attributes the loss of some 40 animals of the most valuable breeds to its use, producing an obstinate costiveness, inflammation and death. Mr. Burham's letter may be found in the New England Farmer, and an abstract of which will be given in the next number of this paper.

The Farmer's Instructor—2 vols. pp. 276, 247.

The preparation of these volumes for the use of the American farmer, and as a part of the District School Library publishing by the Messrs. Harpers, was one of the latest labors of Judge Buel, and with the Farmer's Companion, a work written expressly for the Massachusetts School District Library, will establish his fame as an agriculturist, and writer, and give him a well-founded claim on the gratitude of every cultivator of the soil.

Although in some degree a compilation from the pages of the Cultivator, the new arrangement of the matter, and the connecting notes, give the volumes all the value that could have belonged to them had they been entirely re-written. In the rich miscellaneous department of these volumes will be found collected a vast amount of practical information on almost every topic of interest to the farmer. It is unnecessary to say that the volumes are got up in excellent style by the publishers, and will be worthy of a place on the shelves of every agriculturist in the country. The addition of such volumes will give the New-York School District Library a character and usefulness it could not otherwise possess.

Blacklock's Treatise on Sheep.

We have before us the last Edinburgh edition (1839) of this excellent work, and would suggest that a republication of it in a cheap form would be a valuable present to the sheep growers of this country. It is less extensive than the volume published by the London society, but very full and practical in its details, and its arrangement is greatly improved in the present edition. It contains a number of illustrative engravings, relating to this valuable animal and the diseases to which they are subject. The contents of the several parts are as follows: 1st, History of the Sheep; 2d, Wool; 3d, Wool trade; 4th, Improvement of the Breeds; 5th, Management; 6th, Accidents and operations; 7th, Diseases and their Remedies.

We shall probably have frequent occasions to draw upon the volumes we have mentioned for the benefit of our readers, and have made such arrangements as will ensure the earliest receipt of all foreign agricultural publications and periodicals likely to be useful.

Maple Sugar.

Perhaps there are few trees in the American forest of more value than the maple, (*Acer saccharinum.*) As an ornamental tree, it is exceeded by few; for fuel it is only equaled by the hickory; its ashes abound in alkali, and from it a large proportion of the potash of commerce is produced; and its sap furnishes a sugar of the best quality, and in abundance. Sugar has become not only an object of luxury, but of utility, to such a degree that a supply of it constitutes an important article of importation, and is of national consequence. For sugar the world has hitherto relied on the cane, with the exception of some parts of India, where the sugar palm yields it much more cheaply. The sugar cane is, however, a tropical plant, and of course its cultivation must of necessity be limited to such hot countries. France, during the wars of Napoleon, shut out from her India possessions or deprived of them, commenced making sugar from beets, and it proving unexpectedly successful and profitable, it has extended not only over that empire, but nearly the whole of continental Europe, where it forms an important item in their system of cultivation and profit. The manufacture has been attempted in the United States; but though the facts of the case and certainty with which tke beets may be grown, and their great value for stock has been fully ascertained, still little progress in the production of sugar has been made. The introduction of any such object of general culture, the history of the cotton and silk business in this country shows must be gradual, and rather the result of individual effort, than combined operations. The whole interior of the northern part of the United States have relied, and still rely, more on their maple woodlands for sugar than on any any other source, and as a branch of domestic manufacture and home production, the business is of no little consequence. The time occupied too in the business is very limited, and occurs at a time when very little of other labor can be done.

The process of making maple sugar is very simple and easily performed. The trees must be of suitable size, and within a convenient distance of the place where the operations of boiling, &c. are to be performed. Tapping the trees to procure the sap, is best done with a half-inch or three-quarter auger, penetrating the wood about two inches, and spouts made of alder or sumach inserted to convey the sap to the buckets. When gathered, the sap should be boiled as early as possible, as the quality of the sugar is in a great degree depending on the newness or freshness of the sap. There is a tendency to acidity in this fluid, which produces a quick effect in preventing the making of sugar; and which when the sap is obliged to be kept for many hours in the reservoirs, must be counteracted by throwing into them a few quarts of slaked lime. During the time of sugar making, warm weather, in which the trees will not discharge their sap sometimes occurs, and the buckets become white and slimy, from the souring of the little sap they contain. In this case, they should be brought to the boiler and washed out carefully with hot water and a handful of lime to each.

In reducing the sap, the great danger to be apprehended is from burning the liquid after it is made to the consistence of molasses, since, when this is done, it is impossible to convert it into sugar; a tough, black, sticky mass of little value being the result. Indeed constant care and attention is required to produce a first rate article; for though sugar may be made in almost any way where the sap can be procured, yet unless the strictest neatness is preserved in all the processes, in gathering and boiling the sap, in clarifying the syrup, and in converting the syrup to sugar, a dirty inferior article will be made instead of the beautiful and delicious sweet which the maple properly treated is sure to yield.

The quantity of sugar produced in a year, varies considerably from the same trees. The cause of this difference is to be found in the depth of snow, continued cold, or a sudden transition from cold to warm, thus abridging the period of sugar making. A sharp frost at night with still warm days, are the most favorable to the sugar maker. Perhaps four pounds of sugar from a tree may be a pretty fair average of seasons generally, although we have known the growth to exceed six pounds, and sink as low as three. A man will take care of one hundred trees easily, during the season of making sugar, which usually lasts from about the middle of March into April, perhaps employing him twenty days in the whole. Dr. Jackson, in his report of the Maine Geological Survey, gives the following instances of the production of sugar in that state.

	Lbs. of sugar.
At the Forks of the Kennebec, 12 persons made	3,650
On No. 1, 2d range, one man and boy made	1,000
In Farmington, Mr. Titcomb made	1,500
In Moscow, 30 families made..................	10,500
In Bingham, 25 families made	9,000
In Concord, 30 families made.................	11,000

Fortunately, we are at last to have the statistics of this important branch of domestic industry investigated, sugar being one of the items to which the attention of the Marshals employed to take the census of the U. States is to be called, in the agricultural department of their labors. We think the aggregate will be found to exceed the expectations of most of our citizens, and be found not one of the least interesting of those branches of industry belonging to the soil.

Soils.

The *soil*, strictly speaking, is that part of the earth's surface, in which the elementary earths, such as silex, alumina, lime, &c. by atmospheric contact, and combination with vegetable and animal matter, are changed into a mass fertile, or capable of supporting a profitable vegetetion. It is evident, therefore, that in most cases in uncultivated lands, not subject to the deposition of vegetable matter, the depth of soil must be inconsiderable. On lands of a rather porous texture, the soil will be deeper than on those more compact, owing to the greater ease with which the decaying particles of matter penetrate such earths. The depth of soil, and this is a point on which the question of fertility mainly depends, may be considered as depending in the first place on the combination of fertilizing materials with the original earths, by a natural process; and secondly, on the artificial exposure and combination of the earths and fertilizing matters, that take place in cultivation. In a region or on a farm in which the earths are properly proportioned, the soil may be made by skilful management, and very easily, of any required depth; nothing more is necessary than to mingle the proper materials to the desired depth, and the work is done; but such instances are comparatively rare, and in overcoming the obstacles that present themselves to the formation of soil, the aid of science, and the skill of the agriculturist is most put in requisition.

It is rarely found that, in cultivated lands, the depth of the soil exceeds that to which the plow penetrates; and the farmer, and the best rotation of crops, is the one that most effectually deepens and promotes the formation of a soil favorable to vegetation. A good soil can not be formed or preserved in which water is constantly present near the surface, nor can such a soil exist where the earths are so porous, and possess so little adhesive power, that the fertilizing materials placed upon it, sink by infiltration beyond the reach of the plant. In the first case the remedy is draining, thorough draining. Without this no effectual amelioration can be accomplished, and when this is done, exposing the earth to atmospheric agency, or supplying the materials in which it may be defective, will make a fertile soil as low as it is moved. In the second case where there is too little adhesion, the way to convert the earths into soil, is to add such substances as possess this power, and of these clay is the most effectual. In order to determine the precise proportions of the earths in any soil, analysis is requisite; but every farmer can determine whether his soil is too wet, tenacious, or too light, whether sand or clay predominates, and it is on the relative proportions of these two substances, that the easy or difficult cultivation of a farm, or the conversion of the surface earth into soil, depends.

If we suppose that soils suitable for the nourishment and growth of plants, are not usually found lower than the earth is stirred in the processes of cultivation, its average depth can not be considered more than six inches; as it is believed that more plowing falls short of that depth than exceeds it, and trenching or spading has not been introduced into this country, as a part of field cultivation. Some of our best farmers have, it is true, by increasing the depth at each plowing, brought the depth of soil fit for the support of plants, as low as twelve or fifteen inches, and their crops show the immense advantages derived from the extra range thus given to the roots of the vegetables grown. Parts of Belgium and Holland, which, half a century since, were wastes of drifting white sand, are now the most fertile lands in Europe. The clay necessary to produce adhesion and retain moisture, was found immediately below the sand, and was brought to the surface by spading. A course of cropping, calculated to promote fertility in such soils, has been adopted and with astonishing effects. In some districts, however, where the sands are unusually light, at the end of each course of cropping, or once in five or six years, spading is again resorted to, though by cultivation, this becomes less necessary, and may in all cases eventually be dispensed with.

A few calculations may assist us in forming an estimate of the quantity of the earths, or the vegetable matter existing in the soil, and the quantities required to render it fertile, when the deficiency is ascertained. Dr. Jackson, as reported in the New-England Farmer (vol. 18, page 271,) gives the following example of calculating the weight of a soil, and of its manure.

"Let the specific gravity of a soil be 1,277—water being 1: then one cubic foot of water weighing 1,000 ounces, a cubic foot of the soil would weigh 1,277 ounces, or 79,187 lbs. An acre of land contains 43,560 square feet area, and if we estimate the cubic foot of soil as weighing 79,187 pounds, or half a cubic foot, at 39,152 pounds nearly, supposing we wish to calculate the weight of an acre of the soil for the depth of six inches, the usual depth of tillage, we have a weight of 1,719,620 lbs. or 859 tons nearly, as the weight of an acre of the soil to the depth of half a foot. If the soil on analysis contain 9½ per cent of vegetable matter, 3.2 per cent being soluble, and 6.3 unsoluble, it would give 81½ tons of vegetable matter to an acre of six inches in depth." And the Dr. adds that, in a similar way, by estimating the per cent of lime, silex, clay, &c. in any soil, the weight per acre may be easily ascertained.

If we, with Dr. Jackson, suppose every acre of land to the depth of six inches, as weighing 800 tons, (this is the soil exclusive of stones,) then an inch of this soil will weigh 133 tons nearly; or one ton and one-third of a ton would be required to over an acre to the depth of the one hundredth part of an inch. If we suppose a soil to contain 60 per cent of silex, or sand, twenty-five per cent of alumine, five per cent of carbonate of lime, and ten per cent of vegetable matter, soluble and insoluble, then the quantity in tons in every acre of land, to the depth of six inches, of these several substances, would be as follows:

Silex, or sand,....	480	tons.
Alumine, ...	200	"
Carbonate of lime, ...	40	"
Vegetable matter, &c., ...	80	"
	800	

Repeated analysis shows that a soil constituted in about the above proportions will be a fertile one, and when the quantity in tons of any particular earth in a soil is known, the tons required per acre to raise it to any given standard, can be ascertained at once. Thus, if eighty tons of vegetable matter is requisite to form a fertile soil, and analysis shows that it does not contain more than from ten to twenty tons per acre, there can be no difficulty in determining the nature of the substance to be added, or the quantity required. It is very necessary that the amount of vegetable and animal matter in a soil should be understood, as many farmers, if their conduct be allowed to testify, seem to suppose that on an exhausted soil, the addition of ten or twenty tons of manure, is an abundant supply. The same remarks will hold good as to the addition of earths. Thus, on a soil containing eighty per cent of silex in the six inches of soil, twenty loads or tons of clay, mixed with the sand, will add such a per cent to the mass as to render it adhesive and productive. The application of a ton of lime to an acre, though only equal to one-fortieth of that in a good soil, will in most cases, cause a material change in the quality and action of the soil. The quantity of gypsum in soils is still less than that of lime, and a less quantity in proportion to the whole mass, is found to be efficient.

Culture of Rape.

We are not aware that any efforts have been made in this country to introduce the culture of rape, which in England and on the continent is deemed one of the most valuable of crops, and enters extensively into all their systems of rotation. According to Decandolle, there are two kinds of this plant; one the *Brassica napus*, the one commonly cultivated in Great Britain; and the *Brassica campestris*, the one usually grown on the continent, and according to him the most productive. In England it is frequently called *coleseed*, and in France and Germany *colsa*, but in both countries is highly prized for the excellence of the oil its seeds yield, and the value of the rape cake for feeding animals, its qualities in this respect resembling the oil cake from linseed. According to Decandolle, the *B. campestris* has a rough, the *B. napus*, a smooth leaf.

Rape, as its name *Brassica* indicates, belongs to the cabbage or turnep family, but it never heads like the former, and its roots are of little value compared with the latter, yet it forms an excellent green crop for feeding sheep, and when grown for its seeds, is excelled in profit by few other crops. It is biennial, that is, it requires two years to complete its growth, and ripen its seeds; being sown in July, and perfecting its seeds in the August of the coming year. When used for fattening sheep, the plants are fed off green in the fall, in the same manner as the turnep. According to Loudon, the place which a rape occupies in a rotation, is between two culmiferous or grain crops. "On rich soils it may be succeeded to the greatest advantage by wheat, as it is found to be an excellent preparation for that sort of grain; and by its being taken off early, there is sufficient time allowed for getting the land in order for sowing wheat."

The preparation of the land for rape is the same as that required for cabbages or turneps, and the soil which suits the last will be the best for the first of these plants. It may be sown broad cast or in drills; suffered to stand where sown, or be sown in beds and transplanted, but in any case the ground must be kept clear of weeds, and the plants properly hoed and thinned. The mode of culture is essentially the same as that of the turnep. When grown as food for sheep it is sown earlier, is fed off by animals on the ground, as the turnep, and wheat is sown immediately after; when grown for seed, it is sown later, and the seed being gathered in July or August, wheat follows.

In Notes on the Agriculture of Germany, by Mr. Carr, an English gentleman, he says the after course is as follows:

1 year, fallow, well dunged.
2 " rape.
3 " wheat.
4 " barley.
5 " peas, light dunging.
6 " rye.
7 " oats, with rye, or timothy grass seeds, and red clover.

The clover and peas plastered in May. The clover is mown twice for hay, and left two years for pasture, when it is heavily manured, fallowed, and again sown with rape. "The rape seed is sown broad cast in the last of July or first of August. This crop is greatly benefited the following spring by dusting gypsum over it, about one hundred pounds to the acre. In July the seed is ripe, and as the weather is generally fine, is trodden out by horses very expeditiously on large canvass sheets in the field. The oil of this seed pressed out, when purified, is without smell, gives a brilliant, clear, burning flame, and is universally used all over Germany, in the saloon of the rich and the cottage of the poor. The value of the crop is somewhat precarious, because it is subject to so many contingencies; the turnep fly, and caterpillar prey upon it when young, and when in flower, a small beetle (*Haltica nemorum*) often eats away the blossom bud, or lays its minute larvæ n the petals, ultimately furnishing every seed pod with a maggot which either eats the seeds away, or forcing the pod open when nearly ripe, causes it to fall out. When spared these calamities, it is, however, a very remunerating crop, worth from 10*l* to 20*l* an acre, especially if there is a foreign demand. The straw is generally burned, and the ashes scattered over the field; it is sometimes sold to the soap makers who prize it highly. Two furrows are now given for wheat sown broad cast in September."

We can see but one serious obstacle to the culture of rape in the northern states, and that is the rigor of our winters which might endanger the safety of the plants; an obstacle of course that would not exist farther south. That it would be valuable, could it be safely cultivated, there can be no doubt; the oil and the cake would insure such a result. In many instances on good lands, the proceeds of the first crop have more than equalled the price of the land. If any of our readers have attempted the culture of this plant, we should be pleased to learn the result, that we may give it a place in the Cultivator.

Best Cows for the Dairy.

"Messrs. Editors—I am a small dairyman, and I am anxious to have the best cows. Those I have at present are of the common breed, or perhaps a tinge of Devon blood, red and good looking animals, and I have taken some pains in the selection of pretty good milkers. But I find by experience that a good cow may have a poor calf, or in other words, that there is no certainty the progeny of a good milker will possess the quality of the parent. Is there no way to insure such a result, or can not a cross be given that will give good milkers with a good degree of certainty? I should like to have your opinion on this point; and also on that of the best means of obtaining such a certainty.

Inquirer."

Experience shows to make any permanent change in a breed of cattle, is the work of time and skill; and the procuring a breed possessing the desirable properties of being good milkers and having such quality permanent and certain, can not be expected without calling into action the facts collected by a long series of experiments and observation. That it can be done the success of Mr. Jacques in the production of his celebrated *cream pot* breed, of which Mr. Coleman has given so interesting an account in his Report on the Agriculture of Massachusetts, proves. Mr. Jacques' animals were the product of the common stock with an intermixture of the Short Horn foreign blood, and by careful selection of the best of the breed, for milk of superior quantity and quality, he gave them the distinction they have justly obtained. That the course pursued by that gentleman would be successful in the hands of others we have no doubt; and a similar process we should recommend for this purpose.

"Inquirer" says his cows are good milkers for common ones. Let him then cross them with a full blood Short Horn bull; and the progeny would hardly fail of being good milkers. Let him continue the process not of breeding from these crosses, but selecting the best milkers from them, for crossing, as at first, with the pure Short Horns. In this way there would doubtless be animals of the quality required, produced; and in time these qualities would become constitutional, and of course permanent.

We would recommend the Short Horns for this purpose, because their excellence for quantity of milk is placed by the experience and usages of the great dairymen about London beyond a doubt. Mr. Youatt says that—"The number of cows kept for the purpose of supplying the inhabitants of the metropolis with milk is about *twelve thousand*. They are, with very few exceptions, of the Short Horn breeds—the Holderness or Yorkshire cow, and almost invariably with a cross of the improved Durham blood. The universal preference given to this breed by such a body of men, is perfectly satisfactory as to their value, and that on three distinct points." These are, first, the quantity of milk; and as these cows are kept for their milk, the single fact of their being selected by these men of experience, is in in itself demonstrative. The second point is the quality of the milk; and though the cream of these cows is a secondary article of profit, yet they are found better even on this point, as a whole, than any other breed that could be selected; and thirdly, as few of these cows are allowed to breed, but are fattened as dried up, the fine beef and its high prices, turned out from these dairies, proves that good milking and easy fattening are compatible with each other.

In corroboration of these statements we mayadd that many of the imported Short Horns in this country have proved superior milkers, and indicate qualities in this respect deserving of particular attention in breeding. The Rev. Mr. Berry's stock, so famous in England for their union of excellent qualities, were Short Horns, and were as highly prized for their milk as for their superiority in other respects.

DICTIONARY OF TERMS

USED IN

Agriculture and its Kindred Sciences.

ATMOSPHERE. That mass of thin, elastic, and usually invisible fluid, in which the earth floats, and with which that and other bodies are surrounded. The height of the atmosphere is calculated at 46 miles; its pressure on the earth to be equal to that of a column of water 32½ feet high, and on the body of a middling sized man at 32,440 pounds. The density of the atmosphere diminishes in geometrical, while the height increases in arithmetical progression. In all the functions of animal and vegetable life, the atmosphere acts a most important part. It is composed of oxygen and hydrogen, carbonic gas, aqueous vapor, and a minute quantity of hydrogen. In addition to these permanent ingredients, it contains a multitude of other substances, in the form of vapor or gas, varying in kind and quantity according to circumstances, but all exercising more or less an influence on the animal and vegetable kingdoms. Of those that effect the animal, that undetermined something called *miasma*, which produces diseases to such an extent as to render some of the most fertile districts of the globe scarcely habitable, may be adduced; and of those that act on the vegetable, the ammoniacal products, the result of fermentation, may be mentioned. By stirring the earth, the absorption of these atmospheric agents is greatly promoted, and the consequent vegetation of plants proportionably accelerated.

AWNS. The long bristle-like terminations of the envelop of the kernel in some kinds of plants, is termed the *awn* or beard. It is particularly conspicuous in some kinds of winter wheat, in most varieties of spring wheat, and in all the kinds of barley. Wheat without beards can be converted into the bearded, and vice versa by changing the sowing from autumn to spring, or from spring to autumn. Of all grains, barley is the most liberally provided with this formidable appendage.

AZOTE. A gas, which constitutes the most important portion of the air, and is sometimes called nitrogen, because one of the most essential properties of its base is, that in conjunction with oxygen, it composes nitric acid. Though in itself fatal to animal life, it abounds in animal substances, and forms ammonia with their hydrogen when burned. The great difference between animal and vegetable substances lies in this, the former contains azote, and the latter is destitute of it. Owing to its feeble affinity for other substances, the number of compounds into which azote enters is small, and its influence on agriculture, with the exception of its effect when combined with animal matter, proportionably limited.

BACON. The flesh of swine that has been subjected to the process of smoking over a wood fire, is termed bacon; but the parts to which this term is most usually applied, and which are usually chosen for bacon, are the hams, and the cheeks or jowls. A good ham is one of the most excellent kinds of food, and this goodness in a great measure is depending on their preparation. The kinds most celebrated, are the Westphalia, principally brought from Hamburgh; the Hampshire, from England; and in the United States, the Virginia, or southern ham generally. It is not known that there is any thing peculiar in the feeding or pickling the Hamburgh hams; but their superiority is attributed to the manner in which they are smoked. This is performed in large chambers in the third or fourth stories of buildings, to which the smoke is conducted in tubes from fires of oak or maple chips in the cellar of the building. In passing this distance, the vapor which smoke usually holds, is deposited, and the hams are perfectly dry and cool during the whole process The Hampshire bacon is made from pork not scalded in dressing, but deprived of the hair by quick fires of straw or other combustible materials. This singeing is repeated two or three times as the case may require, when the hog is cut up, pickled and carefully smoked. These hams are particularly hard and fine, which is attributed to the skin not having been softened by scalding. The Virginia or southern hams, are supposed to owe much of their superior flavor to the animals being allowed to run at large the most of the time of feeding; to their being much in the woods, and wild, giving more firmness to the muscle; and to their feeding much on acorns and other products of the forests. Virginia hams are usually small, the hogs themselves rarely weighing over two hundred: And the pickling and smoking performed in the best manner. The great defects in smoking, commonly are, the hams are too near the fire; and the house is too tight. The hams are in consequence kept too warm from the fire, and the condensation of the vapor keeps them wet. Dryness while smoking is indispensable to good bacon.

BARK. Modern writers on vegetable physiology divide plants into *exogenous* and *endogenous*; in the first of which, the additions that constitute growth are made successively on the exterior side of the parts from which they proceed; and in the last the growth is the result of additions made internally. The trees of northern regions, such as the pine, oak, and elm, belong to the first class; the trees of tropical climes, such as the palm, cane, bamboo, and all grain bearing plants, belong to the last. The first named trees or plants, only, have a proper bark. In this class of vegetables, every year adds a new layer of wood which is the *alburnum;* and a new layer of bark, which is denominated the *liber*. Bark, then, is divided into three parts; the inner layer called the liber; the zone of successive outer layers, called the cellular envelop; and the exterior surface of this envelop, which is termed the epidermis. A cross section of the bark of the basswood or elm, will exhibit this structure in perfection. The bark exercises an important influence in preserving plants from the effect of frost, and the alburnum from injury, and cannot be removed without inflicting severe or fatal injuries to the trees. A healthy and clean bark is essential to a vigorous growth; and an occasional wash of soap, lime, or ashes, is found beneficial, when trees are attacked by insects or mosses.

BARLEY. One of the common cultivated grains, in use from time immemorial, and extensively cultivated in modern times. It has a thick spike, with long awns attached to the kernel. It is divided into several kinds; of which the most common are the long eared, or two rowed barley, the square or six rowed, and sprat or battle door barley. The six rowed is most commonly cultivated in the north of England and Scotland, having the reputation of being the hardiest plant. In this country the long eared or two rowed has usually obtained the preference; producing a whiter, fairer grain, and smutting less than other kinds. Barley in this country is principally used for malting; in other countries it is extensively used for bread, and for feeding cattle. Barley has met with little favor in this country as food for horses, but there is nothing improper in the grain, as is evident from the fact that barley is almost the only grain given to horses in the east, where the best and finest horses are found. The difficulty lies in the mode of feeding. Barley is one of the best substitutes for corn in making pork. It requires a rich soil, rather moist than dry; and the ground should be made fine before the seed is sown. From two to two and a half bushels of seed per acre, is the usual quantity allowed.

BAROMETER. An instrument for measuring the weight of the air. Torricelli was the inventor, about the beginning of the 17th century. Torricelli reasoned, that as the pressure of the atmosphere was equal to a column of water about 33 feet high, mercury, which is nearly 14 times heavier, would rise about 30 inches, and the result justified his conclusion. The changes in the height of the column of mercury preceding, or during changes of the weather, have given great value to this instrument, and obtained for it, among common people, the name of the *weather glass*, as foretelling the weather. It is a most valuable instrument at sea; its rapid fall previous to violent storms, putting the mariner on his guard, and since its use has been understood, has been the means of saving many valuable vessels and lives annually. It might be of essential service to farmers; but as yet has not received from them the attention it deserves, as connected with meteorology, a science in which they are so much interested.

BASIN. A term in geology used to designate a section of country converging to a point lower than the remainder, which part is most usually occupied by lakes, swamps, or rivers. Thus we speak of the basin of the Hudson north of the Highlands; that of the Mohawk above Little Falls; or the basins of Lake Erie, and Lake Ontario. The best defined basins of Europe are those of London and Paris. The first of these basins is a bed of clay in some places 700 feet in thickness. The basin of Paris is formed of chalk, alternating with limestone, marls and gypsum.

BAULK. Ground left unturned between the furrow slices in plowing, and also strips of ground usually in grass between plowed ridges, as in common field lands. These are the European definitions; in this country farmers give the term rather wider definition, and include the strips of grass land that border plowed fields, and occupied by fences, &c. When fences are removed such baulks are found the richest part of the fields. Few things indicate more clearly the general skill and conduct of the farmer than the baulks of his fields. The skilful plowman is at once distingushed by his baulks, or rather by the absence of them, except where prevention is impossible. In such cases every precaution is taken to keep them from weeds, and rubbish of all kinds.

BEAN. The plants that come under this designation are of two species, *Phaseolus* and *Vicia*. To the first belong the varieties of pole and bush beans usually cultivated in gardens; while the last, *Vicia faba*, is the bean known as the Windsor or horse bean, cultivated extensively in England as a field bean, and considered as of great value as food for animals of all kinds. In Europe, the bean is used, mixed either with peas or oats or alone, ground into meal, for feeding horses, fattening pork, or even as food for man. It is considered one of the most nutritive kinds of food; but in this country is little used, corn meal being considered a preferable substitute to bean meal, either for man or beast. The prices which are obtained for the common white bean, would seem to render it a proper article of culture on light soils, where it succeeds better than on those of a heavier kind.

BEER. A liquor produced by brewing together malt, hops and water; and when properly made is a nourishing and wholesome drink. Beer is, however, like most of the other liquors of commerce and trade, adulterated to a frightful extent by the introduction of ingredients of a cheaper nature than malt or hops, if not absolutely noxious or poisonous in their effects on the system. The quantity of beer consumed by English laborers is astonishing; especially during harvest, when it is provided by the employer. The greater part of the barley grown in this country as well as in England is made into beer; though the establishments for the manufacture here are on a small scale, compared with the magnificent and expensive ones of that country. If the good old home brewed beer, from malt and hops, could be substituted for strong beer or whiskey among the classes that consume the most of these drinks, we think the health and morals of the country would receive a decided improvement.

BEET. A common vegetable of which there are several varieties, such as the scarcity and common beet of our gardens; the mangel wurzel or field beet, cultivated for cattle; and the white Siberian beet, grown principally for the sugar manufacture. The mangel wurzel is a valuable root, producing heavy crops, and being excellent food for sheep, fattening animals, and for milch cows. It requires a rich loam. The manufacture of sugar from beets in its most improved state consists in slicing the roots thin after they are well washed, drying them thoroughly in ovens, grinding them to powder, and then by putting this powder into water, dissolving the sugar while the fibre and the mucilage, which rendered the crystallization difficult, remains unchanged, and is separated from the sweet solution by straining. This is then evaporated, and the syrup crystallized in the usual manner. Beets thus treated yields from eight to ten per cent. For cooking, medium sized beets are to be preferred, as they are found to be sweeter, and less fibrous than those of larger size. Unlike most other roots, beets are fit for use, as soon as they attain a sufficient size; but it does not attain its full perfection till October, and when wanted for winter use; should stand as long as consistent with safety from frost.

BEE. (*Apis mellifica, L.*) A hymenopterous insect, of the family *Apiaria*, and well known as the honey bee. The valuable products of this insect, and its singular habits and instincts, have caused it to receive more attention than has perhaps been given to any other, (unless the silk worm is excepted;) and the naturalists of Europe, among whom we may mention Reamur, Cuvier, and Huber, have each largely written on this subject. The treatise of Huber is a model of such investigation and writing, and though later observation would seem to indicate that on some points he had been mistaken, still his work is likely to remain the standard authority in the natural history of the bee.

There are three sorts of individuals that make up a community or hive of bees. The female mother, or as she usually is called the *Queen;* the males or *drones*, and the *working bees*. These last have been improperly termed *neuters*, since the experiments of Huber show they are females, and may at the pleasure of the community, and by an interesting process, be converted into the prolific Queen of the hive. Reamur asserts that the female in the spring lays as many as 12,000 eggs, in the space of 24 days. The product of the bee is of four kinds: the honey, wax, pollen, and propolis. The *honey* is drawn from the flowers and undergoes little change as is evident from its occasionally partaking of the narcotic or intoxicating effects of the plants from which it is derived. Age usually deprives it of these noxious qualities. The *wax* is elaborated from the honey by the bee. It is formed between the abdominal rings of the working bees, into plates, and is used for making the combs. The *pollen* or '*bee bread,*' under different modifications appears to constitute a large part of the food of the bees and their larvæ; while the *propolis* is used for lining the hives, closing unnecessary holes, &c. The working bees, and the Queen also, secrete an active poison, which is retained in a small bladder at the root of the stings, and through which it is ejected into the wound by pressure. The Mexicans have a bee, an excellent worker, domesticated like our common bee, but which has no sting, and in its habits is as harmless as the house fly. Several attempts to introduce them into the United States have failed; we believe from their inability to endure the cold of our winters. Mr. Weeks of Vermont, has paid more attention to the bee than probably any other individual in the United States; and he has in several valuable papers given to the public the result of his observations; correcting errors into which others have fallen, and disclosing many new and valuable facts in regard to their habits and proper treatment.

BEEF. Of all kinds of animal food used, it is believed there is none finer flavored, more easily digested, or more nutritious than beef; certainly there is none more universally used as an article of human sustenance. To have beef in perfection it is necessary that the animal should be well fed; that the beast should be disposed to take on fat at the points where it is of the most value; that the pasture should be clean and free from noxious weeds, or if stall feed, that the substances used for feeding should be sweet and such as will communicate no unpleasant taste to the flesh; and finally, if salted, that the pickle should be carefully made, containing salt enough to preserve the meat perfectly sweet, yet not enough to harden the lean to the consistence and color of mahogany. Dried beef, properly prepared is an excellent article, and one which should be found among the stores of every farmer. In the tropical regions beef is preserved by being cut, as soon as killed, into thin slices and thoroughly dried in the sun. Such beef in the language of the country is called jerked beef. In some parts of the world, particularly in Abyssinia, beef is eaten raw. At a feast, the animal is tied to the door post; the flesh is cut from the living beast, is served to the guests, the muscles still quivering with life; and the more distinct this action, the more highly is the flesh esteemed.

Died, recently, at Roxbury, Mass., Hon. JOHN LOWELL, a distinguished agriculturist.

Gratuitous Agent at Washington City.

Our thanks are due to the Hon. J. W. Allen, M. C. for his friendly offer, contained in the annexed letter, to act as gratuitous Agent for the Cultivator. Members of Congress and others at Washington, who wish to procure the Cultivator for themselves or friends, can do so by applying to Mr. Allen.

"*Washington, D. C. Feb.* 13, 1840.

"Gentlemen—I see in your list of special agents, the names of some gentlemen acting gratuitously. I have heretofore endeavored to render some service to the Genesee Farmer, and thereby to the country, by obtaining subscribers for it. I am now taking three copies of the Cultivator, one sent to my residence at Cleaveland and two to me here, which I send among my constituents urging them to send for the paper.

"If you think it will be of any benefit to any body, to put me on the list of *gratuitous* agents you may do so.

"The work is invaluable and if every farmer in the land would take it, down to the citizen who has but his half acre, it would be worth millions of dollars annually to the country. Very respectfully,

"Messrs. Jesse Buel & Co. J. W. ALLEN."

Letter from Mississippi.

To the writer of the following letter, and to the many public spirited gentlemen in various parts of our extended country, who have used their influence to promote the circulation of the Cultivator, we tender our warmest acknowledgments, and assure them, that no efforts will be spared by its editors and proprietors, to make the paper every way worthy the high favor with which it has been received.

"Gentlemen—Coming a few days ago to the capital of our state, to attend a convention for the purpose of organizing a state agricultural society, I thought I could do no greater service to the highest earthly interests of our state, than to promote the circulation of your invaluable periodical. I have done something, but not so much as I fondly hoped I should have accomplished: I will, however, continue my efforts, and now enclose a check for $75, in payment according to your terms, for one hundred copies. Our currency is bad, and I have had to receive all sorts of shin-plasters, and many have not paid, or I should not have availed myself of your premium for subscribers. All the profit I ask, is the comfortable assurance of doing my duty, and promoting so high an interest as that contemplated by your paper.

"Last evening according to previous adjournment, the convention met in the Representative Hall. "The Mississippi State Agricultural Society" was organized, a constitution adopted, officers elected, an executive and general committee chosen, and all necessary arrangements made to give efficiency to the society—and sir, I hail it as the dawn of better times for Mississippi. Soon I hope, instead of our being a hissing and a reproach, our state, with her abundant resources and rich agricultural products, will be as an earthly paradise—for I assure you, our soil, climate, and the general intelligence of our people is not surpassed by any people in the United States. Our difficulties are, and have been great, but out of them all, I hope, our energy and industry, and the blessing of a kind Providence, will soon deliver us. JAMES ELLIOT."

Setting Fence Posts in Stone.

Every farmer is aware the greatest difficulty in making post and board fence, is setting the posts firm enough to resist the action of frosts and winds, that have a constant tendency to lift them from the ground. This is more the case when there is an undue proportion of clay in the soil, than in loose, gravelly soils; and posts in the first instance, will decay sooner than where there is less moisture. What is called the conglomerate rock of geologists, is a mass of clean pebbles cemented together by lime, alumina, and frequently a little oxide of iron; the first being the most important item in the cementing composition. We think this process of nature may be imitated to advantage in many farming processes, and where the materials are at hand, the making of artificial stone, becomes an important part of farming business. What is called *pise wall* is a composition of such a nature. Our cobble stone houses which are becoming so common, and promise to be so durable, also belong to this species of construction; and it seems probable, where suitable sized stones abound, such walls and buildings will become still more common.

In building post and board fence, the following mode would doubtless be an effectual way to secure the posts. Let the hole for the post be dug so as to leave from six to eight inches clear space around the post, when placed in the hole. The posts should be the largest at the bottom, and square; and if larger than they generally are, it will be no disadvantage. They should be set at least two feet into the ground. Let materials for a mortar be provided, consisting of water-lime, clean sand, and washed pebbles about the size of a hen's egg. It is absolutely essential that the sand and stones be clear from dirt. One peck of lime, one peck of sand, and one bushel of pebbles may be allowed for a post, though it is evident the quantity must be variable, according to the size of the hole or post. In any event there must be enough mortar to fill the opening completely, and a trifle over to smooth up against the post to prevent water settling around it. The mortar must not be wet till the hole is ready to receive it. In setting the posts, let a shovel full of mortar first be thrown in, and the foot of the post placed on this in its proper position. The rest of the mortar composed of the lime, sand, and pebbles must now be quickly put in, and if thrown in with some force, so as to drive out all air, and bring the pebbles into contact, so much the better. The operation of filling, and smoothing the surface requires to be done expeditiously, as the mortar sets rapidly; and the posts should not be stirred for some days, as there would be danger of cracking the mass and thus destroying its value. In time this mass would become a genuine conglomerate, firm and durable as the rock itself, rendering it scarcely possible for the posts to be displaced, and if of good materials, little liable to decay.

Where stone suitable for walls are not to be had, farmers must resort to post and board fence as the cheapest and most durable; and any course that shall give greater firmness and durability to the posts, must be of consequence to them. The most durable woods only should be employed for posts, such as cedar, yellow locust, white cedar, red beech, chestnut, &c. and the boards should be put on in the firmest manner; first by nailing the ends thoroughly, and then putting over the place of junction a narrow board secured by spikes or nails made for the purpose. For all common purposes, four boards are sufficient; the bottom one twelve inches wide, and the others eight inches each. These may be placed three, five, and eight inches apart, making a fence more than four feet in height. The cost of such a fence must of course vary according to the cost and quality of materials, and the care used in making; but will most probably in all respects be one of the best and cheapest that can be adopted.

Mr. Lossing's Berkshires.

We have a communication from Mr. John Lossing, a celebrated breeder of Berkshires in this city, on the subject of Berkshire pigs, which will be published in our next. In the meantime, Mr. L. desires us to mention, that he received in October last, four pigs from Reading, Berkshire county, England—two males, and two sows, from different families, for starting a fresh cross; and that gentlemen from abroad, who wish to procure pigs from him this spring, would do well to make an early application.

Cisterns.

The value of cisterns for rain water is not appreciated by those who have not used them, or who having tried them, have been unfortunate in their construction. For most domestic purposes, rain water is far superior to any other; and where cisterns are properly constructed, and secured against external agents, the water filtered will be found the best of any for cooking or drinking. Cisterns as commonly made are too shallow to keep water at a suitable temperature for drinking, but this is not an essential point in other domestic uses. Cisterns may also be of great use for watering animals where other means are not at hand, and may be made of great use where wells can not be obtained.—The average depth of water that falls in this country may be set down at 40 inches; of course common barns, or dwelling houses, provided with proper conductors for the water, will furnish an ample supply of water for a cistern of large capacity.

Cisterns, as generally made in the country, are defective; and probably not one in five answers fully the purpose for which it was designed. The grand object seems to be, not to see how good they can be made, but how cheap. The usual practice is, to excavate a hole in the ground, some six feet deep, and about as many in diameter. On the earth sides of this pit, rough as it must necessarily be, a coating of plaster made from water proof lime and what is called sand, but in reality nothing more than loam, is thinly spread, and the whole covered with plank. The loam has the effect of preventing the mortar from setting; the points of the earth project through the plaster covering so much as to allow water to penetrate through, and render the water within hard, or admit the rain water to escape, and the cistern is condemned. Sometimes it is built up with a wall of small stones, and on these mortar is spread; but in such cases, unless it is plastered over a second time, the mortar sinks from the under side of the stones, and the cistern of course leaks. Bricks are liable to the same objection; but either stones or bricks will make a good cistern if the proper attention is paid to placing them in the first place and plastering the surface afterwards. If made of the right materials, and in the right manner, a cistern will be as hard and as smooth as a stone jar, and as impervious to water.

In building cisterns, as in every thing else, what is once *well* done is twice done, so far as trouble, expense and utility are concerned. Too much pains or care can not be taken in the selection of materials, as if well made, a cistern will last for centuries. The lime should be good, whether common or water proof is used, the sand clean, sharp and coarse, and the mortar should be mixed and used without delay. Stinting the quantity is very bad policy, as in all such cases it will be found, the thicker the wall the firmer it will be.

What is termed "*concrete*," is a mixture of lime, sand and pebbles, in the following proportions:—Pulverized stone lime, not slaked, one bushel; clean sand one bushel; small stones, clean, none larger than a pigeon's egg, four bushels. The whole well mixed together dry; then wet so as to be like mortar, worked over a few times with a shovel, then quickly thrown into the place where it is wanted, not to be disturbed afterwards. Water proof lime ground would be the best, fresh and caustic, but common lime prepared as above, will make in this way a wall solid as stone itself. In making cisterns of this material, the wall is usually formed as much as eight inches thick, and where it is large twelve inches. The pit is first excavated with reference to the quantity of water required, and the deduction to be made for the thickness of the wall. A covering of the proper depth, made as directed above, is placed over the bottom. A tub made of boards in such a manner as to resist some pressure, and at the same time admit of easy taking to pieces and removal, but without a bottom, is now placed in the pit, standing on the concrete, and leaving a space around it of the thickness intended for the wall when finished. The materials, as above proportioned and prepared, are thrown into this open space, until the mass is brought to the surface, or as high as is desired. The whole is now left for some days, for the wall and bottom to set, when the boards are taken out, and a first rate cistern is the result. It may or may not be plastered on the inside; the cistern will look better, but the actual improvement is trifling. The top must be secured by timber and planks, with a covering of earth that will exclude frost; a pump provided; and if the conductors are well arranged, there will be no want of water.

The cost of a cistern will of course depend on the ease with which the materials can be procured, and the nature of the excavation. The quantity required in bushels, to fill the space around the tub, may be easily calculated when the thickness of the wall is determined on, and a full supply of materials should be at hand before the mixing commences. An allowance of about one-fifth must be made for shrinkage in the mortar while setting, and of course this extra quantity of materials, in lime, sand and pebbles, must be provided for. In many places, rain water is the only water to be relied on, and cisterns in such places are made on great scales. Buenos Ayres is one of these. It has been remarked, that when people once become accustomed to rain water for drink or for cooking, they can with difficulty tolerate any other.

Orchard Grass.

Of the grasses cultivated for meadows or pastures, on moist but not wet land, there are few more valuable than the orchard grass, (*Dactylis glomerata.*) It is a very durable plant, springs early, grows with great rapidity when mown or fed off, continues green late in the season, makes an excellent hay, and as pasture, is much relished by all animals. It is particularly valuable as a grass to sow in orchards or woodlands, from which the under brush has been cleared, as it thrives well in the shade, and by occupying the ground in such places, not only furnishes good pasture, but excludes weeds that would otherwise take possession. A mixture of clover, orchard grass, and timothy seeds makes good mowing or pasture; the two last spreading and occupying the ground as the clover dies out. Where the orchard grass is used alone, more seed should be put on than is generally used, as if thin it makes large tufts, and will not mow or feed as evenly as when growing closer. Where frequent rotations of grain crops are practiced, as in some of our wheat growing districts, orchard grass would not be equal to clover, and indeed nothing could be substituted for that grass, for alternating with wheat. Orchard grass seed is quite bulky and light, a bushel weighing under twenty pounds, and hence those unacquainted with its appearance and use, generally but imperfectly seed their land. We have made considerable use of this grass in mowing and pasture, and think it well deserves the encomiums passed upon it in England, and in the best agricultural districts of Pennsylvania.

Bees—Inquiry.

"Messrs. Editors—Can you inform me of the name of the best work on bees; and of the place where it can be procured. I have paid some little attention to them, and should be glad to learn more, as their habits and instincts are truly wonderful; and I am convinced when properly managed, they are a source of handsome profit, and little expense. Apiarian."

Monroe, Michigan, 1840.

John M. Weeks' "Manual, or Easy Method of Managing Bees," is one of the best works on the subject published in this, or any other country; and shows a knowledge of this valuable little creature, not equaled or exceeded by any writer since Huber. Mr. Weeks' hive called the "Vermont Hive," is probably equal to any other hive; and we have observed Apiaries where this hive has been used with the most complete success. We are of the opinion, however, that where circumstances are favorable, rooms of the garret, or even buildings on the earth, when properly made and secured, where the bees can multiply and work without swarming, and where the honey is of easy access without injury to the bees, are to be preferred. The moth that is so destructive to the single hive, is not as seriously felt in these large masses; and the trouble bees occasion in swarming, almost the only one they do occasion, is avoided. Their lives too can be safe, and the barbarous practice of killing them to get their stores is prevented.

Mr. Weeks' book, or pamphlet, of which four editions have been published, may, we presume, be found at most bookstores, and should be in the hands of every man who has the care of bees.

Communications.

Management of Sheep--No. 10.

Messrs. Editors—In my two last, I treated of matters very essential to the welfare of sheep during the winter season; and it is to be hoped that, sooner or later, farmers will learn that it is an axiom, that as the comfort and welfare of their domestic stock is promoted, in that ratio will be their profits.

My present chapter will embrace that which differs not materially from the practice of thousands of wool growers, yet, varying very essentially from the great mass of farmers—consisting of order, full feeding, and regularity of feeding.

As regards economy, I am very willing to concede that I may be behind many others; but this matter will be discussed hereafter—here stating, however, that I am governed, as regards *materials* for feeding, as many others are, by circumstances; which when made known, your readers will perhaps admit that I am not far from the right path. Agriculture, by means of societies for its promotion, is making rapid strides in this country towards perfection; and there is no branch of it, perhaps, in which greater improvements have been made, than management of stock. Still, there are many errors to reform, and much yet to learn—especially in regard to sheep husbandry. I am satisfied that the declaration made in a former number of this series, namely, that management of sheep, with a view to the greatest profit, is comparatively in its infancy in this country, is true to the letter. This remark, however, is intended to be general in its application, not doubting but there are many instances where the highest point of economy has been attained, and thereby the greatest amount of profits realized. But lay not the "flattering unction to your souls," that even one of you has reached this point. I am free to confess that I have not, and the communication of your correspondent "Niagara," in the January number, has fully confirmed me in this belief. No, it will never answer for any man to settle down in the belief that he has attained the point of perfection in any thing; for surely as he does, he will either not advance at all, or begin to retrograde. We ought to be willing not only to make some experiments ourselves every year on a small scale, and make the result known through agricultural papers, but adopt the successful experiments of others. For my own part, I have adopted one of the *improved*, as well as *approved*, methods of management of sheep, in regard to protecting them from the terrible storms of winter. It was with me, at first, an experiment, although having so much true philosophy about it, it could hardly be termed such. It was successful, and ever despising a spirit of selfishness, I have, irksome as it truly has been, communicated all the advantages resulting from it, through the columns of our farming publications, that others might be benefitted likewise. Now, if I have not offered in former chapters, reasons and facts enough to convince all on this point, let such as are yet sceptical, go to work and experiment on a small scale. If they have a hundred sheep, let them select twenty-five of them, embracing all ages; let the sheep be marked, and also their progeny, and be kept entirely separate from others; and at the end of two years, provided they adopt the course of management I have heretofore, and hereafter shall recommend, in all respects, if every position I have taken is not fully confirmed, let them come to me, and the trifling expense incurred for hovels shall be reimbursed. But they will find it no lottery business.

With a view to method, I shall begin with my mode of treatment of lambs.

It has been stated in a former chapter, that at the time of rearing, they are divided into flocks, varying in number, from one hundred to one hundred and twenty-five; a larger number herding together being deemed incompatible with their welfare. About the first of November they are yarded, and graded as to size and condition; and, also, the flocks reduced to about one hundred each. This matter of grading should always be attended to by every farmer; for, although he has not more than fifty or one hundred lambs, there will always be a few, either from diminutive size, or low condition, which require to be separated from the larger and stronger, and extra care bestowed upon them; by neglect of this, formerly, my losses were considerable. At this time, too, there will be found some which need tagging; that is, the filthy locks cut off: this if not really necessary, yet is indispensable to good appearance. For, what *looks* more disgusting, or *sounds* worse than clattering ding-balls: thunder to my ears is music in comparison. The two or three old sheep which were put with each flock at the time of weaning, to tame and facilitate changing from pasture, are allowed to remain with them, for the purpose of learning them to approach the troughs and eat grain, which, at about this time I begin to feed. Use is made of oats, and only about two quarts to the hundred is given for several days; which should be scattered so thinly as to reach the whole length of the troughs. This quantity is not enlarged for a week or more, by which time nearly all will have got a taste, and acquired a fondness for them; after this, the quantity is gradually increased to half a bushel, and this amount is continued to be fed, daily, until about the first of January.

Here I deem it necessary to give my reasons for beginning thus early to grain my lambs, with some other remarks, which I hope will not be thought prolix or digressive.

It is the practice of the great majority of farmers, to allow their sheep to run upon the fields in the fall, *without hay or grain*, as long as the ground is uncovered with snow. This is decidedly wrong, and should be often adverted to by you, Messrs. Editors, in terms of strong condemnation. The grass, it is generally conceded, after repeated freezing, loses much of its virtue to nourish, and, ceasing to grow, the pasture becomes ground into the very earth; and, therefore, sheep can not obtain a sufficiency to keep up their good condition, without the addition of a little hay given once a day, or grain. The diminution of flesh may not be very apparent, yet, depend upon it, they are all the while losing stamina and strength; and so well satisfied am I of this, from experience and observation, that I consider a *late fall* rather an evil, than a good, to the generality of farmers, so far as their stock is concerned. I have expostulated frequently with farmers on this subject, and have been told by some of them, that they did throw out hay to their sheep, but they refused to eat it; but on further investigation it proved to be the *tops* of their stacks, something not worthy the name of hay, and no wonder the sheep rejected it, preferring the decaying grass to such trash. Here, by the way, is a confirmation of my remarks in reference to the utility of barns, made in my last: for there is no time in the month of November, that my sheep refuse to eat *barn* hay; and this arises not from any greater deficiency of pasture than is usual on all farms at this season. I respectfully conjure you, my brother farmers, to reform in this matter altogether. Begin by the middle of November, or earlier, if necessary, to either grain all your sheep a little, or give them a small quantity of hay: let it be good, and they will be certain to eat. Do not think by withholding either, or both, that you are practicing a piece of economy. Verily, Messrs. Editors, I am not a believer in *man ghosts* in these matter-of-fact days, but if the ghosts of departed sheep were permitted to walk the earth, to tell the whys and wherefores they were sent untimely out of this "breathing world," many would shake their woolly locks at us, and say, "we did it," by half starving them in the months of November and December. Peradventure any should appear, I believe, at least, that the ghost of a sheep is an "honest ghost," and may be fully credited if it charges against farmers the crime of inattention and inhumanity.

About the first of January, by which time the season is so far advanced that lambs will eat hay with avidity, I suspend feeding grain to several of the best flocks, and to these it is not resumed regularly until the first of March or thereabouts; after which, it is not remitted till the foddering season expires. With the inferior flocks there is no interruption, but receive daily their half bushel of oats up to the time they are turned to pasture. When this period arrives, some twenty or more, as the case may be, of the most inferior are selected, and these I continue to grain until about the first of May. This will generally be found necessary in all large flocks. During the winter, should there be any among the better flocks which are declining in flesh, they are immediately taken out, and put with the inferior, as these, of course, receive extra attention and care throughout the season. This last point should never be disregarded; and it is equally applicable to grown sheep.

It will be well here to remark, that I consider it unsafe, and therefore unwise, to grain sheep in the morning on an empty stomach, for the reason that all kinds of grain are more or less stimulating, and will therefore be very apt to induce purging, especially with lambs. If it produces not this effect, it will engender a kind of fever producing an action on the pelt, which causes the wool to drop from it. My practice is, always to feed grain in the middle or latter part of the day. But a contrary course, adopted by many farmers, as well as feeding too much at a time, has laid the foundation of the prejudice which they entertain against oats as food for sheep. But there is another cause of their prejudice. Many allow their sheep, through mismanagement, to get pretty near the bottom of the hill, before a step is taken to bring them back; and too late they attempt to restore their emaciated condition, by giving oats or other grain. As I have before observed, grain is stimulating, and in proportion to the quantity fed, and its effect upon a poor sheep, if suddenly given in too large quantities, is like a bowl of rich turtle soup, or other very highly seasoned food, to a man in the last stages of the consumption. To show that oats is, like much else in this world, a good thing, I will state the fact, that I commenced the winter with five hundred and thirty-five lambs, and up to this time, (21st Feb.) have lost but *two*; both of which were mortgaged to the crows before foddering season commenced: and furthermore, from a particular inspection this morning of all the flocks—and my lambs receive my personal attention exclusively—I found not one affected with scours, neither have more than half a dozen been so, any time this winter. I will further say, that if good condition, and the life and elasticity of deer be a guarantee against loss, not more than one or two more will go over the dam this season. In my next I will introduce a table, the result of actual experiment, will show that oats stand third in nutriciousness of the various grains, as well as something else, to prove that, if fed at all, nothing is cheaper.

That something more than hay is requisite for lambs, and young stock in general, would, in these enlightened days, be folly to deny. The truth is, we can not begin too soon to lay the foundation for vigorous constitutions; and if there is any virtue in grain to promote this, it should not be withheld. Very many farmers are too short sighted in their calculations: they sacrifice large prospective profits to small immediate gains. They sell all their grain of every kind, and allow their young stock to take it rough and tumble through the first winter of their existence, and the consequence is, a stinted, unthrifty, and short lived race. Management like this has caused the domestic animals to look as they do, on three-fourths of the farms of our widely extended country. The splendid Durham, the Leicester, and South Down sheep, and Berkshire hog would degenerate sooner from this disgraceful cause, than any other. Out upon such short sighted, parsimonious management. Feed twenty-five cents worth of oats or other grain, to each of your lambs, and it will be returned to you at the end of five years, forty times over, by a hardier constitution, greater size, more wool, more vigorous and numerous progeny, and longer life. If there ever was a truism, this will be found one.

My best hay is always appropriated to the lambs; which is fed to them in box racks—a description of which will be found in my next. When the weather is very cold, hay is given three times a day: the second feeding, however, is very light as in the middle of the day they are grained. The troughs, varying from some I have seen, and more economical, will be noticed here after.

I have now given an outline to your readers of a mode of management with respect to lambs, with reasons, also, and facts to show that it is entirely successful. I have written hurriedly, and if any thing essential has been omitted, it will be supplied in my next, which will "*positively* be my last appearance" on the subject of *winter management*. L. A. M.

Lansing, Tompkins Co. N. Y

A New Variety of Sheep.

Messrs. Editors—The opinion seems to have become general within the last few years, that wool of the finest quality can not be grown so profitably, as that of a medium grade. The reasons are, that the fine woolled sheep (Saxons) carry lighter fleeces, require more protection as well as extra food during winter, rear fewer lambs, are smaller in carcass, and are slower in arriving at maturity than some of the coarser varieties; and the increased fineness of their wool does not compensate for these deficiencies. It is also notorious that our manufacturers do not make any thing like a just discrimination in prices, between medium wool and that of the higher grades.

It is not necessary here to discuss the question, whether the defects of the Saxons, such as we find in this country, are inseparable from this breed of sheep. My own opinion is that they are not, at least to their full extent, and I have so expressed myself on former occasions. Candor, however, compels me to admit that my opinions in relation to this breed have undergone some change. But whatever may be the inherent defects of the Saxons, there can be no doubt that their reputation has suffered less from these, than from the gross frauds practiced in their introduction into this country, and the subsequent mismanagement of our breeders. A detailed statement of the several importations of them which took place between 1824 and 1828, (the epoch of the Saxon mania,) has been made public, in which the fact is disclosed, that a large portion of the imported sheep were not pure, and, in many instances, scarcely half blooded animals. In language used on a former occasion, "our country was flooded by eager speculators with the grade sheep and refuse Merinos of Germany. Fineness of wool during the period of this strange excitement, was made the only test of excellence, no matter how scanty its quantity, no matter how diminutive or miserable the carcass." The same views unfortunately continued to influence our wool growers. The legitimate consequences of breeding with reference to a single point, (fineness of wool,) to the exclusion of all others, were soon apparent. While there are many individual exceptions to the remark, many men who have kept up and even improved the quality of their flocks by a more judicious system of breeding, it will not be denied that the mass of American wool growers, have suffered their Saxons to become as we have described them, light fleeced, feeble constitutioned and diminutive sheep.

The question then has arisen, with what breed shall their place be supplied? Many have turned their eyes towards the "old fashioned Merinos." This undoubtedly was a very valuable race of sheep, but not without their defects, and these of a serious if not a decisive character. It is known to all that they spring from the same common stock with the Saxon, or rather they are the parent stock from which the Saxon descended, and possess, with greater or less modifications, the same distinctive traits. The fleece of the Merino, quantity and quality being taken into the account, is perhaps as near the standard, in which the greatest profit is to be found, as that of any other variety. It is of a quality the most saleable, and which brings the fairest remunerating price in our American markets, and any improvement in its fineness, accomplished by breeding, is usually, if not inevitably, accompanied by a counterbalancing diminution in quantity. But the Merino, like the Saxon, is slow in arriving at maturity—is decidedly deficient in the points which constitute a good mutton sheep; and is, though not perhaps to the same extent with the common Saxon, a poor nurse.

A variety carrying a fleece similar to that of the Merino, but more resembling the coarse woolled breeds in those points where the Merino is defective, would be the desideratum of the American wool grower. Can such a variety be produced? Probably it would be impossible to retain to their full extent, in a cross, the perfections of the coarse and fine woolled races. But I believe an approximation to it can be made. I believe that a variety can be produced with a fleece closely resembling the Merino, and perhaps equal to it, with the size of the carcass, aptitude to fatten, &c. very decidedly improved. I shall proceed to state the result of some experiments, on which I have founded the foregoing opinion.

At the annual fair of Otsego, several years since, I saw some lambs which were a cross between the South Down and the Merino. Their wool was even, but perhaps hardly fine enough for the purposes of the wool grower, and they inherited much of the unsightly throatiness of the Merino. The *evenness* of the fleece, however, which is usually lost in interbreeding between fine sheep, and those of larger and coarser varieties, induced me to hope much from a South Down cross engrafted on the fine woolled stock. The Down, as is well known, can not be excelled in those points where the Saxon and the Merino are most defective. It is moreover an upland sheep, and will bear hard stocking, qualities in which it resembles the fine woolled race, and which fits it for the purposes of the wool grower. Its wool, which in length belongs to the middle class, is compact and even, and in fineness ranks about as follows:

	Diameter of fibre.	*Serrations in an inch.*
S. Down,	$\frac{1}{600}$ of an inch, - -	2,080
Merino,	$\frac{1}{740}$ " " - - - -	2,400
Saxon,	$\frac{1}{850}$ " " - - -	2,720

It will be seen that the South Down wool approximates almost as near to the Merino, as the Merino does to the Saxon. The first cross therefore between the South Down and the Saxon would give wool of a quality near that of the Merino. The second cross (breeding towards the Saxon) would give a wool equalling or excelling the Merino.

I have tried the experiment, and the event justifies these conjectures. I enclose four specimens of wool from lambs one-fourth South Down, two bred with pure Saxons, and two with sheep in which the Saxon and Merino was about equal. You will perceive that they are already three inches long, and of the quality I leave you to judge. I will only say that No. 1 and 3, (bred with Saxon) would not suffer much by comparison with any Merino wool I am acquainted with. No. 1 and 2 are from bucks which have run with fifteen ewes apiece, have received no grain, and yet are in first rate order, and are fully as large as Merino yearlings. The fleeces of all I have, are extremely compact and heavy. The one-fourth bred lambs were much larger when dropped than Merino or Saxon lambs, and evidently much stronger and hardier. I left out several exposed to the weather the first night after they came, which was a cold and stormy one, and in which Merino or Saxon lambs of the same age, would certainly have perished, and in the morning every one was alive and active.

I prefer the Saxon cross, because, independent of the superiority of the wool, better forms can be obtained, and the coarseness about the head, and throatiness, peculiar to the Merino, are avoided. But the largest, strongest, and best breeding ewes should be selected to couple with the South Down ram. The produce, even in the second cross, (one-fourth South Down and three-fourths Saxon,) so far as my experience goes, are a decidedly hardy sheep, sufficiently so to withstand a winter in this climate, without shelter, or any other food than hay. This being the case, the increased fineness of their wool gives the one-fourth bred the preference in my opinion, over the half-bloods.

If this new variety of sheep can be established and perpetuated, I am sanguine in the belief that it would form a breed peculiarly adapted to the wants and interests of the wool grower. Here, however, undoubtedly, is the main difficulty to be encountered. The attempt to perpetuate a cross by breeding directly among themselves, is contrary to theory and sound experience. But a rigorous system of selection may do much. If necessary, reject thirty or even fifty per cent of the increase until the desired points are found to be stamped on them with sufficient certainty. The time and expense attending such a process among larger and slower breeding animals, such as the horse and cow, has probably prevented its ever having been tried among them to the extent here advised.

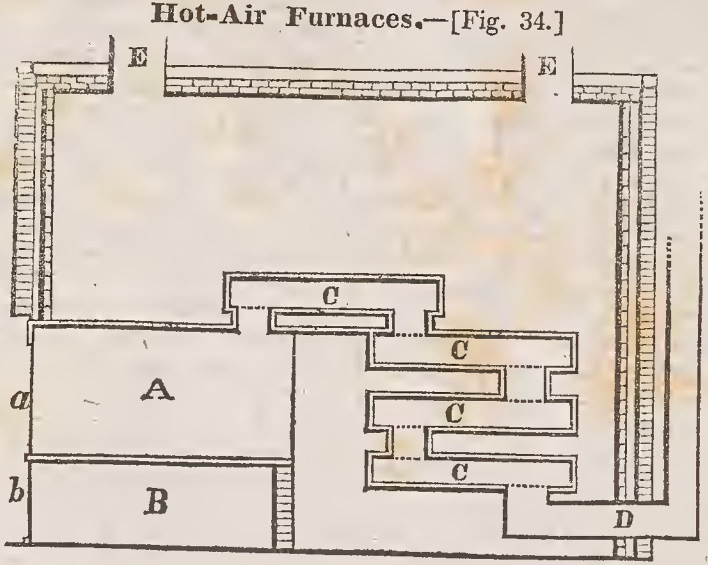
At all events, I think the experiment worth trying. Should it fail, the South Down blood thus introduced into our Saxon flocks, can not but be a most renovating admixture. Even the uncertainty of breeding uniformly good animals, is preferable to the *certainty* of breeding uniformly *bad* ones. Yours, &c. H. S. R.

Cortlandville, Feb. 7, 1840.

To Dairymen or Dairywomen.

Can some of your obliging correspondents among this numerous class of your valued patrons inform one of your constant readers *about* the *average* quantity of milk, (from a fair run of cows,) required to produce a quart of cream, for four equal periods of the year: 1st period embracing the months of June, July and August; 2d period, September, October and November; 3d period, December, January and February; 4th period, March, April and May. Also, the best method of producing a large quantity of cream from a given quantity of milk. AGRICULTURE.

Hot-Air Furnaces.—[Fig. 34.]



I have repeatedly been asked for information respecting hot-air furnaces, and as summer is the time for their erection, perhaps a short description will not be unacceptable.

Permit me to speak very briefly of their advantages, alluding of course, to the mode of construction here described. Fuel is a large item of expense in every family, and is becoming still more so. We know many farmers who annually consume, in warming the different rooms of their houses, as many as fifty cords of wood, and some much more. We can not alter the quantity of heat which a given quantity of fuel throws off in combustion, without altering its nature; but we can adopt means to *save* this heat, and apply it to warming our rooms. Experiments have shown that by the use of a common brick fire-place, the owner pays *nine-tenths* of the cost of the fuel for the privilege of heating the air above the top of his chimney. The hot-air furnace is the best thing, by far, that we have seen, for saving fuel. A neighbor has kept several rooms of his house warm night and day, through the past winter, by means of one, and from his experiments it is clear that it will not require *ten cords* of wood for the whole year.

Another important advantage, is keeping up only one fire for several rooms. As the wood is burned large, it saves much labor in cutting, and needs replenishing once only in five or six hours. Another advantage is the house-room saved, none being occupied by stoves or fire-places. Another is the prevention of dirt, the universal accompaniment of fire-places. It also renders all the rooms warm in the house, by night as well as by day, imparting to them the peculiar and comfortable warmth of the air of summer. It is safe—children do not burn their fingers, and if rightly constructed, the house is far less liable to take fire. And by no means a small consideration to the person who loves the *culture of flowers*, and who can not afford the expense and care of a green-house, tender plants may be kept in any of the rooms, without the least danger of their being frosted, and with no other attention than that of watering.

The hot-air furnaces commonly erected in cities are on an entirely different plan, and, in my opinion, greatly inferior. The one here described is the result of many experiments, and is the best form of several which have been tried. It was designed by William R. Smith, of Macedon.

A, fig. 34, is a longitudinal section of the stove, for the reception of fuel. It should be large to admit large sticks of wood, so as to lessen the labor of cutting, and to cause the fire to burn long without renewing. Three feet in length is not too much. The bottom, instead of being a plate, is a grating, made of cast iron bars, running lengthwise with the stove, supported at the ends and in the middle by cross bars. Through this grating the ashes fall into the ash-pit B. The advantages of this are, the wood burns more freely, the fire need not be interrupted to remove the ashes, and the ashes are much better in quality, as they contain no mixture of charcoal. The doors, *a* and *b*, of the stove and ash-pit, should, if practicable, shut very closely, for the better regulation of the draft, as the fuel will burn slowly for a long time when desired, as for instance, during night and in mild weather, when the draft is nearly closed. All the air admitted to the fuel, should be through the ash-pit door.

C, C, C, C, are four flat, square, cast iron drums, connected by short cast iron pipes, and through which the smoke passes to the smoke pipe D, from which it escapes into the chimney, or passes out into the open air. As the smoke thus becomes much cooled before entering the pipe D, the soot accumulates more rapidly, and hence this pipe should be as short as practicable. It should, however, have some height to cause draft, or should enter a tight small chimney, for the same purpose. The drums should have small openings for cleaning. They are supported by bricks not shown in the figure, to prevent confusion.

At a short distance from this apparatus, a double brick wall, with an included plate of air, is built around the whole. It is covered by a layer of bricks, supported by iron bars, and on this a layer of four or five inches of ashes, covered again by brick, mortar or boards.

It will be observed, that the greatest part of the heat of the burning fuel is thrown out from the drums, and heats the surrounding air; this heated air is confined within the brick air chamber, until it escapes through the air-pipes, E, E, into the rooms above. The object of the double walls, is the more perfectly to confine the heat, and to prevent its escape through any other channel. Probably if the included space between the walls, were several inches in thickness, and filled with dry ashes, or still better, with powdered charcoal, this would be more completely attained. If the inner wall is occasionally braced by a cross brick to the outer, it need be only two inches in thickness, or composed of bricks on edge.

The furnace should be built in a room in the cellar, entirely devoted to the purpose, and a window left open for the admission of fresh air to the chamber; or if this can not be done, a trunk or pipe one foot square, should lead from without through the wall to the chamber. In the former case, several air holes, four inches square or more, should be made at the bottom of the chamber.

On one side of the chamber, should be two double sheet-iron doors, for admission in cleaning the drums, &c. and sufficient space for this purpose should be allowed between the drums and the walls.

The pipes E, E, through which the hot air escapes to the rooms above, should be of bright tin, and as nearly vertical as possible, and from eight to twelve inches in diameter. The larger they are, the less the temperature of the air chamber need be raised to heat the rooms above, consequently less fuel is required, and the cast iron will not burn out so soon.

In the seventh volume of the Genesee Farmer, is a description of a furnace somewhat similar; but the drums are there placed in succession *above* the stove. In the present plan, the descent of the smoke causes it to throw out its heat more completely; and as the last drum is the lowest, the coldest and freshest air comes in contact with it, and the smoke passes off at a lower temperature than that of the air in the upper part of the chamber. But great care is necessary to have the drums tight, to prevent the escape of smoke into the chamber, and for this purpose the cracks at the joints should be stopped with a paste made of iron filings or turnings mixed with sal ammoniac and water.

The expense may be diminished by substituting sheet iron for cast iron for the two last drums.

Circular brass or iron grates, turning on the center, placed in the floor of the room, over the air pipes, E, E, regulate the quantity of hot air admitted.

This method of warming houses has been found preferable in point of *health* and comfort, to any other; and the only objection appears to be, we do not have the cheerful "blazing hearth" to gaze at. But habit, which created our desire for this, will soon remove the difficulty, and most will learn to prefer a book, a picture and a stand of fine flowers in winter, to blazing sticks, smoke and a heap of ashes.

Should any one wish further information, I would communicate it with pleasure, through the columns of the Cultivator. Very respectfully,

J. J. THOMAS.

Macedon, 3 *mo*. 1840.

Good Crop of Wheat.

Messrs. Gaylord & Tucker—As I frequently see notices of extraordinary crops recorded in agricultural and other publications, I am induced to send you an account of a crop of wheat raised the past season on the farm of Mr. Jacob Kirk, of York county, Pa.

In the fall of 1838 I sowed three acres of ground to wheat, using one and one-fourth bushels of seed per acre—the varieties sown were the Orange Bearded (so called here,) and the Blue-stem, a variety preferred in this section to many others, of bald wheat. The yield produced by the above three acres, was one hundred and twenty-eight bushels; or forty-two and two-thirds bushels per acre. No difference could be observed while growing, between the two varieties, neither was there any perceivable difference in the yield, but the Bearded unquestionably makes the most flour, being larger in the kernel, and the flour being whiter than that of the bald.

This wheat was sown between the 3rd and 8th of October, on a soil which I suppose would be called alluminous—what we here call red-land soil, having red shale for its basis, and which twelve or fourteen years ago, was so completely worn out that it would scarcely reproduce the seed sown upon it. It was then purchased by Mr. Kirk, who commenced the following system of "rotation of crops," with this worn out piece of land. First year, rye; second, corn; third, fallow; fourth, wheat, with manure, when it was likewise seeded to grass, (clover and timothy;) fifth, mown; and sixth, grazed, when it was again broken up and sown with rye and the same system as above again pursued. This system has been but twice gone through with since Mr. Kirk became the owner of it, and has with two ordinary manurings produced the above mentioned crops—but the cause of its fertility is supposed to lie in this, that Mr. Kirk has his barn so constructed with sheds that his manure is always in the dry, and when carted to the field is immediately plowed in; and the wheat immediately after sown upon it. I have now no method of ascertaining what quantity of manure was applied to the last crop, but it was certainly not an extraordinary quantity. I do not send you this as a brag crop, but merely to show what manure will do, especially when kept in the dry. I am candidly of opinion that it is worth fifty per cent more than when exposed to the weather.

Respectfully yours, ROBERT FOSTER.

P. S. I might here observe that the above piece of land has never been limed, and that the manure used was barn yard manure, together with what ashes were made about the premises.

Lewisberry, Pa., March 3, 1840.

Durant's Report on the Culture of Silk.

(*Concluded from page* 33.)

Silk is now cultivated in twelve or fifteen states of the Union. The quantity produced is yet small, probably not exceeding 20,000 pounds; of which Connecticut furnishes a very large proportion. In most districts the business is new; those engaged in it are laying the foundation for a much greater yield.

The climate from our southern border, up to 42 or 44 degrees north latitude, is in all respects suitable for the silk culture. As an auxilliary branch of farming, the feeding of silk worms is as profitable as feeding of poultry, and the silk will find as quick and ready a market as poultry. Both are deemed indispensable to the comfort of society, and will be consumed at any price. Both are profitable when conducted as collateral branches by the farmer, and both, or either one, when raised as an *exclusive* business, are *not* profitable, but ruinous, even at the lowest rates of labor in this country. With the long tried experience of Europe, and the low price of labor in that country, the whole continent does not furnish an instance of profitable silk culture, conducted exclusively for that business. No establishments are erected, or stock companies created, to make silk, but silk-worms are fed, and millions of dollars worth of silk is annually made, at a good profit, by the peasants and farmers, who, in connection with their other employments, feed as many silk-worms as will occupy the *spare rooms* of the dwelling and out-houses.

The reeling of silk (making raw silk) has hitherto been connected with the silk culture in the states; and generally the same families that raised the cocoons, have not only reeled, but also twisted it into sewings. For family use, Dale's is probably the best reel; it is the most simple in construction, and costs three and a half or four dollars. There is, however, very little difference in the merits of the numerous silk reels; the preference is always in favor of the cheapest: the high prices are caused by a studied complication, that never improved, but always lessened its merits.

Raw silk can be most advantageously made in "filatures," or reeling establishments, confined *exclusively* to that branch of the business. The silk manufacturers always require their silk to be of even thickness, some definite number of fibres to each thread, and large quantities of each size. The "filatures" alone can furnish such requirements; for each family can only raise from five to fifty pounds of silk annually, and when different hands conduct the reeling, it is difficult to find two parcels of equal number of fibres, or of equal thickness. The raw silk in bales of 200 to 400 pounds, always commands the highest price in European markets.

The silk culture is simple, and a suitable employment for children. For my views on that part of the subject, I beg to quote from a former communication which I had the honor to furnish in February, 1838, in answer to a circular from the committee on agriculture in the house of representatives of the United States; it is embodied in the printed documents of that session, and therefore only the part particularly relative to this branch of the subject, need be inserted here:

"What kind of soil, and what situation and exposure, are the best for the productionof the mulberry?

"A rich, light, sandy soil is the *best* for the mulberry, though it will thrive *well* on any soil which is not wholly silicious, like the immediate border on our Atlantic coast, Next to pure silex, the soil *least* adapted to the mulberry is that purely argillaceous, or compact and hardened clay. Gently rising ground, or a moderate eminence, open to the full action of the sun, is the *best* situation, and south is the *best* exposure.

"What species of mulberry is the most valuable, taking into consideration the capability of enduring cold and frost, the quantity and quality of the foliage, and the labor of culture and stripping?

"Taking into consideration all those properties, the *Brussa* mulberry is the *best* species for feeding the silk-worm. I wish, however, to be understood, that by *Brussa* I do not mean all those various kinds which are sold under that name, but I have a direct reference to the tree or trees which Mr. Charles Rhind brought from Brussa to this country.

"I would remark, that *species* is a very indefinite term to designate the most *valuable* mulberry, because among the many millions of trees from the seeds of each species, there are not two trees equally valuable or perfectly alike; each individual tree (considered as food for the silk worm) forms a distinct variety, differing as much from each other as each individual of the human race differs from all other individuals of the same species, or as much as the fruit of one individual tree differs from the fruit of all other individual trees, raised from *seed* of the *same species*. Mulberry trees which produce leaves perfectly alike to the delicate taste of the silk-worm, must be not only of the same species, but also scions of the *same parent stock*, produced by cuttings inserted in the soil, or by inoculation or ingrafting.

"I would further remark, that the seeds from each and every *species* of mulberry furnish some individual trees which are *not* suitable food for the silk-worm; and further, that the seeds from nearly *every* species of mulberry furnish some individual trees which are *good* and *valuable* food for that insect—hence, the *best* method to produce a good mulberry orchard is, to select one tree possessing all the desirable properties, and *multiply* it by *cuttings*. By this method a good and valuable mulberry orchard may be made from the indigenous trees of this country. The species native black mulberry furnishes some individual trees which are, in every respect, good and valuable food for the silk-worm. The native black mulberry is equal, in quality, to the best in the world; the leaf is generally *smaller* than the Brussa, and is therefore inferior in *quantity*, because one hundred pounds of large leaves can be stripped at less expense than the same weight of small leaves.

"What is the best mode of cultivating the mulberry; at what age may it be stripped, and what is its value, expense and profit per acre?

"The nursery should have a southern and eastern exposure, a rich, light soil, and the seeds (when *new* varieties are wanted) should be sown in rows, three feet apart. When a particular variety is wanted, the particular tree which is to be multiplied must be cut in short lengths, leaving three eyes on each piece, and planted one foot distant, in rows three feet apart, leaving only one eye above the ground. The best time for this operation is in the spring, when the buds have swelled almost to bursting. The best time for transplanting is very early in the spring, as soon as the ground is free from frost; this should be done when the seedlings and cuttings are one year old. The open ground to receive the young trees should be made mellow one foot deeper than the length of the roots, and the top of every tree should be cut off, so as to leave only three or four eyes above the root. The tops will form cuttings for the nursery, while at the same time the health and growth of the trees will be much benefited by the operation. Trees thus treated, may be stripped the second year after they are transplanted, and would cost, standing in the nursery, about one cent each; the transplanting can be done for four cents more, making *five cents* for each tree standing in its permanent place.

"The 'profit per acre' depends on many contingencies, such as cost of land, cost of labor to gather leaves, cost of building to shelter worms, &c.; in relation to which, I would remark—*First:* Any number of acres appropriated *exclusively* to the growth of mulberry and the culture of silk, provided the building is appropriated *exclusively* to the worms, will *not* afford any profit; because the gross amount of silk thus raised will *not* (after deducting a just estimate for labor) pay a reasonable interest on money invested for trees, land and buildings.

"*Secondly:* Every farmer in the states south of 45 degrees north latitude, can raise from 100 to 300 dollars worth of cocoons in the *spare room* of an ordinary barn and dwelling; and this would be *all profit*, if the silk is considered, like poultry, a collateral branch of farming.

"Which is the most valuable species of the silk worm? What is the best mode and time for their propagation, the quantity, quality, value of, and market for, the cocoons?

"The species *Bombyx*, of Linnæus, comprehends *many* varieties of the most valuable silk-worm, among which is the Asiatic, (*Mori*,) divided into many sub-varieties, and distinguished only by the color, shape and weight of their cocoons. Their relative value may be expressed thus:

BY LINN. GENUS PHALENA, SPECIES BOMBYX, VARIETY MORI.

Sub-Varieties.

"White cocoon, pea-nut shape, compact, and reels well; 6½ grains of pure silk; most valuable for this country, because it gives the greatest quantity of good silk.

"Bright yellow cocoon, egg shape, 4 to 5 grains pure silk; lustrous; cultivated in Connecticut for more than half a century; reels bad, and therefore of less value.

"Pale yellow cocoon, pea-nut shape, compact, reels well; 3 to 3½ grains pure silk, very soft; receives best dye; is much cultivated in Europe.

"Golden yellow cocoon, pea-nut shape. very compact, reels best; 2½ to 3 grains pure silk, very lustrous and not strong; much cultivated in Spain: is best for fine white ribbons.

"The coloring matter in all cocoons is contained in the natural gum, which can be removed by boiling in soft water, leaving the silk white and lustrous.

"There are four varieties of silk-worm indigenous to the United States, and not found in any other part of the world. They make a large quantity of coarse, strong silk, which can be used at present only by carding. Education may cause these worms to spin in a form suitable for reeling, when the largest kind (*Cecropia*) would, for many domestic purposes, become very valuable to this country. Their relative value may be expressed thus:

SATURNIA OF SCHR.

"*Cecropia* feeds on elder, cocoon 19 grains pure silk.
Polyphemus feeds on scrub oak, cocoon 14 grains pure silk.
Luna feeds on acacia, (locust,) cocoon 11 grains pure silk.
Pomethea feeds on sycamore, (buttonball,) cocoon 9 grains pure silk.

"The best mode and time for the propagation of the Asiatic silk-worm, (*Mori*,) is, to expose the eggs to hatch, for a few hours, in a paper box, near a fire; feed the worms regular three times per day; admit air freely, and remove the filth at least once per week. At about the fortieth day they will commence winding, and in four days more they will have finished the cocoons, when those for reeling should be put in the oven, to remain half an hour, (after having drawn the bread,) to kill the chrysalis. Those for seed should be placed, uncovered, in a dark room, on paper, where the perfect insect (moth) will come forth in twenty days, to cohabit, deposit eggs, and die in eight days more. The eggs should be left adhering to the paper, rolled up and placed in a dry, cool and dark place, until wanted to hatch for the following season. The extreme cold of this climate will not injure the eggs. Dampness and direct rays of the sun are very injurious to the eggs and worms in all their stages. The time for hatching is best when the trees first put forth their leaves. Each worm spins one cocoon, and each female moth deposits about 700 eggs. Allowing the sexes equal, 100 moths would give an increase of 35,000 worms. "The quality and value of cocoons" are given in preceding remarks. A good market for cocoons is found at silk manufactories, which are already sufficiently numerous for the quantity of silk grown in this country. A more suitable market would be an establishment *exclusively* for reeling. *Such* an establishment does not exist in the states; but it is probable that interest will induce individuals to erect them as soon and as fast as cocoons can be raised to supply them."

Since writing the foregoing, experience has increased the favorable opinions therein expressed in regard to the native black mulberry. The best Italian sewings are made from worms fed on the black mulberry of Calabria. Mr. Caldwell, of Clark county, Va. sent me two bushels of cocoons from worms which he fed entirely on the native black mulberry. I exhibited them at the Fair of the American Institute, where a part of them were reeled and twisted into sewings by Mrs. Brooks, a very intelligent and skilful lady from Connecticut. Mrs. Brooks has four years practical acquaintance with the reeling of silk, and she remarked, that these cocoons from the native black mulberry, made "*the strongest silk that she ever saw*," and considered it "*superior to all others for sewings.*"

There is *not much* difference in the silk made from different species of mulberries, when the compared specimens of produce are all by the *same sub-variety of worm.* Generally all silk-worms will make the strongest and most lustrous silk, from the most hardy and tough species or varieties of mulberries; and the most tender and perishable, afford silk of the least strength and lustre. Hence, if *strong and lustrous silk* is preferred, then the *Black*, the *Brussa*, and the *Common White* are the *best* mulberries for the silk culture. And the *Moretti*, the *Multicaulis*, the *Chinese*, and many similar varieties, are *best* for producing a comparatively *dull and weak fibred silk.* The silk made from the Morus multicaulis, much *resembles cotton* in lustre and strength of fibre.

The native black mulberry is known to be a very superior timber. A few facts that have come to my knowledge, may not be inappropriate here.

The schooner "UNION," built at Lodi, N. J. about forty-three years ago, had a large portion of her upper timbers, and most of her trunnels, of native black mulberry. In fourteen years afterwards she was overhauled, when her deck planks of Georgia pitch pine, were much decayed; the white oak futtocks were completely destroyed by rot, and the white oak timbers and bottom planks, were much decayed; while every timber and trunnel of black mulberry was perfectly sound. She beached and stranded during a severe gale near the mouth of the Delaware, after a constant service of more than twenty years; and at no time from her launch to her wreck, was there any perceptible sign of decay in the black mulberry although the trunnels of this wood, were driven into the upper futtocks, where (in common with the upper timbers) decay always commences first in vessels of her class. The black mulberry used in her frame, measured from sixteen to eighteen inches across the butt.

The sloop "HIGHLANDER," built near Bellville, N. J. more than thirty years ago, is now running on the Passaic and Hudson rivers. All her upper timbers, and most of her upper futtocks, are mulberry, principally white; and, although more than thirty years have elapsed since her launch, yet no sign of decay has ever appeared in the mulberry employed in her frame, while some of her white oak timbers have long since crumbled from the spikes.

Mr. Cornelius Kingslane, a highly respectable and intelligent shipwright, who built the Highlander, informs me that he has built as many as thirty vessels, in a large number of which he employed native black mulberry, and from long experience is convinced, that for durability and strength, is superior to white oak, chestnut, cedar, wild cherry, red elm, or locust.

I am aware that some fastidious gentlemen contend, that there is no black mulberry in the states. Such opinions are founded on the fact that Linnæus speaks of red (*Rubra*) *only* in America. Names are given to *facilitate* science, and when we have trees bearing pleasant fruit, it is very *convenient* to designate them with specific names. We *have* an indigenous tree bearing black mulberries, and it *is* by general consent called the *Black Mulberry*, notwithstanding Linnæus and his followers may insist that it is "*Rubra.*"

Silk forms a very large integer in the trade and commerce of nations. The *natural* advantages of the states, are favorable to participation in a full share in its culture, manufacture, or commercial transportation; but foreign treaties, and internal legislation, have *not* placed this country "on a footing with the most favored nations." It is not my business, or intention here, to discuss the issue of "*free*" or "*restricted*" trade; but I deem it within my province to notice some apparent inconsistencies which (although they have a controling influence in the American silk trade) cannot be reconciled to any known system of policy, or political economy. Manufactured silk (except sewings) from all Europe are permitted to enter our ports *free;* and the present distress in the country, tells a startling tale of the very free use made of the privilege, by foreign artisans and foreign ships; while our own manufacturers are restricted by a duty of ten per cent. from beyond the Cape, and twelve per cent. from Europe on the raw material, that was to employ and support this important handicraft. The same causes that restricted the handicraft, also restricted the "carrying trade" in "American bottoms." A gentleman of Boston, an enlightened and intelligent traveler, and long a resident of Canton, has furnished me with full and complete returns of the export silk trade of China from 1831 to 1838 inclusive; and the facts therein show, that of the large amount of raw silk annually exported from Canton, only about one hundred and fifty piculs are shipped to America in American vessels; while the large quantity of nine thousand piculs are shipped to England in British ships on English account. It is then manufactured in Europe, and sent mostly in European bottoms, to enter the American market *"duty free!"*

I regret that the nature of this communication will not permit me to give the valuable details furnished me, of the China silk trade; but the export of *raw silk* from Canton for a few years, may serve to illustrate the tendency of all the Asiatic raw silk trade from ports beyond the Cape of Good Hope:

EXPORT OF RAW SILK FROM CANTON.

Years.	*To America in American ships.*	*To England in British ships.*	*To England in American ships.*
1832-3	144 Piculs,	6,651 Piculs,	None.
1833-4	210 "	9,836 "	80 Piculs.
1834-5	13 "	10,000 "	None.
1835-6	225 "	9,276 "	None.

The Chinese *picul* is equal to one hundred and thirty-three and a third avordupois pounds. The prices of raw silk at Canton, in 1832-3, were for *"nankins"* $351 per picul—*"canton"* $225 per picul, and *"common quality"* $58 per picul.

Under the existing regulation for manufactured silk, an import duty, whether of *ten*, or *ten thousand* per cent. on raw silk can have no influence to encourage or depress the silk culture of the states. This may seem paradoxical, but the elucidation is simple and easily understood. The silk culture, is the producing of raw silk. Raw silk has *no value* except that arising from its use in "silk manufactures." The comparative prices of manufacturing labor, enables Europe to make "silk manufactures" much cheaper than they can be made in the states; and by the existing ("free") regulations, Europe can, and does, supply our market at prices that prevent the possibility of competition by our own manufacturing establishments, which must cease operations, and leave the *value of raw silk* to be regulated by its *use* in silk manufactures of *Europe*, where an *American* import duty of *ten* or *ten thousand* per cent, can not effect it.

By the present tariff, the only manufactured silk chargeable with duty from Europe, is the sewings, that pay twenty-eight per cent, which enables American manufacturers to compete with the European sewings in our market. This, at present, consumes nearly all the raw silk made in the states; and if an additional import duty was levied on sewings, or if an equal duty was levied on any or all other "silk manufactures" *required* in the market, then, and not till then, would a duty on *raw silk* have a *controlling influence* on the *American silk culture.* Yours, &c.

CHARLES F. DURANT.

Potatoes—Spring Wheat—Muck for Rye—China Corn.

MESSRS. EDITORS—In a former volume it was intimated, that I might communicate the result of some experiments then in view. Potatoes being an important crop, both for the table and stock, I have tried a number of varieties, on different kinds of soil, the last four years. Last spring I selected a patch that was seeded down the previous year, but owing to the severe drouth of 1838, the grass seed all failed. The soil is a dark brown loam, eight to ten inches deep, resting on a deep, soft, tenacious subsoil. There was spread upon it, at the rate of about twenty-five ox cart loads of coarse barn-yard manure to the acre, and covered with a plow about ten inches deep, then harrowed well and then furrowed about three feet each way. Each row, the way it was planted, contained about one square rod of ground. It was alternated, with two rows of potatoes and two rows of corn, running north and south. First two rows of Rohan potatoes, two do. of a new variety from France, two rows of short Lops and two rows of new Lancashire pink eyes, both imported from England in 1838—two rows of Mercers and two do. of kidneys. The land was quite uniform, and the tillage the same. When planted there were six eyes of Rohans put into a hill, in the form of a triangle, all the other kinds had a plenty of seed, adding to each hill a part of a shovel full of good manure. They were all well tended, and when dug about the 20th of September last, the two rows of Rohans yielded five and a quarter bushels, the two rows of French two and a half, the two rows of short Lops five and three-quarters, the new Lancashire pink-eyes one and three-quarters, the two rows of Mercers two and three-quarters, and the two of kidneys two and a half bushels.

I have cultivated the Rohans two years, from seed obtained from Mr. Thompson, of Catskill, N. Y. I tried some early planted on warm ground, but the vines were fresh when the first frost came; the quality of these, however, was better than those later planted.

It is well known that any kind of potato not fully ripe is not a fair trial of its quality; I am of the opinion, if Rohans had a longer season to grow, they would be greatly improved in quality. The potato from France proved a second quality for the table. The short Lops were also green when cut down by the frost; in quality they may be ranked with the Mercers. They are round, not large tubers, but numerous in the hill; they are heavy, yellowish meat, good flavor, boil mealy and often crack to pieces. The new pink eyes are early, fine quality, but yield poorly.

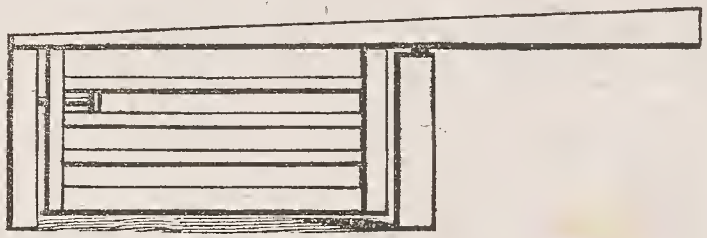
I hope to be excused for my particularity, when it is so necessary to give the result of any first trial.

I planted last spring about two square rods of China corn, the seed from Mr. Thorburn, N. Y. It was on the patch with the potatoes, and yielded at the rate of 98 bushels to the acre, of sound, good corn; and one of my neighbors had a patch of the same, that produced at the rate of more than 100 bushels to the acre. These highly cultivated patches, however, are not a fair trial of common field crops, but they show what might be done in the field, if we tilled less and cultivated better. I have cultivated three years different kinds of spring wheat. I tried what was considered a superior kind, from the virgin lands of Michigan, where it yielded bountifully, but it produced miserably here, 50 per cent less, on the same land, and same culture, than the Siberian from Rome, N. Y. and the quality much inferior. The Siberian answers best here, and in a common season yields from fifteeen to twenty bushels to the acre.

The fall before last, I was preparing six acres for winter wheat, the Dickerson from Tioga, New-York, on ground that had been cropped probably for a century, with little return of manure; the quantity of compost which was intended to be applied to the acre falling short, there was spread on the residue about 30 loads of muck from a drained meadow, and then sowed with rye; the yield was 34 bushels of superior grain; on measuring the ground it was one acre and ten square rods. Other trials of the application of decomposed muck for a crop of rye, have been favorable.

Yours respectfully, D. L. DODGE.

Cedar Brook, Plainfield, N. J. March 14, 1840.



Field Gates.—[Fig. 35.]

A writer in the third volume of the Genesee Farmer, estimates the difference of time between passing through gates and bars, where a man and team passes but once a day for half the year, to be equal to 3¼ days, and goes into a calculation of the amount, of which this time would pay the interest. As a moment's reflection will convince any one, that there is a great saving of time in using gates in preference to bars, and as our old bars are fast going to decay, and must soon be replaced by new ones, or something else, I will give my method of making what I call improved balance gates. Balance gates are those having the top rail extended sufficiently to balance the weight of the gate; and, as ususally made about the country, are, of all things, the most unsightly; but there is a way of making them both comely and durable. My method of making them is as follow:—Take a tree of cedar, pine, chestnut, or other durable timber, twelve or fourteen inches in diameter at the butt, and which tapers pretty fast; cut it eighteen or twenty feet long; hew the small end for eleven feet, three by four inches at the end, and six by four inches at the distance of eleven feet from the end. Mortice, six inches from the end, a hole four inches long and one inch wide; also another mortice eleven feet from the end, six inches long and one inch wide. In these mortices insert slats of good white oak, of sufficient size to fill the mortices, extending from the shaft four feet and two inches—on these slats lay boards, either four, six, or eight inches wide, and at such distances apart as corresponds with the fence, or suits your taste. Then take two slats similar to the first, only thinner, place them on the boards opposite to those morticed through the shaft and rivet them together—one rivet in each end of each board, and the gate is ready for hanging. A better idea of the gate can be obtained from the above plate, fig. 35.

The post on which the gate hangs should be of seasoned white oak, twelve or fifteen inches in diameter, six feet long, either round or an octagon, and set in the ground two feet. Insert in the top of this post a cast iron gudgeon, having the end oval, such as is technically called step-gudgeon. Let this gudgeon project above the top of the post two and a half inches. Insert the box for this gudgeon to run in, into the shaft so deep that the shaft will barely clear the top of the post. The gate should hang so near the post on which it rests as not to sag when opened, and if it hangs right it will turn as easily as if suspended on hinges. If the end of the shaft is too light, weight is to be added; if too heavy, the sides should be hewn off.

The gate should shut against a post of sufficient size to admit of being cut away so as to let the shaft come into line with the two posts. The best fastenings for such gates are sliding bars, to enter a mortice in the post, so that the gate can neither be raised nor the bottom shoved through either way.

The advantages of these gates over others, are their cheapness and durability. They can be made by any farmer, and a man can make one as quick as he can make a good set of bars. The whole expense of a gate made in this way, will not exceed $2.00 when made in the neatest manner. The reasons why they are more durable than other gates are, they cannot slam by high winds if left open; unruly cattle cannot break them by jumping on to them; they are not liable to be run against by careless driving. They are also very convenient in deep snows, as they can be lifted over the snow drifts. In short, for field gates, either in summer or winter, in high winds or low, I would recommend them to my brother farmers as a cheap, durable gate, and one, if made right, that will be an ornament to their farms.

Yours, &c. MYRON ADAMS.

Ontario County, Feb. 10, 1840.

Weather, Crops, &c. in Indiana.

EDITORS OF THE CULTIVATOR—Heavy peals of thunder are now rattling over our heads. This has been a remarkable month. But little snow has fallen, and none laying on the ground. The weather has been, for some days, much like April or May—frost nearly all out, and ground so dry that some plows have been started. This is very unusual for so high a latitude as 41-2, even in the West. The months of December and January were very steady cold, and good sledding nearly the whole time. The first snow fell while the ground was yet soft; consequently, the roots of the wheat have been kept in fine order, and the crop now is exceedingly promising. There is still an immense quantity of the last crop in the hands of the growers, at 50 cents a bushel.

As the great Western Prairies begin to furnish this staple to the east, it will soon be time for farmers there to turn their attention to other products. For, as here no regard is paid to the preservation of the quality of the soil, while its present quality lasts the eastern farmer can not compete with the western wheat grower.

You would suppose that some imagine that this soil can never deteriorate, to see them moving their stables to a new location, on account of the accumulations of manure, and setting fire to immense piles of straw "to get it out of the way." But such are the facts. You can easily imagine how long the best soil will last under such a system of cultivation.

The December number of the Cultivator is just received. I can not speak in too exalted terms of him whom so many thousands will delight to keep in remembrance, by looking upon his fine intellectual face.

My warmest wish, gentlemen, is that you may be enabled to fill his editorial chair, with honor and credit to yourselves, and satisfaction to his numerous admirers. And when the time comes that we shall have nothing but your likeness to look upon, may you enjoy that most enviable of posthumous fame, that the world are now bestowing upon your much lamented predecessor. And so far, I am in candor bound to say, the evidence is strongly in your favor.

I remain your devoted agricultural friend,

SOLON ROBINSON.

Lake Court-House, Feb. 28, 1840.

Experiments in Maryland.

MESSRS. EDITORS—As I am not particularly devoted to the plan in which our ancestors cultivated the soil, I have in my little way digressed from that old style which is wedded to almost every neighborhood, that of the son treading in the footsteps of the father, year afteryear, in the same monotonous way. In 1836, I purchased a small piece of land; the year before the owner took off of it a crop of wheat which brought him about four dollars to the acre, being about five bushels. I found it well set in clover. I immediately divided the arable part into three lots. In the fall of 1836, I sowed five bushels of wheat on the half of lot No. 1, containing about five acres. In the spring of 1837, I sowed three bushels of oats on the other half. This has been twice plastered over, a bushel each time to the acre—in spring of 1836, on the clover—in the spring 1837, on the wheat and oats. I was very particular in not suffering this lot to be grazed, and especially so in not suffering a hog to touch any part of the clover. I had a little cut, but the second growth was turned in, in the fallowing for the grain. It is enough to say, I got the land in good order before seeding either wheat or oats, which with us is no very easy work, the soil being stiff and very subject to baking. In July, 1837, by the time some of my neighbors had secured their harvests, I had as follows in market:—

2½ acres in wheat, making 22 bushels to the acre, 55 bushels wheat sold at, $1.50,............	$82 50
2½ acres in oats, making 52 bushels to acre, 130 bushels oats, sold 45 cts....................	58 50
Admitted by persons competent of judging, that I lost by cutting a swath or two to get out the wheat, and not cutting it time enough, at least 20 bushels, which could have been saved with better management; making 20 more, at 45 cts..........................	9 00
	$150 00

The first crop paying the cost of the land, it having cost me $30 per acre, leaving the land indebted for the expenses of working it. This it must be remembered was the year of the drouth. This crop was thought by my neighbors to be rather better than any other grown in this vicinity, of the same kind. As I was convinced of the value of clover and plaster, I felt anxious to make more to the acre than I could by the culture of wheat and oats. In an adjoining lot, which was on clover, I suffered my stock to graze very close, yet no hog was seen there, for to my mind it is a dear meat that is raised on young clover, especially at the price it is now bringing.

On this lot I raised a little corn, about forty bushels to the acre; but on about five acres I planted 27,000 tobacco plants, being less than the usual distance apart, for which, from the old school planters, I got a scolding, and a prediction that I would not succeed, for deviating from the custom of planting nearer than three feet. But I took the time and trouble to work the ground with the plow, harrow and roller, until, from its being in a rough and cloggy state, it was made even and well pulverized. The consequence was I had very little trouble to work it, the plow going but once; the rest was done with a small handled harrow. Getting ground in good order is half the battle as to the labor part. This lot No. 2, brought me 7,500 pounds tobacco, which sold at only a moderate price, being $402.00 for the product of five acres, or $80.40 cents per acre. Lands under the old system, under circumstances unfavorable, produce about five bushels wheat, which brought only 80 cents, being $4 per acre.

In 1838, in lot No. 3, being two years in clover, and degenerating, I planted a heterogeneous mixture of corn, tobacco, potatoes and beans, determining that no space should be left without something on it; but after all the work which was necessary was done, even to artificial seasons, I found my close planting upon the quantity of filth I had put upon the ground, acted only in conjunction with the drouth, to fire and kill what was on it. I therefore failed in toto of making what I anticipated, a brag crop.

Not being yet out with experiments, I planted lot No. 1, (which I sowed with clover when I put it in oats in 1837, and during the whole time keeping hogs from trespassing upon it, thereby giving the roots of the clover a fair chance, though I grazed it,) in tobacco in 1839. Flattering myself that there was still room for improvement, and that by adding manure to the clover, I could obtain 2,000 pounds per acre, or $100 per acre. Thus far I think, there is but little reason for apprehending a disappointment, if tobacco should not fall from its present price.

Should this be worthy a place in your paper, I will let you hear from me when the tobacco is sold, when I will give my manner of cultivation, &c. and should be glad to receive any instruction from those who do better, as I am only wedded to my system until a better is shown me. The sole improvement to me appears to be in the free use of clover and plaster, and the entire disuse of the hog upon clover. EXPERIMENTER.

Tracey's Landing, Feb. 5th, 1840.

Account Current with Various Crops.

Messrs. Gaylord & Tucker—Having been induced by the reading of agricultural papers, to keep a farm account the past season, I am much pleased with the plan, as we can thereby ascertain what crops are the most profitable, and direct our cultivation accordingly. The following is an account of my cultivated crops, which, if you think of sufficient interest, you may insert In the Cultivator:

POTATO CROP.

Piece No. 1, Containing 2½ acres—manure spread and plowed in—planted on ridges, two rows on a ridge.

Dr.		*Cr.*	
To plowing and harrowing,	$6 18	By 691 b. pota's at	
" ridging,	2 98	25 cts...	$172 75
" planting,	6 37	Deduct,..	104 45
" 56 loads manure,	28 00		
" 66 bushels seed—25 cts.	16 50	Profit,...	$68 30
" hoeing,	7 68		
" plaster,	1 00		
" harvesting,	19 50		
" board,	12 50		
" interest on land,	3 75		
	$104 45		

No. 2, Containing ½ acre—manure spread and plowed in—planted in single rows without ridging.

To plowing and harrowing,	$2 05	By 94 b. potatoes	
" 15 loads manure,	7 50	at 25 cts.	$23 50
" 2 days' planting,	1 50		
" 15 bushels seed—25 cts.	3 75		
" 3 days' hoeing,	2 25		
" 4½ " harvesting,	3 19		
" board,	2 68		
" interest,	75		
	$23 67		
Deduct,	23 50		
Loss,	17		

No. 3, Containing 1½ acre—planted on an inverted sward, without manure—single rows.

To plowing and harrowing,	$5 33	By 190 b. pota's at	
" 4 days' planting,	3 00	25 cts...	$47 50
" 30 bushels seed—25 cts.	7 50	Deduct,...	36 23
" 5 days' hoeing,	3 75		
" 10 " harvesting,	7 50	Profit,....	$11 27
" plaster,	90		
" board,	6 00		
" interest,	2 25		
	$36 23		

My potatoes were an uncommon light crop, having suffered from a blight which injured most of the potatoes in this part of the country. The results of the several pieces speak well in favor of ridging.

RUTA BAGA CROP.

No. 1, Containing ½ acre—manure spread and harrowed in—seed sown on ridges—rows two feet apart.

To plowing,	$1 25	By 500 b. ruta ba-	
" 11 loads manure,	5 50	gas, 20cts	$100 00
" preparing ground & sowing seed,	2 25	Deduct,...	23 63
" 6 ounces seed,	38	Profit,....	$76 37
" 7 days hoeing,	5 25		
" 5 " harvesting,	3 75		
" board,	5 00		
" interest,	1 25		
	$23 63		

No. 2, Containing ½ acre—manured in the ridge—rows 2½ feet apart.

To plowing,	$1 25	By 350 b. ruta ba-	
" 8 loads manure,	4 00	gas, 20 cts.	$70 00
" preparing ground & sowing seed,	2 25	Deduct,...	22 62
" 6 ounces seed,	38	Profit,....	$47 38
" 7½ days' hoeing,	5 62		
" 5 " harvesting,	3 75		
" board,	4 13		
" interest,	1 25		
	$22 63		

My ruta-baga suffered from heavy rains soon after sowing. I also had considerable transplanting, which was done in odd hours, and of which I kept no account.

CORN CROP.

Containing one acre—manure spread and plowed in.

To plowing and harrowing,	$6 12	By 60 bushels of	
" 40 loads manure,	20 00	corn,....	$60 00
" ½ bushel seed,	75	Stalks,....	10 00
" 2½ days' planting,	1 88		
" 9 " hoeing,	6 85		70 00
" 3 " cutting & shooking,	2 25	Deduct,...	55 80
" 10 " harvesting,	7 50	Profits,...	$14 20
" plaster,	1 55		
" board,	7 50		
" interest,	1 50		
	$55 80		

My corn much was injured by the grub and cut-worm.

WHEAT CROP.

Containing two and a half acres.

To plowing and harrowing,	$6 10	By 40 bush. wheat,	
" 4 bushels seed,	8 00	at $1 75,.	$70 00
" preparing seed & sowing,	50	Straw,....	9 00
" plaster and lime,	4 40	State bo'nty	3 00
" harvesting,	6 00		
" thrashing,	4 00		82 00
" board,	5 25	Deduct,...	38 00
" interest,	3 75		
		Profit,....	$44 00
	$38 00		

OAT CROP.

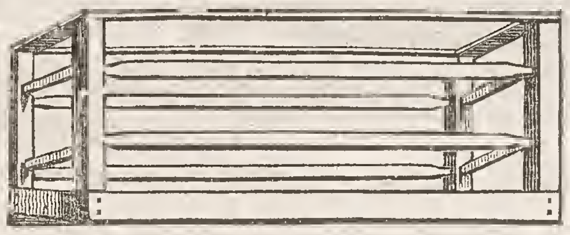
Containing one and an eighth of an acre.

To plowing and sowing,	$2 75	By 65 bush. oats,	
" 4 bushels seed,	2 40	at 50 cts..	$32 50
" harvesting,	4 12	Straw,....	7 50
" thrashing,	1 95		
" board,	2 50		$40 00
" interest,	1 50	Deduct,...	15 22
	$15 22	Profit,....	$24 78

By way of experiment, I cultivated a small piece of ground with carrots, beets, and parsnips: carrots yielding about 800 bushels per acre; beets 600, and parsnips 450. The price of the several crops is reckoned at the market value in this place.

Respectfully yours,
EBENEZER SMITH.

Middlefield, Mass. Jan. 23, 1840.



Hay Rack for Sheep.—[Fig. 36.]

Messrs. Gaylord & Tucker—Number 12, volume 6, of the Cultivator contains an article reading thus—"The 20th November is universally understood throughout New-England as the close of the season of pasturage, and the time for bringing our cattle and live stock to the barn. Sheep may be left out as long as the ground remains bare," &c. In my opinion here is an error. Sheep will live awhile thus treated, and so will cattle and horses; but whoever manages thus with their sheep will stand the chance of losing at least one out of a hundred during the winter. It does not consequently follow, that it is good management on account of its having long been practiced.

Another error, in my opinion, which exists among many farmers, is, in permitting their sheep to range their meadows when bare in winter and spring, doing not only injury to themselves by destroying their appetite, without obtaining but little nutritious substance, but many times greatly injuring the meadows by destroying the grass roots that are thrown up by the frost.

The time has come when every farmer ought to be provided with racks in which to feed his sheep, at least in wet weather; still there are many who have no place other than the wet ground or dirty yard, at such times. Much is annually wasted in the articles of hay and manure, for want of racks. Much time and pleasure is lost in transporting hay from place to place in hope of finding some spot where the hay will not be trampled in the mud and wasted.

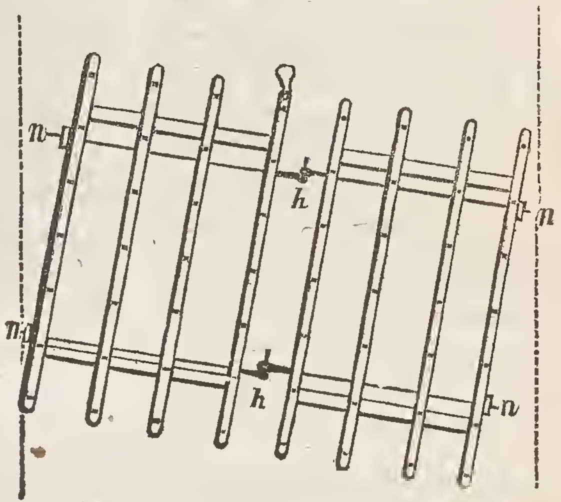
I will give a description of a moveable rack (fig. 36,) which is light, cheap and durable, fourteen of which I have used three or four years, two only have been out of repair.

It is made with four posts, four inch square, two feet ten inches long; four rails, two inches by four, fourteen feet long, two on each side; one board on each side, four inches wide. The posts to be bored with a two inch augur, and the ends of the rails shaved down to fit the hole; the boards to be nailed on the outside of the posts at the bottom or lower end; two end rails, two feet four inches long; a board nailed upon the ends of the rack, at the top of the posts.

Yours, &c. L. G. NORTHRUP.

Shoreham, February 17, 1840.

Harrow for Old Lands.—[Fig. 37.]



Messrs. Editors—The object of my present communication is to lay before the readers of your most valuable paper, a plan and description of a Harrow.

Description.—As far as my observation has extended, I find that the Harrow or Drag, most commonly used, is well calculated for new land, to delve between stumps and stones; but, for older farms with but few roots and rocks, the above representation, will be found much superior as a labor-saving implement; on account of the great number of teeth, not any two of which traverse the same track. It is composed of two pieces of frame work. The stiles 2½ inches square, and rails 3 inches and ⅞ of an inch thick. The rails go the whole thickness through the two middle stiles, and are shouldered to tenon into the outside stiles; are hung as above represented, with iron hinges, having a shoulder at the stile hinged, and a nut at the opposite outside of the stile. The teeth may be 8 inches long and ⅝ of an inch square, tapering to a point—*n. n. n. n.* are the nuts—*h h.* where hinged. The dotted lines are parallel with the direction the team goes. Respectfully yours,

JOHN CAIN.

Rutland, Vermont, Feb. 15th, 1840.

Rearing Calves on Milk and Meal.

Messrs. Editors—In the last number of the Cultivator, you published some remarks of mine on the mode of feeding calves by Mr. Hearsey, by giving skimmed milk with some meal, &c.

Mr. Hearsey says that it is necessary to explain the manner of mixing the meal—that if the raw meal is put into the milk it will scour the calf. He makes the meal into suppaun, heats the milk over steam to the state of its coming from the cow, and then mixes about one pound of the cold suppaun in the milk, and feeds the animal in this way three meals a day. His calves thus fed, at the end of the year are more than double the size of those calves that suck the cow. He now makes 12 lbs. butter a week from two cows, and uses six quarts of milk daily from the same cows.

He adds a pint of boiling water to a pan of milk when set, holding six quarts, and the next day the cream will all be floating on the top, and skimmed off and churned.

DAVID TOMLINSON.

Schenectady, March 10, 1840.

Preserving Hams for Summer use.

Messrs. Gaylord & Tucker—As the time is now come to put up hams to be kept for summer use, I will state to you my mode. I believe we have tried all the methods in practice, and must prefer the one here described.

We take a dry cask or box, say an old flour barrel, put a good layer of coarse salt in the bottom, and then put down a ham; cover that with coarse salt, and put down another ham, and so on till the cask is full, or the hams all deposited. Set the cask in a cool dry place, and whenever a ham is wanted take it out, and it will be every way as clean, clear from vermin and all other impurities, as when put down. This is attended with very little trouble or expense, as the salt is not at all injured for any other use in the fall. My cellar being a very dry one, we put the cask of hams in a cool place in that; but a damp cellar would be apt to dissolve the salt. The hams should be well dried before being put down. Yours, CALVIN BUTLER.

Plymouth, Conn., March 14, 1840.

Sore Teats in Cows.

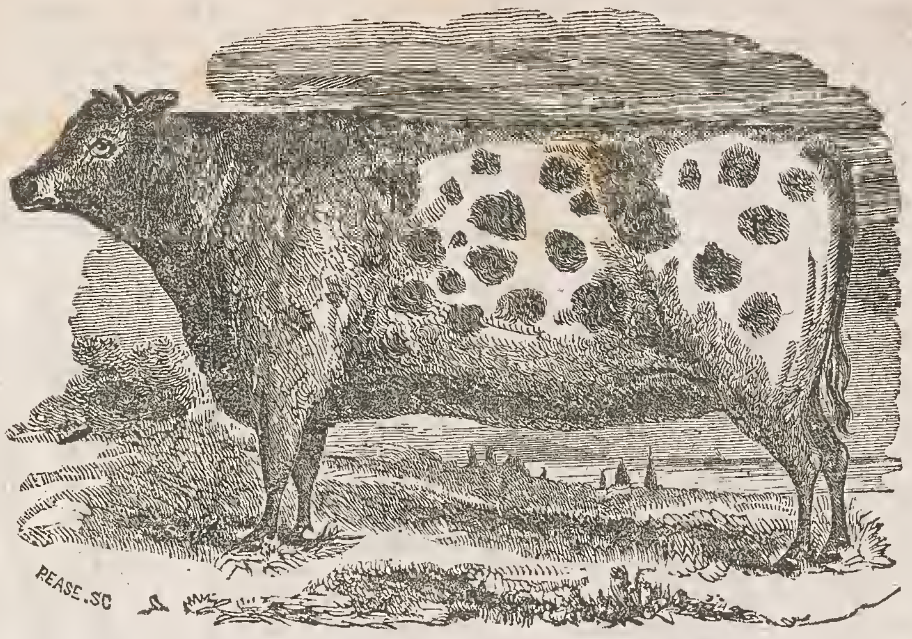
Messrs. Editors—As many of our farmers suffer severely annually, by swollen udders and teats in their milch cows, the following is a cheap, simple, and a most sure remedy.

Take the bark of the root of the shrub commonly called bitter-sweet, wash and simmer it with a small quantity of lard, until it is very yellow, and when cool, apply it to the parts that are swollen, two or three times a day, until the udder and teats are perfectly soft and free from kernels. It has been tried with great success in our vicinity.

A FARMER.

East Windsor, Ct. Jan. 15, 1840.

A Hoosier Calf—[Fig. 38.]



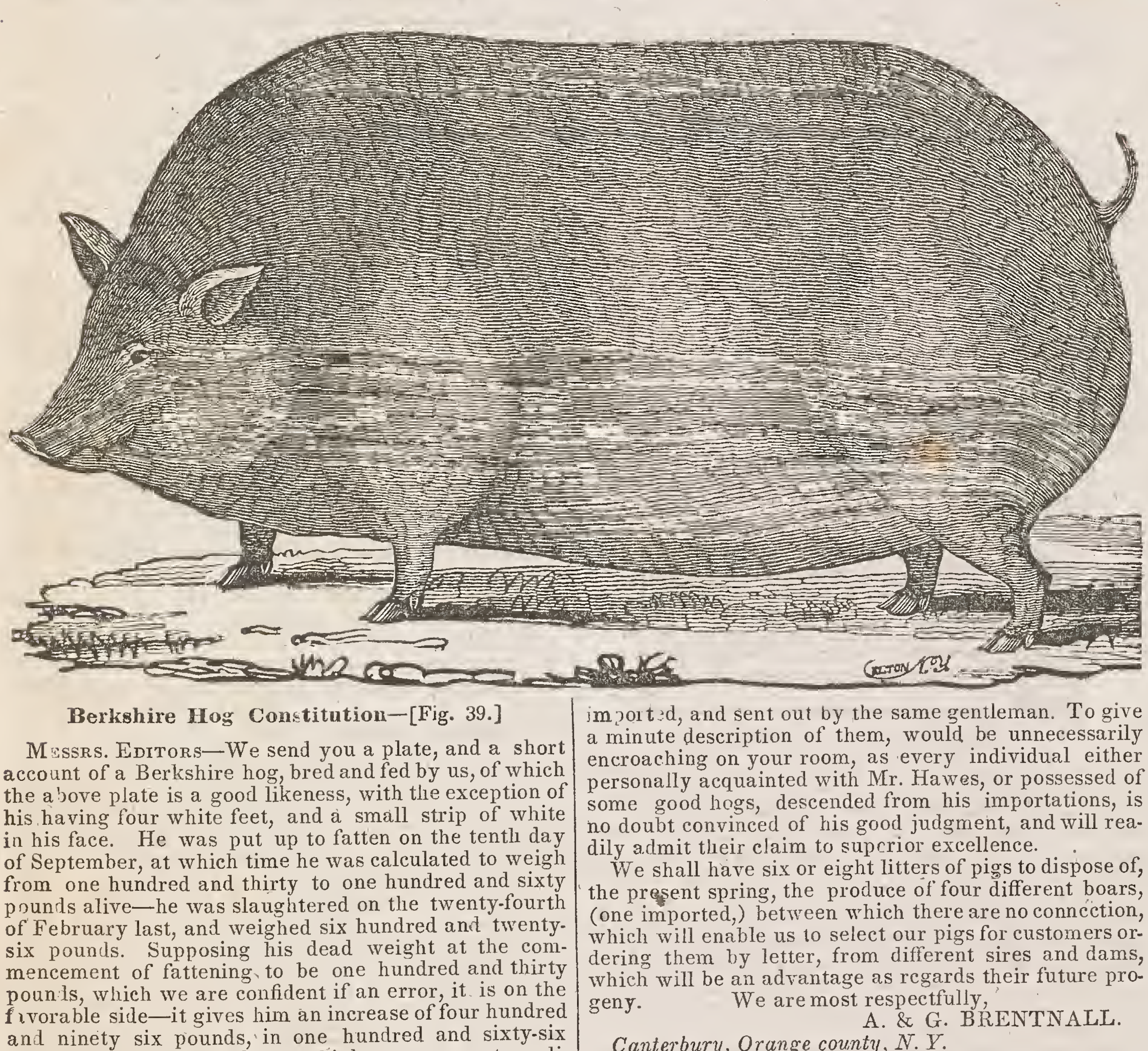
The annexed is the profile of a calf nine months old, as it stands in the yard eating a few years of corn. It is now four months gone with calf; and if nothing happens, will, of course, be giving milk at the early age of 14 months. According to the estimate of a butcher who examined it the other day, it would dress four hundred weight of meat. It is out of a rather small but handsome white heifer, 3 years old, of the common breed; well made for a scrub, save her very heavy bull neck and enormous ox horns. This defect ot thc dam (bull neck) appears conspicuous, you perceive, in the calf.

The color is a beautiful spotted—thicker and darker towards the head, which is nearly red, and larger and thinner towards the flank. The spots in the above are exactly as they appear on the left side; making, however, all due allowance for my total ignorance of the science of "light and shade."

The bull it is from is a most beautiful animal, three years old, and about three-fourths in the blood of the short-horned Durham. The moment I read the interesting article of Mr. Randall, in your last, it struck me at oncc that the above calf is a very happy illustration of his views in relation to crosses with the Durham. Except the defect of too heavy neck, "the Hoosier Calf" would not yield in beauty to any thing of the full blood I have ever seen. The rough pencil sketch given you does no manner of justice to its elegant proportions. The body is round as an apple, and the slight sinking of the belly, perceptible in the profile, has only occurred within the last few weeks. I have especially failed to sketch the beautiful outline of its hind quarter, straight in thc leg, ample and rounding above, beyond almost any thing I have evcr seen.

My apology for venturing to give you a pencil sketch of it is, the very great interest which Mr. Allen's sketches of hogs, and Mr. Randall's of cattle, have excited in behalf of your paper. We are all but children of a larger growth, and must have something like *sensible objects* to give us definite ideas. C.

Cass County, Indiana, Feb. 25, 1840.



Berkshire Hog Constitution—[Fig. 39.]

Messrs. Editors—We send you a plate, and a short account of a Berkshire hog, bred and fed by us, of which the above plate is a good likeness, with the exception of his having four white feet, and a small strip of white in his face. He was put up to fatten on the tenth day of September, at which time he was calculated to weigh from one hundred and thirty to one hundred and sixty pounds alive—he was slaughtered on the twenty-fourth of February last, and weighed six hundred and twenty-six pounds. Supposing his dead weight at the commencement of fattening to be one hundred and thirty pounds, which we are confident if an error, it is on the favorable side—it gives him an increase of four hundred and ninety six pounds, in one hundred and sixty-six days. His weight we do not think so very extraordinary, only in his attaining it in so short a time. It is our impression, that he would have attained the weight of eight hundred pounds, had the season of the year warranted us in keeping him two months longer.

He measured in height two feet eight inches; from his ears to the root of his tail; four feet eleven inches, round the body back of his shoulders, seven feet one inch; breadth over his shoulders, two feet four inchcs—over his loin, two feet two inches—when clove down the back he measured one foot four inches deep on the shoulder, and his hams weighed sixty, and sixty-one and a half pounds, which are all lean with the exception of about one and a half inchcs only of fat on the outside.

We wish at the same time, to inform those subscribers to your invaluable journal, who are breeders of Berkshire hogs, that our friend Siday Hawes, Esq. sent us out last fall four Berkshire pigs—two boars and two sows, selected by him cxpressly for us, regardless of trouble or expense, with a vicw of our carrying forward, and improving on the good properties of those hogs, previously imported by him, of which we held a good sample. They are in color similar to those formerly imported, and sent out by the same gentleman. To give a minute description of them, would be unnecessarily encroaching on your room, as every individual either personally acquainted with Mr. Hawes, or possessed of some good hogs, descended from his importations, is no doubt convinced of his good judgment, and will readily admit their claim to supcrior excellence.

We shall have six or eight litters of pigs to dispose of, the present spring, the produce of four different boars, (one imported,) between which there are no connection, which will enable us to select our pigs for customers ordering them by letter, from different sires and dams, which will be an advantage as rcgards their future progeny.

We are most respectfully,

A. & G. BRENTNALL.

Canterbury, Orange county, N. Y.

Culture of Corn, Roots, &c.

Jesse Buel & Co.—I have not seen a sample of the Cultivator and Farmer, but from the excellence of the late Genesee Farmer, conducted by the editors of the present work, I have the fullest confidence that it will produce the happiest effect on the farming community. I know that the forty copies of the Monthly Genesee Farmer, which I procured last year and circulated in this county, (twenty-four of which included the four volumes of the work,) produced a new and valuable stimulus to agriculture in this county; but none I believe were so much benefited by it as myself. The four volumes cost two dollars, and I am warranted to say, that it was worth to me more than one hundred dollars in my crop of roots, and in thc additional quantity of corn, leaving out of the calculation the many other advantages which I derived from it.

I planted seven acres of *Dutton* corn on the 10th of May last, and on the 5th of September it was ripe, and commenced cutting it up. Each evening I put up the stalks in small shooks; about the middle of October I commenced husking it on the field, and each day I took in the corn and fodder. The ground and the corn were carefully measured, and I got from seven acres, 1,352 bushels of ears, which I calculate to be 676 bushels of corn or 96⅓ bushcls to the acre. The ground was a clover and timothy sward, mowed the two previous seasons; it was manured with twelve loads manure to the acre, and plowed down early in the spring. After four times harrowing the ground, the corn was planted three feet between the rows and one foot in the row. At the first dressing, my corn was thinned leaving two stalks (together) for every foot in the row. In the culture of my corn, it received no extra labor or care beyond what I usually bestow on my corn crop. Of the commcn corn of this country (the yellow gourd-seed) on land equally good and the season at least equally favorable, I never made more than 65 bhshels to the acre; and this increase is chiefly attributable to the fact, that the Dutton corn will bear fifty per cent more stalks to the acre than our larger growth. The stalks too are of considerable value. I have procured Green's patent straw cutter, and feed ten cows with my stalks and roots without any hay this winter; and the stalks from my seven acres will be more than sufficient.

I planted last spring one acre of beets; part sugar beet and part mangel wurzel. They yielded 1050 bushels, weighing 26 tons. I also planted one acre of ruta baga, which yielded 600 bushels. The beet root and ruta baga, were I believe never before raised in this county, except a few in gardens. I never saw any before last season, consequently I received all my knowledge from the Genesee Farmer. I think every farmer should read a good agricultural work and would do so if he understood his interest. JOHN MYERS.

Canton, Stark Co. Ohio, Feb. 10, 1840.

Importance of Advertising.

Messrs. Editors—I have just received the February number of the Cultivator—and I hasten to address a few lines to you on a subject, which I consider of importance to every farmer, who is a breeder of cattle. With Mr. Allen, of Buffalo, I regret exceedingly that you have come to the determination of not admitting advertisements: for, with that gentleman, I consider them half the spirit and interest of an agricultural journal—so much so, that if I had to make the choice between your well conducted paper, excluding advertiscments, and an inferior one, admitting them, I should give the preference to the latter. Of course I would confine the advertisements to strictly agricultural subjects. To such of us, as are not in the habit of frequenting those places of abomination, thc bars of taverns, the sources of information on these subjects are narrow and limited. In this respect, the farmers in the old country have a great advantage over us. For there, every small town has its weekly market days, on which the farmers meet to sell their produce, and afterwards dine together at public ordinaries, on plain substantial dinners. This brings the farmers together, and affords them an opportunity of conversing on general agricultural subjects—of deriving much useful information with regard to sales of stock, &c.—of discussing the merits of newly invented agricultural implements—and of discoursing on thc merits of the different breeds of cattle most in repute. As we, (unfortunately I think,) have not the same facility, I trust, Messrs. Editors, that you will do all in your power to aid us, in gaining information where we may best improve our cattle, &c. by crossing with the most approved breeds. For want of this information, I have myself felt great inconvenience, both with regard to my ewes and sows. What I suggest is, that you should publish, at the suitable seasons, a list of male animals of improved breeds, with the names and residence of the owners, and the price at which the animals serve. This would not take up much room in your valuable publication, and I consider that it would afford information well worth the space it would occupy. Wishing you every success in your new work,

I am gentlemen, yours respectfully, C. B.

Ontario county, Feb. 20th, 1840.

☞ It will be secn by a notice in this paper that we have determined to issue an advertising sheet on the first of next month. Owners of high bred animals, whether of horscs, cattle, sheep or swine, by availing themselves of this opportunity to make known the particulars desired by our corrcspondent, will, it is believed, promote their own interests as well as confer a favor on the public.

Carpenter's Harvesting Machine.

Editors of the Cultivator—In the March number of the Cultivator, I saw the queries of Mr. Lambson, of New-Jersey, relating to "Carpenter's Harvesting Machine." We are glad to gratify any who may wish information concerning the Harvesting Machine. He asks—

"What would be the cost of the machine?" Six hundred dollars, *warranted and durable.*

"What number of hands is necessary to attend it?" One to drive the team, and one to take care of the machine.

"Where the ground is very wet, would the car wheels sink so deep as to render the machine useless?" The car wheels have broad fellies to keep them from sinking into soft ground.

"Could the thrasher be dispensed with *and the machine taught to mow?*" We think not; it is too heavy and too costly for that use. The *great saving* in grain and labor, is in *finishing* the work without laying the grain on the ground. It may be gaged to cut as high as the grain will admit, and the nine feet swath streams from the cradles to the thrasher *so evenly* that no more power is required to *finish* fifteen to tweenty acres a day, than is necessary to drive a common thrasher, which only thrashes say two hundred bushels in a day with many hands in attendanc. Respectfully,

G. G. CARPENTER.

Wheatland, March 11, 1840.

Treatment of Sandy Soils.

Messrs. Editors—Should you deem the following remarks, copied from a letter written by one farmer to another, in reply to some inquirics and in answer to some objections, worthy of a place in the columns of the Cultivator, they are at your service: X. Y.

"*Dear Sir*—My reasons for supposing that in deep sandy soils, (or those in which silex predominates, to the exclusion of more tenacious materials,) much of the value of manure was lost by infiltration, or passing below the roots of plants, were the opinions of such practical and scientific men as Von Thaer and Davy in Europe, and Jackson and others of our state geologists, in this; observation of the operation of water on the soluble parts of manures, and the facility with which these parts are separated, and carried off when the water is in excess, as is evident from the color of water in yards, and that which leaches from them; and also from some personal experience in that class of soils. One part of the farm on which I many years since resided in New-England, was a tract of very light sand, which was cultivated according to the exhausting mode then in use, and which after I left passed into the hands of an old fashioned farmer, who has continued the system of cropping, until the land is now incapable of producing any thing, and is mostly a bare surface, or nearly so, of sand. In recommending a different course to him, a few years since—a different course founded on manure, clover, and plaster, his reply was, "manure does no good, it sinks into the sand, and is lost to the plants on the surface." Now, although I believe I could take those same sand plains, and in five years make them the most fertile part of the farm, yet, for the reasons already assigned, I have been inclined to believe that on porous, gravelly, or deep sandy soils, much of the benefit and value of manures was lost by sinking with the water beyond the reach of plants. It is the most active part of the manure, the salts, that are the most soluble, and hence the most liable to be lost. I may be mistaken, however, in some of my inferences, and in the British Husbandry, I find a remark that reminds me of the opinion expressed by your neighbor; viz. that on such soils the manure does not sink beneath the soil plowed; that work asserting that on the light sands of Belgium, their system of manuring and plowing, with their course of cropping, soon converts the sand into a rich soil as low as it is stirred by the spade or plow.

In the cultivation of what are termed sandy soils, experience would seem to have taught European farmers, that it is better in most cases to form the manures into compost, than to apply it long or fresh. Their method of forming compost is to place a layer of sods, muck, or swamp earth, (the latter being considered very valuable as containing usually a quantity of clay,) then a layer of fresh manure, then another of sods or earth, and then of manure, and thus to alternate until the requisite height is reached, and then it is left to ferment and rot. The covering of the heap is of turf, grass side down, as are all the sods used, to receive the wash or drainings of the manure. These piles are occassionally watered by urine, but this can be dispensed with. Where there is a deficiency of lime in the soil, or where the compost is to be used for grain crops, layers of lime are added to the heap, but these layers are not placed in contact with the manure, but between layers of sods or earth. These heaps of compost made in autumn are ready for use in the spring, and are applied to the crops or to the soil as is wanted for the purpose of the farm. I have some doubts whether compost heaps made in this way, in our climate, late in autumn, would decompose during our winters, so as to be fit for use in the spring, for root crops; but if they would, I have no doubt it would be the best mode of manuring your land, or indeed almost any other.

For myself, I think that rotted manure, as being more quickly felt by the plants, is better for roots than that which is long, though roots and corn are the only crops to which long or fresh manure should be applied. If ashes could be obtained, I should use them liberally, either in the compost heaps, or applied directly to the land. On sandy soils few things are more useful. A short time since in visiting a neighboring town, I observed a Mr. L. an excellent farmer, drawing manure. His method was to draw one load of stable manure, place it where wanted, and then go to an old ashery, and get a load of leached ashes, which was placed on the manure. In this way, the gases and volatile salts of the manure are kept from evaporation, and the salts that abound in ashes are incorporated with the manure. His system has produced some of the most beautiful fields of grain I have ever seen; and though his soil is not quite as sandy as yours, I have no doubt would succeed well with you.

One difficulty in a soil constituted as is yours, is that it parts with moisture so readily, that manure if applied fresh or long to a crop, is kept in so dry a state that decomposition is but slowly or partially effected, and the change of the earths that compose the surface, into soil, or rendered fertile, is not so complete or rapid, as when the proper degree of moisture is present; or the manure is rotted and made into compost before its application to the land. To this want of moisture, and consequent entire dryness of the manure in which they were planted, must be attributed the failure of the potatoes of which you spake to me. In our soils, that are so retentive, the difficulty, though more serious, is of an entirely different kind. We find it necessarry to lay our land, cultivated with roots or corn, into ridges, in which the manure is placed, and rare indeed is it to find that the manure is not decomposed at the time of digging the roots, or plowing after the corn. No matter how near the surface, if covered at all, it rarely is found dry; and I think probable, that so far as decomposition is concerned, or the manure to be kept moist, (which is essential to its doing any good,) you would find much benefit from covering it a sufficient depth to prevent evaporation, and if possible, thus secure that proper degree of moisture, without which fermentation can not proceed. Deluged by water, as manures on too retentive soils frequently are, plants are very little benefited by them; without moisture, as they must sometimes remain on very porous soils, they do not ferment, and while dry are comparatively useless. With us, under-draining and the use of means to give more dryness and friability, is what is required; with you, the giving greater tenacity and the power of retaining moisture, is the grand desideratum.

In the treatment of sandy soils, I should rely much upon the incorporation of clay with the surface, either in the shape of clay marl, or made into compost by mixing with manures in layers as above described. The capacity of this earth for retaining moisture, or rather its attraction for it, renders it one of the most effectual agents in benefiting soils that are too light; and very fortunately for the agriculturist, it most usually occurs in abundance near where it is wanted.* Ashes contain both clay and lime, and are therefore beneficial in two respects: they serve to assist sandy soils in retaining moisture; to correct acidity where it exists; (which, however, is not often the case with sandy soils, but is a characteristic of wet ones;) and they give some lime to soils, that sometimes are destitute, or nearly so, of that necessary ingredient.

For myself, I should have no fears, were I the owner of a farm like yours, about making it capable, (were it not, as yours already is) of producing any kind of crop whatever. Most gladly would we, who work such heavy, tenacious, yet strong soils, exchange for such as are more friable. Did it not already exist, any degree of fertility can be easily imparted to yours; while freedom from moisture, and friability, and ease of working, are not, without expense and difficulty, given to ours. I must venture another hint: your situation and that of your farm, is most suitable for instructive experiment; you have the means and the inclination to make them; and I hope that in instituting them, a record of the whole will be kept, that others may be benefited as well as yourself. There is another important point. Have you ascertained, by analysis, the kind and proportion of earths in your soil? If not, Professor D. or B. would doubtless analyze a specimen for you. You would need to take the earth from a little below the surface, where it has not been manured, or is in its natural state. If taken from several places, thoroughly mixed, and the specimen to be analyzed taken from this mass, the result would give a very satisfactory average. Almost any one can determine the proportions of sand, lime, and clay in the soil, but the detection of the salts, or the oxides, is a more difficult and delicate matter.

S. D."

Durhams vs. Devonshires.

Messrs. Editors—Permit a subscriber to make a remark or two on an article in your December number, recommending Devonshire Cattle in preference to the Durham. I would first observe that the recommendation comes under no responsible signature; the assumed one of "*Phelim*," is no guaranty for the good faith, disinterestedness or soundness of the advice, and in a matter of such importance, the incurring the vast expense of changing one high priced breed for another, we should at least know in whose judgment and experience we are asked to confide. In general, it would heighten the character of your publication, if all your correspondents were required to give their *names*, with their communications, but more especially where facts are stated or advice volunteered.

Phelim informs us that among northern farmers, the Durham cattle are considered "not adapted to the climate, the pasture not sweet or rich enough, and the winters too cold or severe." He then asks "whether it would not be a good plan to buy some other breed that will keep on short pasture and stand our severe winters?" Admitting his premiscs, the answer to this inquiry would undoubtedly be in the affirmative; but it seems to me that in pitching upon the Devonshires as a substitute, he could not have made a worse choice among all the known breeds of improved cattle. I will admit that the latter being a lighter breed may exist on shorter commons, but why does he expect them to possess more hardiness than the Durhams? Is it because his favorites derive their origin from the mild relaxing climate of Devonshire, where myrtles and oranges endure, almost without protection, what can hardly be called a winter, while their rivals from their birth are accustomed in their native county Durham to face the blasts of the frozen North Sea, or has any legerdemain (we know the arts of cattle breeders are wonderful,) transformed the delicate constitution of the Devons into something like that of the Arctic Bear?

In other respects Phelim has not given an exaggerated description of this celebrated stock, but I must have better evidence than unsupported assertion before I can believe that they excel the Durhams in ruggedness of constitution. In our *southern* states, the Devons would probably find a congenial climate, while the improved Durhams, mingling the blood of the Flemish and native British races, have all the predisposition that descent can give to make them hardy, and to fit them for our own rigorous seasons. In evidence of this, we see them extending themselves even into the Scottish territory, whilst the other (Devons) are never attempted. If a change becomes necessary, would it not be better to take them from a more northern than a more southern district. With this view, I do not *recommend*, but I venture to direct public attention to the far-famed Ayrshire breed, as possessing all the qualities Phelim presumes the Devons to possess, except perhaps, their peculiar fitness for the draught, while they are altogether superior as a dairy stock. I do not surrender the Durhams, however, where they are not stinted in their summer pasturage or starved during winter upon straw, and the following instance will show that they rank high as draught cattle; a pair of Durham steers raised by the late Mr. Brentnall of Goshen, have in one day gone from that village to the Landing at Cornwall, a distance of about 20 miles, and returned the same day *with a load!*

One point of conceded superiority the Durhams possess which has not been touched upon; that of early maturity. Phelim confesses that the cows of the Devonshire stock are smaller than the bull; this *is* a disadvantage, and hence their calves as far as my experience goes are small, puny and of slow growth, requiring at least one year more than the Durhams before they are fit to breed.

Having thus freely criticised one communication, can I be forgiven for a further trespass, by animadverting on the article headed "Saltpetre in meat," from the pen of an old friend, the ingenious and learned Professor Rafinesque? Is not his alarm about that "*deadly poison*," which we administer to the community in our hams and other salted meats, entirely gratuitous? Nitric acid is indeed a most corrosive ingredient, but when combined with potassa, and become a *neutral* salt, why is it more dangerous than common table salt, which is a compound of soda and muriatic acid, the latter quite as formidable as aquafortis in an uncombined state? Unless there be some acid extricated during the operation of curing, having a greater affinity for the potash than nitric acid, and thus setting it free in its deleterious state, I presume no danger need be apprehended from its moderate use, which is said to be serviceable in intenerating the *fibre* of animal substances. If our preserved meats become insoluble, the change must be in a great part referred to the *salt* and the *pyroligneous acid* of the smoke-house. At the same time, I agree with the Professor in thinking, that *sugar* in a large proportion, might be beneficially applied far more generally than we find to be the case in these processes.

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*Note by the Editors. The introduction of the above suggestion as to the importance of clay in the ameliorating of sandy soils, induces us to add an extract or two, illustrating the manner of its use, as well as its value; the first will be from Prof. Emmons' Geological Report of 1838. The Professor says, in using clays—

"The great point to be attended to is to secure a sufficient degree of fineness, that they may be incorporated with the soil, and form, strictly speaking, a constituent part of it. To attain this object it is necessary that they should be raised in the autumn and placed in heaps, that they may be exposed to frost and the action of the atmosphere through the winter. To assist still further in the process of pulverization, it is better to mix them with barn-yard materials, straw, manure, and refuse of any kind, either animal or vegetable. This course being pursued by them, they should be spread as evenly as possible on green sward, that they may enjoy the further benefits of air, moisture, &c. by direct exposure during the season. Besides, the grass in passing up through the layer will greatly assist in producing a comminuted state. The succeeding season it is in a state to be plowed in, when it is duly prepared to become a constituent part of the soil. It is only in this way that the stiff and adhesive clays can be broken up, and prepared for incorporation with the other earths." * * * "Most of the clays of this state are those which are marly; or which are combinations of clay and carbonate of lime. They are widely diffused, but their value is not highly appreciated. The time is not distant, however, when they will be as highly esteemed as plaster. They have even one advantage over plaster, that their effects are more lasting when they have had a due preparation." Report, page 222.

The other extract will be from Judge Buel's Farmers' Companion, and is particularly valuable as illustrating the manner in which, by the use of clay and skilful cultivation, he produced such an entire change in the character of the sandy parts of his farm:

"Our practice differs somewhat from the recommendation of Professor Emmons. Our leisure time for drawing clay is generally in the winter, and we are enabled to obtain it at this season from the clay banks in Albany. We do not place it in piles or mix it with other materials; but scatter it immediately from the wagon upon the sward, as evenly as its adhesive properties will permit. In this way it becomes better exposed to the ameliorating influence of the weather. The frosts and the rains break down the lumps; and when the clay has afterwards become dried, it is readily pulverized by the maul or roller, and distributed by the harrow." Page 42.

The quantity of clay required to impart tenacity to a sandy soil is comparatively small; and among the many farms in the older settled parts of our country, that have been pronounced worthless, if not abandoned, as light sand, we scarcely know of one where the materials for rendering them retentive, and of course valuable, were not at hand. Sandy soils, if not based on clay, usually abound with what are called swamp-holes, ponds, or marshes, and these from time immemorial, have been the receptacles of vegetable matter, and that they contain clay, the presence of the water is the most conclusive proof. Let no farm be abandoned because it is sandy, until careful examination has proved that the proper article, and the cheapest, for its amelioration, does not exist in the vicinity.

But I dare intrude no farther on your good nature, and am therefore with great respect,

Yours, &c. COMET.

N. B. I have no Durhams or cows from the banks of Ayr, for sale. *Newburgh, February* 1, 1840.

Successful Farming.

Messrs. Gaylord & Tucker—I think I have been very successful in farming the last year, and will give you an account of the different crops I have have raised and their product from 33 acres of limestone land. I do not mean to boast of being able to raise more from an acre than other farmers, or of having raised any very superior crops; but on the contrary I am aware of having committed many erros in my system of farming, and I am convinced that my crops last year ought to have been one fourth heavier, and that in future I shall increase the product from year to year above what I have raised last year.

3 acres of Barley, 180 bush.	
7 do do 230 do	
5 do do 225 do	
635 bushels at 70c.	$479 50
4 acres I. Spring Wheat, 125 bushels at $1.10	137 12
5½ " of Rye, 244 bushels at 75c...........	183 00
10 " of clear Timothy, 20 tons, $15	300 00
2 " Lucerne and red clover fed green for soiling, cut three times and valued at.....	60 00
1½ acre in Potatoes and Cabbages, 105 bushels potatoes at 25c.	26 25
750 heads of cabbages at 3c...........	22 50
Yours respectfully,	$1,208 37

FREDERICK SEITZ.

Easton, Pa. March, 1840.

Culture of Indian Corn.

Messrs. Editors—Careful observation has satisfied the writer, that the present system of cultivating Indian corn, is generally very defective, and can be greatly improved. Not more than *half a crop* is obtained upon an average, except on new or very strong land. We also see this valuable crop frequently destroyed by autumnal frosts.

The following is an outline of the plan which has been tried by the writer, with entire success. Good crops have been obtained—75 bushels to the acre—and the corn, invariably ripened before the frosts of autumn could injure it.

Spread upon the ground, before plowing, 20 to 30 ox cart loads of good, long, or unrotted stable manure; when the corn is planted, put into the hill one half of a shovel full of well rotted manure. This will give the corn an early and vigorous growth, until the roots are long enough to derive sustenance from the long manure. By thus giving it an early start, it will ripen two or three weeks earlier than it otherwise would. The long manure will carry it out, and make more corn and less stalk, than when all rotten manure is used. Let the manure, which is to be kept until it has rotted, be piled up, and covered, so as to protect it from rain and sun, and it will lose much less of its strength than if exposed. Some may say, that the quantity recommended per acre, is more than can generally be afforded. Unless the land is very strong, or in high tilth, *less can not be afforded.* As a general rule, 5 acres, with 100 loads of manure, will produce more corn than 10 acres with the same quantity, beside the great saving of labor and ground. It is very clear that farmers generally do not manure their land high enough for Indian corn. Upon sward land, rotten manure is indispensable to give the corn a start, and insure an early and full crop.

Poudrette, is a good substitute for rotten manure, when it can be had.

No farmer should be satisfied until his average crop is at least 75 bushels to the acre.

A Lover of Good Husbandry.

New-York, March, 1840.

Cutaneous Diseases of Sheep.

Messrs. Editors—The disease, as described to exist in sheep, by your correspondent "J. V. H. Clark," is strictly cutaneous, but not dangerous nor catching. It is caused, first, by sheep being kept on too short an allowance of feed, when they get hunger-bit, (vorhungert) pinched with hunger.

Secondly, by being kept in sour and wet pastures; and although they may have plenty of feed, and fill themselves; yet, the blood becoming gradually vitiated and acrimonious, the requisite and healthy nourishment is not conveyed through the system, which partly causes respiration to stop. These vitiated juices, becoming more and more acrimonious, seat themselves in the skin, and when the sheep begin to thrive again, it starts the dandruff, and causes itching; hence they are seen nibbling and pulling out small flakes of wool. The period is from one to four months, and even longer, before an eruption takes place: And if sheep are long exposed in such pastures, the worse the effect—even the *rot* may in a higher or less degree be contracted, when this disease becomes permanently fixed, (seated;) there is then no help for the poor animal, but it is inevitably doomed to destruction.

Thirdly, it may be brought on by fever.

I know of no particular cure for it—and none to my knowledge has ever been published, either in this country or Europe. Whenever I have had any individuals that were affected with it, I bettered their feed by giving them plenty of oats and hay, and as much salt as they would eat. Should, however, the sheep be poor and feeble, great caution in feeding is necessary.

I am yours, most respectfully, H. D. GROVE.

Buskirk's Bridge P. Office, March, 1840.

Culture of Carrots, Ruta Baga, &c.

Messrs. Gaylord & Tucker—Having been a subscriber to the Cultivator three years, I have derived much instruction and pleasure from its perusal; and wishing to impart instruction as well as receive it, I will give you my experience in the root culture the past season. I have been engaged in it for the last three years on a small scale, and have derived much profit from it. I sowed half an acre of Swedish turneps on a wet soil, and the wet weather caused almost a total failure; one-eighth of an acre of carrots, the land a sandy loam; was in corn the previous year, and the product was eighty-five bushels, or 680 to the acre. I also sowed one-eighth of an acre of mangel wurtzel, and the product was seventy-five bushels, or 600 to the acre, the land being the same as the carrots; both pieces received a liberal dressing of unfermented manure. Agreeable to my experience, one acre of carrots is worth more to feed farm stock, than four acres of ordinary good grass; the carrot contains more nutriment than the wurtzel or ruta baga, and is easily raised, not being subject to the depredations of the insect.

B. STANTON.

South Westerlo, Jan. 22, 1840.

Rohan Potatoes.

Messrs. Editors—I have seen several statements in the Cultivator, of large yields of the Rohan potato. Permit me to give you a statement of the yield of two Rohans, which you had the kindness to present to me last spring. One of them I cut in fifteen parts, an eye in each part, and made fifteen hills—nine of the hills were afterwards plowed up, and the remaining six produced half a barrel of fine large potatoes—the largest weighing 3 lb. 3 oz.—the other one I gave to a neighbor of mine, it weighed half a pound, and had seventeen eyes. He made fifteen hills, and the yield was a flour barrel rounded over, full of the largest size, weighing 138½ lbs. some weeks after being housed—which I think is the largest yield, of any statement I have yet seen of this valuable vegetable. W. J. SLINGERLAND.

Minaville, Montgomery county, N. Y.

Large Calf.

Mr. Luke Watson of East-Windsor, Hartford co. (Conn.) has a bull calf of the short horn breed, that weighed, when three months and three days old, 336 pounds. What is very remarkable he is the second calf of a very large heifer three years old the first of April next. She brought her first calf at the age of twenty months and a half—her second at the age of two years seven months and a half.

East-Windsor, Conn. Feb. 15, 1840.

To Correspondents.

An apology is due to our numerous correspondents and friends, for the want of proper and immediate attention to their letters, inquiries, &c. which has been occasioned by the necessary absence of the resident editor at Rochester most of the winter. A number of inquiries now on hand will be answered next month.

☞ Several communications intended especially for this No. are unavoidably delayed till our next. Among them "Evelyn," and Mr. Cain's Plan of a Dwelling-House.

☞ The first edition of the January, February, and March numbers having been exhausted, we are getting out a new edition, and hope to be able to furnish those subscribers who have not received their numbers in the course of two or three weeks. We have made such arrangements as will enable us hereafter at all times to supply back numbers.

☞ Those subscribers to vol. 6, who have not received the December number, are informed that it will be sent them just as soon as the portraits to accompany them can be procured. The fault lies with the copper-plate printer who injured the plate, from which the portrait of Judge Buel is taken, so much that it became necessary to have it re-engraved.

The Genesee Farmer.

In reply to several inquiries, we would state, that no *complete* setts of the Genesee Farmer, either of the weekly or monthly paper, can be furnished. We have quite a number of the 4th, 7th, and 8th vols. of the Weekly Genesee Farmer, which, to close the concern, will be sold at half the subscription price, viz: $1 per volume. We have also, a supply of the 1st and 3d vols. of the Monthly Genesee Farmer, price 50 cents per volume.

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PRICE CURRENT.

ARTICLES.	New-York, March 25.	Boston. March 21.	Philadelphia. March 24.	Baltimore. March 23.
Beans, white, per bushel,......	2 00— 2 25	1 25— 1 75	1 25— 1 30	1 25— 1 37
Beef, per cwt..................	7 00— 8 25	7 00—10 00	6 87— 7 62	....
Bacon, western, per lb.........	....	0 07— 0 08	0 07— 0 08	0 09— 0 10
Butter, fresh, per lb..........	0 16— 0 18	0 20— 0 23	0 16— 0 20	0 12— 0 20
Cheese, per lb.................	0 08— 0 09	0 08— 0 11	0 09— 0 10	0 09— 0 12
Cotton, best per lb............	0 06— 0 10	0 7½— 0 09	0 09— 0 11	0 10— 0 15
Flour, best, per barrel, ...	5 00— 5 75	6 00— 6 13	5 87— 6 00	4 62— 4 87
Grain—Wheat, per bushel,....	1 05— 1 14	....	1 08— 1 12	0 90— 1 03
Rye, per bushel,......	0 56— 0 57	....	0 60— 0 65	0 55— 0 56
Oats, per bushel,......	0 22— 0 34	0 30— 0 40	0 28— 0 36	0 27— 0 28
Corn, per bushel, ...	0 56— 0 57	0 50— 0 56	0 48— 0 65	0 45— 0 50
Hams, pork, per lb............	0 10— 0 12	0 09— 0 10	0 09— 0 10	0 10— 0 11
Pork, in hog, per cwt..........	....	6 50— 7 50	7 25— 8 00	....
Seeds—Red Clover, per lb.....	0 15— 0 16	0 15— 0 16	0 16— 0 17	....
Timothy, per bushel,..	2 10— 2 15	2 50— 3 00	2 75— 3 00	2 25— 2 50
Wool—Saxony, fleece, per lb..	0 50— 0 52	0 50— 0 55	0 55— 0 60	0 60— 0 70
Merino, per lb........	0 40— 0 45	0 47— 0 50	0 50— 0 53	0 50— 0 55
¼ and common, per lb..	0 34— 0 37	0 40— 0 45	0 37— 0 45	0 37— 0 42
Sheep, per head,....	4 50— 6 00	3 25— 5 00	2 50— 5 00	2 00— 3 50
Cows and Calves, each, ...	25 00—38 00	25 00—38 00	28 00—35 00	30 00—35 00

THE CULTIVATOR,

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

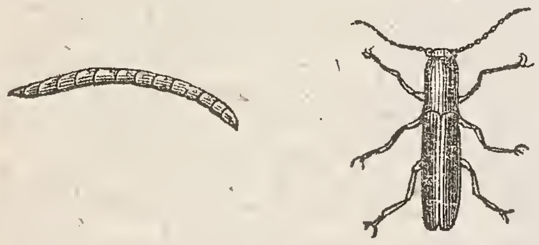
☞ For Notices to Correspondents, Acknowledgments, &c. see cover.

Predatory Insects.

Most of those insects that inflict such serious injuries on the farmer, considered as individuals are harmless and inoffensive; it is only when appearing in multitudes, that the small quantity of food required by each one, swells into an amount destructive to the hopes of the husbandman, or the injury sustained in the granary, garden, pasture, or orchard, is observed or appreciated. Notwithstanding the losses the agriculturist or fruit grower is continually sustaining from this source, very little attention has been given the subject; and the history, habits, and transformations of those that are the most destructive, are very little understood; and of many of them that inflict serious injury, even the name and appearance is unknown, or involved in doubt and mystery. Certain classes of insects are known to prey upon the roots of plants; others on the leaves and fruits; others on the ripened seeds—some on the woody fibre, and some on the ascending juices; all more or less pernicious; but the means of destroying which, or preventing their ravages, can never be fully effected or known, until their habits and modes of existence shall be observed. Every farmer may aid much in this investigation; he may collect facts respecting the appearance and action of these depredators, from which he himself, or the man of science, may deduce the most important results.

To aid the farmer in this matter, to put him as it were on the correct course of observation, and to show how important a knowledge of the insects that prey upon his labors, and diminish his profits, is to him, is the object of this paper.

FIG. 40, WIRE WORM.



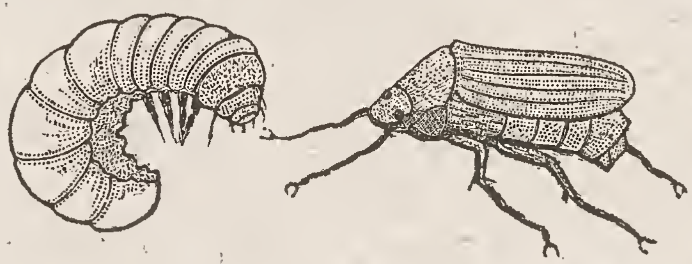
Larvæ. *Perfect insect.*

Cataphagus lineatus, of Stephens.
Eleater segetis, of Bierk.
Eleater lineatus of Linnæus.

"It measures when full grown about seven lines in length. The body is very narrow, of a yellow color, hard, shining, and composed of twelve segments, on the last of which are two indented, dark colored specks. The head is brown, the extremity of the jaws black. The anterior segments have six scaly feet. It is said to remain in the ground four or five years, from which it issues as an Eleater."—*Wilson.*

This is a most destructive insect to crops, frequently committing the greatest ravages, particularly on roots, and spring grains. Perhaps there is no insect so injurious to the Indian corn plant, as this; and it is the most numerous in the turf of old pastures or meadows. We once turned over a piece of old meadow, and planted with corn. This was entirely destroyed—three or four worms frequently attacking a single kernel of the seed, or a stalk of the plant. Not supposing the potato was liable to their attacks, we planted the ground over with this root, but even these were in many cases destroyed by them. The potatoes planted were first attacked by them, and on digging up a tuber, from five to ten were found sticking into it like pins. The sprouts were then assailed, but these were so numerous and vigorous, that in most cases they were soon beyond danger from the worm, as a fine crop of potatoes was the product of the ground. Barley, spring wheat, and oats are sadly thinned out by them where they abound. The perfect insect is a slim black bug, of the kind commonly known as the *snapping bug;* and after depositing its eggs in the earth, perishes within a short time. Late plowing, by exposing the torpid larvæ to the action of severe frosts, or ashes and lime applied to the earth or plants, appear to be the most effectual methods of counteracting and destroying the wire worm.

FIG. 41, WHITE GRUB.

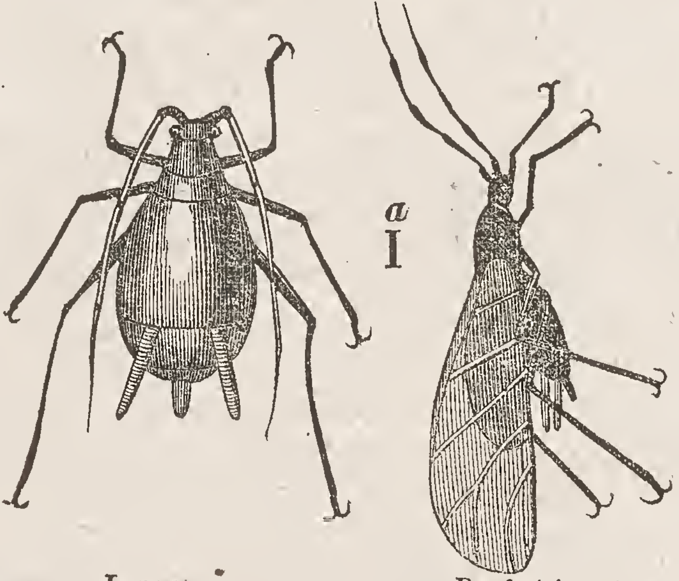


Larvæ. *Female perfect insect.*
Melolontha vulgaris.
Scarabeus melolontha.

The perfect insect of this destructive worm is called the May-bug, cockchafer, &c.; and makes its appearance about the time of the blossoming of the fruit trees. It is slow and unwieldly in flight, remains secreted during the day, is attracted by light, and during the time of its appearance at dusk, seems to rise up in countless numbers from the earth, the grass, or its hiding places. The perfect insect exists but a short time, and is not considered as injurious. The male speedily perishes after the sexual union. The female, as soon as she is fecundated, digs a hole in the earth about six inches deep, deposits her eggs, and dies. The larvæ from these eggs are the white, red-headed grub of our meadows and corn fields, feeding on the roots of these plants, and often inflicting great ravages. We have seen acres of meadow, the roots of the grasses in which were so cut off by this grub, that the turf might be readily rolled up in pieces of almost any size. Both this worm and and the wire worm confine their ravages beneath the surface, never showing themselves above the earth, until the last transformation is undergone, and the perfect insect produced. These grubs change their skin every year, and, according to Kirby and Spence, they remain in the ground four years.

The larvæ of the melolontha, is one of the very few which have been distinguished by the name of vegetating insects, from their being found both before and after death with shoots of some vegetable fungus issuing from them. In some districts of Pennsylvania, it is a common belief that these vegetable elongations change to blackberry bushes; a supposition, it is needless to say, utterly unfounded. Hogs not unfrequently commit serious injury in turf lands in hunting these larvæ. It has been recommended in districts where this grub abounds, that during the few evenings in which it appears, bright fires be kindled of straw or brush wood, which, by attracting the insects, will destroy thousands, and prevent the annual deposition of eggs. Late and deep plowing, will, as in the case of the cut worm, destroy such of the larvæ as are thrown out and exposed to the action of the frost.

FIG. 42, PLANT LOUSE—*Aphis.*
Aphis Rosæ, (*magnified.*)



Larvæ. *Perfect insect.*
a—Size of life.

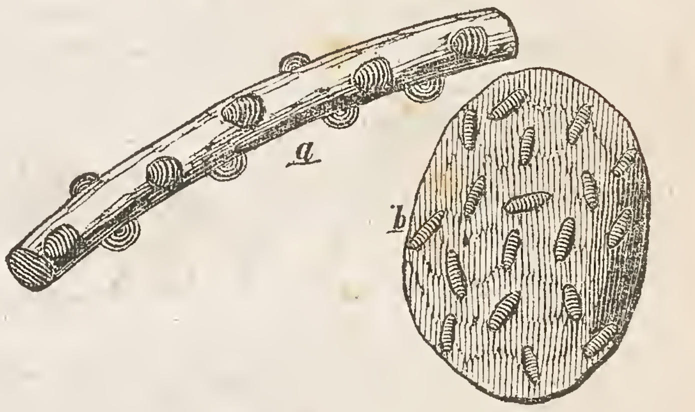
This predatory insect is in many respects a most singular one; and is well deserving the attention of the curious—certainly of the farmer on whose labors it preys abundantly. The genus is a large one, and there are many species, infesting different plants and trees; indeed, almost each variety of tree or plant seems to have its peculiar colony or kind of aphis.

The true aphis are usually very small, their bodies of a soft consistence, the eyes entire, and the abdomen furnished with two horn-like projections at its posterior extremity. Their movements in walking are slow, they cannot leap, and during a large part of their lives are without wings. They have no proper mouth, but are furnished with a sucker which they use in extracting the fluids of plants which constitutes their food. When the aphis first appears in the spring, they are usually solitary, and all females. These give birth to living young, and these, too, are females—the males not being produced until late in the season. Unlike any other known insect, the females thus produced continue to multiply their numbers without connexion with the male—the effect of the parental impregnation extending, according to Huber and Bonnet, to no less than eight generations. The effect of this singular mode of re-production is a multiplication of such rapidity, that Reamur calculates a single mother in five generations may be the means of producing 5,904,900,000! Every farmer witnesses instances of this rapid increase. A single female fixes herself on the leaf of a turnep, cabbage, or the tender shoot of a tree. In a few days they can be numbered by thousands, each vigorously employed in pumping out the juices of the plant, and thus injuring, if not wholly destroying it. The leaves curl and wither, and if they fix on plants intended for seed, the seeds are not perfected.

Another striking peculiarity in the aphis, is the honey like product it furnishes in such abundance; and which, during the summer months, constitutes the principal food of the ant. The two horn-like protuberances just mentioned, are hollow; and while they are fixed to the leaf or twig, small drops of a transparent liquor exude from the opening, and if not taken off by the ant, are thrown off into the air. A few years since a magnum bonum plum tree, standing in our garden, was infested by millions of aphides, the under side of the leaves being encrusted with them. From this tree, there fell a continual shower of these minute drops, looking, when the sun was in the proper direction, like falling mist. The currant leaves, grass, &c. below, was frequented by flies and wasps, as the tree itself was by numerous ants—all partaking of this animal nectar.

The destruction of these insects is a matter of much difficulty, after they have once obtained possession of a plant. Close fumigation with sulphur, washing or sprinkling with soap suds, tobacco water, &c. may sometimes succeed; but the surest remedy is to watch their appearance, and whenever a colony appears crush it at once, by destroying the leaf or twig. The figures we have given are those of the *Aphis rosae*, a fair representation of the species generally; green, and preying on the shoots of the rose bush, the flowering of which it damages or prevents. The figures are much magnified.

FIG. 43, WOOD LOUSE.



a, *Coccus acer*, found on the maple and bittersweet.
b, *Coccus malus*, apple tree louse.
Coccus, of Linnæus.
Gallinsecta, of Reamur.

This insect was classed by Linnæus among the aphides, and in some respects it resembles them; but it differs decidedly in its mode of reproduction, its products, and in its general appearance. Like the aphis, it lives by sucking the juices of plants, and is thus very injurious; but it confines itself to trees, while the aphis is omniverous. There are many species of the coccus, several of which are common in our orchards and woodlands; all, however, but little known except those that infest appletrees, which they sometimes destroy. Two of the most important coloring materials used, are the products of these insects, or rather the insects themselves; the first called Kermes, (*Coccus ilicis,*) and known from the earliest ages as imparting a crimson, or blood-red dye to cloth; and the other the *Coccus cacti*, or cochineal of South America. Of this insect, in some years, nearly 5,000,000 dollars have been exported to Europe and the United States. What is called in commerce *Lac*, is the product of an East India coccus.

The insect that infests appletrees, is the female of the coccus malus, and appears like a small, hard, immovable shell, as indeed it usually is when observed. This coccus, when impregnated, fixes itself by its sucker which projects from between its two forelegs, to the bark, and after depositing its eggs between its body and the bark, dies, and forms a covering that completely protects them through the winter, as well as the young in the spring, until they are ready to provide for themselves, which they do while so small as to require a glass to make them visible. Nothing looks more disagreeable than a tree, crusted over with this insect; and if they are suffered to proceed, unmolested, the tree will speedily be ruined. When this shell is lifted with the point of a knife, a fine dust or powder will be seen, which the microscope shows to be the eggs, or if in the early summer months, the young of the coccus.

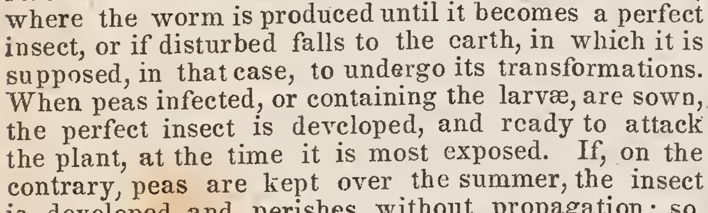
There is another species which we have seen on the bitter-sweet and the maple. It is nearly as large, when full grown, as the half of a small pea; and has its upper side in the oval form, while it is fastened by a sucker on the under or flattened side. The eggs of this kind are deposited in the same manner as the former; the dried body of the mother furnishing a hard covering, beneath which they remain until they are ready to emerge, to commence the work of procreation and destruction. In examining the flour like dust under these shells, with a good microscope, we have frequently, at the same time and in the same mass, found the coccus in all its stages of development, from the egg to the lively insect.

The *Aphis lanata*, or cottony aphis, is a species of coccus, instead of a true aphis. This insect adopts the same mode of feeding; produces and protects its young in the same manner; but to facilitate their spread, the shell is filled with a substance resembling cotton, which, when the dead body of the mother is lifted to enable them to remove, puffs out in white balls or tags, and on this, blown about by the winds, the young coccus is wafted till it is lodged on some tree, where it forms new colonies, again to reproduce and spread. What English writers have called the American blight, appears to be an insect of this kind; and they are all very injurious to trees, and particularly so to the apple, which it seems to prefer. When the outer bark of a fruit tree, infested with the coccus, is pared off, numerous dead points will be found, indicating the place where the sucker had penetrated. If these points abound, it is clear the sap must be vitiated, independent of the quantity lost by its appropriation to their support.

To destroy the coccus, some application that will destroy the young before they fix themselves to the bark, and which will also prevent their escape from under the bodies where they are hatched, seems desirable. Washing the tree in lye will kill all the young that are not protected; but, in some experiments we made on an appletree, it did not seem to effect those beneath the shell, or prevent the eggs from hatching. A composition, made of oil and tar, rubbed over the body, will do much towards destroying the insects; but its use is unpleasant, and too much, too, would injure the tree. White-washing appears, on every account, the best mode for cleaning infested fruit trees—it not only killing such insects, but bringing off the rough and unsightly bark, beneath which so many varieties of insect depredators take shelter. The figures are those of the ones described above, considerably magnified. One resides on the twigs; the other on the bark of the trunk or branches.

Fig. 44, Pea Bug—*Bruchus pisi.*
Fig. 45, Curculio—*Rhynchoenus nenuplear.*

Fig. 44—*Bruchus Pisi.* (Magnified.) Fig. 45—*Curculio.*



a—Size of life.

The first of these insects is well known to farmers and gardeners, from the ravages it makes in the pea crop, not unfrequently becoming such a nuisance, that farmers are mostly obliged for a time to suspend the cultivation of the pea for a year or two, when its numbers are at once reduced, and the crop may again be resorted to with success. The egg is deposited in the pea, where the worm is produced until it becomes a perfect insect, or if disturbed falls to the earth, in which it is supposed, in that case, to undergo its transformations. When peas infected, or containing the larvæ, are sown, the perfect insect is developed, and ready to attack the plant, at the time it is most exposed. If, on the contrary, peas are kept over the summer, the insect is developed, and perishes without propagation; so, that if two years old peas are used for seed, the crop will usually be free from the bug, unless infected crops are in the immediate vicinity, or have preceded it.

The curculio constitutes a numerous family of depredators, among which the *C. granaria*, the insect that commits such ravages in granaries, and the one we have named, known for its destruction of fruit, are the most prominent. In the *nenuplear*, the antennæ, it will be seen, are placed on the proboscis, and this mark ranks it among the Orchestes of Illiger.

The fruit curculio attacks nearly all smooth skinned fruits; but plums and cherries are its favorites, and in some years these are nearly or quite destroyed. It makes its appearance at the time of the formation of the young fruit, and in a few days on examining the trees, it will be found, when the insect is plenty, that nearly every plum has a small crescent like incision in it; and as the fruit increases in size, it will be found that in the most of these an egg has been deposited, which changes to a worm, preying upon the pulp of the fruit, and rendering it worthless. The fruit so impregnated, usually falls to the ground, or if not, the grub drops from it, and seeks a refuge in the earth, where it remains over the winter, and becomes a perfect insect in the spring, ready anew to assail the tree. The curculio is a shy insect, rarely showing itself even on trees the most injured, lying still in the day, and stinging busily in the night. By placing a sheet under the tree, however, and giving it a violent jar, they are dislodged in great numbers; and, as for a time they remain perfectly motionless, advantage may be taken of this inaction to destroy them. When the curculio once appears in an orchard, it usually increases until the fruit is annually destroyed by them, unless measures are timely taken to counteract them. To do this, several ways have been recommended, either of which, perhaps, would be effectual, if generally adopted and carefully pursued.

Dislodging them and destroying them, as mentioned above, is a good method, but the operation must commence in season, and be continued each evening until the period for their depredation is passed. If once permitted to make a lodgment in the tree, they will injure more or less fruit—as the quantity they will puncture in a night is surprising. Paving the ground with stones or beaten gravel, around the trees, has been successful in some cases; as when the grub falls, it can not at once penetrate the earth, and is picked up by small birds who are very fond of them. Having the fruit orchard accessible to swine, is, perhaps, one of the most effectual methods of destroying them; these animals eating all the fruit that falls, and it is the worm-infested cherries or plums that first fall, and, of course, the insects are in these cases effectually used up. We have some cherry trees standing in an orchard where swine usually run, and the fruit, on these trees, is uniformly fair and fine; while that on other trees, standing where swine never come, is frequently much of it damaged and worthless.

Some have attributed the black excrescences which, within a few years, have destroyed so many valuable plum and cherry trees, to the insect named above, and which is so injurious to fruit. That this destruction of the wood is the work of an insect, can not be doubted; but it does not seem to be satisfactorily proved, that the two depredators are identical. One thing seems certain, however; unless more efforts are made to prevent the spread of this evil, by the excision and burning of the infected branches whenever they appear, the cultivation of the plum and some kinds of cherry must be discontinued among us.

Agricultural Schools.

In another part of this sheet, we give an address to the farmers of the western district of this state, from our correspondent 'Evelyn,' and the arguments which he has there so ably urged, with reference to agricultural schools in that part of the state, are applicable in a greater or less degree to every section of our country. The necessity of providing some such institutions for the education of the sons of farmers, as is proposed by 'Evelyn,' has long been apparent to every reflecting mind; institutions that shall unite the teaching of all the useful branches of learning, with that of the arts and sciences, and a thorough *experimental* knowledge of agriculture: and the hope has been entertained, that while hundreds of thousands were lavished on institutions devoted to the professions alone, a few thousands might be given to aid in imparting instruction on the art of all arts, that of tilling the soil. This hope, however, has been constantly disappointed; and it seems now necessary to look to individual munificence, or associated enterprise for the accomplishment of this purpose; and we believe it can be satisfactorily effected in this way alone.

The examples adduced of the private agricultural schools, or colleges if you please, of Fellenberg, Oberlin, or Pestalozzi, are direct to the purpose. With little or no encouragement from those in power, these men effected an incalculable amount of good; gathered around them young men from every quarter, instructed them in all valuable learning; and returned them to their friends qualified to teach others—or by their superior skill to raise, what by many was considered the drudgery of agriculture, to the rank of a science. In this country, we have as yet had no schools like these. The nearest approach to them was the Rensselaer school at Troy; but in this, agriculture was not the MAIN thing aimed at, and there were no means of being taught experimental farming, on a scale proportioned to its importance.

We can easily conceive what such a school as the Rensselaer one might become, if there was attached to it three or four hundred acres of land, and the application of agricultural chemistry and vegetable physiology, taught in the school room, carried out in the field; aided by the advantage of a few hours daily labor in the field or shop. Suppose for a moment, that Judge Buel had opened a school on the Fellenberg system, for the instruction of farmers' sons, or others, in the principles of scientific and practical agriculture. Who can doubt that the most beneficial results would have ensued; and that many who now spend three or four years in a college, because they have little else to do with their time, and come out only to add to the number and dead weight of the unproductive classes, would have hastened to avail themselves of such an opportunity of acquiring useful knowledge and confirmed health—mental and physical energy of the most available kind: and who can doubt, that in such hands, such a school would be productive of profit, as well as usefulness and fame.

We hope the affluent among the lovers of our country will look at this subject. In what way could the Wadsworths, the Rensselaers, the Grangers, and the many other rich and influential men of our country, make a more commendable use of their vast resources, or establish a surer claim to the proud title of a benefactor of the human race, than in endowing schools like those under consideration. The instructors can be found; and thousands are anxiously waiting to avail themselves of the benefits such instructions would offer. Sound minds in healthy bodies, are what we most want in the young—and the schools of Fellenberg and Oberlin show, that no places can be more favorable in these respects than agricultural institutes.

Agriculture in Massachusetts.

The memorial of the Commissioner for the Agricultural Survey of Massachusetts, to the legislature of that state, is before us, abounding, as do all the papers from the pen of that gentleman, with valuable facts and suggestions; an abstract of which we propose to lay before our readers.

The part which the state of Massachusetts has taken in regard to the promotion of her agricultural interests, has been most honorable to her, and advantageous to her citizens. In developing her resources by agricultural and geological surveys; in encouraging the culture of wheat, sugar, and silk, by suitable but temporary bounties; and in the small though encouraging aid she has given her agricultural societies, the Bay State has set an example which may well be followed by others, where the circumstances require such interposition. The question has naturally arisen, whether the permanent prosperity of the state may not be more promoted by a different disposition, in some respects, of the bounties of the state; and it is to the statement of facts bearing on this point, that Mr. Colman's memorial is principally directed.

The commissioner states, in the first place, that the disbursements in the two last years to agricultural societies, has been $8,768; bounties on silk in the same time, $785.14; bounty on wheat the last year $9,280.14; making a total of $18,833.28. He does not state the expenditures for the last year on account of the geological and agricultural surveys, but calling that item $3,000, it will be seen that Massachusetts has expended within two years about twenty-three or twenty-four thousand dollars. Mr. Colman is of the opinion that a large part of this patronage may now be withheld, and the remainder applied with more advantage than it has been.

Mr. Colman advises that no further bounty be given for the production of wheat. The objects of the bounty were two; first, to determine the capacity of the state for its production; and secondly, to ascertain by actual experiment, the best modes to be adopted to secure its cultivation. The first has been fully and satisfactorily ascertained, and a continuance of the bounty would not be likely to secure the latter object.

The main objects in view, in offering the bounty on silk, have also been accomplished; and that part of the expenditure is no longer necessary. The fact that silk may be abundantly and profitably produced; that it can be made an important item of domestic and household industry; and that no fears need be entertained from the climate, have been established: though as much light on the points of the best kinds of mulberry trees, and the best modes of managing the worms, has not been obtained as was expected, or as is desirable.

No claim has been made on the state, for the proposed bounty on beet sugar, though several specimens have been presented of good quality; and the practicability of the beet culture, and the sugar manufacture being thus established, Mr. Colman recommends, if the terms of the law will admit, that the offered bounty be withdrawn.

In order to give greater efficiency to the efforts to promote agriculture in the state, the commissioner proposes the organization of a "Board of Domestic Industry, composed of one delegate from each county or congressional district, to be joined by the committees of the legislature on agriculture and manufactures, and the Governor and Lieut. Governor of the commonwealth, *ex officio*." This Board, the members of which are to have a reasonable compensation, are to meet once a year at Boston; and their session is never to extend over ten days. This board is to have the general superintendence of the aid given by the state for the promotion of agriculture, and its kindred objects. The agricultural societies are to make full reports to the Board, and the Board is to annually report to the legislature, the condition of the state on these points. The agricultural societies are to receive one-half of the sum now paid them, and the other half placed at the disposal of the Board, to be distributed in premiums open to competition throughout the state; and on such objects as shall be deemed most conducive to the public good. The great object to be kept in view, in offering and distributing these premiums, to be "not the rewarding of individual enterprise and skill, but the obtaining of practical and decisive information for the general benefit of the farmers."

Such is the general outline of the plan proposed by Mr. Colman, and we think if carried out by the legislative body, the state will receive a more decided benefit, and at less expense than under the present system. We are glad to perceive Mr. Colman urging upon the legislature of Massachusetts, the importance of being at regular intervals in possession of complete details of the condition and state of our agricultural and domestic industry. There is scarcely an object of more importance, as enabling us to understand the resources of our country, and the most efficient mode of directing them; and through the agency of the assessors, the information sought might be readily obtained.

Mr. Colman states the amount of flour imported into Boston, annually, for the last three years, to average 418,000 barrels; and 2,000,000 bushels of other bread stuffs; and he estimates the expenditures for bread, by two-thirds of the state, at $9,000,000. If this amount, by an improved system of agriculture, could be reduced one-half, and we believe it might be done, the state would be greatly the gainer, and no one the loser. At present it is doubtful whether Massachusetts raises a peck of corn to each acre of her territory; that she could raise a bushel to each acre will scarcely be disputed; and this difference would alone do much towards supplying her industrious and enterprising population with bread.

Tropical or Southern Florida.

We have before us a series of papers from Dr. Perrine, of Indian Key, on the South Florida coast; a communication from whom appeared in the February number of the Cultivator. Dr. Perrine is, as is generally known, the talented and indefatigable agent of the Florida Tropical Plant Company—the object of which was the introduction, into that peninsula, of such trees, plants, &c. as experience had proved particularly valuable in tropical climates, and adapted in their habits to that section of our country. His operations commenced by the establishment of a colony at the extreme southern part of Florida; but it had hardly gone into operation, and but just begun to exhibit its efficiency in the collection of plants, &c. when the colonists were massacreed or driven off by the Indians, and the trees and plants destroyed or left to themselves. Since that time Dr. Perrine has established himself on Indian Key, one of the islet reefs that surround the cape of Florida, and, with the aid of several gentlemen, has converted this coral or limestone rock, which was nearly bare of earth when they took possession, into one of the most delightful places in this country. Containing about twelve acres, it has been converted into a garden, where may be found a great variety of trees and plants from all parts of tropical America; several kinds of sugar canes, cocoa nut, bread fruit, orange and lemon trees; the plants that produce the Sisal flax and Manilla hemp; palms of several kinds; among others the sugar palm from the East Indies; with numerous other productions of great value and interest.

As Dr. Perrine's papers are not of the kind that would interest the majority of our readers, except in the abstract, the crowded state of our columns compels us to adopt this method of disposing of them; and in this way comply with the Doctor's wish, which was to call the attention of the public to the facts contained in them. In a former communication to us, Dr. P. expresses his firm conviction, that had the government of the United States offered a reward of $500, for every Indian brought into the posts of the peninsula, the war would have been closed in six months; either by the capture of the Indians, by volunteers attracted by such a compensation, or by the Indians surrendering themselves for the sake of the bounty—a result not at all improbable. Either way, the expense would be comparatively nothing to what it is annually costing this country; but we apprehend a speedy termination of the war in any way, would sadly interfere with the prospects of the harpy host of contractors and speculators, assembled in and around Florida, and whose efforts have, doubtless, contributed to prolong the struggle in that peninsula.

The papers in the package before us are—

1. A memorial to the Senator from South Florida to the Floridian legislature, stating the causes that have prevented the agricultural improvement of that district of country, and the best means of removing them.

2. A letter to R. Fitzpatrick, Esq. representative of Dade county in the legislature of Florida. It is similar, in its contents and arguments, to the one published in the Cultivator of February, demonstrating the salubrity of the climate, and the excellence of the soil, and the facilities offered for the production of fruits, silks, &c.

3. A memorial to the Hon. James Whitcomb, Commissioner of the land office at Washington. This was accompanied by samples of the productions of the imported plants, as well as the native ones, embracing the Manilla hemp, the Agave Sisalana, the Coontee seeds, silk from several kinds of mulberries, seventeen kinds of valuable woods, embracing teak, mastic, mahogony, lignum vitæ, &c. &c.

4. A communication to the Hon. H. L. Ellsworth, of the patent office, Washington. A variety of articles accompanied this, for the use of the agricultural department of the patent office; among which were a cluster of cocoa nuts, grown on Indian Key, in addition to most of those before mentioned.

5. A memorial similar, in nature, to No. 1, but addressed to the legislative council of Florida.

6. A communication to the editors of the Cultivator, on the health, fertility, and value, in a national point of view, of Florida; and detailing, at length, the causes that have produced and perpetuated so unfavorable an opinion in the public mind, respecting this region. The wrecking system; the defective existing commercial regulations; and the Seminole war, are the principal of these causes. The ill health of the people on the coasts, has been unquestionably greatly exaggerated; and may be, in a great measure, attributed to the irregular, dissolute life of many of the individuals. Of the agricultural capabilities of a large portion of Florida, but one opinion can be entertained. Its geological formation renders it certain that it contains the essential elements of fertility; and the experiments that have been made, justify this conclusion. It is, beside, the only spot in the United States, where tropical plants can flourish; and Dr. Perrine deserves great praise for his persevering efforts, in defiance of so many obstacles, to promote the interests, and make known the importance, of this extreme southern part of our great country.

Tables of Temperature, &c. for 1838 and 1839.

We have prepared for the Cultivator, the following tables of the temperature, weather, course of the winds, &c. as in some respects they may serve for comparison with tables by other observers. The place of observation is about 15 miles, a little west of south, from Syracuse, in Onondaga county, and at an elevation of at least 800 feet above the great Seneca level, or the Erie canal.

Year & month.	Ave. temp		Weather.				Winds.								Range of therm.
	9 A. M.	2 P. M.	Clear.	Cloudy.	Rain.	Snow.	North.	N. West.	West.	S. West.	South.	S. East.	East.	N. East.	
1838. Jan.	26	32	13	14	4	11	1	2	13	5	9	..	..	1	63
Feb.	9	14	7	21	..	15	1	9	7	6	2	..	..	2	34
Mar.	31	40	20	11	4	5	2	3	12	5	3	1	1	3	57
April	29	39	11	19	5	11	2	10	10	2	3	2	1	..	43
May,	48	57	12	19	12	4	1	8	11	5	..	3	..	3	62
June,	65	77	18	12	10	..	2	5	17	2	1	..	..	3	42
July,	72	81	20	11	11	..	2	4	17	5	3	..	..	1	34
Aug.	64	74	21	10	10	..	..	9	15	4	2	..	..	..	24
Sept.	58	66	22	9	4	..	3	8	16	3	..	..	..	..	30
Oct.	43	47	8	23	10	4	1	4	12	8	3	..	..	2	47
Nov.	28	33	7	23	6	9	2	6	9	10	2	..	..	1	55
Dec.	19	22	3	28	1	19	1	4	15	10	1	..	..	..	34
	41	48	162	200	77	78	18	72	154	66	29	6	2	16	
1839. Jan.	20	25	10	21	3	10	2	5	8	7	6	..	3	..	59
Feb.	24	32	9	19	5	6	..	2	6	6	6	4	3	..	51
Mar.	29	35	17	14	6	6	2	4	9	8	4	1	3	..	61
April	46	54	20	10	9	1	5	4	7	1	5	4	2	1	43
May,	52	61	18	13	10	2	2	7	9	6	2	1	2	1	53
June,	59	71	15	15	14	..	..	12	9	4	2	1	1	1	39
July,	67	76	20	10	12	..	1	7	14	6	1	..	..	1	36
Aug.	64	73	21	10	9	..	..	5	8	6	3	4	3	1	41
Sept.	53	64	17	12	8	4	1	6	10	8	2	1	1	1	48
Oct.	50	61	22	9	5	..	2	4	6	12	2	2	1	1	57
Nov.	31	34	7	23	7	11	1	7	8	6	5	..	..	3	40
Dec.	25	30	8	23	1	15	3	3	11	2	4	2	5	..	38
	42	51	184	184	89	55	19	66	135	62	42	26	23	10	

The above tables show the average temperature for each month, and for the year; the number of clear and cloudy days in each month and year; the general course of the winds; and range of the thermometer for each month. The extreme range of the thermometer in 1838, was between 8°— on the last day of January, and 93° on the ninth day of July, giving 101°. The same for the year 1839, was 9°— January 23d, and 90° on the thirtieth day of July, giving 99°. An instance of those sudden changes which occur in our climate, took place on the 19th of October, 1839, when the wind which, during the forepart of the day, had been southwest, at half past 2 o'clock suddenly changed to north, and then the thermometer fell from 65° to 24° in three and a half hours, or 41 degrees. August of 1839, was remarkable for the severe gale on the Atlantic coast of the 28th and 29th, which was felt over a large extent of country. The gale was accompanied with a slight fall of snow in many places; as at Salem, Mass. Catskill, N. Y., and the elevated lands of New-Hampshire. In western New-York both these days were fair, though the thermometer was low, and frosts occurred in various places.

Many observers, and among others, Darby, have noticed the fact that the trees which form the forests on the eastern shores of our great lakes, have a sensible inclination to the east; and that every where, where the hemlock is found, the long, slender twig that points the tree, has the same uniform deviation from the perpendicular, and always in the same direction, a little north of east. Where lands have been cleared, and orchards set out, it will be found, on examination, that where the exposure is free, nine-tenths of the trees have the same inclination. This is particularly the case west of the Allegany ranges, in the vast tract of country embraced by the Mississippi and St. Lawrence vallies. A glance at that part of the table, showing the course of the winds, will explain these phenomena; for, although two years may be too short a period to determine such a point with absolute certainty, yet there is little probability that further observations will make any essential variations in the main results.

We have for several years noticed the fact, and particularly during the summer months, when the meteorology of the heavens can be best observed, that whatever may be the direction or course of the lower strata of clouds, that of the cirri, or highest of all clouds, is almost invariably from west to east. It is nothing uncommon to see the lower clouds drifting in heavy masses, and with a strong wind, to the north or northeast; while far above them, the streamers of the cirri are floating undisturbed towards the east or southeast. Indeed, it is very rarely that cirri are observed taking any other course, and it may fairly be inferred that they never do so, until by greater condensation, they approach the nature of the cumulus, and by their density sink into the influence and action of the lower currens of air. From their observations on these clouds, on the high Cordilleras of South America and Mexico, Humboldt and Boussingault have inferred, and, we think, with good reason, that in the upper regions of the earth's atmosphere, there is a current constantly flowing from west to east; an inference which, if admitted, assists materially in developing the theory of storms, sudden changes of temperature, &c. &c.

Neither of the two years, 1838 or 1839, have equaled in intensity of heat or cold, many that have preceded them. In the last respect, the present winter has far exceeded either of the others; the thermometer having, on the first of January, fallen to 13°— and having been below 0 a much greater number of times than in either of those years. The quantity of snow has, also, thus far, been unusally great; and its fall has been accompanied by storms of the greatest violence. What the effect of such a body of snow on the crops will be, remains to be seen.

Honey Locust for Hedges.

Dr. Daniel Stebbins of Northampton, has received from the State Agricultural Society of Massachusetts, the premium of 25 dollars, offered for the best specimen of live fence, not less than 50 rods in length. The Dr. states that he "transplanted from his nursery four thousand two hundred honey locust trees, from the seed, being two years old, and set them around the borders of a twelve acre lot, about 160 rods, averaging about half a foot apart: some portions of the lot adjoining heavy timber land, is partially shaded and the trees have grown but indifferently; other parts having a better exposure, have grown very well, from five to eight feet, and capable of being so interlocked as to make a durable and valuable fence."

Could the honey locust be made to grow in hedges, there can be no doubt it would prove a great accession to our farming, community in which materials for good fences are unfortunately in many places very rare. Some few instances have occurred in which live fences, both of native and foreign plants seemed to promise well for a time; but owing either to some want of adaptation to our climate, or defect in the mode of culture, they have rarely continued to flourish for any length of time. Experiments with the native plants of this country should be instituted or continued, as they will be more likely to succeed than others; and should one of our native shrubs or trees prove to us what the hawthorn is to the agriculturists of England, it would be indeed invaluable. We have had trees of the honey or three thorned locust growing for some ten or fifteen years from the seed; and the appearance of their thorny stems is truly formidable. The man, or the beast, however, who ventures near them, requires to be shod with iron, as the bunches of stems from the trunks, or the thorns from the branches, occasionally fall to the ground and render approach with unprotected feet dangerous.

Brown Corn.

The region around the beautiful Winipisiogee lake in New-Hampshire, is becoming as famous for corn, as is the picturesque lake country of the west for its wheat. The corn the most esteemed there is a variety somewhat resembling the Golden Sioux, eight rowed, large eared, the cob small, and the kernel large, *and very early;* one of the most important considerations in our northern climate. It is named the Brown corn from the individual who first cultivated and brought it into notice; and its success in his hands, and those of other farmers in that region, and wherever it has been introduced, would seem to justify the high reputation it has acquired. At the Stafford County Agricultural Show and Fair, three fields of this corn were offered for the premium, one of which gave an acre producing 131 bushels; one, an acre producing 130 bushels; and one, an acre producing 116 bushels. The competitors were Messrs. Lanprey, Pillsbury, and Brown, all three living on the margin of the lake, or on the islands in its waters. The second crop, or 130 bushels per acre, was grown on a farm owned by E. H. Derby, Esq. of Boston, and of the proceeds and management of which an interesting account has been given by him in the 35th No. of the current volume of the New-England Farmer.

It is pleasant to record these triumphs of skill and industry; for they furnish the most conclusive testimony that the science and practice of agriculture is improving in the country, and that by attention to varieties of plants, and their culture, the product may be vastly increased, with little or no increase of labor. There can be little doubt that crops of from 70 to 80 bushels of corn to the acre are now as frequently grown as 40 or 50 were half a century since; and probably 100 bushels to the acre are oftener reached now than 70 was at that time. Indian corn is certainly one of the important crops grown in the United States, and should receive a proportional care and attention. All years may not prove equally favorably; but if proper care is paid to the preparation of the ground, and to the choice of seed, perhaps there is no crop less liable to a failure.

Answers to Inquiries, &c.

Culture of Onions.

To "W." who has inquired the "best method of cultivating onions, the preparation of the soil, time and manner of planting, quantity of seed, after culture, and the preferable mode of keeping them through the winter," we would say, that a fine loamy soil, sand predominating, not too deep or too rich, is the best for the onion. The onion is one of the few plants which appears to thrive best when cultivated for a succession of years on the same ground. The soil must be fine, that the seed may be covered without deep planting. If manure is used, it must be thoroughly rotted and incorporated with the surface soil. A writer in the Horticultural Register states that he raised excellent onions on a stiff clay, by covering the surface with three inches of well rotted manure, sowing the seed on this, and covering with an inch of fine earth. The roots could not penetrate the clay, and the bulbs formed in the surface mold. Onions should be sowed as early as the ground can be fitted for their reception; the latter part of April is to be preferred, though good crops are occasionally grown from May sowing. They should be sown in drills ten or twelve inches apart, and sufficient seed should be used to insure a proper thickness in the drills. To grow good onions the roots may nearly touch each other, and the thinning may be regulated accordingly. The surface of the onion beds must be kept loose, and free from weeds. Few roots are more easily kept than the onion. It is only necessary to keep them dry, secure from frost, but at a temperature so low as not to encourage sprouting. Perfect dryness is one of the most essential things. In a dry cellar we have never found any difficulty in their preservation.

Shrunk Wheat for Seed.

"*Quere.*—Is it expedient to sow wheat that is shrunk from one-third to one-half, by rust? I have a quantity of the Italian wheat of this description which is in demand, but I have misgivings about it; I have ascertained by experiment that four kernels out of five will grow; but the quere is, whether such seed will produce a healthy stalk. An answer through your columns might be of service to the public.—*H. B. S. Vt.*"

It is *not* expedient or advisable in this case, or any other, to sow defective seed. Imperfect seeds, if they do vegetate, never produce as healthy, vigorous plants as those from sound perfect seeds. We have sometimes known very good wheat produced from shrunk seed, and if transferred to other soils, or districts, the wheat of our correspondent *may* give a good sound crop. The safe rule for the farmer is, never to use a seed, a plant, or an animal, for the purpose of reproduction, that is not perfect and healthy.

Cutting Red-Oak Posts.

Our friend in East Clarendon, Vt., who wishes to "know the best season for cutting red-oak for fence posts," is informed that we have had no experience with that kind of timber. If any of our readers will respond to the query, we shall be pleased to give the reply a place in our columns. The best time for cutting wood intended for timber, seems still a disputed point. That much of its durability, and its exemption from dry rot, is depending on the time in which it is cut, appears evident, and any facts that go to settle this point, will be acceptable to the public.

Warbles in Cattle.

William Todd, Utica Mills, Md. says—"I would be very thankful to know whether there is any cure for what we call 'Warbles' in the back of cattle at this time of year. I think them a great injury to cattle, and I have searched all the papers and books on the subject of stock, and can find nothing on the subject. I have some cattle at this time whose backs are literally covered with them. I heard that unleached ashes, scattered on their backs, and sprinkled with water, would cure them; but I have tried it in vain. There is a kind of maggot in each one, which will make its way out early in the summer. I have never known cattle to suffer from them farther than they are generally poor, and will not thrive or fatten well."

The difficulty or disease spoken of by our correspondent, is caused by the *Œstrus bovis*, or gad-fly, which in the hide and along the back of cattle, finds a habitation for its future young. The egg is deposited in July or August; the larvæ or grub is developed in the course of a few months, and remains in the abscess or pocket it has formed in the thickened hide until the spring months, when it escapes from its residence, burrows in the earth for a short time, undergoes its transformation, and emerges a perfect insect, prepared to reproduce and perpetuate its race. The head of the larvæ is always towards the bottom of the cyst, the respiratory organs being near the tail, and consequently near the opening in the skin. In speaking of this insect, Mr. Youatt, in his great work on cattle, says, "It certainly does not interfere with his condition, and the butcher regards the existence of warbles even as a proof of a disposition to thrive. The injury done to the skin is, however, another affair, and the tanner would probably tell a different story;" thus arriving at a different conclusion with regard to the injury they inflict from that of our correspondent.

As soon as the larvæ is sufficiently developed to have its place of residence easily found, it is easily destroyed by pouring a little corrosive liquor into the hole, or by introducing a red-hot needle. The larvæ may also be crushed in its receptacle, or forced out with the finger and thumb, and destroyed.

The following is the method of cure recommended by Mr. Lawrence in his Farmers' and Graziers' Complete Guide:

Yellow basillicon ointment........	4 ounces,
Spirits of turpentine..............	1 ounce,
Oil of vitriol......................	½ a drachm.

First mix the ointment and turpentine together, and afterwards add by a little at a time the oil of vitriol; keeping it constantly stirred until well incorporated. It is then fit for use.

There are few animals of the ox or deer kind that are not liable to the attack of the fly; and we have seen warbles of the largest kind, in the common black squirrel of the woods.

Grasses for Lawns.

T. F. S. of Pawtucket, asks, "What kind of grass or grasses make the most handsome green lawn? when should the seeds be sown? and where can the Jerusalem artichoke and the burr-oak be obtained?"

What are called the *dwarf grasses*, or those used almost exclusively for pastures, and which form a fine close turf, are to be preferred for lawns. Among these Anthoxanthum odorata; Holcus odorata; Avenus pubescens; Poa annua; and some species of the agrostis, are used in England, and as they are found in our older pastures would unquestionably succeed here. Grass seeds may be sown in the spring or fall, but the spring is the best time, and they may be put in with spring grain, such as wheat or barley, or by themselves, at the pleasure of the sower. All lawns require to be made perfectly smooth, and almost any of our common grasses that form a close turf, will, when frequently mown or fed close, give the fine and green appearance so desirable in turf. Much of the beauty of lawns will be found to depend on the treatment, and the labor bestowed on them.

The Jerusalem artichoke is to be found every where, being cultivated in the garden of almost every farmer, and the roots in small quantities can be doubtless procured of every gardener. The Burr Oak is not grown this side of the Alleganies to any extent. In the western states north of the Ohio, and particularly in Michigan, it flourishes abundantly, and by planting the acorns, might be readily introduced among us.

Potatoes from the Seed.

Our correspondent, J. G. Pierce, from East Smithfield, Pa. who inquires respecting the mode of producing potatoes from the seed, is informed that nothing more is necessary, than to provide a bed of rich garden mold in which the seeds are to be sown in the same manner as other small seeds, in drills 16 or 18 inches apart, covered with fine light earth, and kept from weeds while growing. The roots the first season will be small, probably showing many varieties, and the most promising of these must be preserved for planting the second year, when the peculiar quality and value of the several kinds can be more accurately ascertained. The celebrated Mr. Knight of England, in this way produced some of the most productive and valuable varieties now grown in that country.

Appletrees—Black Scours, &c.

A correspondent (J. L.) at St. Armands, L.C. wishes to know whether grafted appletrees, suitable for planting, can be had in Albany? whether they can be so packed as to be sent safely? and whether they will stand the winters of Canada?

Appletrees, in any quantity, of the best grafted varieties of fruit, can be had at the Albany nurseries, at prices varying from $15 to $20 per hundred trees. They can also be safely packed, and forwarded to any part of the Canadas, or the United States, by water. Whether they will survive the winters of that section of Canada, we have no means of determining with certainty; but it is our impression the trees would succeed, though, in such a northern latitude, the fruits might occasionally suffer from early or late frosts. This question might, however, be easily answered by any one on the spot.

J. L. also asks—"Do you know the disease which I will call the 'black scours,' or a preventive or cure for the same. It confines itself mostly to lambs or young sheep. It appears to be useless to do any thing for them, after they are attacked, as they soon run down and die."

We have never been troubled with this disease in our flocks; but Blacklock, in his excellent treatise, thus notices it. After making a distinction between the common diarrhœa, produced in lambs by fresh grass, and the dysentery, he proceeds—"If dysentery continues, it will terminate fatally within a fortnight. Death is generally preceded by the '*black scours*,' which is only an aggravation of the disease, or purging, the stools being mixed with shreds of dark, gangrenous matter from the decomposed interior of the intestines." The directions he gives, for cure, are as follows—Bleed freely, if the disease is recent, but moderately if a longer time has elapsed. After bleeding, immerse the sheep in a tub of hot water, for twenty minutes. Then give an ounce of castor oil, with thirty drops of laudanum, and cover the sheep in a snug corner. Thin, well boiled flour porridge, given in small quantities after the operation of the oil, are useful to defend the bowels, soothe the pain, and stop the purging. Should this course fail, a medicine, prepared as follows, may be given—Logwood four ounces; extract of catechu, one drachm; cinnamon, two drachms; water, three pints; boil for a quarter of an hour; strain and add sixty drops of laudanum. Give half a pint night and morning, adding to each dose a grain of ipecacuanha. The best preventive is clean, dry pasture, pure air, and gentle treatment. Crowding numbers of sheep into confined places, is very sure to generate disease of some kind.

Lawrence, in his work on cattle and sheep, gives the following recipe for this disease in sheep:

"Peruvian bark, in powder,		one drachm.
Root of ginger,	do.	one drachm.
Prepared chalk,	do.	one drachm.
Brandy or gin,		one table spoonful.

Mix and give in a little warm gruel; if the disease is very bad, add a tea-spoonful of laudanum."

Cultivation of Fruit Trees.

A correspondent at Elizabethtown, N. J., inquires as to the "proper time of setting out, and the best method of cultivating the pear, apple, quince, cherry, raspberry, gooseberry, and other slips."

Fruit trees may be transplanted at any season of the year, when proper precautions are used; but when an individual has the choice of time, the spring is much the best time for this operation. The ground for a nursery or an orchard should be in good condition; the holes should not be dug deep, but large; as many of the roots, (particularly the fibrous ones) should remain as is possible; in removal, they should never become dry or be frozen; and when placed in the earth, rich loose earth should be placed about and among the roots. Trees sometimes require to be secured from being shaken or moved by the wind, when first planted; but if the roots are preserved and the planting done in a skilful manner, staking may usually be dispensed with. Fruit trees after once being rooted require little attention, other than pruning, and preventing the grasses from binding the roots of the tree.

Raspberries, gooseberries and currants, are usually planted in hedgerows, and to produce the largest and best fruit require that the earth around them should be moved annually. By cutting out from the currant slips, all the buds below, and for several inches above the surface of the earth, the numerous shoots that disfigure this shrub may be prevented, and the fruit greatly improved, by a more full and equal exposure to the sun.

Green's Straw Cutter.

We have received a letter from a gentleman of Rockingham county Va,. on the subject of this implement. Mr. H. purchased at Philadelphia, one of Green's Straw Cutters, and he concludes it is not the thing it has been recommended to be, and wishes that some one could be invented, and then thoroughly tested by some Agricultural Society, which would answer the purpose of cutting straw of any length, be strong, and not liable to get out of repair, and which could be worked by horse or other power as well as by hand.

We do not wonder that our correspondent complains. The cylinder of his machine was wood instead of lead as it should have been, and soon wore out; and the several parts were made of white pine, instead of good strong wood, as such implements require. We are not surprised that he ranks it with wooden nutmegs, and pine made carryall wagons.

Green's Straw Cutter, when well made, is as little liable to get out of order as any such implement perhaps can be; and the only serious objection we have heard made to it is, that it can not be made to cut fodder of any required length. In some cases it is also said to clog. The great fault of our machinists in making agricultural implements is, they do not make them strong enough; they do not use iron enough to give the required firmness. Farmers do not handle tools or machines, as they are treated in workshops; they do not notice the first signs of displacement of the parts, and take precautions against further damage, and therefore all such implements require the greatest firmness and strength.

We hope the hints of our correspondent will receive attention; and shall readily give place to a notice of farming implements, such as he has desired.

Poudrette.

"Is Poudrette a good manure on clay soil? On what soil is it most beneficial? Mine is a clay soil and I have intended to try some of the manure this season.

"J. C., *Freehold, N. J.*"

In the several experiments in the use of the Poudrette in this country, the details of which have been published, we find no mention made of the character of the soils on which it was used. We therefore copy the following from a French periodical, as an answer to the above inquiry:

"1. Poudrette is a perfect substitue for common dung, whether with respect to price or quality. 2. Its favorable effects essentially depend on the moisture of the season. 3. In dry years it is less efficacious upon sandy soils than upon very greasy or medium clays. 4. It is particularly suitable to very greasy clays. 5. By virtue of the lime and ammonia which it contains, it quickens and develops the inert humus, and the humic acid which often accumulates in the soil. 6. The Poudrette combined with organic matter, or in the state it is acutually made, is a powerful means of rendering clay land friable."—*Le Cultivateur for August*, 1838.

The Strawberry.

J. U. H., of Waylandsburgh, Va., who has requested some information on the culture of the strawberry, is informed that the soil best adapted to this delicious fruit, is a rich garden mold, deep, and rather moist than dry, but free from any stagnant water below the surface. In preparing it for the reception of plants, nothing more is necessary than to make it loose, and fine, and free from all weeds, roots of grass, &c. The roots may be planted either in spring or autumn, as most convenient; but spring planted vines can not be relied on for fruit the same season, unless, in transplanting, large quantities of earth are moved with the roots. If planted from August till October, they will become rooted, and produce abundantly the following season. If planted too late in autumn, the roots are liable to be thrown out in winter by frost, here in the north; a difficulty not likely to occur with our correspondent. Two modes are pursued in planting, each having its advocates; one is, to plant in hills at about eighteen inches distance, and the other is, to place the roots in drills some two feet apart, and the plants six inches in the drills. In either way, they can scarcely fail of succeeding, if the ground is kept free from weeds, the useless runners eradicated, and the earth properly stirred and manured once in each year. The strawberry should find a place in every garden; and, considering that, with care in the selection of varieties, this fine fruit may be had from June to October, it is surprising it receives so little attention.

Spring Crops.

The Pea, as it is not liable to be injured by frost, may be put into the ground early, and should be, when it is intended as a green crop to precede wheat, that it may be taken from the ground in time for that grain. The pea is an excellent crop, and may in many cases be cultivated to advantage by turning over sward land in the spring, manuring it first if necessary, rolling and harrowing to make a loose level surface for the reception of the seeds, and covering them by the harrow, followed by the roller. In this way the pea is considered a fallow crop, taking the place of a summer fallow, and the turf and the added manure is thoroughly decomposed and fitted for the reception of the wheat. On all suitable soils, peas should be sown before this month; but it has sometimes been desirable to sow peas so late as to have them escape the ravages of the pea bug, and those put in as late as the middle or twentieth of May are apt to do this; but a heavy crop from such late sown plants can hardly be expected.

Potatoes are a crop that may be planted early, or at almost any time between the middle of April or the middle of June, with a reasonable prospect of a crop. Dry sandy soils are not as good for potatoes as one containing more vegetable matter, more moist, and consequently more cool. The varieties the best for the table are rarely abundant bearers, the Pinkeye or the Mercer for example, though fair crops of these are sometimes grown. The Long Red, the Sardinia, and now, the Rohan, are considered the most productive, and of course the best for general cultivation or for feeding. The Rohan seems destined to introduce a new era in potato culture, and valuable as this root has proved, shows that by originating new varieties, greater excellence and greater productiveness may be expected. Potatoes may be planted in rows or in drills; they may be planted whole or in sets, and if the soil is of the proper quality, and the after culture good, the crop rarely fails. Last year a farmer in Vermont, turned over a piece of turf land carefully, rolled it well and leveled, and then with a stick made holes a few inches in depth between every second furrow slice, into which a potato set was placed, and the holes filled up with mellow soil to the level of the field. The piece had *no further labor* put upon it, and the crop was at the rate of 400 bushels to the acre. Thirty-two loads of manure to the acre was placed on the turf before plowing, and turned under, and the sets were placed two feet apart in the rows. Where potatoes are planted on clean sward land, some have recommended that pumpkins should be planted with them, as usually a good crop of pumpkins may be obtained with little or no injury to the potato crop.

Corn is one of the most important crops grown in the United States, and every thing relating to it demands unusual care and attention. The selection of seed, choice of soil, preparation of land, after culture of the crop, are all things that must be well looked to or a partial or total failure of the crop may be expected. While the average corn crop is not more than 35 or 40 bushels per acre, multitudes of instances are on record in which more than 100 bushels have been grown, and a few of more than 150 bushels to the acre. Last year in one county in New-Hampshire, no less than three premiums were claimed for more than 130 bushels to the acre. It is idle to plant corn on land not naturally dry, or that has not been made so by draining. There is o crop grown that more delights in warm dry soil than maize, and there is none that will resist the effects of drouth longer. The soil too must be rich. A poor soil, and good corn, are incompatible. Corn is one of the crops to which manure may be applied the most advantageously, and if mixed with the soil there is scarcely a possibility of applying too much. If unfermented stable manure is used in the hill, too much may be injurious, as instances have occurred in which the vitality of the seed has been destroyed or materially weakened from this cause. For use in the hill the manure of the hog pen or yard is superior to any other; and the drier the ground the greater will be the effect of applied manures. Corn is a plant that requires an elevated temperature from planting until ripening, and seed corn will rot at temperatures in which peas, potatoes, and spring grains would vegetate well. Corn should be planted as soon as the ground is sufficiently warm and dry, and not before, and if it is not in this condition by the middle of May, a crop of the ordinary varieties of corn need not be expected, as in our northern latitudes, the time required for bringing it to perfection could barely be found in our summers. There are few plants cultivated, the goodness of which is so much depending on after culture as corn. Whatever may be the variety, the state of the ground, or the climate, corn will not give a great yield, or prove profitable unless the strictest attention is paid to this point. If allowed to remain smothered in weeds, and the earth about the plants unstirred, corn need not be expected. In all cases, we believe cutting up the corn by the roots to be the best method of harvesting; and where this crop is to be followed by wheat, this course is indispensable. The proper time is when the ears are well glazed, and before the stalks have become dry. Cut up and secured in this way the corn is of the best quality, and the whole of the fodder, an important item, is saved for the winter.

Jerusalem Artichoke.

Some experiments with this common root are on record, which would seem to show that, with proper management, it might be made valuable in cultivation, particularly as a winter food for store hogs. Once introduced into a piece of light rich ground, it is not eradicated without considerable difficulty, as all those who have planted it in their gardens are aware. In the kitchen garden, the artichoke should always have a place, as the fresh roots in the spring, gathered and sliced thin and eaten with vinegar, are relished by most people; and they make a very good article for pickling. If intended for swine, they should be planted at least two years before the swine are turned in to them; after which, the annual rooting of the swine will be all the cultivation or stirring of the earth that will be required. The smallest pieces are sure to grow, which renders their propagation as easy as their extirpation is difficult. If the roots are allowed to remain in the ground too long, they grow wormy, and decay; while the roots of one year's growth are smooth and fair as potato tubers.

Agricultural Societies.

Oswego County.—We noticed in our March No. the formation of an agricultural society in this county, and had intended to have published its constitution, adopted at a meeting in February, but have not been able to make room for it. We are pleased to learn that at a meeting since held, a very liberal Premium List was made out, and that efficient measures are being taken to promote the objects of the society, the result of which will be exhibited at their autumnal Fair. The following is a list of the officers of the society:—Col. U. G. White, of Oswego, President; Arvin Rice, Esq., Hannibal, 1st Vice-President; Joseph Sandford, Volney, 2d do.; Jacob I. Fort, Oswego, Treasurer; Dwight Herrick, do., Secretary; Edwin W. Clarke, do., Corresponding Secretary; Joel Turrill, Oswego, Orlo Steele, Scriba, Wm. Ingalls, Granby, Executive Committee.

Yates County.—An agricultural society was formed in this county on the 14th of March, under favorable auspices, the constitution of which will be found on the cover of this sheet. The officers are as follows:—John Hatmaker, Milo, President; Henry Spence, Starkey; John Spicer, Barrington; Henry P. Sartwell, Milo; Samuel Wise, of Benton; Henry Husted, Potter; D. B. Lindsley, Middlesex; Uriah Handford, Jerusalem, and Elisha Doubleday, Italy, Vice-Presidents. Charles Lee, Milo; Benj. Tuthill, Starkey; A. F. Whittaker, Benton; George Wagener, Jerusalem; James P. Robinson, Potter; Jospeh McCain, Barrington; Alexander Basset, Middlesex; and Elisha Barker, Italy—Executive Committee: D. A. Ogden, Penn-Yan, Corresponding and Recording Secretary: Eben Smith, Penn-Yan, Treasurer.

The District School Journal.

We have received the first number of a paper with the above title, issued at Geneva, and edited by Francis Dwight, Esq. It is in the quarto form and published monthly at $1 per annum.

New-York has laid broad and deep the foundation for universal education; and it remains to be seen what use will be made of the magnificent provision she has provided, what advances in the department of education will be accomplished, and how far the hopes and wishes of the friends of instruction and learning are to be realized. We think the adoption of the District Library system, one of the most decisive improvements made to extend useful knowledge in the state, and engrafted as it has been on the school system, it can not fail of the happiest results. As the means of still more widely diffusing a knowledge of our system; of awakening an interest in the great subject of education; of bringing the best modes of teaching before the public, and thus correcting some of the numerous evils which all admit to exist we hail the appearance of this Journal, and if conducted with ability, which we can not doubt, it can not fail of rendering the most essential service to the cause of public instruction.

As this journal will contain the decisions of the Superintendent of Common Schools, on the various questions which arise and are submitted to him from the districts, it is clear that it should be in possession of every school district in the state, and we think each district should receive a copy to be preserved by the clerk for the use of the district; and this might readily be done by the vote and at the expense of the district. All teachers, and all who feel an interest in the cause of education, should afford it an early and cordial support. It will contain original papers on all subjects relating to teaching, education, and the kindred topics, and will doubtless be a standard work on these topics. As such we cordially recommend it to our readers.

DOMESTIC ECONOMY.

It may not be amiss to say here, as we propose, at the solicitation of our lady subscribers, to give a monthly paper on subjects embraced in the term domestic economy, that we are not versed in the mysteries of the kitchen; or Dr. Kitcheners, in the science of cookery; yet we do not intend to give place to any directions that are impracticable to the many, or which we have not the best assurance from our own experience, or that of our friends who furnish them, will fulfil all that can be expected of them. In most of the preparations of cookery for the table, there are varieties of richness, and while we would earnestly recommend both on the score of *economy* and *health*, contentment with the plainer sorts of fare, we shall endeavor to give such directions as will satisfy all reasonable appetites, and furnish specimens of both the simple and plain, and the rich and expensive.

Plain Indian Puddings—Baked.

Scald a quart of milk, (skimmed milk will do,) and stir in seven table spoonfuls of sifted Indian meal, a tea spoonful of salt, a tea-cup full of molasses, and a great spoonful of ginger, or sifted cinnamon. Bake three or four hours. If whey is wanted in the pudding, pour in a little cold milk after it is all mixed. This is both economical and good.

Rich Baked Indian Pudding.

Boil a quart of milk, and add a pint of fine Indian meal. Stir it well. Mix three table spoonfuls of wheat flour with a pint of milk, so as to have it free from lumps. Mix this with the Indian meal, and stir the whole well together. When the whole is moderately warm, stir in three eggs well beat, with three spoonfuls of sugar. Add two tea spoonfuls of salt, two of ground cinnamon or grated nutmegs, and two table spoonfuls of melted butter. When the pudding has baked five or six minutes, stir in half a pound of raisins; and add half a pint of milk for them, as they will render it too dry.

Rich Bread Pudding.

Cut a pound loaf of good bread into thin slices. Spread them with butter as for eating. Lay them in a pudding dish—sprinkle between each layer of bread, seeded raisins, and citron cut in small pieces or strips. Beat eight eggs with four table spoonfuls of rolled sugar, mix them with three pints of milk and half of a grated nutmeg. Turn the whole on the bread in the pan, and let it remain till the bread has taken up full half the milk; then bake about three-quarters of an hour.

In making boiled puddings it is essential that there should be water enough to keep the pudding covered, and that it should not be allowed to stop boiling from the commencement to the close. Water may be kept boiling in a tea kettle to pour in, as that in the pot boils away. An old plate at the bottom of the pot will prevent the pudding from sticking, and when it is done, if the bag is dipped in cold water, it will come out of the bag easier.

Indian Boiled Pudding.

Make a stiff batter by stirring Indian meal into a quart of boiling milk or water. Then stir in two table spoonfuls of flour, three of sugar, half a spoonful of ginger, or two tea spoonfuls of cinnamon, and two tea spoonfuls of salt. If any thing extra is required, add two or three eggs well beaten, but they can be dispensed with, and some add a little chopped suet. Such puddings require a long boiling. They will be good in three or four hours, but better for being boiled five or six, and some give a boiling of eight or nine. They require good sauce at eating.

Sauce for Puddings.

Common sauce may be thus made. Stir flour and water into boiling water, and sweeten to your taste with molasses or sugar. Add a spoonful of rose water, and a lump of butter half the size of a hen's egg. A glass of wine added with grated nutmeg, will make it very good. If sauce rather better than common is required; take a quarter of a pound of sugar, and the same of butter, mould them well together with your hand, adding a little wine. Mould it into a lump, and set it away to cool. Nutmeg must be grated over it, and it is fit for use.

Address before the Tompkins Agricultural Society.

We have received from the respected author, L. A. Morrell, Esq. an address delivered before the Tompkins Agricultural and Horticultural Society, together with the by-laws of the society, list of premiums, &c. all of which we should be pleased to lay before our readers, did not the space required forbid. We should be the more pleased to do this as the whole proceedings are marked with an energy and spirit auspicious of the best results. But while we are unable to place the whole of this able address on our pages, there are some passages containing important truths, so well and forcibly expressed, that our readers will thank us for a few extracts. On the benefit of agricultural associations, Mr. Morrell remarks as follows:

"As it is generally conceded that associations of the kind we have formed, are useful almost wholly on account of the knowledge received and imparted, when called together, we will confirm this by introducing a practical illustration. Suppose that one of you at the Annual Fair, should receive the premium for producing 50 bushels of wheat, or 500 bushels of potatoes to the acre; when it is a well known fact to us all, that not more than from one-third to one-half, is the average production of those crops in this county. The inquiries will at once be set afloat—what was the character of your soil? What crop preceded? What the quantity, and the kind of manure applied? How often plowed? In short, the whole *modus operandi*, will be elicited and made known. Each one of us will go home fully persuaded that there is some radical error in his mode, arising either from the character and preparation of the soil, or the culture; or else why the disparity in the quantiy generally produced, and that by yourself. One and all will then be aroused to adopt your method, and the consequences will be, under like circumstances of season, &c., that we shall produce as much, or an aproximation to it. Self interest will prompt us to make the effort, and a laudable emulation to out-do you, will cause a pleasurable excitement: and when we can learn that there is another path than that which ourselves and fathers and grandfathers have trodden, it will be exchanged for the one which leads to a surer and increased reward for our labors. The exhibition of our Fairs, of domestic stock, would afford another illustration of the benefits of agricultural societies; but it would be doubting your good sense to proceed farther; preferring to leave it to such occasions, and to time, to test the soundness of our views and arguments.

The organization of a body of men for some given object, presupposes that there is some good to be effected, or improvement to be accomplished: and this implies, that there are errors to eradicate, and reforms, therefore, necessary. If our system of agriculture were perfect, this association would, indeed, be useless: to attempt to prove that it is *not* perfect, would be a waste of words; for we hope that no farmer in this county is so full of worldly wisdom as to suppose that he has attained the point of perfection, and has nothing farther to learn. If there be any such, we kindly advise them to take heed, and to arouse and shake off the unprofitable delusion. We tell them that this is truly the locomotive age of improvement of agriculture:—and that, while they are at rest, their fellows around them will be advancing, and gathering up by the way sides the rewards which the sciences applicable to agriculture have so thickly scattered in the paths of the improved systems."

The miserable system of farming pursued over so large a part of the United States, is thus graphically sketched by Mr. M. Its truth will be apparent to all.

"We will state in plain words the system to which we are opposed, viz: *the repetition of crops, or otherwise, growing the same crops successively on the same ground, without an intermediate change, or rotation.*

This system is antique, is generally followed, and has not inappropriately been called the "*skinning system.*" It had its origin in the unparalloled fertility of our soil. Ungrateful man. however, refused to give back a portion of what he took from it, or give it rest, that its exhausted powers might in a measure, be restored; and the consequence is, that millions of acres, which were originally fertile and exceedingly productive, are now comparatively as sterile as the desert. For the proof of this, we point to many districts in Maryland, and farther south; and it is this system, in a great measure, which has disabled the hardy New-England farmer from reaping those crops, which were wont to grow on his once fertile soil. But there is no need of going beyond the precincts of our own county for proofs of the ruinous tendency of this system. It is upon the lips of farmers, 'that they do not grow as much wheat as they once did, and the *fault* is not theirs, for their crops are as well put in as they ever were.' Then, we ask, whose fault is it? 'Why Providence, say they, in sending such bad seasons.' We boldly deny it, and unhesitatingly charge it to the 'skinning system' which they have followed; and if the history of every acre of tillable land could be ascertained from the beginning, the charge would be proved to the letter."

The different effects of the old and the improved systems of farming, are shown by Mr. Morrell in the following extract, given as an illustration:

"The 'skinning system' and 'rotation system,' in their effects, can not be better illustrated, than by comparing them to a man who undertakes something requiring the exercise of great physical power and energy. Being fresh and vigorous, he is entirely successful. This is the first crop. If he attempts to accomplish the same thing over again without sufficient time to recover his powers, exhausted by the first trial, he fails to do as much: if a third time, still less: and at this period his strength is so materially diminished as to require much time before it is restored: and it may be that he never recovers it. But on the contrary, if after his first heavy task is performed, it is succeeded by a different and lighter one—and this represents the rotation crop—he will recover much of that muscular force of which he had been deprived: and then if he undertakes again his original task, he will accomplish it with similar ease and success. Man is truly the 'golden link in the great chain of creation;' he, however, but represents, and is himself subject to the great and benign laws which govern all nature: he requires *change of action* and *rest* from *exhausted effort.*"

In showing the benefits of rotation, and the improved system of farming, Mr. M. treats at length, and with ability, of the green crops, roots; such as the potato, ruta baga, sugar beet, the Rohan, with notices of silk, cattle, sheep and swine, and references are made to some of the ablest writers of the day in support of his positions. The address thus alludes to the subjects of Horticulture and Agricultural periodicals:

"There is still another subject of paramount importance, and which it is the special object of this society to promote, viz: *horticulture*, or gardening and cultivation of fruit. It may, therefore, very appropriately be termed a *fruitful* subject, and to master it, requiring the possession of nice sensibilities, a cultivated and discriminating *taste*, to which the committee claim no particular title. They consequently, recommend the appointment of a committee, whose duty it shall be to report to the next annual meeting of this society, all the information they can collect relative to the best mode of propagating those varieties of fruit most congenial to our climate.

"Agricultural publications are truly as lamps to the farmer's feet. They disseminate the result of experiments connected with, and every species of knowledge calculated to promote the interests of agriculture and horticulture. The *Cultivator*, published at Albany, is above all praise, for the ability with which it is edited by two gentlemen profoundly learned in the sciences applicable to agriculture, and the possession of abundance of practical knowledge. If you would improve and advance in your profession, we say, take the Cultivator."

As useful for reference to those engaged in forming similar associations, (and we trust they are destined to be numerous;) we give the code of regulations of the Tompkins Society, on the cover of this number.

Lightning Rods—Inquiry.

"EDITORS OF THE CULTIVATOR—Can you give your readers any information as to the best methods of preparing and putting up rods, as conductors on our buildings? There is scarcely a year in which great damage of property, and not unfrequently loss of life, is occasioned by lightning. I think farmers should have their barns protected as well as their houses, as experience shows that they are the most liable to destruction, at the time their contents are the most valuable, that is, immediately after harvest. *York Co. Pa.* L. T. P."

In erecting rods for the protection of buildings from the effects of lightning, a few things must always be kept in mind, in order to ensure efficiency and consequent safety. As the point of erection, the most exposed and elevated part of the building, should be chosen. If a dwelling house, the chimney is the point that will require protection; if there are several of them, the most elevated one, the one most exposed to the general course of storms, as the westerly one; or if but one has a fire in it, that one will be found most liable to be struck by lightning, and will of course more require protection. Numberless recorded cases prove that all heated currents of vapor, whether rising from a chimney, or the masses of hay or grain in a barn, are excellent conductors of the electric fluid, and are to be considered as such in all arrangements for protection.

The materials to be used as the conducting medium or rod, is another point that should be attended to. Iron is the most generally used for this purpose, but copper is preferable, as it possesses greater conducting powers, is not liable to rust or fusion, and, being tougher, is not broken to fragments by an electric discharge, as iron sometimes is. The greater cheapness of iron, however, will probably continue its use, and when well put up, it gives all reasonable security. No iron rod should be used of a less diameter than three-fourths of an inch, and an inch rod is still better; as it must be remembered that the surface only has any effect in conducting electricity, and, therefore, the larger the surface over which it passes, the less intense its action, and the less danger of breaking or fusion. A small quantity of metal, if of the right kind, and a large surface given to it, will make a better conductor, than a larger quantity in an improper form. Thus, a copper ribbon, two inches wide, and of the proper length, will be superior to a copper wire of the same weight, as the process of rolling and flattening it, gives a much larger surface; and the same remark will be true in regard to iron. A number of small iron or copper wires, twisted into a rod, is better than a solid rod of the same weight, for the same reason; that is, a greater surface is exposed by the small wires than by the solid one, and this would be the best manner of constructing rods, were it not to be apprehended, that heavy discharges passing over wires would fuse and destroy them. Such have been recommended for ship conductors, as they would be entire, and flexible, and perhaps it would be found that the distribution of the fluid over such an extent of surface as such a rod would afford, would prevent the danger of fusion in any case.

In preparing the rod, the most essential thing is the making of the elevated points. These should be several in number slightly diverging from the main rod, and the sharp points gilded or tipped with silver, so as to prevent their rusting, and losing, in a great degree, their conducting power. Perhaps the easiest mode of pointing them, is to make points of large silver wire an inch in length, turning a screw on one end, and insert this into an opening drilled in the tapered end of each branch of the conductor, to receive it. If wire of the proper size is not convenient, they may be made by cutting them from a half dollar, and hammering them into the right form. If the rod is made in pieces they should never be put up by turning hooks on the ends, and connecting them in that way; as interruption to the fluid in its descent is frequently attended with bad consequences. The several pieces should be put together with screws, the connecting piece receiving the ends of two rods, and being as near the size of the conductor as strength and security will admit. The rod should never be secured to the building by metal staples or fastenings; or if such are necessary, the connection between the rod and these should be broken by pieces of glass, which is a non-conductor. Wood is the best for fastenings, and should only be used, except from necessity. It is not enough that the rod attract and receive the discharge; it must also conduct it to the earth, or no adequate security is afforded.

It has been estimated that a rod properly made, affords protection to five or six times the diameter of its height; that is, a rod standing six feet above a building will protect the building for thirty feet around it. Instances have been known, however, in which a chimney having a column of heated vapor rising from it, has been struck, when within the limits usually considered safe, in a protected building. In such cases the result must be ascribed to the height, and conducting power of the vapor. The foot of the conductor should gradually recede from the walls of the building, and enter the earth to such a depth as to reach moist earth, and if the bottom of the rod is pointed, or split and parted different ways in the earth, the passing off of the fluid will be facilitated. No paint should ever be allowed on a conductor.

Late Sowing of Spring Wheat.

At one of the agricultural meetings at Boston, Judge Hays, of Maine, stated that in 1838, he sowed some spring wheat of the Black sea kind, that it grew finely, and promised well, but was almost entirely destroyed by the grain worm. Believing that by sowing later the season of the fly might be avoided, he last year sowed his wheat much later than usual, and from two bushels sown on an acre he had forty-one bushels. Other farmers who adopted his mode of practice, and sowed late had good crops, untouched by the worm. He attributes much to the kind of wheat which he uses; as he has never known that wheat affected by the blight or mildew. The kind spoken of is a red wheat. In some instances where common spring wheat has been sown in the same field with the Black sea wheat, it was worthless, while the latter yielded abundantly, in one case at the rate of fifty-two bushels per acre.

Lime.

"Were lime a manure, it would be a noble substance for enriching and restoring fertility to lands worn out by a succession of crops; but, as worn out land is not restored to fertility by the application of lime, we are warranted to consider it in a different light; or, in other words, as an article to bring certain principles into action, previously possessed by the soil. This conclusion is sanctioned by experience; and experience is a far better guide than the most plausible theory."—*Morton on Soils.*

We think this short extract has, in very few words, set right a matter of great importance to the farmer, and corrected an error which is prevalent, not only in Great Britain, but, also, to a considerable extent, in this country, viz: that lime will restore to fertility *all* lands that have been exhausted by cropping. But lime is not a manure, in the sense in which animal and vegetable matter is; it is not nutritive itself, it only assists in nutrition; and, however important the part it acts in this way, unless nutritive matter is existing in the soil, ready to be appropriated to the use of plants, the application of lime is entirely useless, so far as the restoration to fertility is concerned. Every one can see, that when all the vegetable and animal matter has been exhausted in a soil, by ceaseless cropping, and nothing but the primitive earths, silex, alumine, lime, magnesia, &c. of which it is composed, remaining, that the application of more of any one of these primitive earths, will add nothing to its fertility or capability of producing vegetation.

If, on the contrary, there is vegetable or nutritive matter in the soil, lying dormant for want of exciting agents, or in an insoluble state, and therefore inaccessible to vegetation, an application of lime, by removing one or both these causes, may render the most essential aid to the farmer, in the production of his crops. A neglect of this important fact has led to serious error in the use of lime, in England, and in this country. Because, in some cases, lime has produced the best effects, it was at once expected in all; and, because, where nutritive matter existed to be called into action by the lime, a great increase of the crops were the result, it was supposed that this effect could be renewed at pleasure; and liming, without manuring, became at once the order of the day. As must have been expected, a failure in the crops, in such cases, has been the result; and a prejudice against the use of lime, resulting from its application on false principles, has succeeded the most unbounded confidence in its favor.

Lime *is* a noble substance; it can not be dispensed with in soils, but, like the other earths, it is powerless alone. The man who eats curry or cayenne with his roast beef, does not expect his nourishment from them—they are only the accessories—the stimulating agents. The farmer who has just views on the subject of vegetable nutrition, does not expect his plants to subsist on the lime, salt or gypsum he furnishes them; nor does he expect that these stimulants of themselves, without the application, in some form, of vegetable or animal matter, of which the plants can avail themselves, will restore fertility to exhausted soils, or continue it in such as now possess it. No farmer should forget that no single substance can ensure fertility; not one of the earths, or one of the stimulating or nutritive manures, can do this; the presence of all is necessary; and the best proportions ensure the greatest productiveness in any soil.

DICTIONARY OF TERMS
USED IN
Agriculture and its Kindred Sciences.

BITUMEN. This is the name of a species in mineralogy, chiefly interesting as forming the basis of a large part of the coals termed mineral coal, an article of vast importance to the arts, commerce, and comforts of life. It has acquired several names, from its appearance in its different states of consistency. *Naptha* is a fluid, of a yellowish tinge, transparent, and with a peculiar odor. It consists of carbon 82.20, and hydrogen 14.80. It is found in many parts of the world. *Petroleum* is of thicker consistence than naptha, in some cases resembling in color and consistence, common tar. It is in this state that it is found in such vast quantities in the United States, principally at the salines on the Kenhawa and Muskingum, at the depth of from 300 to 600 feet. It is also found on the Olean creek in this state, and is the article known as Seneca oil. At Rainanhong in Birmah, is a hill containing coal, in which more than 500 pits have been dug for the collection of the petroleum, and from which 400,000 hogsheads are taken annually. In boring for salt in 1838, on the Tombigbee river in Alabama, at the depth of 600 feet, the miners struck a vein of petroleum, which, flowing over the top in immense quantities, spread itself over the river for some fifty miles, and in that state was set on fire, forming a striking and brilliant spectacle. Compact bitumen, or *Asphaltum*, has lately attracted much notice from a new application, which, in connection with some other substances, has been made of it in paving streets, where its durability has been found to exceed granite. All the coal west of the Allegany mountains is bituminous, and some large beds of it occur on the east of this range.

BLAST. A disease of plants, to which by different writers has been given the name of blight, blast, and mildew. The latter, however, is evidently a distinct disease, and produced by different causes. Blast or blight has been divided into several varieties, affecting plants in different ways, and with varying intensity. Among these may be mentioned blight originating from cold. The north or easterly winds of spring often produce this, by freezing the tender shoots, or by retarding the flow of the juices. Thus the young fruits are deprived of their nourishment, and fall from the stem. Blast or blight from sultry wet weather, originating contagious diseases of plants, is another of the forms noted, and mildew sometimes seems to result from this cause. The blight which sometimes strikes the grain of whole districts, would seem to be owing to atmospheric causes thus generated, since the disease appears to follow, and be governed by the course of the winds. Blast from the want of nourishment, is another form of the disease, but of which the cause is usually obvious. Impoverished land, too great quantities of seed, or injudicious culture, may produce this blight, but in this country, it is oftener observed as an effect of drouth. Blast from *fungi* is the kind of blight which attacks grain also, and which has been erroneously attributed to particular plants, as the barberry bush, since the fungi on the leaves of this plant, and those that cause the blight in wheat are clearly distinct.

BLINDNESS. No animal is so subject to blindness as the horse, and in most cases it can be clearly traced to the treatment they receive. Severe drawing in the harness, or racing, either on the course or otherways, will not unfrequently produce blindness, sometimes temporary, but often permanent. An examination of the pupils, of the eye will most usually enable an observer to determine whether there is blindness or not. If the pupils when exposed to light after being in a dark stable, contract, the horse is not blind; if they contract unequally, or one not at all, then the vision is imperfect, or gone in one of the eyes. The hand placed close over the eye for a few minutes, so as to render the eye dark, will show the dilation or contraction of the pupil, when no other convenient means of excluding light are at hand. A horse, blind with both eyes, will usually have his ears in constant and rapid motion, directing them in quick succession to every quarter, relying on hearing rather than sight; he will lift his feet high as if he were stepping over some obstacle, when there is actually nothing in the way. It is a common saying, that *wall-eyed* horses are never blind. This is probably an error; as there appears no difference in their structure to warrant such an inference.

BLOOD. The circulating fluid of animal bodies, and by means of which the functions of nutrition and life are carried on. Blood is usually divided into arterial blood, which is that given by the lungs to the heart, and by that thrown into the arteries of the system, and the venous blood, which is returned to the lungs through the veins from the surface and extremities. The venous blood is of a dark purple hue when passed into the lungs, and it leaves them of a rich vermillion color. This change is effected by the absorption, while in the lungs, of oxygen, from the atmospheric air with which they are filled in breathing. Messrs. Macaire & Marcet of Geneva, in a series of experiments on the blood, demonstrated that the difference between arterial and venous blood, was as follows:

	Carbon.	*Oxygen.*	*Nitrogen.*	*Hydrogen.*
Arterial blood,	50.2	26.3	16.3	6.6
Venous blood,	55.7	21.7	16.2	6.4

Blood is of much use in some of the manufacturing processes, some valuable coloring pigments being derived from it. From the large quantities of albumen it contains, it is the principal ingredient in freeing sugar or molasses from its impurities previous to the conversion into lump or loaf sugar. Blood is found to be one of the most powerful of manures when applied to the ground; and large quantities of it, mixed with other materials, are obtained from the slaughter houses of our principal cities, and appropriated to this purpose. When animals are attacked with fever, one of the surest remedies is bleeding, either local or general, as the cause may demand.

BOG. A swampy piece of ground, usually containing large quantities of vegetable matter, frequently of the nature of a quagmire, and with tufts of coarse grass mingled with aquatic plants spread over its surface, is in Europe, and usually in this country, termed a bog. Such pieces of amphibious soil, are not common in the United States, but in Scotland and Ireland, a very considerable portion of the surface is occupied by such nonproductive lands. Where bogs exist, the only modes of bringing them under culture, are, by draining or covering the surface with firm earth, and frequently it is necessary to combine both operations. Draining the land consolidates the surface, and affords opportunity to cut off the bogs or coarse tufts of grass, and introduce more valuable grasses, if not to submit it to the action of the plow. Where the boggy ground is mostly composed of vegetable matter, it is desirable to incorporate the common earths with the surface, thus giving increased powers of production, and greater firmness. Gravel or sand may be carried on when the ground is frozen, if the surface is not hard enough at other times, and by thus uniting draining and the application of earths to impart consistence, such soils, worthless in their natural state, are rendered most valuable and productive.

BONE. The frame work of animals, constituting the osseous structure or skeleton, is called bone, and is composed of several ingredients, the principal one of which is the earth called *phosphate of lime*. This material appears to have been selected for this purpose, as forming much harder compounds with animal membrane than the carbonate, which is used in the composition of shells. The harder and more solid the bone the greater the proportion of the phosphate; thus the bony portions of the ear, are very hard, and they consist almost wholly of the phosphate. The long part of the teeth contains considerable carbonate, but the enamel, or the cutting parts, which sometimes approaches to the hardness of steel, is nearly pure phosphate. The composition of bone can be determined by fire, or more accurately by the acids; and they are found to consist of phosphate of lime, a small quantity of carbonate of lime, the whole cemented together by a strong elastic animal membrane, to which is added oil, of which the principal depository is the interior of the bone. The use of bone dust, or bones reduced to powder by grinding, has introduced a new era in agriculture in some parts of the world. Crushed bones were first extensively used as a manure in the counties of Lincoln and York, about the beginning of the present century; and they are now considered the best and most efficacious application that can be made to the soil. It has been estimated that by extending the growth of the turnep crop to districts where it was not before grown, and thus increasing the means of raising cattle and sheep, and through these indirectly, the culture of wheat and barley, the means of subsistence in England has been increased one-fifth. Twelve bushels per acre drilled in, is the usual allowance, but it is sometimes sown broadcast, and the quantity varied from ten to twenty bushels an acre. The experience of farmers who have used this manure, shows that it succeeds best on light, dry calcareous loams, or in general on any soils that are dry and do not contain too much alumine. If sown broadcast, the better way is to mix the bone dust with earth and let it slightly ferment before spreading on the land. With turneps, and for these as a manure it is unrivaled, the practice is to drill it in with the seeds. Bones that have undergone fermentation are superior to those that have not undergone this process, and their effect on plants is more rapid. Where land is much impoverished, thirty bushels per acre have been used with success. In this country they are well spoken of, and mills for grinding the bones have been erected in various places. It is evident from the chemical composition of the bone (salts of lime and animal matter,) that its action on plants must be energetic, and such is found to be the case. The finer the dust, the more rapid its action, while as a matter of course, that which is not so fine, is the most durable in its effects.

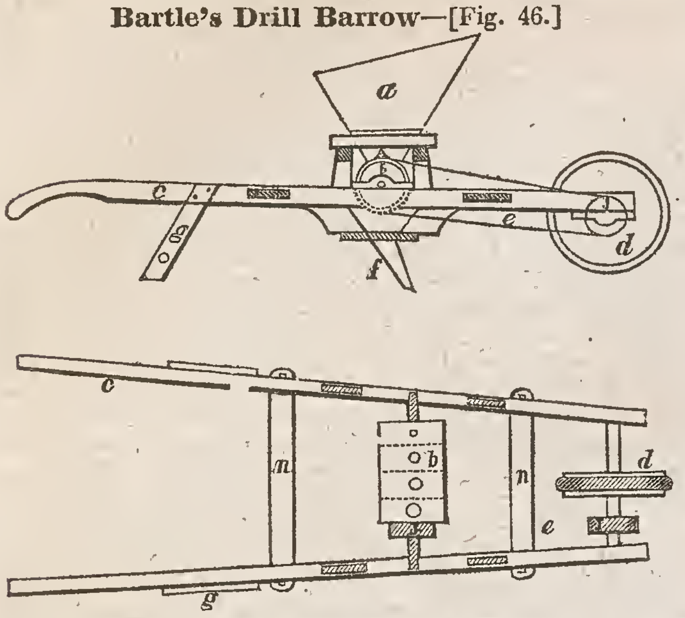
BOTS. It is well known that most animals are infested with particular kinds of parasitic vermin that prey upon them, either externally or internally. Thus the ox, horse, sheep, and even man himself in the tropical regions, are attacked by the fly, the species different in the different animals, and the larvæ deposited on the hair, on the mucous membrane of the nose, or in the flesh, lives on the body to which it is attached until it is prepared to undergo its last transformation and become a perfect insect. These flies belong to the genus *Œstrus*, of Linn. and the parent of the bot, or the one that attacks horses, is the *Œstrus equi*. The female of this fly is known at once by the extremity of the abdomen being lengthened, and turned under the belly so as to form an ovipositor for placing the eggs on the hair of the horse. As this fly does not bite, it does not occasion that terror to the animal it attacks, as is produced by some of the species of gad-fly, and a horse will continue quietly feeding while the œstrus, continually on the wing, is busy depositing the eggs on the hairs. The place selected by the fly is generally on the inside of the knees, or the sides of the horse, always avoiding those parts that the horse is unable to reach with his mouth or tongue. On these points the eggs are rapidly deposited, being fastened to the hair by a glutinous substance. This substance dries, and the egg is firmly attached to the hair, where they remain some four or five days, at which time the larvæ is ready to burst the envelop, and a slight application of warmth and moisture is sufficient to effect this. If at this time the tongue of the horse passes over the hairs to which the larvæ are attached, the operculum or cell is instantly opened, and the worm, small and white, adhering to the tongue, passed with the food into the stomach. This fact of the quickness with which the living worm will be produced when the egg is ripe, may easily be tested by placing some hair containing eggs or nits in the hand slightly moistened with warm water or spittle, and closing it upon them. They may even sometimes be *hatched* by drawing the moistened hand slowly over the hair of the horse, the worms, lively and vigorous, remaining on the hand when removed. When the bot has descended into the stomach of the horse, it attaches itself to every part of the inner coat, but oftener about the *pylorus* than elsewhere. From this account of its production, it is evident the numbers in the stomach may vary from a dozen, or twenty, to several hundreds. They are usually in clusters, attached to the membrane of the stomach by two hooks or tentaculæ. Some writers have maintained that these hooks are on the tail, instead of the head of the animal, and consequently as it is suspended by that extremity, the idea of its penetrating the coat of the stomach, and thus causing death is absurd. The researches of Messrs. Youatt & Clark, however, prove that it is by the head the insect is attached, and that they may at times prove fatal, though such instances they conclude are very rare, and that on the whole the bot is rarely productive of injury to the horse. When the bot has attained its growth, it quits its hold, and passing through the intestinal canal falls to the ground, in which it secretes itself, and enters the chrysalis state, from which in due time it emerges, a perfect insect, and recommences its round of propagation.

BOULDERS. In almost every part of the world masses of rock or stone are found, from the weight of many tons down to a few ounces in size, and rounded by attrition, or angular, as when broken from the quarry. Such rocks are frequently many miles from the place of their original formation and deposit, and by fixing their original location, they greatly aid in determining the nature and direction of the causes that in former ages have acted on the face of the earth. In examining the country from Boston to the Mississippi, and tracing the boulders which are scattered over almost the whole of this extensive region to their original deposit, it will be found that they have been in nearly every instance driven from the north in a southern direction. Thus the greywacke boulders found in the valleys of Berkshire, are traced to the west and north of the Hoosic range, over which they have evidently been forced. All are aware that there is no primitive rocks south of the Ontario in the state of New-York, yet the whole surface is found sprinkled with boulders, which, from the character of the rocks, must have been derived from the primitive ranges in the St Lawrence district and north of the Ontario. Boulders of gneiss, weighing many tons, are found on the elevated lands of Allegany and other southern counties, which have evidently been transported from the north to their present situation. Perhaps there are few of the rocks of the transition or secondary classes more distinctly marked, and more easily known than the red sandstone of the whole southern shore of Lake Ontario, particularly the strata immediately under the bed of iron ore that reaches from Oneida county into Canada; yet blocks of this very stone may be found in great numbers, on the high lands of the dividing ridge, forty miles south of the outcrop of this deposit near the lake, and twelve or fifteen hundred feet higher than the original location. So to the south of the great limestone deposit, boulders of this rock are very numerous. Within five miles, where stones are collected for walls, these boulders are found in some places to constitute one-half or one-third of the stones gathered from the fields. As we recede to the south their number and size become less, and scarcely a trace of them can be found. North of the outcrop of this limestone formation, few or no boulders of this stone are found, even though all the streams flow across it in that direction, thus demonstrating that their removal to the elevated ranges south, was effected by force, and that the force exerted was from a northern quarter. Boulders exercise much influence on the agriculture of a country by their size and numbers, and by the material of which they are composed. Thus a country occupied by limestone or gypseous boulders, is more likely to be adapted to the culture of wheat than one in which the granitic form prevails. So uniform has been the course of the boulders on this continent, the northern part particularly, that the presence of any kind of rock or earth, may be considered proof that the location of the rock, or the strata from which the earths was formed, may be found to the north of its present position.

To save a multitude of conjectures as to the course of the wind and the temperature of the weather, provide a weather cock and a thermometer. The first any farmer can make and put up, on some elevated part of his buildings; the last can be purchased for a trifle, and will be found useful in more ways than one.

Communications.

Bartle's Drill Barrow—[Fig. 46.]

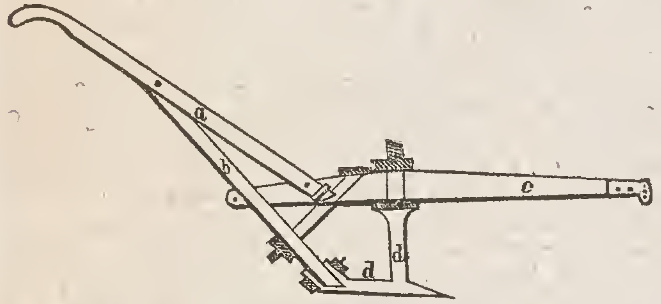


a. Hopper of tin, to set in cast iron hopper, A. *b.* Seed barrel, of iron, brass or hard wood. *c.* Handles, 5 feet long, 2½ inches by 1¼. *d.* Wheel 17 inches diameter, with inch bead to make furrows. *e.* Leather band or strap. *f.* Conductor, of tin or leather. *g.* Legs 2½ inches by 1¼. *n.* Slats 2½ inches by 1¼. *i.* Band wheels, each 4½ inches diameter. The frame is made of white pine, screwed and morticed together.

Messrs. Editors—The above drill barrow has been invented by Mr. Andrew Bartle, and used by him for the last year. It answers beyond the anticipations of himself or friends.

The seed barrel is 5 inches long, and by the hopper, is divided into four parts. No. 1, (or that on the left,) is so arranged as to sow turnep seed. No. 2 for onions, and will answer for carrots, (the latter should be rubbed between the hands, before planting,) No. 3, for beets and mangel wurtzel. No. 4, for garden peas and ochra. The holes in the cylinder (six for each kind of seed) are made in each case, to hold 3 or 4 seed; and each reamed out a little larger on the surface of the cylinder that the seed may be discharged with ease. For turneps, onions, peas and ochra, the chain will answer well for covering. For beets and mangel wurtzel, the rake or harrow is used. The object of Mr. Bartle is to let the agricultural community have the free use of his invention or improvement. A. B. McCLEAN.

New Land Coulter—[Fig. 47.]

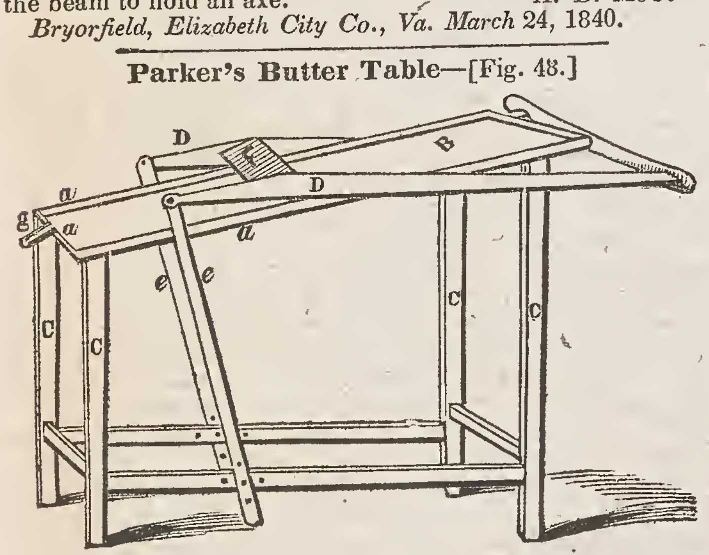


The New Land Coulter I have not seen laid down. I conseder it a valuable implement; and one that should bo in the possession of every farmer who has new land to take up; it is sufficiently strong to be worked by three or four mules or three yoke of oxen, and will nearly do away the necessity of grubbing. The handles *a*, are fixed on to the sides of the beam and supported at the head of the heel piece *b*, by a strong oak or hickory pin.

The beam *c*, is 4 by 5 inches in the centre and 3 by 4 inches at the ends. The hecl piece *b*, is 2½ inches square at the lower, and 3 inches at the upper end. The coulter *d*, is made of 1½ inch square iron, and left full size; the brace and heel bolts are ¾ round iron. A cleet is nailed on the side of the beam to hold an axe. A. B. McC.

Bryorfield, Elizabeth City Co., Va. March 24, 1840.

Parker's Butter Table—[Fig. 48.]

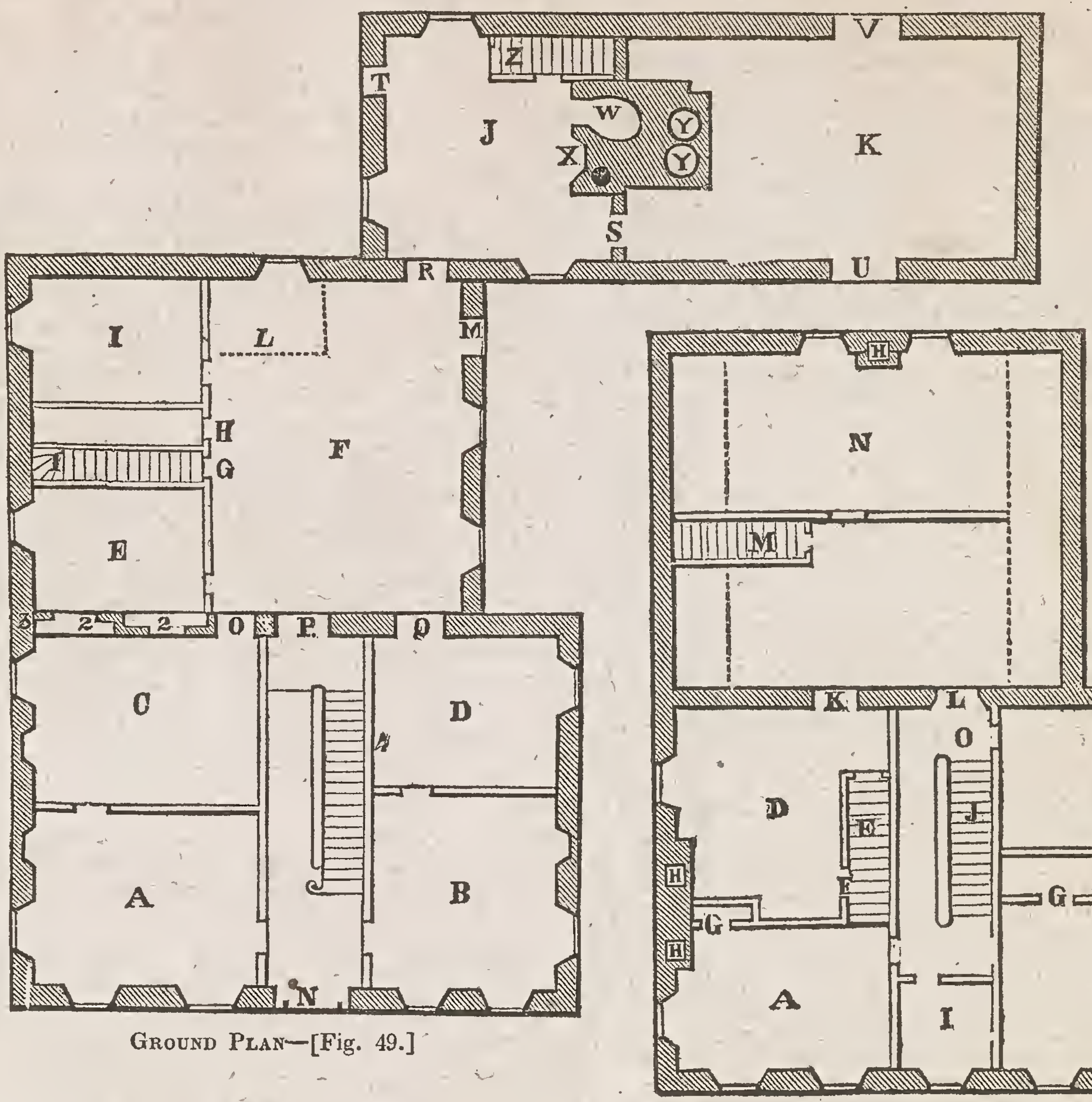


I send you a rough drawing and description of a table for working butter, inventend by me, on which a woman, with a little practice, can work forty founds of butter, and work in the salt, as easy as she can ten with a bowl and butter spoon. A joiner can make one in about a day. Every dairyman ought to have one. Any one who has a mind to build one, can. There is no patent on them. I sell the tables for $3.

Letters *a. a. a.* the sides and ends of the frame, 2½ inches deep, 1¼ thick; sides 3 feet long; end 20 inches long, with a groove in them, 1½ inches below the top, for the bed of the table B. to rest in, which ought to be ⅝ths of an inch thick. c. c. c. c. legs, 26 and 21 inches long—D. D. arms, 3 feet long, 1 inch thick, with the handle framed across the ends—*e. e.* short arms 22 inches long, connected with the long arms with buts and screws—F. butter worker, 4 inches wide and 2 inches thick, on the back side, and worked nearly to an edge on the front side—*g.* spout for the butter-milk.

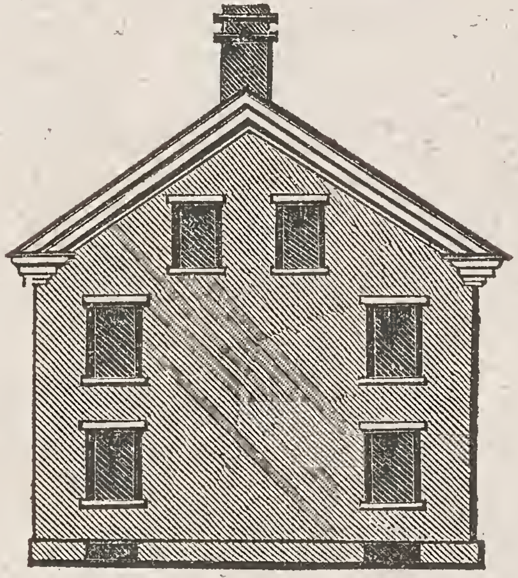
Trentvn, Jan. 25, 1840. JAMES PARKER.

PLAN OF A FARM DWELLING-HOUSE.

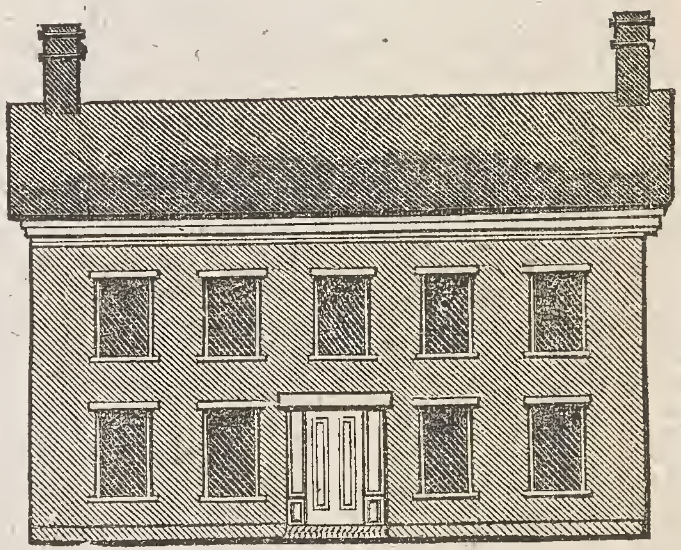


Ground Plan—[Fig. 49.]

Second Story—[Fig. 50.]



End View—[Fig. 51.]



Front View—[Fig. 52.]

Messrs. Editors—I transmit for your consideration the above plans of a Farm Dwelling-House; which plans, and also the premium plans published in the 7th number of the 6th volume of the Cultivator, are original. Many, particularly those unacquainted with architecture, will suppose these several plans are a *fac simile* of their own dwellings, when in fact they may differ as much as a rectangle does from an ellipsis: to such I would say, reperuse, and convince yourselves you arc in error.

In presenting to the public, plans of Dwelling-Houses, I am well aware that different persons, aside from their means in a pecuniary point of view, will have different tastes: some when about to build, will have a prejudice that any thing new, will not admit evcn of a perusal; they must build in every respect like their neighbor Mr. *Somebody's* housc, though as inconvenient as it well can be—and probably cold enough to freeze water over night.

In this age, when improvements in agriculture, manufacturing, and the mechanic arts, &c. are the order of the day and the spirit of the age; I am right glad to perceive, that in many sections of the United States, liberal encouragement is given to improve our architecture.

Among the numerous arts and sciences that embellish life, there is not one more beneficial and ornamental to mankind than architecture; from the wigwam of the savage to the palace of the monarch, its utility is appreciated, and its advantages are acknowledged.

Rude and barbarous among the wandering tribes that seek shelter in the desert from the inclemencies of the seasons, and the ferocity of wild beasts that prowl for prey, it advances from the dictates of simple necessity to convenience and comfort, as we mount upward through the scale of civilized society, till comfort gives place to the accommodations which contrivance provides for ease and luxury, and till it beams upon us with splendor in the mansions of the living, and the mausoleums of the dead.

If any one class more than another, are entitled to convenience, durability and elegance, it is the farmer—the hard-handed and honest-hearted farmer; whose industry, prudence and perseverance has gained him an independence, that no other art, science, or profession can boast of—and who may truly say, as did Selkirk,

> I am monarch of all I survey,
> My right there is none to dispute.

A habitation then for such an one to dwell in, should be convenient in all its apartments—of the most durable materials, and consequently finished in the most modern style of architecture.

In drafting the plans, and in making an estimate of the expense, I have calculated on a stone structure; the main building 38 feet long and 27 feet widc, with an addition in the rear 28½ feet by 24 feet—also, a wood house, which is indispensable to a farmer, 52 feet long and 20 feet wide, off the length of which a wash room is finished, which would be convenient for a wash room or cheese room, adjoining the fire-place of which is the oven, and on the opposite side (the wood-house side,) an arch is built to receive caldron kettles for the use of the farm.

The estimate is made out as labor and materials can be obtained where I live—good building stone being a quarter of a mile distant, and of a quality that a sufficient quantity could be procured for water-table window sills, door thresholds, and window and door caps.

Being of opinion that an open fire-place is not as injurious to health, and certainly more pleasant than a stove, I have in addition to a fire-place in both front rooms, and one in the wash room, placed one in bed-room C. on fig. 49, which would be found useful in case of sickness—the kitchen is intended for a stove, the chimney to receive the pipe, to commenco in the wall immediately over the sink in the kitchen.

Let it be borne in mind, that the dimensions as above given of the main building, the rear part, and the wood-house, are, including the walls, which are two fect thick except the upper story of the main building, which is diminished six inches, leaving the wall eighteen inches thick.

Over the wash-room, is a room to keep and turn the cheese, accessible by stairs out of wash-room, which stairs also lead to room over the wood-house, convenient for a wool room, lighted from gable end of wood-house.

It will be perceived, that there is no communication from the back stairs or back part to the rooms in the main building on the attic story, except to room D. in order to keep the front rooms and front stairs clean.

Explanation of Fig. 49.—A. & B. front dining and sitting rooms, C. & D. bed rooms, E. bed room, F. kitchen, G. cellar stairs, H. passage to door 1, and back stairs, I. Buttery, J. wash-room, K. wood-house, L. sink, M. back door, N. front door, O. door to room C., P. door out of lobby into kitchen, Q. door way into room D, R. door out of kitchen into wash-room, S. door out of wash-room into wood-house, T. outside door, U. & V. wood-house large doors, W. oven, X. fire-place, Y. Y. arch, Z. stairs to cheese and wool rooms, 2. 2. close presses for rooms C. & E. which may be made in the stone wall, by placing a lintel from 3 to 3, and make a stud partition underneath. In case the front stairs are partitioned underneath, there may be a close press for room D. at 4.

Explanation of Fig. 50.—A. B. C. D. I. N. are sleeping apartments, E. garret stairs, F. close press under said stairs, G. G. G. close presses, H. H. H. H. flues of the fire-places on fig. 49, J. front stairs, K. door out of back part into room D., L. a window to light landing O. of front stairs, which window is placed high enough to clear the roof of back part.

An estimate of the expense, as labor and materials could be procured in Rutland, Vermont.

518 perch of stone, delivered quarter of a mile from quarry, at 50 cts. per perch,	$259 00
Laying 518 perches of stone wall, at 50 cents,	259 00
250 bushels of lime, delivered at 25 cts. per bushel,	62 50
1200 bushels of sand, at 2½ cts. per bushel,	30 00
6 boxes of glass, of 50 feet each, at $3.12½ per box,	18 75
9000 feet of lath boards, at $6 per 1000 feet,	54 00
6000 feet of lining boards, at $4 per 1000 feet,	24 00
6000 feet of spruce, 1⅛ inch floor boards, at $10 per 1000 feet,	60 00
Brads, locks, latches, &c. &c.	30 00
25,000 pine shingles, at $2.50 per 1000,	62 50
700 feet of square timber, at 4 cts. per foot,	28 00
3000 running feet of scantling, &c. for joists, rafters, studs, &c. at 2 cts. per foot,	60 00
10,000 feet of pine stuff, at $20 per 1000,	200 00
2 setts of polished jambs and mantels, at $10 each	20 00
2 do. common, at $4 each,	8 00
Plastering, including board and tending,	60 00
Painting and materials, do.	75 00
Joiners' and Carpenters' work, including board.	600 00
4 hearth stones,	14 00
7 cwt. of nails, at 6½ cts. per lb.	45 50
	$1,970 25
Expense of wood-house and wash-room, &c.	247 00
	$1,723 25

The above estimate is calcutated for a plain but good workmanlike structure—and a brick building finished equally as well, would cost $1,650: Wood do. $1,500, all without wood-house and wash part—and with wood-house and wash room, for the plan as follows: stone, $1,970.25; brick, $1,897; wood, $1,745.

I have not given any plan of the cellar, on account of intruding too much, as I have already, on your columns; but I will here state, that the cellar windows ought to be placed perpendicular to the windows on fig. 49, and to have no cellar windows in the front of the house. The cellar may be bricked up on the inside, leaving a vacancy, and have double sashes, which will prevent frost from penetrating—cellar outside door, back and under the buttery.

A stone building can be built to be as warm as either brick or wood, by building bond timber in the walls in their proper places, and battening to the same, leaving a vacancy between the stone and the plastering.

Those desirous of obtaining the above, or any other kind of plans, may procure the same at a moderate price, by addressing the subscriber, postage paid, at Rutland, Vermont.

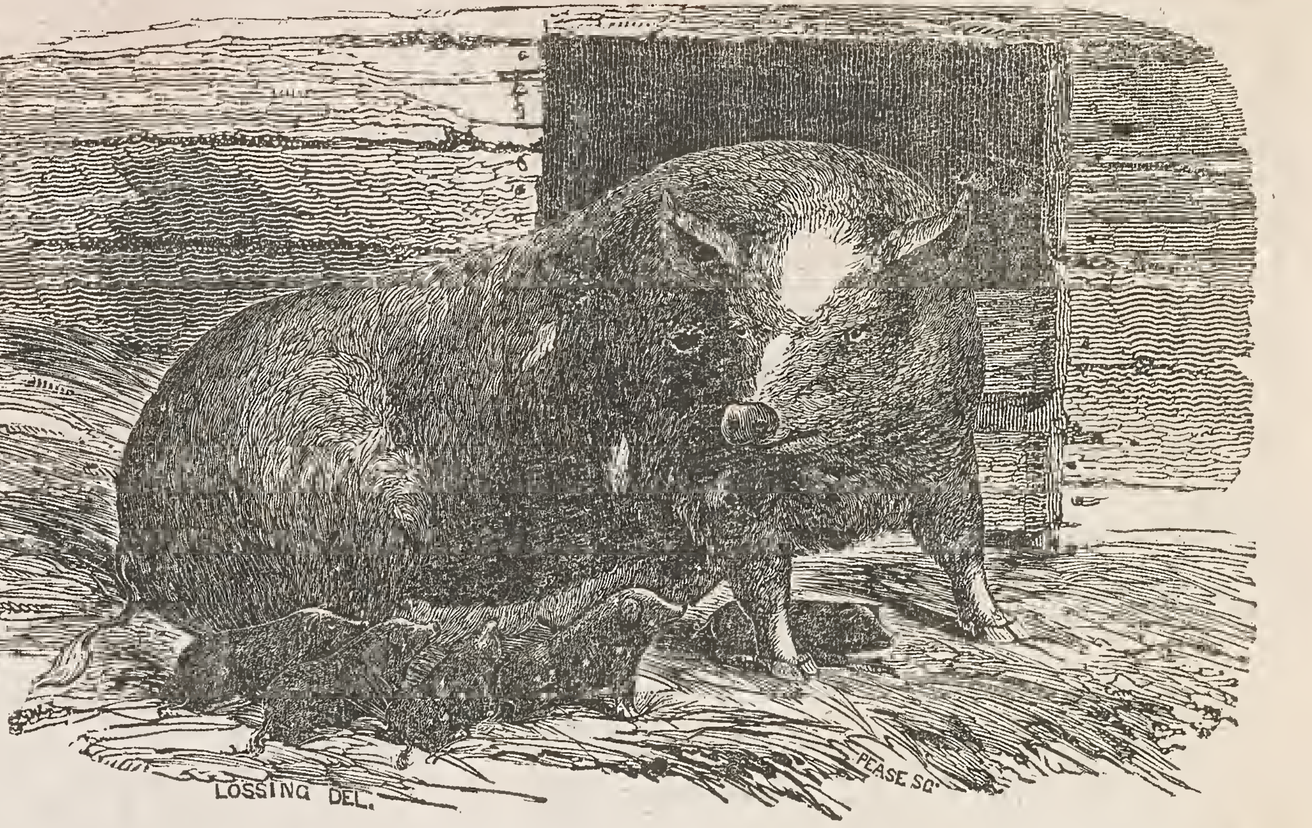
Respectfully yours, JOHN CAIN.

Farming in Wisconsin.

As I have plenty of room, I will give you something in relation to this territory. It may prove interesting to some of your readers to know that there is yet a vast quantity of lands in this territory subject to entry at $1.25 per acre. It is as yet but partially settled, the lands bordering on the main thoroughfare only being taken up, leaving the interior, in which there is situated some of the finest lands in the United States, to the examination and selection of the immigrant. There are the counties of Dodge and Dane, in which the lands have been taken only in the neighborhood of the seat of government and a few scattering sections. Here, then, is a noble field for the emigrating farmer from the east. Thousands of acres of the finest wheat land in the world are yet to be found, together with water powers for the construction of mills, which are plentiful throughout the country. Lands in this vicinty have produced at the rate of forty bushels of wheat to the acre the last season. I think it can be asserted with truth, that a finer wheat country can not be found. Its growth sometimes is astonishing; we have seen it that stood six feet high, with a corresponding thickness of straw, and yield a fine berry. A great deal of spring wheat is raised, the country being so recently settled that winter wheat is not generally sown. Oats are raised in abundance, and are sold at from two to three shillings a bushels. The early varieties of corn are cultivated with success, for though we are farther north than Albany, we have a milder climate, which allows of the growth and perfection of this old stand by of the farmer. The Dutton corn is raised here, and generally answers all that has been said in praise of it. Barley and rye are not much cultivated: but in the root line we can go ahead of any body. Ruta baga, mangel wurtzel, sugar beets, carrots, onions, potatoes, &c. grow here to the greatest perfection. But it is useless for me to enumerate the different articles that can be cultivated in the territory; it must suffice to say that all that can be raised in the state of New-York or the New-England states, can here be raised in abundance.

I can not close this without taking the pen in defence of the much talked-of, much abused Chinese corn. I have seen many remarks in favor and against it in the various papers, and I can not satisfy myself to let this opportunity pass without offering a defence. I procured an ear from New-York last spring, and planted, and it answered every expectation. It yielded me at the rate of eighty bushels to the acre, and I have so great an opinion of it that I shall plant four or five acres of it this summer. It ripened in ninety days, and is a beautiful specimen of corn, growing very heavy and thick, forming fine fodder.

Milwaukee, Wis. Feb. 8, 1840. E. B. QUINER.


LOSSING DEL.
PEASE SC.

Berkshire Pigs.—[Fig. 53.]

Messrs. Gaylord & Tucker—Having for some years paid much attention to this most valuable breed of swine, and having been frequently requested to give the history, marks of identity, statistics, habits, qualities, and properties of the animal, I have prepared the following, as a reply to the many queries I am continually receiving on the subject. Such a paper would seem the more necessary, as it is evident the grossest frauds and impositions have been, and probably will be, practiced by the unprincipled on the unsuspecting public.

For instance, a drover collects a few hundreds of swine, beyond, or in the west of this state, a heterogenous mass, comprising every kind, from the alligator to the snapping turtle. By the simple process of passing through Albany on his way down east, his drove becomes full blood Berkshires; though they may exhibit in color all the tints of the rainbow; and by the time he reaches Boston, it is not impossible certificates may be shown to prove the purchase from some noted dealer in swine.

The effect of this deception may be found in the remark which is frequently heard in distant parts of the country: "Our folks have tried the Berkshires, and find them to be no great shakes after all; no better than the common hog;" and well may the remark be made, as it is not probable these persons had ever seen a Berkshire pig in their lives. In endeavoring to palm off their black and white counterfeits, some have traced the genealogy of their pigs to Noah's ark, and found them to be the exact counterparts of the two saved in that vast menagerie: and others I presume, have traced their stocks to the garden of Eden, and find in their *white* Berkshires an emblem of the purity and innocence of that place, though I have never found white, except in the extremities, to be any emblem of the Berkshire pig at all. The genuine Berkshires, were brought to this country in 1832, by S. Hawes, Esq. an English gentleman, who purchased Judge Spencer's seat, three miles from Albany.

Mr. Hawes, associated with several other gentlemen, in England, had by a series of experiments and investigations, continued for more than twenty years, previous to his coming to this country, brought the full blooded Berkshire pig, to his present high excellence, a "noble animal," superior in symmetry and perfection, apparently conscious of the admiration he every where excites, and a noble monument of what the plastic hand of cultivation can effect over that otherwise uncouth, filthy, and devouring cannibal.

I was the first to procure the breed from Mr. Hawes in 1832. These pigs soon attracted general admiration; in 1834 and '5, they were first introdued into Ohio and Kentucky, and since that period, I have sent more or less of them to every state of the Union; and I understand they took premiums in every county in the two states above named, last autumn. Where the full bloods have been obtained, and continued without alloy, and not suffered to run out by breeding with those too near akin, nor let to run with other hogs, as they will in these ways surely degenerate, I have never heard but one opinion, and that of unqualified approbation. Mr. Hawes returned to England with his family in 1838, but through him and his agency, I have, since 1832, procured four fresh importations of the best animals—the last in the fall of 1839. With these preliminary remarks, I shall now proceed to point out some of the characteristics of the true Berkshire pig.

Color.—The Berkshire pigs imported as above, are principally black, with the ends of the hairs tinged with red or brown, giving them a beautiful brilliant changeable appearance in the sun, something like velvet of that color. Mr. Hawes informed me that he had never known a full blood to have less than three white feet, some white in the face or end of the nose, and occasionally white hairs interspersed over the whole surface—the end of the tail invariably white; there are, however, slight variations from the aforesaid color, as some are much less brilliant, their coats more sandy, and hair slightly inclined to curl. Pigs were imported from Berkshire forty years ago, nearly of the same color, but far inferior in point of rotundity, and other essential points of form. All the stock procured from Mr. Hawes, those which I have bred, and all the full bloods through any other channel, have been essentially the same in point of color. Four years since, I saw a boar, that the owner informed me he purchased from on board a ship, for a full blood. His form and color was right; and being anxious to get a fresh cross, I took Mr. Hawes to look at him. He said his appearance was good, and as a test, I might put him to one of my full blood sows, which I did. At the litter, two pigs were all black, three all white, the balance Berkshires. Mr. Hawes pronounced him a counterfeit; as the result proved he had blood of different races in his veins.

Considering the color as essential in determining the character of Berkshires, I have been much surprised at the efforts that have been made in some quarters to break down color as a test of purity. One maintains, that according to his information, they have as much white as black, in England; and that the color imported by Mr. Hawes, was merely accidental. Another somewhat extensive breeder or speculator in Berkshires, informed me, as an apology for full bloods of every color, that it was from a particular mode of breeding in England, that colors resulted. Perhaps peeled sticks have produced on swine there, the effects they once did on the cattle of Laban! There is at this time in the vicinity of this city, an imported sow, all white, and three others with about as much white as black: two of the males I have seen, and from their general appearance, I should not hesitate to call them impure. I have been informed that a planter from Kentucky, purchased a boar from a gentleman on Long-Island, entirely white, from a stock he had imported as Berkshires; and I have seen one bred in this vicinity seven-eighths Berkshire, purely white, retaining all the Berkshire points of form; but such will most certainly very soon degenerate into the common breeds. I have never met with a pure black Berkshire pig, although there are many advocates for them before the public.

I may add here, that last spring I saw an English gentleman emigrating to Upper Canada, who had a number of very fine animals he was taking on with him, cattle, sheep, and two pigs. He informed me, that he was born and raised in Berkshire, and had paid particular attention to making the best selection of animals to bring out with him. The color of his pigs agreed precisely with those of Mr. Hawes' importation; and he informed me, that it was the only standard color for the full blood. All colors were sold, he said, in England for full blood, and it was extremely difficult, if not impossible, for a stranger to procure such as could be fully depended upon. Mr. Hawes' importations he pronounced pure, and fine animals. I have the testimony of a number of other gentlemen well acquainted with the Berkshire pig in his native country, and they agree with the statement given as to color, &c. indeed, were this not the case with the pure bloods, it would seem strange, that the pigs sent out by Mr. Hawes, at four different times within eight years, should happen to be all of them within a few shades of the same color.

Whatever may be the intentions or wishes of those who have shown so much anxiety to break down the distinction of color, I think it would be as easy to introduce all white or all black leopards, as pure blood Berkshires of similar description; and any gentleman purchasing pigs as Berkshires, other than of the color above described, may have just reason to suspect their purity. I would advise purchasers who wish first rate animals, and pay high prices, to be particularly careful in ascertaining their pedigree; even if imported, they are not secure against imposition, unless proof is afforded that they were selected by competent persons. No pig should be supposed imported, the vender of which cannot produce a bill of lading; as there is reason to believe that some, after a little travel, have been dubbed imported, that had never snuffed salt water. A little attention to these things would have a salutary effect in frustrating the attempts at imposition so frequently made, and with such detriment to the public.

Objections have been made to Berkshires on account of their supposed black rind, which is not the case after a good scald. A black scurf, or outer covering of the skin, comes off, leaving a rind not much thicker than paper, much more white and beautiful than that of any other swine.

Size.—Full grown Berkshires are of all sizes, from 1000 lbs. downwards; the reason why there are so many varying sizes among those imported, is this: gentlemen in England wishing to have small ones for family use, have selected the smallest of their litters for breeding; and as the result of a well known law, have purposely procured a smaller stock. Others, preferring a larger size for market, have pursued the reverse of this course, and run their stock up to a very great size.

In the autumn of 1838, Mr. Hawes brought me one female and two male pigs, unrelated to each other, and also to those of the former importation—one from Newbury, one from Teal, and the other from Reading, all in Berkshire. These I procured expressly for a new cross; their color is the same of the others, with points agreeing materially. In consequence of some complaint about size, Mr. Hawes selected the males from very large animals; one of these at fifteen months old, measured from end of snout to the root of the tail, six feet five inches—and girts five feet six inches in common condition: the other, two months younger, nearly the same size. I challenge the United States to produce two animals of their species and age, of any other color than what I have named, as a standard color for Berkshires, to compare with them in point of size or beauty. I am offered $200 for the oldest, by M. Beach, Esq. of Ohio. I have one sow, purchased of the Shakers at Watervliet, at $150, raised by Mr. Hawes, measuring from the end of her nose to the root of her tail, six feet ten inches, and in girth, five feet ten inches, in breeding order.

The Shakers of Watervliet slaughtered fifteen full bloods last fall—the whole number being what are called runts and cullings of litters, from fifteen to seventeen months old, and their average weight was 356 lbs. One killed at the Shaker village at Lebanon, two and a half years old, weighed 800 lbs. Mr. Shaw, of Rensselaer county, slaughtered one that weighed 556 lbs. I killed one at sixteen months, weighing over 400 lbs. I sold one to Mr. Curd of Lexington, Kentucky, which he advertises as the "Master," and which is supposed by good judges to weigh at least 1000 lbs. Mr. Beach of Ohio, informs me, that many half and three-fourths blood have been slaughtered in that state, weighing, when from seventeen to eighteen months old, from 450 to 500 lbs. Mr. Hawes informed me, that it was not uncommon for them to reach from 600 to 850 lbs. in England. There is, therefore, the most conclusive evidence, that so far as regards weight, the Berkshires are all that can be desired.

Habits.—The habits of these animals are much more quiet and docile than those of the rest of the great swinish family: their native ferocity is softened down amazingly. I have never known a sow to eat her pigs, a thing that frequently occurs with other breeds; they come to maturity much sooner than the old stock, and are extremely prolific, producing from ten to fifteen at a litter, and are very certain to raise the whole. Some of my sows, and those of my neighbors, have raised twenty-five pigs per annum for years.

When two of these pigs of nearly equal size, are put together, a severe conflict immediately takes place, the result of which is final, these two never fighting again. Berkshire pigs, if fed at regular and stated periods, precisely, (and they are much more accurate chroniclers of time than most of our wooden clocks,) will finish their meals and return to their nests, where they will meditate grave as judges, and possibly as profoundly.

The Berkshires improve every breed by crossing; giving length and solidity to the little Chinese, converting that part of the belly which formerly went to lard, to firm and good pork; they give rotundity and beauty to the old razor backs, infusing unwonted life and vigor through their comparatively dry bones. The sows will often take the boar within three days after the pigs have all been removed, which should not be neglected, as a few frustrations will sometimes prevent the sow from taking the boar at all. The young Berkshire pig, I consider one of the most beautiful objects in the animal creation, as he gambols in the sun—his sleek skin distended almost to bursting, as if unable longer to form a barrier against the genial streams of life, as they course through the miniature veins, impatient to swell into the future monster; and endowed with an instinct falling but little short of reason, and in some respects far exceeding it.

Feeding.—Many valuable essays on the feeding of swine, have appeared in the columns of the Cultivator, in the past year, which are as applicable to the Berkshires as any others, so that I deem it unnecessary to say much under this head, more than that feeding should always be done with judgment, and by system. I feed them three times per day, at stated periods, which they will know to a minute—and as they expect no feed between meals, they remain during these intervals perfectly quiet; they will thrive better in this way, than on twice the quantity of food given them irregularly, or in such a way as to keep them in a constant worry and expectation. My practice is to mix a large quantity of water with their food, which they drink with the food it contains, and which has the effect of making them more quiet till the next feeding.

I am decidedly opposed to high feeding for any breeding stock. I have found it very pernicious in all cases, and many times fatal, as the constitution of any animals must eventually give way to it. It is quite too much practiced on young pigs, for the laudable purpose of bringing them forward rapidly, and being afterwards discontinued, the pig is spoiled; high feeding is no way to produce or improve a breed. I shall advise to feed light, and change the dish often. A little pounded charcoal, I have found an excellent tonic or corrective of the stomach for pigs. The sun and water, are considerations indispensable in a piggery. Pigs should be fed as separately as convenience will permit, otherwise they will be all that their name implies.

Sows.—In the sows taking the male, I never interfere with the course of nature, further than to have the litter come in at a proper season, viz: spring or fall. I have abandoned the long standing opinion, that sows never should be impregnated young: since, though the young sow may not have reached her full strength and maturity—nature, which is a great economist in this as in all other things, will diminish the number of pigs accordingly. A sow I raised, which measured seven feet from snout to root of the tail, and was in girth six feet, had her first litter at eleven months old, and bore eight pigs. For experiment, a gentleman took two sow pigs of equal size and vigor, and of the same litter, one was impregnated at six months, the other at eighteen months, each having their regular semi-annual litters. At the end of three years, the one impregnated at six months was the largest, and by far the best milker and breeder. Besides this, a number of similar experiments have been made within my knowledge, and with similar results. Sows should be kept quiet after pregnancy, with room for exercise and air, and furnished with water, and kept separate, to prevent thrusting, crowding, or fighting. A clover pasture, where it can be had, is much preferable to the pen for breeding sows; but it should be one in which they are not liable to be worried by dogs, or other animals. They should neither be over fed or starved—for by the first course, you may lose the pigs; and by the last, you will have a swarm of cannibals, which would be about as bad. Never admit the boar to the sow while she is in a heated state from driving or worrying, but let her remain three or four hours at least, to become cool and quiet.

The Boar.—The service of the male will be equally good and efficient, and the pigs will attain the same size they would, although he may not have attained half the age and size of his stock. He should not be allowed connection with too many sows at first, or indeed never, as in this case nature will become her own executioner. Never suffer the boar to be put to a sow in a hot day, till he has been permitted to cool himself in a puddle of water, which he is sure to do, if there is one in his yard. I have known a number of instances, where neglect of this precaution has proved fatal to the boar. Not having such a reservoir in my yard, I make a practice of throwing a pail or two of water over them in hot weather. Having done this a few times, when I let the boars out they would come and lie down to receive the water, before they would notice the sow. For any further directions respecting the management of this animal, I may refer the inquirer to the December number of volume 6th of this periodical.

I would observe, that I received in October last, per the brig Henry Bell, from Reading, Berkshire, England, for a fresh cross, two males and two sows, with colors agreeing with my former stock, entirely unconnected with each other, and also with my former breed. One boar I sent to M. Beach, Esq. Lebanon, Ohio—one of the sows, my neighbor Z. Standish, Esq. has, who also has a number of very fine breeding sows of my former stock, and will be able to supply his friends abroad with some fine specimens of the breed. There was such an increased demand for these animals last year, that I have been to considerable pains and expense in preparing for it again. Gentlemen from abroad desiring to obtain them, would do well to make an early application to me at No. 253 Washington street, Albany, N. Y.

JOHN LOSSING.

P. S.—The Shakers of Watervliet have a number of fine breeding sows, impregnated by my imported boars. Their piggery, for characteristic neatness, regularity and economy, is surpassed by none in the country. J. L.

On the Cultivation of the Sugar Beet.

Of the different species of roots for the support and sustenance of stock, the sugar beet seems destined to become the most extensively cultivated throughout North America. It is finer grained, sweeter; more delicate and agreeable to the taste than mangel wurtzel, at the same time it is more nutritious, and gives as large a yield, and is equally thrifty, hardy, and as susceptible of an extended a cultivation in the various latitudes. Fed raw, it is preferred alike by the horse. the ox, the cow, the sheep, and the hog, to every other root, with perhaps the exception of the parsnep, and cooked it is only inferior to the most farinaceous kinds of the potato. It makes the finest of wool, the most juicy and delicate of meat, the largest quantities and richest of milk and butter in winter, not inferior to that produced from the sweetest pastures in summer. When not grown too large, it also ranks high among the table edibles; and is perhaps the most luscious and palatable of roots to the taste of man. Being then the largest of yielders, the most certain of crops, the easiest handled, secured, and fed, and above all, a great ameliorator of the soil on which it is grown, we think we are not over sanguine when we assert, that in a very few years its cultivation will become so extended, as to make it the largest and most valuable of our root productions, and that it will work out for the United States, even a greater wealth and independence to the agriculturist than the growing of turneps has to England.

Of the probability of the beet rivaling the cane in the production of sugar, we shall discuss in a future number; it is sufficient in this to know, that as food for man and beast, it deserves paramount attention, and it is to be hoped that all those who have engaged in its cultivation, will endeavor to extend the knowledge and practice of it as much as possible in their respective neighborhoods. With a view of adding his mite to so desirable an object, the writer subjoins below such information as his limited experience enables him to give.

Soil and its Preparations.—The best soil for the production of the sugar beet, is a deep, light, and moderately rich loam, resting on a clay subsoil, but very large crops have been taken from thin gravels and sands, and the hardest clay; but in these cases they had undorgone a potato cropping, thereby manuring the preceding year, and a slight covering of compost, ashes, plaster or lime, the spring they were planted in beets. A very rich soil, such as the deep alluvial bottoms of the west, is no tso proper; the roots grow too large and rank in it, and are consequently coarser and less nutritious, and do not abound with near the saccharine matter that is found with those grown on poorer ground.

Plow deep and roll and harrow fine, and have the ground in lands of about one rod wide, with the furrows between them well hoed out. so as to drain the falling water off, especially if the subsoil be at all tenacious, as most of the western lands usually are.

The Seed and its Preparation.—The white Silesian sugar beet is the best variety, as sweetest, finest grained and growing largest. Soak the seed at least two days previous to planting, in soft tepid water, and then roll it in plaster or ashes so as to prevent its sticking together, and facilitate the sowing. It is indispensable that the seed be well soaked, otherwise, owing to its outward coating the pericarp being very hard, it may not vegetate at all, or so late as to make a fair crop out of the question. I have frequently had it in soak a whole week, and sowed the seeds already well sprouted, and though followed by long heavy rains, they were the quickest up, and gave the largest produce. The first and second weeks in May is the most proper time to plant in this latitude; further north or south, of course later or earlier, according to climate.

Planting.—It can be sown broadcast like the turnep, but as weeds are likely to spring up in most soils and prevent its growth, and the labor of exterminating them much greater in this way, it is preferable to sow in drills. For this purpose, the drill-barrow may be used the same as in planting the ruta baga, but the beet seed is much more difficult to deliver evenly through a small aperture than the turneps, and though I have used a great variety of barrows for this purpose, I have never yet had one that worked well and could be depended upon, especially in tenacious or heavy loamy soils. It is preferable therefore, to take a piece of joice four inches square, or a round stick of the same diameter half or just as long as the lands are wide, fill this with iron or wooden teeth in wedge shape, as far apart as you wish to have the rows, put a pair of fills to this, and hitch on a stout man or steady horse, and once or twice going through the land, completely drills it from one to two inches deep. Then follow immediately with the seed, dropping it by hand, or from a long necked bottle, or tin cup with a hole in the bottom, and a stick handle attached to it, shaking the cup or bottle as you walk along, and following sharp with the eye to see that the seeds are evenly dropped. Faithful children of ten years old, can do this with more ease and facility than grown persons. As fast as dropped cover with the hoe; in heavy soils about half to three-fourths of an inch deep, in sand or light gravel twice this depth.

The rows may be from one to three feet apart for a field crop—two and a half to three feet is the best. This distance enables one to use the cultivator for weeding, without danger of cutting or covering the plants by the dirt being thrown up as it passes through the rows. The product is not so great per acre from wide rows, but land being cheap and labor dear in America, we must study to facilite manual operations, at the same time that we have some calculation to a good yield. Four pounds of seed per acre is generally considered enough, but it is better to have a dozen extra plants to thin out, than to be obliged to transplant one. Those transplanted do not thrive half as well as those that remain where they vegetate; besides, the labor of so doing is more expensive than extra seed and time of thinning. I therefore mean in sowing to have a good seed dropped as near as every two or three inches in the drills.

After Culture.—As soon as the weeds begin to appear, run the cultivator through the row and follow with the hoe. It is very essential that the ground be kept clear of weeds, especially for the two first months, and three hoeings with the use of the cultivator is generally sufficient for the season. As the plants attain a height of about three inches they should be thinned to a distance of about four inches leaving the strongest and healthiest; then during the season as they grow, gradually thin out the remainder, leaving the roots in the rows at least about nine or ten inches apart. If left too thick, they shade and choke each other in growth, and the product is not so great as when well thinned. These thinnings are valuable to feed to stock during the summer, and are frequently considered equal to half the expense of cultivation of the whole crop.

Harvesting.—Chaptal decides, when the leaves begin to decay and turn yellow, is the best time to gather the beets, for if left longer than this in the ground, the roots grow hard and strong and do not yield so great a per cent of saccharine. This of course will take place earlier or later in different climates, and is undoubtedly as good a rule as can be given, it being adopted after a strict chemical analysis of the beet in its growth by that eminent agriculturist. If the soil be light, as the roots generally grow so much out of the ground, they can be pulled up by taking hold of the tops with the hand—but if more tenacious, the dung-fork is the best instrument that I know of for digging them up. Let part of the hands be at this operation and the other part follow with large knives or bill hooks; taking up the root with one hand, top off the leaves with the other, and toss the roots into small heaps to dry through the day, and if left out over night and there be danger of frost, let them be lightly covered over with leaves or straw; a hard frost injures the roots and makes them more liable to decay. They may then be taken to a well ventilated cellar, or be pitted in heaps of 100 to 200 bushels. The beet is rather apt to heat and commence sprouting if thrown into large heaps, or packed away in the cellar. If put in the latter place, any other roots except the turnep may be placed at the bottom, and the beets on top, and if in pits the same roots or straw in the centre. All the beets then have a good ventilation, and an opportunity of throwing off the impure air; and to facilitate this, after covering the heaps with dirt, holes should be made every few feet on the top of them, and wisps of straw be placed in such holes. In this way the writer has experienced no loss or deterioration in the value of the root, but has preserved them till May, as fresh, sound and sweet as when first taken from the ground the preceding fall. In a climate as mild as south Ohio, they might be preserved all winter in tolerable tight sheds and barns.

Feeding.—Throw them on to the ground or floor, and take a hay knife or spade, and a man will slice up a bushel a minute sufficiently fine to prevent cattle choaking on them. The best way to cook them for stock is by steaming, but they can not be kept so over two days in warm weather and a week in cold. without undergoing a fermentation, and losing the saccharine matter so grateful to the taste and so essential to nutriment. Either raw or cooked, my stock frequently prefer them to meal or corn. Raw I think them as nutritious as any root whatever, and as far as my limited experience extends, three bushels of beets with neat stock, is equal to one of Indian meal. Hogs demand less bulk to fill themselves than cattle, and perhaps their value to them would be about as four to one.

Product.—Four hundred bushels is a fair yield in field culture, but six and eight hundred per acre is about as common. The writer grew at the rate of 1,150 bushels to the acre the past year on a hard clay soil, and his average field product was about 600 bushels on the same soil. He has heard of 3,000 bushels being produced to the acre on rich loams. Several of my roots the past season weighed 16 lbs. each, and 10 lbs. is not unfrequent; now admitting this last weight to each root, and that seven rows stood in the width of a rod, which would make them about two feet apart and the roots one foot apart in the rows, and allow 60 lbs. to the bushel, we should have the enormous product of 3,080 bushels to the acre; but roots so large are coarse, stringy and not unfrequently hollow and have much less saccharine in proportion to their bulk, than smaller ones. Those of about 5 lbs. weight are far superior; and these standing one foot apart in the rows and five rows in the width of a rod, making them about three feet apart, gives the large yield of 1,100 bushels per acre, which is quite as great a product as it is desirable to strive for, and upon the whole perhaps the most profitable.

I see by most writers on beet cultivation, that the leaves are considered highly nutritious, and are recommended to be cut and fed to stock. I suspect that persons thus writing had more theory than experience upon the subject, when they made such recommendations. I have universally found that they badly scoured all kinds of animals, even when taken up from green pasture to feed on them, and if persisted in, created disease. I have tried all sorts of ways to prevent their scouring, by salting the leaves and mixing them with other food, but the result was the same. They have a sweetish bitter pungent taste, and I found upon chewing the leaves, that the effect on man was the same as as on beast. I know of no better use for them than to be left on the ground to fertilize and assist in giving it heart for another crop. But it will be seen that the roots alone make it a very valable crop, far more so than corn, or any of the smaller grains. The estimated cost of producing it, ranges from three to eight cents per bushel; the average is probably five to six cents.

Range of Latitude for Cultivation.—In North America, as high as 45° may be considered as one extreme for a profitable crop, but as to southern limits, I should essay it as an experiment, as far south as 30°. But in this low latitude it ought to be planted as early as the 20th February to 10th March, on a cool and rather moist soil, for the purpose of being pulled and fed green at the beginning of summer drouth. Perhaps it would do well to plant between corn, making the rows a foot or two wider apart for the purpose of receiving the beet. The tall stalk would thus shade it from the excessive heat of the sun, and somewhat check its more rapid growth, and possibly tend to make it last longer through the summer. Should the beet succeed so far south, in this way it would prove a great assistance to stock growers getting through those months in which pasture, except in the woodlands, is so completely scorched up by the hot rays of the sun. I would respectfully recommend a thorough trial of it to the planter; it certainly may succeed as far south as Kentucky and North Tennessee and Missouri. I know men in an hour will gather a sufficient quantity in a wagon for a large stock. It may be thus transported from the field where it grows to that where it is to be consumed, and scattered round in the same way that corn is now fed at the south-west to cattle and hogs. I thus kept a large herd of hogs through September and October last year.

Raising the Seed.—There is as much in choosing proper roots for this purpose, as in selecting animals to breed from, and the same general rule holds good in both cases—a medium size and fine true form. Roots weighing four to six pounds and of four to six inches diameter at the top and nine to thirteen inches long, and smoothly and evenly tapering to a point without straggling branches, and of a creamy white color and smooth grain are the most desirable. "Like produces like," and with such selections followed up, the crop will soon run evenly of the same shape and size as the roots from which was grown the seed. Plant the seed roots, and in this latitude about the 1st of May, three feet apart; and as the stalks grow, stake round them in a circle and tie a small cord from stake to stake, for their support. When the seed shells easily, which if planted in May, will be in September, is the time to gather it. Two or three dozen roots will grow seed enough for acres, and at one-tenth the cost usually asked for it at the seed stores. When grown at home one knows what he gets, and as it comes to him abundantly and cheap, he can without grudging give to his neighbors, and thereby greatly promote the culture of this most valuable of roots.

A. B. ALLEN.

Buffalo, March, 1840.

"Report on the Culture of Silk,"

"BY CHARLES F. DURANT."

Gentlemen Editors—The report under the above title published in your last Cultivator, will doubtless be regarded as an important communication to the public. Certainly all correct information upon the culture of silk in this country, will be readily appreciated at the present time, when so many are investing property in its culture. Misrepresentations can confer no benefit upon the public, and should therefore not intentionally be made; or if made should be speedily corrected. As one of your correspondents, I could not but be surprised that your well sustained paper should have admitted upon its pages, a communication which ventures to trifle so much with the public interest, and to send forth so much of the product of the imagination, instead of plain matters of *fact*. We need facts, which we can never obtain from a writer who seems as much intent on a high sounding *Report* as on an exhibition of truth. After having sent abroad Mr. Durant's Report, surely you will feel that if the public, or a respectable portion of the public regard, it as an injurious representation of the business in which they are lawfully engaged, they have a claim to your columns in a few words of self defence. It is the object of this reply to disabuse the public from the effects of a declamatory misrepresentation. And as truth is my object, you will permit me to present, before I close, a word of correction on your note.

I find nothing very objectionable in the first part of Mr. Durant's Report, till he comes to what he sarcastically calls the "*Silk Business*," when he loses the cool temper of an inquirer after truth, and, regardless of consequences, declaims in a most glaring (though incorrect) description of the tree business. Now it is obvious that all the misrepresentations of Mulberry trees given to the public within a few years past, are just as cordially to be deprecated, as is Mr. Durant's Report, so far as it is not sober truth. Misrepresentation for or against a thing, are equally unjustifiable; though I would rather *en*courage enterprise than *dis*courage it.

In reporting against the public excitement on the subject, he says, "The *Morus alba* (common white mulberry) universally esteemed one of the best for feeding silk worms, could not be sold for one cent," &c. It is *not universally admitted* that the white mulberry is "one of the *best*." Its leaves, when obtained, are not objectionable. But there is a variety, and I may in truth say more than one, whose leaves, for *kind*, are as good, and for quantity, far more abundant; and the tree is as hardy. Of this fact Mr. D. is ignorant; for we could not suppose that he would intentionally deny it, if he knew it. I am persuaded that he has some things yet to learn. Nor will he admit any assertion on experience as good evidence of the fact. His own must be his criterion.

Mr. Durant also makes this broad assertion: "So extravagant were the estimates of the profit, that, for each thousand dollars in multicaulis last spring, even at the then high prices, it was generally supposed that fifty thousand dollars could be realized by the sale of the increased buds in the autumn of 1839." Did Mr. D. suppose that in this paragraph, he was reporting truth? Does he not know that there is no truth in saying "*it was generally supposed* that *fifty thousand* dollars would be realized," as the profits of one thousand dollars investment? Did one person in ten thousand ever suppose this? Why then slander the public? *Tenfold* is a great yield for a thousand trees; and few, if any, really supposed that the *prices* could advance from what they were last spring. Call this a flourish, yet it deeply affects the interest of the community. It is nothing short of exaggeration employed seemingly for the purpose of bringing into disrepute, all that has recently been done to encourage the culture of silk; unless the report would except what has been done with white mulberry trees.

Admitting that Chinese mulberry trees have been extolled beyond their value; does this afford a reason why every one should disparage them below their value? What choice is there worthy of attention, in misrepresentations? If Mr. Durant prefers the Morus alba to some kinds which he may never have seen, at least tested, why should he indulge himself to speak contemptuously of all the other kinds. Even if other kinds were not so good, (which is not a fact,) justice should give them all the credit which they merit. Is it fellow-feeling and good will, that would kick the silk business down hill, while he presumes to prove that it already declines, at least where most was to be expected? Is it good or ill will that represents nearly all the silk culturists in America as "bankrupts," without assigning any reason for it, while reasons may exist, which if made known, would present no valid objection against the silk culture? Did Mr. D. state the whole truth, or keep a part from sight to carry a purpose into effect? After having announced the failure of several noted establishments, he says, "the legitimate silk culture, like some bright star in a troubled atmosphere, has moved steadily onward." What is meant by this probably we are to learn from a future number of the Cultivator. And probably he means the culture of silk, as in Mansfield and Ashford. I am not so far from these places as not to know something on the subject. Mansfield now has a variety of the mulberry besides the white, which, if duly cultivated, will lessen the expense of making silk fifty per cent, from their past experience. And with their former trees, good farmers testify that they derived more profit from their silk than they can by cultivating their farms in any other way. And if so, why may they not avail themselves of trees that will produce more than twice the quantity of foliage of equal quality? Why should we willingly discourage any improvement which may be made in the tree? I fear that envy has prevailed as much as benevolence ought, in some communications made to the public. Give every tree, every business and every man their due, and we ask no more. Is it incredible that by request, one of the Chinese Missionaries, Mr. Bridgman, should obtain seed of the most approved tree in China and send it to this country, and that this should produce a noble tree, rapid in its growth and hardy in in its nature, being acclimated to a northorn temperature, and most abundant in its foliage? Why should this fact be incredible? Or if admitted, what lover of his country would willingly ridicule its growth?

Messrs. Editors, in a note subscribed to the above named report, you very justly defend the multicaulis from contempt. And after saying that none of the "tropical varieties" will endure our northern winters, you claim that the main question now is, to silk growers, "which will produce the earliest foliage in greatest quantities from trees planted in the spring, as all these varieties must be." Here, gentlemen, you assume too much in saying that all these varieties *must be* planted in the spring. I have now some fifty Canton trees which are in good condition where they grew last summer. They seem to have received but little injury from the winter, though the cold has been more intense than we have known for 20 years: the mercury having stood 26 degrees below zero. I have also found trees which were dropped on the ground last October, and have lain exposed to all weather possible since, and are now apparently in good heart. The above named trees have had no artificial protection. I have other evidence than this that *they are as hardy as the white mulberry in the same circumstances.*

You are also under a mistake in supposing that no variety but the multicaulis, planted in the spring, will afford foliage for feeding the same season. Believe me, gentlemen, you can have all the evidence you wish from this town that the Canton tree planted in the spring, will outstrip the multicaulis, side by side, and be as soon or sooner ready to afford foliage equal in weight and superior far in apparent texture. I used both the white and Canton, and I testify that I have no evidence that the leaf of the Canton is at all inferior to that of the white, while it is four times as large. I made silk that will bear the test even of envy, exclusively from the Canton planted last spring in seedlings. I could have made many pounds, had I not been desirous to have the public behold the beauty and splendor of this variety. One tree from a seedling *bud*, grew seven feet high, and possessed lateral branches enough to make upwards of forty feet of growth. There are many eye-witnesses of this tree. While the leaves fall a little short of those of the multicaulis in size, they exceed them in thickness. The tree strikes its roots deeply into the earth and spreads widely around; thus it is guarded against winds and cold. On the above description you may rely.

R. T.

Eastford, (Ct.) March 3, 1840.

Ruta Baga injurious to Milk.

Messrs. Editors—I see it stated in the January number of the Cultivator, in an extract from Governor Hill's Address, that the feeding of ruta bagas to milch cows, will not hurt their milk. My experience differs from this. When I commenced feeding my milch cows with turneps, they entirely changed the flavor of the milk and the butter, so much so as to render them unfit for use. On changing the food, the milk assumed its naturally sweet flavor.

J. W. POINIER.

Morristown, N. J. Feb. 1840.

To the Amateur Farmers of Western New-York.

In addressing you on a subject which I consider of vital importance to our agricultural prosperity, a few preliminary remarks may be proper. It is unquestionably true, that for many years to come, the great object of attention in our country must be active productive labor; probably, until the end of time, every department of society must depend on those who till the soil—and it is a palpable misnomer which designates so large a portion of mankind as "the laboring poor." No man is poor because he labors; on the contrary, he alone is rich. If the time shall ever arrive, when by the force of circumstances or legal enactments, men produce nothing more than their own necessities require, the absurdity of calling the laborers the "poor" will be abundantly manifest. It will then be seen, that they are the only rich men, and that all the unproductive classes, are literally dependent upon their bounty, and fed with the crumbs from their table. It is the great mass of mankind having a common condition, that is thus distinguished by the epithet "poor." In this country, particularly, there are *few* that can be called *rich;* and if, as an eloquent statesman has said, these were all hung at the lamp-post, and their property equally divided among those who labor, it would searcely buy them a supper. Nothing therefore can be more base than the canting whine of, "the laboring poor." It arises from a total want of thought, and is calculated only to revive the factions of the middle ages—the bitter animosities of the Guelphs and Ghibelines. The rich are only the managers and trustees of the poor, because to make the property of the rich available, he must return it in one shape or other to the productive classes; when therefore the poor make war upon the rich, they are destroying their own trustees, their own property, and act as wisely as when they burn haystacks, throw the contents of granaries into the river, or scatter streets with flour, which, made into bread, would keep them from starving. Whatever may be the disposition of the rich to perform *their* duties to society—such is the organization of the social compact, that, willing or unwilling, they must perform the trust nature confides to them, and if done fraudulently or negligently, a change speedily takes place, and the *trust* becomes the trustee.

The question, what enables professional or wealthy men, the unproductive members of society to maintain their ascendency over the community? is an important one. Is it any thing but their superior intelligence and education? Let any one of them lose caste, by neglecting these things, and then place one of each class side by side, under circumstances that require the development of mental and physical energy, and a single day determines their relative eminence and rank. The increased wealth of a country is generally in proportion to its increased intelligence; they are mutual correlatives, and hence the conclusion is inevitable, that the means of education and intelligence should be of the most liberal kind. Among the narrow minded opulent, the opinion prevails to some extent, that to maintain their supposed pre-eminence, they must bind down in ignorance the understanding of the many; they oppose and ridicule every effort made to enlighten the farmer upon his social position; they find large numbers ready to join the senseless cry against "book farming;" they excite the tiller of the soil to march under the Cimmerian banner of "no agricultural schools;" they teach him that he is already perfect in his business, and that it consists in industry alone; that because the plow has been used from the remotest antiquity, it is not susceptible of improvement; and that farmers are either above, or perhaps below, the care of government.

All other branches of industry require the fostering care of the legislature of the nation; but the country is not satisfied with the *laissez nous faire* as it regards farmers; it puts upon them the shackles of ignorance—it marks them as culprits. Such legislatures may have much knowledge of political arithmetic, but I doubt their having studied the theory of moral proportions—the rule of three in matters of policy and interest; and what is more surprising, there is no example to justify this treatment of the farmer in the conduct of any other civilized government or country. Look at England. All the great and noble of the land embarked in the promotion and extension of agriculture. See under the patronage of government her professors of agriculture in her universities: Look at France, with no less than fifteen agricultural institutes: See the autocrat of Russia, sending agents into every part of Europe, to ascertain the best systems, and introducing them into his empire: See Sweden and Denmark, with professorships intended exclusively for the benefit of the farmer: Look at Prussia, making it the study, that in the primary schools follows reading, writing, and arithmetic: and even wretched, bigotted, prejudiced Spain, overcoming her religious predilections, and inviting from Sweden a professor of agriculture. After surveying these, and even Egypt and China, let us turn to the only republic on earth—one that swells like the frog in the fable, with its own pretensions to wisdom, and is not the contrast, warm as is the attachment to liberty, almost enough to make a monarchist of every farmer. Yet the farmer is courted as the main bulwark of freedom; one who is to anticipate every danger to our institutions; and who is to snuff the approach of tyranny in the scented gale; while he is treated, as the crafty trader treats the untutored Indian, giving him beads for his lands, and baubles for his gold.

I have not forgotten the men I am addressing, nor the chief object of these remarks. Commerce and manufactures; the advantages of the steam engine; the discoveries of science, and the inventions of mechanical genius, have gradually produced numbers of wealthy men, (of whom you constitute no trifling proportion,) who from the very organization of our constitutions, must be kept occupied, or become worse than useless. If a man has no motive to industry, he is cut off from all the elements of happiness: and the father who remembers the struggles he made in early life to raise himself to affluence, should also be aware, that by the accumulation of wealth, he has taken from his son the motive for exertion, and that he has placed him in a situation of danger, one in which he will be liable to mistake the difference between a life of leisure and a life of indolence. He wonders that his son is not disposed to pursue the acquisition of wealth as he has done; and consents to let him vary the monotony of existence, by entering upon an already overstocked professional career; he has no motive to exertion—and as the author of Modern Chivalry observes, considers his profession as a "means of making his fortune, by the mere blowing of his breath." Such individuals too often sink into apathy and uselessness, and experience the truth of the maxim, that the possession of wealth is not the attainment of happiness: Let us then endeavor, while yet the objects of our affection surround our table, to impress upon their mind the truth of the proverb, "that wisdom is better than gold;" that the study of nature, so easily associated with rural occupations, can only be pursued to advantage when a man is raised above the privations of bodily want.

But to fully enable you to accomplish these desirable things, you must have schools of agricultural, horticultural, and floricultural science, where you may place your children, and where thorough instruction in all that appertains to so honorable a career may be obtained. We may then anticipate the pleasure of seeing the inheritors of paternal wealth, less frequently the inmates of the castle of indolence—less frequently at the bar of the tavern, or the gin-shop—less frequently lounging away the best period of existence in acquiring habits of listlessness and vice, more disgraceful than tattered garments, and more dishonorable than beggary produced by unmerited poverty. There is probably no part of the American states, so soon destined by the bounty of nature to exhibit a system of ornamental farming and rural embellishment, as the section of country in which you have selected a residence; there is none exhibiting more native magnificence, than the country so emphatically distinguished in other parts of America, as the Lake Country. The grandeur of her water-falls, the beauty of her landscapes, the fertility of her soil, all unite to furnish an outline that the taste of Shenstone could never have designed, but which a few such men would fill with beauties that greatly increase the value of our earthly inheritance, delightfully change its aspect, and multiply its attractions and enjoyments.

From you, whose pursuits are *con amore*, who love agriculture for its own sake, and for the sake of your species; from you, whose special delight it is,

> "With flowers and fruit to crown Altheæs' horn,"

we must look for the anticipated change. It is idle to wait the slow and reluctant action of legislatures; a few individuals can accomplish more in a season, than apathetic rulers in an age. The establishment of a college, with sufficient endowments, may be accomplished. Pestalozzi, Fellenberg, Oberlin, are instances of what well directed individual efforts can accomplish, and the difficulties perseverance can surmount. I am well aware of all the difficulties, and believe they will not exceed those attending the establishment of any other boarding school; and roses never grew without thorns, except in Milton's Paradise. The credit of a commencement will be a garland of well earned fame; and if you will not take as much interest as this in the education of your children, who is there that will? If you drive them into other professions, or what is the same thing, withhold the means of dignifying and ennobling their own, you alone must take the responsibility. With half the advantages that professional men possess, their active energies would soon produce a modification of claims; the privileges now gratuitously conferred upon intellectual superiority, would yield to the combination of more equal opulence, and more robust philosophy. While learning and intelligence would be encouraged to retain their natural supremacy over the intellect, wealthy young men would have a new starting post deeply fixed, in our sensibility to reputation—in an ardent desire to triumph in elegant pursuits—and a double title to distinction would be advanced by the connexion of intelligence and prosperity. A more rational regard to public, rather than private aggrandizement, would soon prevail, and thus the *amor patria*, instead of being extinguished by slavish toil, or indolent sensuality, would spread her broad ægis over public spirit and private virtue.

That some such institution is needed for your children, it requires no argument to demonstrate. We are all alive to the advantages of instruction, and even agricultural instruction, so long neglected in schools, has become an object of attention and care. In this respect, the poor man is far in advance of the rich. Common schools have started up in every corner of *the land*—but where are the institutions of the rich? Except for lawyers, doctors, and students of divinity, where is there a single institute that the understanding and heart of a young man of affluence and intelligence, who has passed his grammar and geography, can rejoice to enter and finish his education? Where is it that science unfolds to him "her ample page, rich with the spoils of time?" He feels that among the professions, there is "no goodlier form, no mind of nobler grasp;" but he sees no prospect, apart from them, of being elevated above the level of continued labor—no distinction, but that afforded by excelling his companions in wasting toil. Agriculture he loves—the volume of nature he delights to read, but he finds no one to instruct him in both, and direct aright the inquiring mind. He is at last driven to some unpleasant, if not disgusting businesss; he enters one of the professions; tastes of Circes' enchanted cup; and too often sinks into inertness, insignificance or hopelessness; an object of commisseration, rather than of pride. EVELYN.

Useful Hints to Prairie Emigrants.

Messrs. Gaylord & Tucker—Having never seen any directions in the agricultural journals, to guide the emigrants' operations in his first efforts at prairie farming; and having seen and experienced the difficulties arising for the want of information on the subject; I take this method of offering a few hints, which may be of service to those who intend to make their home in the western prairie.

Never plow up the prairie for the first time, until the grass has generally started—which in the latitude of northern Illinois, will not often be sooner than the twenty-fifth of April. If possible, finish plowing for the season by the first of July: at all events, plow none after the 15th July. The consequence of plowing the prairie after that time is, that the sod does not rot that season, or even the next; but will cut up in cross plowing into square clods, which can not easily be pulverized, and even after they are made fine, the land is heavy, sour, and unproductive for two or three years. The consequence of early plowing, is, that the grass will grow up through the sod, and prevent the decomposition of the innumerable fine wiry roots, of which the sod appears to be almost entirely composed—by sowing on oats, this may be partially obviated. From the 20th May to the 20th June, is the best part of the season for breaking prairie.

With a plow rightly constructed, a pair of horses will easily plow an acre a day. An experienced hand, with four yoke of cattle, will break two acres a day. A team of oxen is generally considered most profitable, as they will obtain their whole living on the prairie during the summer season.

A furrow, turned two inches thick, is better than if it were four or six inches—the thinner the furrow, the better it rots. In cross plowing, a pair of horses will plow as deep as is necessary, without the inconvenience of having the plow clog or choke with sod, as it will when the first plowing has been deep.

To a family, a garden is of the first importance—for the reason of the sods being so tough, many do without one the first season. If a hazel "patch" can be found, clear off the brush, and plow it up; the soil will be found as loose, warm and productive the first year as ever after.

Vines of all kinds, do well on the sod. If the season is not too dry, a tolerable crop of corn, oats, and potatoes may be made on the sod, or rather they will make themselves; as little can be done in cultivating a sod crop, save plowing in the seed.

In selecting farms, the rolling prairie is generally preferred by eastern emigrants.

On such lands, the water is always good and generally durable, and a surplus quickly drains off.

The rolling prairies are generally the most healthy. Indeed on the ridge of land which rises abruptly from the bottoms of the Illinois, near Hennepin, and shoot off with gentle undulations nearly to the Mississippi, I have scarcely heard of a case of bilious fever, or ague and fever, during the three years that I have been a resident of this section of country; and where there has cases occurred, the cause could be traced to the unwise location of their dwelling. This is something that should not be disregarded. Care should be taken that the dwelling-house is not set near large sloughs or ponds, in ravines, or in the borders of heavy timber.

Very respectfully, A SUBSCRIBER.

Providence, Bureau co. Illinois, Feb. 1840.

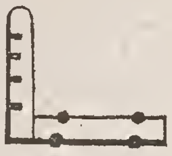
On the Culture of Lucerne.

Respected Friend, Jesse Buel—I some time since received a letter from thy father requesting me to give him such information as I am possessed of, respecting the culture of Lucerne; and thinking thou would like to have it, I have concluded to send it to thee, as I think every farmer who has land suitable for it, ought to have plenty of this valuable grass. It requires a good deep soil, that has not clay bottom. I have succeeded beyond my expectation, and now find no more difficulty in raising it than any other crop. In order to prepare the land for it, spread plenty of unfermented manure on it, and plow it in and plant corn, which ought to be well managed, allowing no weeds to grow. After the corn is taken off give it a good deep plowing, and let it remain in that state until spring, if to be sown with barley; but if with winter wheat, harrow it well, and collect the roots and loose stones, and should there be any fast stones they ought to be removed; then spread about forty bushels of ground bones per acre, and harrow it in; but if bones are not to be obtained, any good rotten manure that has no seeds of weeds in it will answer it. And as it is best to lay the land in ridges about 24 feet wide, open a furrow about 12 feet from the fence, and let the near horse return in it; then open another in the same manner, 24 feet from it, and so continue until the whole is finished; then sow the wheat and plow it in, not very deep, filling the furrows which were opened, and harrow it once over. As it is best to have it as smooth as may be, I made a hone with a plank about nine feet long, and two poles, pretty much the shape as those we smooth our roads with; and if it is not heavy enough lay a post or two on it. It ought to be so constructed as to draw the loose earth towards the furrows. In the spring, about the time clover seed is sown, sow about twenty pounds of Lucerne seed to the acre, and harrow it in with a sharp, heavy iron toothed harrow twice over, once each way, and roll it with a light roller, across the ridges, to be drawn by one horse. After the grain is taken off, let it remain in that state (not pastured) until spring. Soon after the frost is out of the ground, before it is much settled, harrow it once each way with the heavy harrow. I had mine pointed with steel. The harrow ought to be made in two parts; and hung together with hooks and eyes; then it can readily be lifted up on one side by the driver, and cleared by a boy to accompany him with a rake. It may be harrowed three or four times over after every mowing, remembering to pick up the loose stones. The reason I recommended laying it in ridges, is because it can be more readily smoothed with the hone. If it is not smoothed, the harrow will not have the desired effect; and the natural grasses are apt to get in. I generally let mine stand until in blossom, when it is designed for hay. I usually get three good crops, and think the hay is better for all kinds of stock, than any I have ever seen. My first crop has some times been so large, that it is best to cut it rather earlier, as it will sometimes lodge and may injure the roots.

As this grass requires more time to cure than some others, I thought it might be well to inform thee how I manage it. That which is cut in the forenoon, if the sun shines, may be turned with a rake towards evening, but not opened; and that which is cut in the afternoon may remain until the next afternoon, before turning it. That which was first turned ought to be turned the next forenoon, and put in cocks early in the afternoon, and let it remain two nights in cocks; then open it and lay the fork fulls separate, shaking it well, and if it does not appear to be sufficiently cured after being turned, put it up in cocks and let it remain one night more. When the hay is housed, I generally put half a bushel of salt to a load—say to about fifteen hundred.

As this grass, especially the first crop, is apt to be very large, it is liable to be injured by heavy rains when in cock. I would therefore recommend to those who raise it, to get a quantity of low priced, yard wide linen cloth, and give it a thin covering with boiled tar, with a painter's brush on both sides, and sift some fine sand on it while warm; and when dry cut it in squares and fasten a small stone to each corner to prevent their blowing off the cocks. These cloths cost but little, and with care will last many years, and may be very useful for other kinds of hay; for want of them, one of my neighbors had a large quantity of clover hay much injured.

[*Fig.* 54]



The machine to be fastened to the harrow by which it is drawn, ought to be made like the drawing, (fig. 54) with notches in it, to regulate the height, about eight inches high; then the harrow will run much more steady, and is not so liable to injure the crop.

When the swaths are turned the second time, let two be turned towards each other; then when it is raked, the horse can walk between them, and let a boy keep by the side of the horse, and when the rake is full, let him open the swaths with a fork, that the rake may readily enter.

I have been thus particular, being desirous that whoever may wish to raise this grass, may succeed, as a number of my friends have been disappointed for want of proper management. Thy assured friend, JAMES BYRD.

P. S. If the seed is sown on winter wheat in the spring, it ought to be done when the ground is neither too wet nor too dry, but when it will crumble.

Flushing, 2d mo. 19th, 1840.

China Tree Corn.

Great complaints have been made in the eastern states, as well as the north and western part of this state, respecting the "Chinese Tree Corn," and not without some cause. In general it has proved a failure; although in some instances, it has ripened and produced well. In this county, in the town of New-Scotland, I am informed that a farmer, (his name I do not now recollect) planted one ear of this corn last season, from which he harvested six bushels of good sound ears. A farmer in Oneida county had a very good crop. I am also advised that Judge Spencer, in Wayne county, was equally successful. The favarable results of the above crops, I presume can be accounted for by being in favorable locations, with extraordinary manuring and attention.

In the vicinity of New-York, on Long Island, and in New-Jersey, it has, with one or two exceptions, succeeded well and produced abundantly. I have my doubts, however, whether it will, even in that section, ever prove superior or equal to several other varieties which have been cultivated there.

Of all classes, the farmer is the most wary and slow in adopting new things, such as new modes of culture—new fashioned implements—new variety of seeds, or new breeds of animals; and when adopted, if a failure takes place, or he thinks he has been deceived, he is not backward in making complaints; and well he may, as regards seeds, for a failure can not generally be remedied—the season has passed.

Now, I have the charity to believe that Mr. Grant Thorburn never intended to deceive any one with his corn; but that he supposed he had not only obtained a *new variety*, but a very *prolific* and *early* corn. It appears to me very strange that any person would be willing to sacrifice his veracity for the petty sum which he would obtain from the sale of corn grown on "two hundred hills!!"

And after all, what does it amount to? Very few purchased or planted more than one ear, which cost twenty-five cents! It was an experiment, and in most cases a failure. Let it go and pocket the loss; but possibly the stalks were worth the seed, and then the only loss would be the labor and use of the land. I have heard of no person that planted any great quantity; of course no person has been obliged to mortgage his farm in consequence. Neither have I heard of any failures, on account of the loss of a crop of "Chinese Tree Corn."

On referring to Mr. G. Thorburn's account of the "Chinese Corn," as published in the Cultivator of November, 1838, I can not discover that he recommends it very highly; he merely tells what it produced on his farm at Hallet's Cove. He does not say that it is suitable for an eastern or northern climate. He designates where the corn may be procured, and the price. Possibly his enthusiasm may have urged him on too fast—prudence would dictate another trial before he made it public.

Some three or four years since, the "Baden Corn" was spoken highly of, as being very prolific—having from six to eight ears on each stalk. I procured some, and planted it on a rich soil, in a favorable situation. It grew very luxuriantly and about fourteen feet high; on the first of October, I could with the aid of a spy glass, discover some indications of the sitting of the ears, say from three to five on a stalk. This was a failure, but I did not charge the seedsman with fraud or an attempt to deceive. It was a southern variety, and would not mature so far north, unless in a favorable season, and protected by buildings.

Much dissatisfaction has also been manifested in regard to the Whitington Wheat, which has proved in this country to be a *winter* instead of a *spring* variety. The failure of this can not be charged to Mr. Thorburn, for he sold it as he did the Chinese Corn, in good faith, from what was said of it in the London Farmer's Magazine. There it was advertised as the "*Whitington New White Wheat*, for winter or *spring* sowing, which obtained a medal at the Liverpool Agricultural Meeting in 1836." For farther information on this subject, I would beg leave to refer to the communication of Wm. Thorburn, in the August number of the Cultivator, and of Geo. C. Thorburn in another part of this paper.

The foregoing remarks were suggested on hearing some farmers complaining to Mr. William Thorburn, seedsman in Albany, charging him with deceiving them in the sale of the Chinese Corn and Whitington Wheat. They did not deny but that both vegetated and grew finely, but did not mature. Nor did they seem to understand that he was the *seller* and not the *grower* of the seeds. But what pleased me most, was to hear him offer to refund them the money that they had paid him for the corn, which they refused, but took the amount in seeds; thereby acknowledging their confidence in him, and went off well satisfied. I heard him also say that he would refund to all who purchased of him, if they would call for it. The reputation of a seedsman is dear to him—it is a part of his capital. Confidence is every thing; where that is destroyed, farewell to business.

I have been informed that some have objected to subscribe for the Cultivator, supposing Mr. Thorburn was a proprietor—to such I would say, that he is not now, nor ever has had any interest in the Cultivator, except as a gratuitous agent for obtaining subscribers. C. N. BEMENT.

Three-Hills Farm, March, 1840.

Cotswold Sheep.

Messrs. Gaylord and Tucker—I cannot leave this place without giving you some description of six Cotswold wether sheep, bred and fed by Mr. Dunn, of this place, and exhibited in this market by Mr. Kirkpatrick, on the 22d of February. I regret very much I did not arrive early enough to view the whole of them, as the sight must have been gratifying to a practical man, and not only to him but to every consumer, as they could go home, and rest satisfied that food and raiment can be procured, as long as such animals are looked to with considerate care by the breeders, (be the times as hard as they may.)

I need not say much in praise of Mr. Dunn's management, and the gratitude due to him from an enlightened public, as occular proof would have a better effect. Allow me to invite the enterprising farmer to examine for himself, and if it does not spur him on to obtain that breed, and pursue a similar course—my views are not so valuable as I might represent.

I will give you a statement, with reference to the whole inhabitants of Albany.

Mr. Kirkpatrick, the person who purchased them, says, the heaviest sheep weighed 210 lbs. and the fat on the ribs measured $5\frac{1}{4}$ inches. I saw the smallest—the thickness of fat from my own measurement, was $4\frac{1}{4}$ inches—the price $22 each; and the meat sold in the market rapidly for $12\frac{1}{2}$ cents per pound. Mr. McLaughlan, of Montgomery county, bought a whole carcass at that price, to show the farmers in his neighborhood. The fleeces from these sheep averaged about 10 lbs. each. These are facts from the breeder and butcher, without diminution or addition. Should it call the attention of the farmer to any benefit, it will be a satisfaction. I am, dear sir, yours truly,

WM. H. SOTHAM.

P. S.—Perhaps it will be as well to observe, that these lambs were not thought sufficiently good to reserve for breeders, and were the culls of his males.

Albany, Feb. 27th, 1840.

Timber—Proper Time for Cutting, &c.

Timber includes all kinds of felled and seasoned woods. Of all the different kinds known, oak is considered the best for building, and even when it lies exposed to air and water, there is none equal to it. The goodness of timber not only depends on the soil and situation in which it stands, but likewise on the season in which it is felled. People disagree very much in this: some are for having it felled as soon as the fruit is ripe; others, in the spring, and many in the autumn. As the sap and moisture of timber is certainly the cause that it perishes much sooner than it otherwise would do, it seems evident that timber should be felled when there is least sap in it, or when the sap is most fusible or in a liquid state.

The ancients chiefly regarded the age of the moon in felling timber: their rule was to fell it in the wane, or four days after the new. An Amherst, Massachusetts, cooper states that he formerly furnished three oil mills in that vicinity with casks made from oak felled in June; because, he says, timber felled in winter being more porous, would not contain oil; and that oak and walnut cut in June, would not powder post.

That the moon has an influence on the sap, no one who has paid attention will have occasion to doubt: the liber or inner bark is less adhesive at this stage of the moon, the ligneous or woody matter being in a more fluid state. It has been ascertained by various experiments, that the woody part of oak in full vegetation, is only four-tenths of the whole: air constitutes one-fourth of it, and the rest consists in sap. Light woods have still a much less quantity of solid matter; but the season of the year and age of the tree occasion considerable variation.

Timber should be cut when of a proper age, for when it is either too young or too old, it will not be so durable. They should be cut in their prime, when almost fully grown, and before they begin to decay; and this will depend upon the dryness and moistness of the soil where the timber grows. The time of its commencement to decay, or when it is going past its prime, is when the concentric circles are less and less, as may be seen in the oak, beech, walnut, &c. These circles yearly enlarge the trunk by the formation of a new alburnum or soft wood, which the next succeeding year becomes the lignum or hard wood.

The wood of the north side of all trees which grow in this climate is the weakest, and that of the south side is the strongest. The heart of a tree is never in its centre, but always near to the north side, and the concentric circles or annual coats of wood are thinner on that side. In conformity with this, it is the general opinion of carpenters, that timber is stronger whose annual plates are thickest: the air vessels makes the visible separation between the annual plates. Therefore, when these plates are thickest they contain a greater proportion of the woody fibre.

Timber, after being felled and sawed, must be seasoned not by standing upright, but lie one piece upon another, only kept apart by short blocks interposed to prevent a certain mouldiness which they will contract in sweating on one another. Some advise the planks or other timber to lay in water a few days, in order to extract the sap, and afterwards to dry in the air; by this means they will be prevented from cracking or chopping. Some scorch and season them in the fire, such as piles, posts, &c. which are to stand in water or earth. They are charred and seasoned by burning them round in a strong violent flame, until a black, coaly crust is formed; the internal part of the wood is thereby so hardened, that neither earth nor water can damage it for a long time afterwards. An excellent preservation of wood by charcoal, especially applied to eve troughs and water spouts is first to lay on a coat of drying oil, then immediately dust it over with a thick layer of charcoal finely powdered, and contained in a muslin bag. After two or three days, when the oil is thoroughly dried, brush off the loose particles of charcoal, and cover that which adheres with a coat of paint, and in a few days after a second; the whole will become a fine solid crust, and is said to preserve the wood sound many years.

The charcoal should be fresh made, or heated again in close vessels, so as to expel the water which it greedily attracts from the air. Some preserve their posts by salt, by boring a hole into the post that is to be covered by earth, and, after filling with salt, plug it up. Some advise to season the timber before it is cut down, by taking off the bark a year before it is cut: the sap is expelled, and the alburnum is converted into wood in the course of the year. Sills and sleepers for out buildings should have a free circulation of air to save them from decay.

SOLOMON W. JEWETT.

Weybridge, Vt. Feb. 23, 1840.

Popular Errors.

Messrs. Editors—It would be amusing, were it not an incontrovertible proof of an ignorance that ought not to exist among any body of men, certainly not among the farmers of the United States, to read or hear the strange, not to say ridiculous, notions, which some of them entertain. These errors in most cases, may be traced to two causes: ignorance of the most common laws of nature, or inaccuracy of observation. With your leave I will point out a few of these, some of which have long been naturalized among us, and some of which appear to be of indigenous origin.

One of these errors, which occurs to me now, relates to the fecundation of plants, and may be found on the 176th page of the Silk Grower, in an article on horticulture. After a long argument to prove that the impregnation of Indian corn does not take place from the pollen as is usually supposed, and as is so easily demonstrated, the writer goes on to say: "Oh, no, this is much too clumsy and bungling work to be believed in. The effect [impregnation] is, doubtless, produced by *scent* or *smell;* for, observe, the ear is constructed, and is at this season, so guarded, so completely enveloped, that it is *impossible* for any *matter* whatever to get at the grain, or at the chest of the grain, without the employment of *mechanical force*." The error, in this case, arises from the supposition that the pollen must be conveyed to the grain, whereas it is only necessary the fertilizing dust should reach the *silks* which are the organs of impregnation belonging to the ear.

In another agricultural paper, I not long since noticed a paper from a farmer on the culture of corn, in which he earnestly contended that the impregnation did not take place by the pollen, but that certain filaments or threads, invisible except at particular times, extended from the blossoms to the silks, which effected this fecundation. These spider's webs, for such every attentive observer is aware they must be, must be about as effectual in the process of impregnation as the 'scent' in the first writer's article.

On a par with these, is the theory of transmutation, or the change of one species of plant to another during the period of vegetation. Of these believed transmutations, that of wheat into chess, is perhaps the most common, and certainly the most pernicious, as the belief has the effect of rendering the believer careless in cleansing his soil from that weed, or sowing pure seed in his field. Few men would believe that cutting off, or bruising the top of a young oak would change it to a sugar maple; or that the same operation, performed on a young pine, would convert it into a tamerack; yet, either of these suppositions is just as feasible, and consistent with the law of nature, as that any other plants should undergo a similar transmutation. There are some flowers that may be changed by the action of mineral agents in the soil, from one color to another; but the seed of such a flower, the chrysanthemum for instance, never produces a rose or geranium.

Another common error relates to the migration or hybernation of birds, particularly the barn swallow, or the chimney swallow. It is supposed by many that these birds descend to the bottom of ponds, lakes, &c.; in the mud of which they lie torpid during the winter, as it is well known the toad, frog, and lizard do, and as the bat does in caves or other dark recesses. These birds migrate, as their presence in the equatorial regions, during their absence from ours, conclusively proves; and the idea of their being torpid has been countenanced by the fact, that the flight of most migratory birds takes place during the night.

In many parts of the country there is an impression among farmers, that a kind of vegetation takes place among the white grubs, the product of which is the common blackberry bush. That a species of vegetation some times takes place on the bodies of insects, is doubtless correct; and the larvæ of the Melolontha, and the vegetating wasps, are examples of this. The plant produced, however, is a species of the fungus tribe, and not any way related to the higher order of plants.

In the last number of the sixth volume of the Cultivator, is an attempt to show that the Hessian fly and the Chinch bug, two of the greatest enemies to the wheat crop and the farmer, that this country has, are the same insect, or rather that they have the same parentage and origin; and from the remarks there made it would seem that this opinion is quite common among our southern agricultural friends. This, it would seem, is the doctrine of transmutation applied to animals, instead of plants, and appears to involve the same absurdity. In a reply to an objector in the American Farmer, the advocate of this transmutation of animals, gives the following as proof and illustration:

"Agricultor may think it strange and contrary to the order of nature, that the large white grub worms could be transformed or turned to grasshoppers. But such is the fact. A gentleman of highly respectable standing in this country, who caught one of these long, white cut worms, and placed it in a box with some loose earth, and after it was confined for some days, he examined it one morning, and found it had changed or produced a grasshopper. Is it more strange for a cut worm to be transformed into a grasshopper, than that a Hessian fly should deposite an egg which should produce a Chinch bug?"

That the large or long white grub is the larvæ of the May bug is a fact so easily ascertained, and well known, that the mistaking of that insect for a grasshopper, though it might not affect the standing of the gentleman alluded to, must have a tendency to impeach his knowledge of entomology. The grasshopper, when it first appears, is an insignificant, feeble animal, and it is only by long feeding and growth, that it becomes formidable. The May bug or melolontha, on the contrary, emerges from the earth, like the other beetles of full size, and commences the business of procreation with little delay. To suppose that such a large and formidable insect as the red headed grub, should be the parent of the tiny grasshopper, is having the mountain labor with a mouse, in good earnest. The Chinch bug and the Hessian fly are both *perfect insects*, and to suppose that they can have the same parentage is preposterous. Insects in their several stages, appear under such different forms, that unless traced through the series of transformations, mistakes may well occur; but in their perfect state, as the Chinch bug and the Fly, such mistakes are unnecessary. The theory is as incorrect, as to suppose that the progeny of the same Durham bull should in one case be like himself, and in another be a rhinoceros.

Perhaps I have occupied enough of your valuable columns for this time. I may possibly recur to this topic hereafter. M. S. D.

Genesee, 1840.

Rearing Chickens.

Messrs. Editors—Having made some experiments in the raising of chickens, a business that forms a part of every farmer's occupation, I send you a description of my present plan of operation, which appears to answer admirably. Under an out-house 16 by 18 feet square, raised 3 feet above the ground, I have dug a cellar, 3 feet below the ground, making the height 6 feet altogether. Eight feet in width of this cellar is partitioned off for turneps, the remaining 10 by 16 feet, being sufficiently large to accommodate 100 chickens, or even more. This cellar is enclosed with boards at present, but it is intended to substitute brick walls in the course of a year or two. The roost is made sloping from the roof to within 18 inches of the ground or floor, 12 feet long by 6 feet wide. The roost is formed in this way; 2 pieces of 2 inch plank, 6 inches wide and 12 feet long, are fastened parallel 5 feet apart by a spike or pin to the joist above, the lower end resting on a post 18 inches above the ground. Notches are made along the upper edge of these plank, 1 foot apart, to receive sticks or poles from the woods, the bark on. When it is desirable to clean out the roost, the poles being loose are removed; the supports working on a pivot are raised and fastened up, then all is clear for the work of clearing out. I next provide the chickens with corn, oats and buckwheat, in 3 separate apartments, holding about half a bushel each, which are kept always supplied. They eat less, I find, if allowed to help themselves to what they want than if fed to them in the usual way; for in the latter case each tries to get as much as it can, and thus burdens itself, but finding in the former case that they have abundance, they eat little, and that generally in the morning early, and in the evening going to roost. I have 60 chickens, and they eat about 6 quarts per day of the three kinds of grain, in the proportion of twice as much corn as buckwheat or oats. In the roost is also placed a trough of water, renewed every other day; burnt oyster shells, shell-marl and ashes. A row of nests is constructed after a plan of my own, and does well. It is a box 10 feet long and 18 inches wide; the bottom level, the top sloping at an angle of 45 degrees to prevent the chickens roosting on it; the top opens on hinges. The nests, eight in number, are one foot square; the remaining six inches of the width is a passage way next to the wall, open at each end of the box, and another opening midway of the box. The advantage is to give the hens the *apparent* secrecy they are so fond of.

The following are the advantages of this plan of keeping chickens. By having a roosting place partly under ground, the chickens can keep warmer through the winter than any roost above ground could be made without fire; and this is absolutely necessary to induce them to lay. When fed plentifully in the winter they lays enough eggs to pay for the grain, and in the spring they will repay fourfold. Even now, February 17th, our hens lay enough eggs to pay twice over for the grain they eat. I would recommend this plan to all who wish to make their chickens profitable. As fowls are very troublesome, running about the farm, I propose to enclose a few rods square of ground, with a pale fence 8 feet high, and confine them in that, allowing them occasionally a little more liberty. Respectfully yours,

E. H. VANUXEM.

Long-Branch, N. J. Feb. 17. 1840.

Hog Illustration—A True Picture.

Messrs. Editors of Cultivator—We are all of us willing to show forth any thing that will illustrate any favorite theory, or favorite breed of cattle that shows to our own advantage. Would it not be equally useful if we were equally willing to illustrate the reverse of the picture? I think it would. And, therefore, I offer the following TRUE PICTURE of the profits of that universal breed of hogs, that covers the face of our country, to the exclusion of a better breed.

When I settled in this new country a few years ago, I determined that I never would be the owner of any of that vile race of animals which infest the country, and which, before the discovery of the name of "land sharks," used to be known by the name of hogs. But being unable to procure any thing worthy of the name, the force of circumstances made me the owner of several breeding sows in the winter of 1837, then running in the woods. With a force of dogs, men and guns, I caught and brought them home, and confined them in a lot, where I kept my cattle upon prairie hay. I found no difficulty in wintering these wild animals which I had bought for hogs upon the same. In the spring, they "multiplied and replenished" the woods. In the fall there was not sufficient "mast" [i. e. acorns and nuts] to fatten them; and I was not so *green* as to undertake making pork of them with corn, and they lived to multiply another season.

The next fall, *mast* was plenty, and "wood hogs" were fat. I now had "from fifty to one hundred head," but fat hogs in the woods will die; and when killing time came, I could only lay violent hands on eighteen. Only one-half of them were fit to be called pork. I still had a large "claim" upon hogs in the woods; but last fall I could only muster some ten or a dozen "fit to fatten;" and these I let a neighbor, not so well experienced in *hogology* as I was, have to "fat at the halves." By strong exertions, he succeeded in making a pen stout enough to keep them upon a continual trot around it, without finding an outlet. Here, after eating and wasting in the mud more than fifty bushels of corn apiece, he brought me my half of "hog meat." Another neighbor being destitute, and this looking to him "as though it might be eatable," I told him to take it, and we would never quarrel about the price or mode of payment; and I bought my "pork" for my own use.

But this is not the end of my hog speculation. I still had five shoats, and upon them I determined to try what good keeping would do. Accordingly, I "caught them," and put them in a good warm pen, composed of an eating room, a sleeping room, and a retiring room. Nearly every day have I furnished these (permit me to say, devils) with good dry straw, and nearly every night have they slept in a wet, filthy bed. The straw they have eat and scattered through the pen, and all the filth that they should have left in the outside room, they have deposited in their beds. Whoever knows me, knows that no domestic animal of mine, ever lacks food; and it has not been spared upon these in the pen. Forgive me, but I can't call them hogs. Ruta bagas, beets, potatoes, bran, and house slops, including the milk of two cows, all winter, have not been spared.

Reader, is the feed and care thus bestowed, worth one cent a head each day? Then from the first of October to this time is 166 days. I offer you a speculation. Give me one dollar each, and the animals now ten months old, are yours; and I will give you my bond with good security, that, so far as I am concerned, you shall have a perfect monopoly of all the breed, from this time, henceforth and forever.

I have writen to Mr. Allen, at Buffalo, for a pair of HOGS, and I shall send to Mr. Bement, at Albany, for another pair, by the first opportunity.

Will either of these gentlemen, or some other, publish a reverse to my picture?

I am a most sincere hater of alligators and landpikes.

Your friend, SOLON ROBINSON.

Lake Court-House, Ia. March 15, 1840.

"Salt Petre in Meat."

MESSRS. GAYLORD & TUCKER—In the twelfth number of the last volume of the Cultivator, there appeared a communication on the use of saltpetre in curing meat: and the following reason was assigned for abandoning its use, viz:—"It ought to be known, that saltpetre absorbed by the meat, is *nitric acid, or aqua fortis—a deadly poison*, whereby our salt meat becomes unpalatable and pernicious." A sufficient answer to which is found in the fact—that one of the constituents of common salt, is muriatic acid, as deadly a poison as the nitric acid of the saltpetre. And we might, with as much propriety say, that the salt absorbed by the meat is muriatic acid, as to say that the saltpetre is nitric acid or aqua fortis. Therefore, the objection applies with as much force and truth to the use of the one as the other.

Saltpetre is the product of a chemical union between nitric acid and potassa, (potash,) and salt, of a like union between muriatic acid and soda—and in these, as in all other cases of chemical combination, the substances combining, not only lose their properties, but the substances produced generally possess properties entirely different—frequently the very opposite, of those of either of their constituents. From which it follows, that a perfectly innocent compound may be produced by the combination of two noxious substances—or a noxious compound, by the combination of two innocent substances: and it is very improper, and well calculated to mislead, to designate a compound substance by the name of either of its constituents, as in the communication referred to, in which nitric acid and saltpetre are several times used as if they were but different names for the same thing.

Some persons think a small quantity of saltpetre very beneficial to their meat—others think it useless—the former need not be frightened from its use by the fear of being poisoned with aqua fortis—nor the latter deterred from trying it. J.

Lexington, Va. March 19th, 1840.

New-York State Agricultural Society.

Report of the Committee on Agricultural Implements.

The committee appointed at the last annual meeting of the Society to examine any agricultural implements that might be submitted to their inspection, beg leave to report, that they have examined the horse power, the thrashing machine, the separator, and the winnowing machine made by Mr. Pitts of this city. The horse power is of the revolving floor kind, and is wide enough to admit of two horses abreast, which the committee think is a decided improvement, inasmuch as horses work more quietly and steadily in company than when alone. Besides, most farmers can as conveniently employ two horses in thrashing, as one; and when this is the case, a larger power is employed at almost the same expense, as a smaller one, beside securing greater steadiness and uniformity in its application. The horse power may, however, be used with one horse when it is inconvenient to employ two.

The thrashing machine is a spiked machine, and this possesses the advantages and defects appertaining to machines of this kind. Mr. Pitts' modifications, however, have, in the opinion of the committee, great value; especially the attachment of a ratchet wheel to the driving wheel, by means of which the power, of whatever kind, may be suddenly and immediately stopped without being retarded by the momentum of the thrashing machine. It can easily be conceived that cases may occur where the safety of the horses employed would require the horse power to be instantly stopped, which could not be the case unless the contrivance described, or something similar, be adopted. In one instance, at least, the life of a valuable horse has been saved by means of this simple and ingenious contrivance.

The separator is attached to the thrashing machine. Its object is to dispense with the rake in separating the grain and chaff from the straw.

It consists of a revolving apron, across which are placed vertical wooden slats about two inches in height, at intervals of about two inches. The ends of the slats are fastened in two opposite endless wooden chains attached to each selvage of the apron. Thus are formed numerous pockets into which the grain falls while the straw rests upon the upper edges of the slats forming the pockets. A complete and perfect separation is thus effected, by means as simple as ingenious. By the revolution of the apron, the straw and the grain in the chaff, are carried forward. A spiked roller throws the straw forward beyond the machine, while the grain and chaff are deposited upon the winnowing machine.

The winnowing machine is substantially the common fanning mill. It has, however, one very judicious appendage, viz: elevators similar to those employed in grist mills; by means of which every thing that passes through the screen, is again returned to the action of the fanners. The grain is deposited in boxes placed to receive it, and is found to be perfectly free from dust and chaff. The committee are of opinion that it would be necessary to pass the grain repeatedly through the common fanning mill, to render it as clean as the grain which is passed but once through this machine of Mr. Pitts.

The committee are well aware that it is imperative upon them not to speak in too strong terms of any machine submitted to their examination, but they can not forbear saying that in their opinion the separator of Mr. Pitts is worthy of all praise.

The celebrated Professor Low declares that to Andrew Mickle belongs the honor of having perfected the thrashing machine. But if any one will compare the cumbersome, intricate, and expensive machine of Mickle, with the compact, simple and cheap machine just described, he will be satisfied that this mead of praise is justly due to Mr. Pitts.

JOEL B. NOTT,
C. N. BEMENT, } *Committee.*
V. V. BULLOCK.

Chinese Tree Corn.

MESSRS. EDITORS—I take your excellent paper the Cultivator, from which I received the information of Mr. Thorburn having the Chinese tree corn. I wrote to Mr. C. N. Bement, and he applied to Mr. Thorburn, who sent me fourteen ears, and six Rohan potatoes. I also received two other ears from New-York. I planted them on the 10th of May. I put but two grains in a hill. The very points I put three grains, being so very small. I attended it with my other corn, and I think it to be a very great acquisition. It is so very early and very productive. In three months after I planted it, it was hard enough to have turned my hogs into, thus being in advance of the other corn about four weeks. I always hog down one field of corn, then sow it in wheat; it is a good fallow crop, if it can be eat down soon enough. The Chinese corn will have the advantage of all other corn, it coming ripe so soon that you can get your corn eat down by the middle of September, and your wheat sowed in good season. My sixteen ears planted one acre and twenty rods. I gathered seventy bushels of corn, very sound and good. I think I can raise one hundred bushels from one acre by planting it three feet apart and three stalks in a hill. It does not grow as high as our corn, and will bear closer planting. I took four stalks to the agricultural fair at Cincinnati. They bore twenty ears, and the committee awarded me a premium of one pair of sugar tongs, worth $3.25. I see in some of the papers some fault is found with Mr. Thorburn. I think it is without any good reason, for I think it to be a very productive and early corn.

The Mad Itch.

I see in a late number of the Cultivator, Mr. Demy asks for a cure for the mad itch. From my experience about it, I think it to be a very hard complaint to cure, I think the cause of the mad itch is the cattle running where corn stalks are cut up and thrown to hogs. The hogs chew the stalk and spit it out, and the cows eat it; and the substance being all extracted, it lies in the stomach and becomes dry and hard, and it will not digest at all. In the fall of 1828, I had my hogs running in the pasture with my cows; I cut up corn and threw to the hogs; the cows came occasionally at first; but after some weeks, they were always there at feeding time. In three days I had five milch cows die. The second and third I cut open; they all looked inwardly very well, but the stomach was hard. I cut it open, and the particles of the chewed stalks were hard and dry; it was the first of the mad itch I ever saw. When they were first taken they would walk around the pasture fence, hold up their heads and look wild; they would occasionally run to the fence or trees or stumps, and rub the under jaw, or between the horns, and one of mine rubbed one of her eyes entirely out, and one of them went into the great Miami River and waded and swam in the river for five hours; she then swam to some driftwood and put her head on it and died in the water. I think the best cure for it is to keep your cattle away from your hogs in the fall of the year, when you feed corn on the stalk.

JOHN REED.

Cherry Ridge Farm, O., Jan. 28th, 1840.

Spring Wheat after Potatoes.

MESSRS. GAYLORD & TUCKER—I send you some experiments on sowing spring wheat after potatoes, without plowing. I think in 1836 I made the first trial. I had a rich piece of ground of one and three-fourths of an acre, descending to the north. The year previous to my coming into possession, it had been sowed with turneps, but there was an entire failure of the crop. I spread another coat of manure in the spring, which was hauled out the fall previous by the former occupant, plowed the ground the last of May, fine and deep, once only; harrowed well, planted with the common yellow potato in my usual way, which I have practiced for twenty years. It was the last year of our agricultural society's existence. My potatoes looked so fine, I measured off one acre according to the rules of the society, which then was that the ground should be measured, the potatoes dug, and measured by men under oath. The acre yielded 553¾ bushels. We found one potato that weighed 3 lbs. 5 oz. and there were many that weighed from 2 to 2¾ lbs. I got the premium by more than 200 bushels. So much for the potato crop.

The next spring I purchased four bushels spring wheat. I cleaned out of it, by fanning and washing in strong brine, about twenty quarts, leaving three bushels and twelve quarts. About the 1st of April, we had a warm, dry spell. I went and took a look at the ground, and it looked so clean and mellow, I determined to try an experiment. I accordingly went on with my team and harrow, at the same time set another team to plowing two lands, fourteen paces wide, making about one-third of an acre. The second or third day, sowed the whole broad cast, after being well rolled in lime. That which I sowed without plowing, I harvested six days previous to the other, it being ripe, and the quantity and quality of the former was far superior to the latter. Now for the product, which was 1353 sheaves, yielding a little over six bushels the hundred, making over eighty-one bushels at six bushels the hundred; every bushel of which weighed 62½ lbs.

The next year I plowed the ground once, harrowed and planted with corn, three feet one way, and from one and a half to two the other. I harvested from one acre by actual measurement, one hundred and four bushels of good corn.

The next year plowed once, sowed with barley, had a fine crop, but do not recollect the quantity, as I did not take an account at the time, and seeded with clover and timothy. The reader will see that these four successive crops, were raised with but very little labor and expense, and that these four crops yielded as much or more clear profit than some five or ten acres equally as good by nature.

My object in writing this communication is, first, to call the attention of the farmer to the importance of tilling no more land than he can well do, and make profitable; 2d. that he would make the experiment of sowing spring wheat on potato ground without plowing.

In 1837, I had two pieces of potato ground of one acre each, which were manured and treated in every respect alike. One piece I plowed, and the other I did not; sowed both the same day. The field that I plowed I thought was of the two most promising, but when harvested the other had the preference. I think I have tried this, every year but one since 1826, and that was three or four years ago, when the snow came on early before the ground was frozen, and lay very late in the spring, which made the ground very hard and heavy.

Rotation of Crops.

As I have a little more leisure, I will trouble you with a few more remarks on cropping. My method is, in the first place to make all the manure I possibly can through the season, haul it on my potato and corn ground, at the rate of from thirty to thirty-five loads, such as we carry, to the acre; till well; get a good crop, cold or hot; follow with two white crops, generally with wheat and barley or barley and oats, mixt half and half, for grinding for hogs, horses, cattle and sheep. I had a very fine crop the season past; and I can recommend this crop to those who can not conscientiously grow barley for whiskey or beer. After taking off these two crops, seed with clover and timothy, at the rate of one peck the acre. E. W. F.

Warren, Herkimer Co. N. Y. March 21, 1840.

"Mineral Rods."

MESSRS. EDITORS—"*The place to dig a well*," most convenient to our habitations, attended with the least expense, and which, when completed, will afford the greatest supply of water, is certainly a subject of no trivial importance; and it is one of anxious inquiry in most sections of the Union. That person who shall discover, and communicate to the public a sure method of finding the subterranean currents or reservoirs of waters, most convenient to our dwellings, will richly deserve to be honored as a most distinguished benefactor of our race. Your readers are indebted to your Ontario correspondent, Mr. Adams, for bringing the subject before them in the February number of your invaluable CULTIVATOR: and they would owe no measured amount of gratitude to him who shall supply them with the requisite information upon this subject, through the columns of your most acceptable monthly visitor.

If the forked branch of the peach, or other tree in the hands of certain favored individuals, will unerringly direct them to the concealed fountain, and indicate its subterranean course and depth—as most professors of this art believe and affirm—we entreat those who are in possession of the facts, to lay the evidence before the public, that all scepticism upon this subject may be eradicated from the minds of the candid, reflecting portion of community. Others will continue, as a matter of course, to receive as truth the most absurd propositions, or reject with contempt the most lucid demonstrations, as their prejudices or whim-whams may chance to incline.

I was, some years since, for several hours, a firm believer in the truth of this subject; and, during this time, I had, what I verily supposed, the best possible evidence in its favor—my own individual experience: and I have been intimately acquainted with several highly respectable individuals, in different sections of the Union, from New-England to Louisiana, who as firmly believed in its truth, as in any matter of fact that occurred under their immediate observation. These individuals not only believed in the truth of this art, but they frequently practiced it, as they supposed, greatly to their own benefit, and for the good of their neighbors. I have witnessed experiments made by these individuals, and carefully noticed the mysterious working of the rod in their hands, but I have utterly failed to discover any convincing proof, that a subterranean current or reservoir of water, over which they were passing, had caused the motion of the rod. If sufficient evidence of this is known to any of your readers, let this evidence appear in the Cultivator for the benefit of the public; and none will receive it with more profound gratitude than the subscriber. The cautious, discriminating portion of community are much averse to being volunteers in faith. They readily admit the truth of facts, when sustained by appropriate evidence; and they firmly believe that truth needs not the aid of supposititious facts to render it useful to mankind; but is "when unadorned, adorned the most."

I am not aware that the mineral rod, used in searching for water, has ever been described in books: and as it may interest your readers to know how this art is practiced by its professors, I will here explain the method of selecting and using the rod, as practiced by the adepts whose experiments I have been permitetd to witness. For the rods used in this art, select a forked shoot of the hazel, peach, or other *stone* *fruits*, of one year's growth, that the wood may be well hardened and elastic. Let the two prongs of the fork be of equal size and length: from eighteen inches to two feet will probably be found most convenient. The prongs, at their division, should be from one-fourth to three-eighths of an inch in diameter, and gradually tapering to their extremities. With the palms upward, grasp firmly with each hand, a prong of the rod, the united portion of which should stand perpendicularly some ten or twelve inches above the palm of the hands. Holding the rod in this position, with the hands separated about fifteen inches, walk deliberately across the grounds you wish to examine, and at the same time holding the rod with a firm close grasp, and keeping your attention continually directed to it, that you may observe its slightest motion. When you arrive near a subterranean stream or resorvoir, the united end of the rod will begin to turn downwards. When vertically over the thread of the stream, the rod will be attracted with the greatest force; and, in general, it will bend downwards in a degree proportioned to the magnitude of the current, its proximity to the surface, and the *power* with which the experimenter is naturally endowed of managing the rod.

In searching for water, it is essential that the rod used should be green. But in seeking for the metals, a dry rod is employed, and this rod must be taken from the *witch-hazel*. Where the branches of this rod unite, it is hollowed out and charged with quicksilver. I have never seen a rod prepared for searching for mines and concealed treasures; and, of course, can not describe it from my own personal knowledge. The description here given is derived from persons respectable for their intelligence and moral worth; and whose veracity is above suspicion. These persons have assured me that they have witnessed experiments in which a rod of this kind, in the hands of *gifted individuals*, would apparently direct them unerringly to a concealed coin, that had been hidden for the purpose of testing the truth of the claims of professors of this art.

If there be, in reality, no truth in these pretensions, there must be a most surprising aptitude in the rods, and in the manner in which it is held and used, to deceive the persons practicing this art, and those who witness their experiments; and to dupe them into the belief that certain persons possessed some occult and useful powers, not imparted to the common mass of mankind.

If any of your readers are curious in matters of this kind, let them try the experiment in the manner herein directed; and there will be few who will fail to be highly interested and amused—if they hold the rod firmly, proceed with attentive caution, and mark with critical care its slightest motions—with its apparently violent inclination to bend towards the earth, even in opposition to what may at first appear their most determined efforts to restrain it.

Some years have passed since this experiment was showed to me by a worthy and esteemed friend, who had learned the art in the state of Tennessee. Astonished at its motions in his hands, I tried the experiment under his instruction, and carried the rod according to his direction. To my utmost surprise, the rod worked with great power in my hands, and at the identical spot where I had seen it bend and writhe in the hands of my friend. Elated with my unexpected success, I continued my observations, noting with the most critical attention, all the circumstances attending this experiment. I suspected from the motion of the rod in certain places, that there was some hitherto unexplained *attraction* between the united portion of the rod, and the subterranean current of water. If my suspicion, were correct, the rod would necessarily be uniform in its motions when brought over the same place. But to my great chagrin, the rod, which had bowed with so much force over a particular spot, that its torsion had broken the bark, when brought again to the same place gave no indications of water, but stood quietly erect; or now obsequiously bowed its head over a locality, which it had formerly pretended was dry as the desert of Sahara. Here, then, were some mortifying and unexpected facts to be explained; and I now set myself to observe, with the nicest care, the action of the muscles of my hands and arms while performing these experiments. My attention was soon rewarded by detecting the *truth*. An involuntary, and before unobserved, motion of my hands and arms—too slight to be observed by the nicest eye of a person walking at my side—had produced the motion of the rod: and I can assure you, gentlemen, and your readers, that a rod held in the *same manner* in your hands, will writhe with as much violence, as it will in the hands of the most successful "water-witch" in the United States, whether layman or clergyman. Since I have detected the *true cause* of its motion in my hands, (and, as I fully believe, in the hands of all others,) I can depend with the utmost confidence upon the forked hazel to work in my hands, with any required degree of force, or not at all, in any place, as I please. And from the general results obtained by sinking artesian wells, we are warranted in promising gentlemen a plentiful supply of water, whenever they sink a well where the mineral rod indicates, if they but sink the shaft a sufficient depth.

Immediately after detecting the true cause of the motion of the rod in my hands, and, as I fully believe, the *only cause* of its motion in the hands of any one, I fully explained to my friend how we had been gulled by our heedlessly neglecting to attend to all the circumstances of the experiments we had made; but my success in his case was not very flattering. Indeed, I have rarely succeeded in convincing an adept in this art, that the result of his experiment was entirely fallacious: for it is as true in this, as in politics or religion, that

> "A man, convinced against his will,
> Is of the same opinion still."

The public are deeply interested in knowing the truth upon this subject. If the claims of these "water-witches" can be sustained by *facts*, decisive, and well authenticated, let them be spread before the public in the columns of your journal, that all reasonable doubt may be driven from our minds. Until this shall have been done, let every individual be upon their guard, and never suffer themselves to commit the folly of sinking a well in an inconvenient situation, merely because an honest, well meaning dupe has bent a peach or hazel twig over the place. N IVES.

Wallingford, Vt. Feb. 1840.

Geological Survey—Root Crops, &c.

Messrs. Gaylord & Tucker—As you have taken the editorial department of the Cultivator, I feel greatly disposed to transfer to you the confidence I used to place in its late lamented editor, in all matters relating to the theory or practice of farming; a confidence begot in me by a close, attentive perusal of every number of the Cultivator, from the first prospectus up to the present time. And as the several volumes stand in good, substantial binding on the shelf, I often regard them as a legacy worthy to be left to my children. Now, sir, that the Cultivator may suffer nothing in its high reputation, by its union with the Farmer, is all that the subscribers can wish; and from an intimate acquaintance with the Genesee Farmer for the last two years, I have not a doubt but their wish will be gratified. If the Cultivator and Farmer is continued with the same spirit and originality of the two numbers already received, I promise to add so many volumes of it to this valuable legacy, as I may yet number years of life.

This communication was begun with the intention of suggesting through the Cultivator, to my brethren of the plow, the propriety of petitioning our legislature in due time, that when the geological survey of this state shall be completed, a copy of the same shall be deposited in each of the school district libraries in the state, instead of supplying the members of the legislature with extra copies, which never get a general circulation, but are commonly laid on lawyers' book shelves, along with musty records, out of the reach of an agricultural community. Farmers ought, from the nature of the subject, to be interested in the survey more than any other class of citizens; and if the plan proposed be adopted, many will be brought in contact with the work, who would never think of inquiring after it, if it was out of sight. It will not certainly be anti-republican for every man to go to the district library for part of his reading; and thus there will be no room for favoritism in the distribution of the work.

I also wish to call the attention of such farmers as are about commencing the cultivation of root crops, to the importance of selecting that kind of crop which is best adapted to their several soils. Loamy soils are absolutely necessary for the cultivation of roots; and the lighter the loam the better for the turnep, while a heavier one suits the beet. This accords with the experience of my neighbors and myself. We have raised three crops of the mangel wurtzel, two or three of the carrot, and four or five of the ruta baga. Our soil is a loam sufficiently light for most farm crops, but rather apt to become hard, if worked while wet, resting on an argillaceous slate. The result of our experience is, that while the ruta baga has never exceeded the rate of four hundred bushels per acre, and the carrot about the same or rather less; the mangel wurtzel has, in no instance, fell short of a thousand bushels.

It may be useful to state my method of preparing the seed of the mangel wurtzel for planting. Owing to their rough exterior and lightness, they are apt to lodge in the holes of the drill; while to plant them by hand amounts to almost a prohibition of the crop on a large scale. First, soak the seed in water until it is ready to sprout; then pour off the water, and add so much plaster or lime as will absorb the moisture, stirring it up, then put the seed in small quantities into a sieve or colander, and give it a swinging or rotary motion, like riddling grain, until each seed is rendered smooth and round by its coating of plaster, while the loose plaster passes out at the holes of the sieve. The seeds now put into the drill, (I use Robbins' drill,) will be so smooth and heavy, that it will drop with great regularity, and come up with certainty. Yours, &c. L. B. ARMSTRONG.

Kingsbury, Feb. 10, 1840.

Whitington Wheat.

Messrs. Gaylord & Tucker—Please to have the goodness to publish in your next number, the following communication:

As my character officially (as a seedsman) has been animadverted on, relative to the sales I made last spring of the Whitington New White Wheat, for spring wheat, when it has been ascertained (and an experiment made in my own garden proved the same) that in our climate it should be sown in the fall, I would merely observe that no design to deceive the public was dreamed of, as some inconsiderate persons have thought proper to remark, even in the papers. I could have no great emolument from the supposed imposition, as my whole stock was twenty-eight bushels, and sold at but a trifling profit, as it cost £1 per bushel in London, to which heavy expenses are added: I sold it at 25 cents per quart, and gave a good deal away. My own opinion, and that of many of our first agricultural gentlemen, is, that it is the finest wheat ever introduced to this country, and they one and all intend making a trial of it the ensuing fall. Mr. Whitington, of Surrey, England, who sent it out to me, writes, in reply (26th Sept.) to my making known to him the disappointment of those who tried it: "In answer to yours, I am as much vexed, as I am confounded; I really am at a loss to account for the extraordinary results you communicate. I enclose you one of last year's circulars, and one of the present season's. As regards its winter properties as well as spring, it has been tested, and publicly admitted to be the best wheat in this country for rapid growth standing uninjured in the most severe weather, and yielding by an excess of 16 bushels per acre off the very poorest soils, every other tried variety of white wheat. As to its failure for a spring wheat with you, I repeat I can not account, neither can I learn of American gentlemen here. It is of a Swiss origin, which induced us to try it as a spring grain for two seasons, sowing it in February, which in this country is the latest period for sowing wheat. Our circular expresses what was done with it in 1838, and this year, 1839, we sowed it on the 23d and 24th of March, fifteen acres of it, and all was housed by the 25th of August. In addition to this fact, Messrs. G. Wildes & Co., Mr. J. Fothergill (the London corn factor,) Messrs. Phillipson, the extensive farmers of Sutton estate in Surrey, have all had capital crops of it, from sowings in February and March; while Mr. Baxter, the large flour factor, who also farms 300 acres, only nine miles from London, sowed ten acres of it during the first week of April, and has carried a capital crop; he assures me fully forty bushels per acre. We stand too high connected and engaged as agents for several noblemen's estates, and farming largely, as well as being land surveyors, for upward of forty years, to represent falsely any article, as do also our agents, Messrs. Gibbs & Co. I can have no right to doubt you, but whether and what are the local causes which have created the disappointments, ought to be best known by you, and under these circumstances I would not advise you to sell it again as spring grain. I regret you did not write me sooner, that I might have sent you some in time to sow the present autumn, the successful issue of which is beyond all question. I will send you twenty bushels by the next packet, hoping it may yet arrive in time for this autumn's sowing, and from which you can supply to those who may, under their hopes, insist on some sort of compensation. If it arrive in time, and your weather be mild and open, sow the wheat, desiring it may be buried three inches deep."

The wheat sent out to reimburse, came too late to do any thing with it the last autumn, but will be delivered in such quantity, as was before purchased, gratis; can be kept in a case or glass demijohn, sealed air tight for fear of weevil, until the proper time to sow it next fall.

Sufficient quantity has been sent to *W. Thorburn, Albany*, to reimburse, in such quantities as was purchased of him (gratis) last spring. GEO. C. THORBURN.

11 *John-street, New-York*

Preparation of Seed Corn.

Messrs. Gaylord & Tucker—I send you the result of an experiment made in planting corn the past season. Having seen statements of the benefits derived from steeping the seed in a solution of sulphate of iron, (copperas,) as securing it against the ravages of birds and cut-worms, we resolved upon giving it a trial. Mr. Jacob Kirk (with whose crop the experiment was tried) procured a few ounces, dissolved it in hot water, and poured over the corn. After remaining in the solution from six to eight hours, the corn was taken out, rolled thoroughly in plaster, and planted. A few rows of the same kind of corn was planted in the middle of the field, without steeping the seed, but just as it came from the cob. The field was likewise planted with pumpkin seeds, also without preparation. After the corn and pumkins had come up, I observed that many of the latter were cut off by the worms, but could not see a single stalk of corn disturbed, until I examined the rows (for I had marked them) the seed of which had not been prepared. Here I found the worms at work, nearly a tenth part of which they had destroyed; the birds had likewise taken some. The steeped corn was of a greener and more healthy color than the other; grew faster, with stouter stalks, while that from the unprepared seed could readily be pointed out by its more yellow and dwindling appearance; neither was the yield so great as the other.

Now, whether this difference in yield is to be attributed to the copperas, or to the plaster, or to both, I have yet to learn; but think the copperas prevented the birds and worms from committing depredations, as we have frequently rolled seed corn in plaster, but have never found *that*, a security against either birds or worms.

The above is at your service—you will please pardon errors in composition, as my province is behind the plow, and not the pen. Yours, R. FOSTER.

Lewisberry, York Co. Pa. April, 1840.

The Rohan Out-Done.

Messrs. Editors—I tried some experiments in 1838, to ascertain the best method of cultivating the potato crop, the quantity of seed required per acre, &c. I also tried to see how many potatoes I could raise from a single tuber. In consequence of this experiment, several of the small boys in our neighborhood, came in as competitors on the ensuing year; one of whom raised from a single tuber, which weighed about six or seven ounces, the enormous amount of four bushels and one-fifth, heaped measure; one of which was much the largest tuber I have seen since I left my native state, New-York, in 1816; many others were very large. The potatoes, when growing, occupied a fraction less than one square rod of ground; making, for this country, a very great yield per acre, notwithstanding a severe and continued drouth all the time they were growing—having been planted on the 9th of June, and being killed by an unusually early frost in September. I saw the potato planted, and the proceeds dug and measured.

H. N. G.

Quaker Bottom, Ohio, Jan. 25, 1840.

Hard-Pan Lands—Inquiry.

Messrs. Gaylord & Tucker—I wish to inquire through your agricultural paper, for the best method of cultivating what is usually called (in this section) hard-pan lands. There is considerable such land in the southwest part of this state; and during three or four years last past, many of the occupants have realized but little for their labor. Such land is usually wet and cold. The surface of such land is a black muck, varying in depth from six to fifteen inches. The subsoil is invariably exceeding hard, and it is with great difficulty that the plow can be made to penetrate it at all. Consequently, it holds water a long time, and necessarily it is late before the farmer can get in his crop. Should there be any one among your readers, who has experimented sufficiently on such soils to have arrived at a sure conclusion, he would benefit those farmers who occupy such lands, and show himself a friend to agricultural improvement, to make it known.

J. TOWNER.

Gainesville, March 28, 1840.

Breeding Horses for Purposes of Utility.

To the Editor of the Franklin Farmer:—I have observed, with much pleasure, some recent articles in your excellent paper, on the subject of "Horses for agricultural purposes;" but those most especially commending themselves to the attention of the farmer, are the prize essays by Messrs. Williams and Beatty, and a more recent one by "Crofts." This subject is more peculiarly appropriate in these *iron times*, when it is necessary to bring every thing to the standard of utility, and when it becomes prudent people to reduce all luxuries to comforts and all comforts to necessaries. With us Americans, however, brought up in such pervading abundance, it is hard to discriminate between such as would be considered luxuries in Europe, and necessaries in this country; the first having become so common here as not unfrequently to be classed with the latter, and probably among them all, there is no item of such unlimited and extravagant indulgence as *horse flesh*. To become aware of the extent to which this last has been carried, we have but to look at the vast sums that have been expended within the last 20 years in the importation of bloods. Estimate the immense number and cost of sporting animals throughout the country, then add the almost incredible number of road and farm horses, that but for the indulgence of their owner's pride and fancy, (luxury,) might much better be annihilated entirely, or their places, when indispensable, supplied with oxen or mules that could perform the necessary labor at half the cost; and, in addition, every young blood must have his crack gelding and every boy his poney, the aggregate of which is an annual expenditure of millions that might be saved, without particular inconvenience. But this taste always has prevailed, and will probably continue so to do to the end of time, and if not *innate*, has been so long indulged in, as to make it a useless undertaking to attempt abolishing it. We must, therefore, content ourselves with the more reasonable and perhaps equally beneficial task of endeavoring to guide the popular will.

Whenever required at all, horses may be rendered valuable to the full amount of their cost, provided there is proper attention paid to breeding exclusively for utility. In the manner of this, however, your prize essays are at total variance; the first giving unqualified preference to the "thorough-bred for work"—the last asserting very broadly, that "experience has shown, both in England and in America, that horses of the pure and unmixed blood, though very suitable for racing, are not the best adapted to farming purposes." With this last opinion, I am fully disposed to coincide; for nothing can be plainer, than that the fiery, irrepressible ardor, the quick and sudden, almost *electrical* motion, the indomitable, lion-like spirit and courage of the thorough-bred, constitute an *excess* of the qualities essential to a more servile animal. Occasionally a thorough-bred may be found, uniting all the best horse attributes in such just and well balanced proportions, as to entitle him to stand as a model of the prince of beasts. Such are, however, exceptions that only prove the rule.

The properties required for farming purposes are very comprehensively stated in Judge Beatty's essay:—a "good constitution, gentleness and evenness of temper, docility, steadiness of movement, capacity to endure steady and constant labor, great muscular power, durability, hardiness; easy to be kept in order with moderate feeding;" to which, if we add symmetry of form, fine action and appearance, sufficient spirit and a quick pace when called upon for it—what more is required for the gentleman's horse? Can these properties be united? To a great extent we think they can. And the advantage of adopting this principle would be great; for in breeding such a race, all the progeny would be certain to find a ready and profitable sale, as the choicest in form, spirit and character would command higher prices for the "fancy," while the *mediocre* would answer every purpose for the horse of "all work." But how is this combination to be obtained? Your first essay, (Mr. Williams') says, "import a bay Turk, a bay Barb, a Cleveland Bay and a Bay Dray;" your second (Judge Beatty's) though recommending a judicious selection of domestic animals as breeders, yet clearly prefers, as conferring "incalculable benefits on the agriculturists of the country, the importation of several pair of the Black Cart-horse, the Suffolk Punch and the Cleveland Bay, to commence a stock with." But the best English authorities say, "the true Suffolk like the Cleveland, is now nearly extinct," and of the heavy black horse, adds, "these are adapted more for show and parade, and to gratify the ambition one has to outvie his neighbor, than for any peculiar utility." While "Crofts," quoting the redoubtable Nimrod, certainly a great authority, says we must go to France for the "light cart-horse and the black roan stallions."

With entire concurrence in the belief as to the ultimate success of judicious experiments in crossing with the foreign breeds, I still think that the object of producing the most *useful and valuable* animal would require more outlay of capital, time, observation and experience, than American breeders have to devote to it; and at any rate, could not be obtained, except through several generations. England was at an incredible expense, and from the time of Athelstane to George I. a period of more than eight centuries, before obtaining a good racer; and Bakewell, in our day, to improve the short-lived sheep, took a whole long life and spent thousands of pounds. What then is to be done? Why the most obvious thing in the world—just lay aside the telescopes and spy glasses that have been used to look across the Atlantic, and put on the old spectacles and examine the stock of the *Northern* members of the family compact, and see if they have anything indigenous to the soil and climate adapted to the present subject.

Though they have not said, or written, or sported so much on the subject of horses as their countrymen south of Mason and Dixon's line, yet the Yankees, with all their *notions* and indefatigable zeal, have not been altogether idle or unenterprizing in this matter. It is vastly to be regretted, however, that they have not adopted some regular, scientific and sustained system of breeding, for the want of which some of their best and most useful bloods ever imported, have become measurably extinct by infusion into the general mass; and though this mass has thereby been greatly improved, yet from the neglect to perpetuate the concentrated essence of this improvement, it must be sought for, if at all, with some modifications.

I can not speak certainly of any distinctly characterized race as existing there now, although there is no portion of the Union where better roadsters and the *every-day* farm horse are found in greater proportions. A race existed, a few years since, in Vermont, called the "Morgan Horse," valuable, enduring, active, and every way fitted for hard farm or road service, and of good action and reasonable size and appearance.. But it is now unfortunately almost extinct. It was made by a cross of the stout, English thorough-bred, on the hardy Canadian trotting mare; and this produce, a stallion kept by Mr. Morgan, put to the native Vermont mare, gave the "Morgan breed." These horses have been repeatedly tried at the south and west, by mail contractors, as stagers; and it was found that they would go much faster, give a harder pull, and endure twice as long on the road and in service, as the larger horses without known blood, bred there. A memorable instance of this kind took place on the road between Baltimore and Washington, about ten years since. A new line of stages, starting with Vermont horses, in opposition to the old line with the long-backed, leggy, cow-heeled, Pennsylvanian, reduced the time, between the two places, one-half.

New-York, probably, combines a greater excellency of *practical* blood, than any state in the Union. She has had her Duroc, her Membrino, her Messenger and Eclipse, and lastly, her Bellfounder, a pure blooded, imported trotter, of great and deserved celebrity as a stock horse, having been used for the last twelve years on Long-Island and the Hudson river counties. From a combination of these, she annually produces a large stock of serviceable animals, unsurpassed and unsurpassable. Many of them sell, as soon as fitted for market, for $200 to $500 for actual service, while some of the fancy and fast goers, bring from one to three thousand dollars. Tom Thumb was a New-York horse, a mixture of blood and dunghill, so far as I could learn; and after beating every thing known in this country, in the trotting line, was shipped to England for a high price, and there won with ease, against the best horses that could be produced. But his best time, when in America, can not compare with what a crack trotter will now do. To trot a mile within 2m. 35s. to 2m. 45s. is not considered extraordinary in New-York and Philadelphia. Dutchman, in his great match of three miles against time, last season, carrying 145 lbs. weight, did the first mile in 2m. 34s. the second in 2m. 28s., and the third in 2m. 30s., making three miles in 7m. 32s. Now, this is a speed, taking into consideration the difference of weights, almost equal to good racing.

Long-Island weights, for aged geldings, is 123 pounds. Dutchman carried twenty-two pounds over this. Seven pounds is considered equal to a distance of 240 yards. Now, allowing for this, and considering that he would average the above speed for four miles, (which it is confidently thought he can do,) the performance would require 9m. 2s. I believe a race of four miles, done in eight minutes, is considered pretty fair time the world over. In the way of trotters and roadsters, the Bellfounders seem to be carrying away the palm just now, uniting as they do, the best English and American racing and trotting blood; and when bred on to good, hardy, common mares, produce, at once, a substantial, fine appearing, serviceable animal. I will here give you the description of one that has been standing at Buffalo for the last three years, that you may see how near this style of horse would, on large, heavy mares, meet the ideas of your stock breeders.

Bellfounder 3d was bred by T. T. Kissam, Esq. on Long-Island, New-York, and was got by the imported Bellfounder 2d—he by the celebrated Norfolk trotter, Bellfounder 1st, that went nine miles in less than thirty minutes; and his owner then challenged to trot seventeen and a half miles within an hour, which was not accepted. His grand dam was Velocity, by Hap Hazard, by Sir Peter, out of Miss Henry by English Eclipse—all racers of the first repute. His dam, Lady Alport, was got by Membrino; he by imported Messenger, dam by Tippoo Saib, &c. &c. Velocity trotted twenty-eight miles in one hour and forty-seven minutes. The present Bellfounder was foaled in June, 1830, and when five years old trotted over the Harlaem course, N. Y. a fraction short of a mile, in 2m. 45s. He was but partially trained, and of such spirit as it was difficult to curb to a trot. A stallion on this gait, is never considered as manageable as if made a gelding. It is, however, under all circumstances, a good speed, and indicates great capabilities for his stock. Bellfounder's color is a dark, dappled bay, a small star in the forehead, one white foot, black legs, mane and tail. He is sixteen hands high, neat head, fine arched neck, short strong back, wide deep chest, long under the belly and powerful, well developed stifle, legs moderate as to length, joints strong, compact and well knit, smooth flat legs, with a pastern sufficiently elastic, but shorter and stronger than that of the racer. His weight, in ordinary flesh, is 1,200 pounds, and it is confidently believed that he possesses all the requisites for service, so well enumerated by Judge Beatty. I would especially commend his docility of temper, being as playful and obedient to a proper groom, even when in season, as a well trained puppy. While standing here, he has been put to mares of *every variety of color*, from white up to jet black, and still every colt, yet dropped, has been of a beautiful blood bay, and very much after the cast of the horse. This is an important consideration for those who contemplate breeding matches.

Good trotting horses are coming more and more into repute, not only at home, but abroad; and could our great stock producing states be better employed now in these hard times, than in growing well matched, serviceable carriage horses? These animals are in great demand, and ever will be in the Atlantic towns and cities, and good matches, there, always command a high price and sell readily; $400 to $1,000 a pair is not at all uncommon. Russia is at present, paying great attention to this department of stock: trotters there, of a first rate repute, bring an immense high price, and are bred, not only for the road, but as an efficient arm of cavalry service. I have repeatedly seen about twenty thousand imperial horse guards, (probably as splendid a military show as the world can make,) under review, and many of their evolutions, I noticed, were on a fast trot; and one of the favorite past-times of the Emperor Nicholas and the nobility and gentlemen of Russia, the winter I spent at St. Petersburg, was to attend the trotting matches on the frozen surface of the river Neva.

Yours, A. B. ALLEN.

Buffalo, N. Y. Jan. 17, 1840.

Value of Ashes.

MESSRS. GAYLORD & TUCKER—From observation and actual experiment, I have come to the conclusion that leached ashes are worth at least six cents per bushel, to incorporate into a gravelly soil; and that unleached are worth four times as much as leached. Care should be taken to mix unleached ashes well with the soil. This fact shows the impolicy of farmers selling their ashes for 12½ cents per bushel. J. TOWNER.

A farmer ought never to purchase tin pails. A good wooden milk pail will out last two tin pails of equal cost. J. T.

Gainesville, March 28, 1840.

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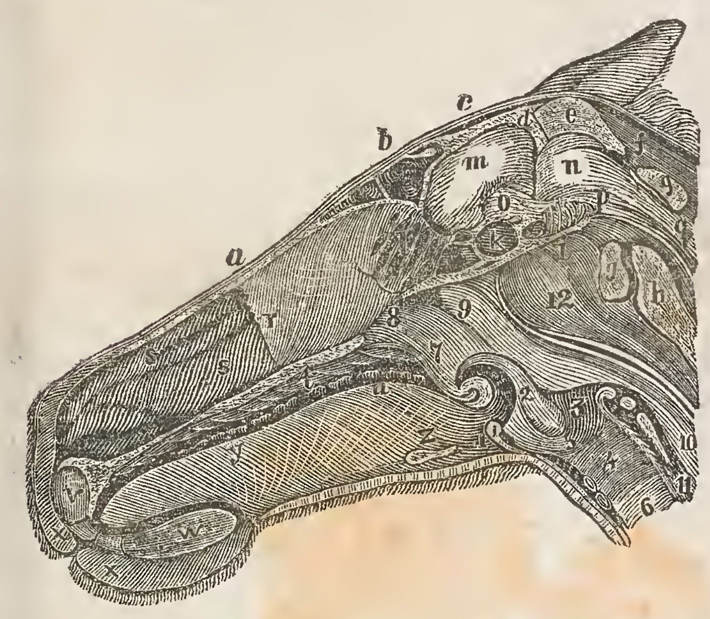
THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

THE HORSE.



Section of the Head.—[Fig. 55.]

a The nasal bone, or bone of the nose.
b The frontal bone. The cavities or cells beneath are called the frontal sinuses.
c The crest or ridge of the parietal bones.
d The tentorium, or bony separation between the cerebrum and cerebellum.
e The occipital bone.
f The ligament of the neck, or *pack-wax*, by which the head is chiefly supported.
g The atlas, *sustaining* or *carrying*, or first bone of the neck.
h The dentata, *tooth-like* or second bone of the neck.
i The cuneiform, or *wedge-shaped* process, or base of the occipital bone. Between it and the other portion of the occipital bone *e*, lies the great foramen or aperture through which the prolongation of the brain,—the spinal marrow,—issues from the skull.
k The sphenoid, *wedge-like*, bone, with its cavities.
l The ethmoid, *sieve-like* bone, with its cells.
m The cerebrum, or brain, with the appearance of its cortical and medullary substance.
n The cerebellum, or little brain, with its beautiful aborescent appearance.
o A portion of the central medullary, *marrow-like*, substance of the brain, and the prolongation of it under the name of the crus cerebri, *leg of the brain*, and from which many of the nerves take their origin.
p The medulla oblongata,—the prolongation of the brain after the medullary substance of the cerebrum and cerebellum have united, and forming the commencement of the spinal marrow. The columnar appearance of this portion of the brain is represented, and the origins of the respiratory nerves.
q The spinal marrow extending through a canal in the centre of the bones of the neck, back and loins, to the extremities of the tail, and from which the nerves of feeling and of motion, that supply every part of the frame, except the head, arise.
r The septum narium, or cartilaginous division between the nostrils.
s The same cut off at the lower part, to show the spongy turbinated, *turban-shaped*, bones filling the cavity of the nostril.
t The palate.
u The molar teeth, or grinders.
v The inferior maxillary bone, containing the incisor teeth, or nippers. The canine tooth, or tush, is concealed by the tongue.
w The posterior maxillary, or lower jaw with its incisors.
x The lips.
y The tongue.
z A portion of the os hyoides, or bone of the tongue, *like a Greek u, v.*
1 The thyroid, *helmet-shaped* cartilage, enclosing and shielding the neighboring parts.
2 The epiglottis, or *covering of the glottis*, or aperture of the wind-pipe.
3 The arytenoid, *funnel-shaped*, cartilages, having between them the aperture leading into the trachea or wind-pipe.
4 One of the chordæ vocales, *cords* or ligaments concerned in the formation *of the voice*.
5 The sacculus larygnis, sac or *ventricle* of the larynx, *throat*, to modulate the voice.
6 The trachea or wind-pipe, with its different rings.
7 The soft palate at the back of the mouth, so constructed as almost to prevent the possibility of vomiting.
8 The opening from the back part of the mouth into the nostril.
9 The cartilage covering the entrance into the eustachian tube, or communication between the mouth and internal part of the ear.
10 The œsophagus, or gullet.
11 The cricoid, *ring-like* cartilage, below and behind the thyroid.
12 Muscle of the neck, covered by the membrane of the back part of the mouth.—*Farmers' Series.*

The horse is one of the most noble, useful and beautiful of animals; and since he has been subjected to the dominion of man has occupied a prominent place in every department of agricultural economy. But he is at the same time, an animal more susceptible of disease or injury than any other of the domesticated ones. Less hardy than the ox, if injured or treated as that patient animal is, he becomes worthless; hence the necessity of greater care in guarding against disease, or the infliction of injuries. The horse, too, is subject to some diseases, to which none of the other animals of the farm are; some of them of a very serious character; and it is for the purpose of illustrating the nature of two of these, as well as for giving a more correct opinion of the anatomy of the horse's head than is generally prevalent, that we have prepared the engraving that accompanies this article. We may hereafter give other sectional drawings to illustrate particular parts or diseases; as, although the horse is one of the most common of animals, the structure of some of the most important parts appears to be little understood.

The Glanders.

The two diseases to which we have alluded are the *glanders* and the *poll evil*. The first of these was described nearly two thousand years since, and was then, as now, a dangerous, not to say incurable, disease.—Glanders may be an original disease, or it may be the result of contagion; indeed its contagiousness is one of its most formidable features. If a horse in which the disease is well developed, is allowed to lie in the pasture with other horses, or if a sound horse is put in a stable with a glandered horse, or where one has been fed, they are very liable to become infected. Notwithstanding these facts are well known, many men will use a glandered horse as long as the poor creature can stagger, thus subjecting not only their own horses, but all those with which they come in contact, to the danger of this incurable complaint. In consequence of the increase of veterinary knowledge, another alarming fact has been disclosed with regard to this disease, and that is, that men who are exposed in stables with glandered horses, are liable to the disease in its most fatal form. Several well attested cases of this nature, have, within a few years, come before the Veterinary College of London, clearly traceable to contact with infected animals.

In its first appearance, glanders may be confounded with a catarrh or cold, but a little attention will show the distinction. Colds are attended with fever and cough; while the glanders rarely produce either. The matter discharged from the nose is also different, being lighter and clearer in its color than the mucus in catarrh, more glutinous or sticky, and flowing steadily, and not irregularly, as in cold. It is the application of this discharge to some abraded surface, or to the nostrils of a sound animal, that produces the disease. One of the most certain tests of this disease is to inoculate some worthless beast with this purulent matter, when, if it is the glanders, it will show itself as surely as the small pox after inoculation.

When glanders are bred in horses, it may always be traced to improper stable management. Closely confined, hot and ill ventilated stables, so vitiate the air as to render it unfit for respiration, and by its continual passage over the delicate membranes that line the nostrils, at last produces irritation, inflammation and disease. It is a singular fact, however, that when one nostril alone is attacked, it is almost always the near one. M. Dupuy, of the Veterinary School at Toulouse, states, that of eight hundred cases that had come under his notice, only one was affected in the off nostril. As the disease progresses it affects not only the nostrils, but proceeds to the frontal sinuses, as shown in the engraving; the glands of the jaws and neck are affected, the bones become careous and rotten, and emaciation and death ensue. In the country, where horses lie in the pasture during summer, and in stables during the winter, that are usually far from presenting any serious obstacle to the circulation of the air, glanders are much less common, than in the crowded and confined stables of cities, where this disease at times commits fearful ravages.

In spite of the dangerous consequences known to result from this disease, there are individuals who will not only use glandered horses themselves, but resort to the most infamous deception in order to put such horses off upon the ignorant or the unsuspecting. Some of these tricks, according to Mr. Youatt, are as follows:—"Having given the horse a brushing gallop, that he may thoroughly clear his nose, some of them blow powdered alum or white vitriol up the nostrils a little while before he is shown, and though the horse may be sadly tortured, the discharge is for some hours stayed. Others roll up a pledget of tow, and introduce it into the nostril sufficiently high to escape common observation."

In cases of the glanders, where the horse has been turned from the stable to the pasture, or the freest ventilation given, the disease has disappeared; but it is apt to return with the causes that first produced it—warm stabling and improper ventilation. In Arabia and in South America, where stables are not known, the glanders never appear; but wherever the European mode of keeping horses is pursued, the disease follows as a matter of course, and infection continues the evil that injudicious management created. But though nature sometimes effects a seeming cure, medicines appear to be wholly inoperative, or nearly so, in combatting this disease. We are aware that there are a thousand cures for glanders as well as other diseases, but it well sustains the character of incurable so long ago given it, and the man whose horse has this disease fixed upon him can not perform a more laudable act, both as concerns the community and the poor animal itself, than to knock it on the head at once, and thus put an end at once to suffering and the danger of contagion. Iodine has, indeed, lately been announced as a cure for this formidable complaint, but its use is too recent to justify a full decision on its merits, although experiments would seem to be much in its favor. In the present state of our knowledge of the disease, a return as nearly as possible to a state of nature, in the condition of the animal, while in the incipient stages of the disease, appears to be the most likely to arrest its progress,

The Poll Evil.

The Poll Evil is another disease, the seat of which will be shown in the engraving, better than by any mere description. The bone of the neck nearest the head, and marked g, in the cut, is termed the *atlas*, because in the human being, that bone supports the head and it is at or near the junction of this bone with the head, that this troublesome and disagreeable disease is seated.

The poll evil arises from various causes, all inflicting more or less injury on the parts where the disease appears. Hanging back in the stable, or when hitched on the halter or bridle—rubbing or striking the back of the head against the manger—unnatural stretching and painful tension of the ligament of the neck by unnecessary tight reining—and not unfrequently an accidental or a designed blow on the poll will originate this disease; inflammation comes on, and a swelling appears, hot, tender and painful. As the ligament *f* passes over the atlas *g*, and the seat of the inflammation is between the ligament and the bone beneath, it is always serious in its nature and difficult of treatment. Mr. Youatt, one of the first veterinary surgeons of the age, thus describes the course to be pursued, when a horse is threatened with poll-evil;

> "The first thing to be attempted is to abate the inflammation by bleeding, physic, and the application of cold lotions to the part. By these means, the tumor will sometimes be dispersed. This system, however, must not be pursued too far. If the swelling increases, and the heat and tenderness likewise increase, matter will form in the tumor; and then our object will be to hasten its formation by warm fomentations, poultices, or stimulating embrocations. As soon as any matter is formed, which may be known by the softness of the tumor, and before it has time to spread around and eat into the neighboring parts, it should be evacuated; and now comes the whole art of treating poll-evil: *the opening into the tumor must be so made that all the matter shall run out*, and continue afterwards to run out as fast as it is formed, and not collect at the bottom of the ulcer to irritate and corrode. This can be effected by a seton alone. The needle should enter at the top of the tumor, penetrate through its bottom, and be brought out through the side of the neck, a little below the abscess. Without any thing more than this, and frequent applications of warm water to keep the parts clean and obviate inflammation, poll-evil in its early stage may usually be cured. If the ulcer has been allowed to deepen and spread, and threatens to eat into the ligaments of the joints of the neck, it may be necessary to stimulate its surface, and perhaps painfully so, in order to bring it to a healthy state and dispose it to fill up. This however, will be ineffectual except the pus is enabled by the use of setons, perfectly to run out of the wound, and the application of these setons may require the skill and anatomical knowledge of the veterinary surgeon. In very desperate cases it may be necessary, in order that the ulcer in its whole extent may be acted upon by caustics, to divide the ligament of the neck, by which we have described the head as almost entirely supported. This may be done with perfect safety, as the head

will be supported although the ligament should be divided between the second bone and the head. The divided ligament will soon unite again, and its former usefulness will be restored when the wound so made is healed."

In cattle or horses there is an opening between the first and second bones of the neck, in which the spinal marrow is only coverd with a ligament, and it is at this point that the butchers of Lisbon and Madrid, with a short but keen bladed knife, deal the fatal blow. This operation is called *pithing*, and where understood, is much preferable to the common mode of knocking down, practiced in England and this country.

Action of Manures.

Of the importance of manures to the cultivator of the soil, there seems to be but one opinion. The practical man and the theorist both are compelled to admit, that a plentiful supply of manure is essential to success in farming; and experience proves that few things are more true than the Flemish maxim, " without clover no cattle, without cattle no manure, without manure no grain crop." The nature of the action of manures, or the manner in which they produce their good effects, does not, however, seem to be equally clear with the points before mentioned; at least, there seems to be a greater diversity of opinion on this topic, a thing perhaps allowable when it is considered that it is less a matter of direct observation than the others, and that even men of science do not appear to be perfectly agreed in all their conclusions respecting the laws of vegetable nutrition.

To produce vegetation, three things seem to be indispensable; moisture, warmth, and a communication with the earths. Deprivation of the two first is certainly fatal to plants, and though where the two first are present and the last absent, yet the perfection of such plants is never complete, and fruits are never formed. Thus an acorn, suspended by a string over a glass of water at a proper temperature, will vegetate, and while the roots seek the water the young plant will extend upwards, yet the growth will continue no longer than the substance of the acorn affords nourishment to the young shoot. Fill the glass with earth, and if watered, the growth will continue so long as nourishment and space are afforded. It would appear then to be clear that the union of these three things are necessary to the growth and perfection of plants.

There was a time when it was believed that plants derived their support entirely from water, and that if a suitable supply of this was provided, it was all that was required, and that the use of the earths was only to serve as a reservoir or repository of this fluid for the use of the plant. This, idea of water being the sole nourisher of plants, may be traced through Greece to Egypt, an origin, or opinion, not surprising among a people who yearly witnessed the fertilizing effects of the waters of the Nile, on the apparently barren sands of that country. The large quantity of sediment brought down by the river, appears to have been overlooked in their estimate of fertilizing causes, though it is now well understood that of all substances such deposites are the most valuable. This opinion was revived and apparently confirmed in the 17th century, by the experiments of Boyle and Van Helmont. The willow tree of the latter, planted in a tight box, lined with lead, the earth and tree carefully weighed at planting, watered with rain water only, and after a few years growth, both the earth and tree again weighed gave a gain, which, when it was ascertained that the earth had diminished only a few ounces, was deemed conclusive as to the nutritive power of water. It remained for later philosophers, by the analysis of rain, and other water, to show that the substances required in the growth of such plants was contained in abundance in the fluids employed.

When water, made chemically pure, is employed in that state to promote the growth of plants, a failure is the certain and inevitable result. That able experimentalist Cuthbert Johnson, has varied his experiments in every form, and always with the same termination, the death of the plant, in a longer or shorter period. Dr. Thomson was equally foiled; he finding that plants so treated vegetated only for a short time and then failed, never perfecting their seeds. Other experimentalists have been equally unsuccessful, and the theory now more rationally adopted, is, that water is only valuable as a solvent for the nutritive matter required by plants; in other words it is only useful as a liquid manure. Some plants of the bulbous rooted kinds, that are made to flower in water, such as the tulip and hyacinth, are obliged to be planted in the ground every other year, or they refuse to flower, or even, finally, to vegetate. This is accounted for by the fact that the store of nutritive matter provided by nature in the bulb, and drawn from the earth, was exhausted by vegetating for one season in water.

It has been supposed by some, the earths most common in good soils would, if watered with pure water, support vegetation. But the experiments of M. Giobert proved the fallacy of this supposition. He mixed silica, alumina, lime, and magnesia, in the proportion in which they are found in the best soils, and then in vain attempted to grow plants where pure water was used. This was not the case when water impregnated with animal and vegetable matter, or that from a dunghill was used, as the most luxuriant vegetation ensued. All the efforts to induce plants to appropriate to their growth matter in any other state than that of solution have failed. The finest and most impalpable particles of matter are rejected equally with the coarsest. Davy ineffectually tried charcoal, reduced to the finest possible state; and Chaptal and Johnson equally failed with the earths, saline substances, and with other organic matter. All nutrition, then, in plants, as well as in animals, is performed by substances in solution, or æriform; and it is hence also evident, that manures are only useful to plants when presented to them in a liquid form, or when they assume that form in the earth by combination with water.

We have before expressed our full conviction that all vegetable growth, or nutrition, is the result of a chemical action not dissimilar to that of the voltaic battery, or the agency of electro-magnetism. Of the existence of such electro or voltaic currents, vegetation itself furnishes the most conclusive proof. To this the vegetable sensibility of the mimosa must be attributed; and the currents as they exist in the fluids of plants, may, under the microscope, be distinctly observed in those plants with transparent cuticles, such as the *Caulina fragilis*, or *Tradescantia virginiaca.* We further infer this action, from the general similarity existing in the functions of vegetables and animals, and their nutritive powers. In animals the nervous system furnishes conclusive evidence of such agency, and the organization of the plant may not unreasonably be referred to the same cause. " Perhaps," says Professor Henslow, " until the contrary is proved, we may consider the addition of *sensibility*, to the living principle, as the characteristic property of animals; a property or quality by which the individual is rendered conscious of its existence, or of its wants, and by which it is induced to satisfy these wants by some act of volition." Dr. Green, in quoting this passage from Prof. H., goes farther, and says, " We are inclined to the belief, however difficult it may be to demonstrate it, that a quality strictly analagous in its results, to this property in animals, belongs to vegetables."* Every new truth in vegetable physiology goes to confirm our previous opinions of the nature of vegetable nutrition, and develop the rationale of manures. The earths will not cause vegetation, be they ever so nicely proportioned; water cannot support the plant, when used in a pure state; the salts of manures, constituting their most efficient part, are fatal to plants in a concentrated form, or when present in too large quantities; but when these are combined, the growth of the plant they are brought to act upon, is certain and rapid. It is scarcely possible there should be a clearer or more beautiful illustration of the nature of the chemical action necessary to the growth of plants than this combination affords. In this case the different earths constitute the battery for the generation of the voltaic current, the particles constituting the plates of the great machine of nature, and the finer the earths are made the greater the number of pairs, and consequently the more active in their results. In itself, however, this battery is powerless; it is only when the plates are plunged in an exciting fluid, when water containing the salts necessary to produce this action is applied, that this current, so indispensable to the growth of plants, indeed, without which no vegetable (and perhaps no other) organization is possible, is fully developed. To us this philosophy of vegetation appears extremely simple and natural, explaining more satisfactorily than any other theory, the action both of vegetable and mineral manures.

If the plates of zinc in the common battery are corroded or destroyed, or those of copper rendered worthless by continued action, it is clear these defects must be supplied before the desired effect can be produced. So if any of the necessary earths be absent, or if they have been exhausted by cultivation, a healthy vegetation can not be expected until this deficiency is remedied. And if the proportions of earths are ever so perfect, if the exciting agents, the salts and the water, are absent, there can be no growth; the current, which alone carries into circulation the substances that go to the formation of the plant, cannot exist. In this way only, can the prodigious fertilizing powers of some liquid, or dry manures that when applied to the soil become liquid, be satisfactorily accounted for. Urines, poudrette, and the sewerage water of large cities are instances of this kind of agents.

But whatever opinion may be entertained of the theory here advanced, it cannot be disputed, that independent of the substances more particularly necessary to excite voltaic action, there are few articles so rich in the materials required by plants, as are what are termed the liquid manures, or the drainings of the barn-yard or the stables. This fluid contains the most essential of the salts employed in accelerating vegetation, and their loss to the farmer is irreparable. There is some little difference in the constituents of the urine of different animals and of man, but the analysis of one, and we select that of the cow, by Prof. Brande, will give a sufficiently accurate notion of the constituents of this substance, and the loss occasioned by not converting it to its proper use in promoting vegetation.

Water,..................................	65.0
Urea,..................................	4.0
Phosphate of Lime,......................	3.0
Muriates of Potash and Ammonia,..........	15.0
Sulphate of Potash,......................	6.0
Carbonates of Potash and Ammonia,.......	4.0
Loss,..................................	3.0
	100.0

Barn-yard manure, after it has been deprived by solution, by washing, and by evaporation of these essential animal and vegetable salts, is very little better than common vegetable mould. Its efficiency in promoting vegetation is gone with the exciting agents it has parted with; the remainder is only the earths which have formed the frame-work of the plants, consumed or decomposed, useful indeed, but wholly wanting in the power they once possessed.

To show the difference caused by the presence of these agents in enabling plants to take up the matters necessary for their perfection, we give the following from a statement of Prof. Johnson:

"I caused beans to vegetate under three different circumstances; the first were grown in distilled water; the second were grown in sand and watered with rain water; the third were sown in rich garden mould. The plants thus produced when accurately analyzed, were found to yield the following proportion of ashes:

Those watered with distilled water,.........	3.9
Those " with rain water,............	7.5
Those grown in garden mould,.............	12.0"

Garden mould, or soil, more than almost any other abounds in these prominent elements of fertility, and the above experiment proves conclusively the importance of their presence, where luxuriant vegetation is wished or expected.

Liquid manure, then, may be considered one of the most valuable agents in the production of crops. But its use as practiced on the continent of Europe, and in China, cannot be expected here; it has as yet, scarcely been introduced into England, though where it has been tried its benefits have been most decisive. The additional labor required in the German or Flemish use of this manure is so great, that their system, unless in some limited cases, cannot be expected here; the cost would exceed the income. There is no necessity, however, for the frightful waste of this valuable material that we witness in every part of our country. Instead of this fertilizing fluid being converted to a profitable use, the great object, with multitudes of farmers, seems to be, how they shall get rid of it in the easiest manner. Ditches are constructed from their yards or stables to the highway, and the neighboring brook or river, to carry off the precious article, as though it was feared the surest means of fertilizing the soil, or producing great crops, would accumulate too rapidly.

It is to the accumulation of such salts that the sewerage of cities owes its fertilizing properties, when employed for the purposes of irrigation. A striking instance of this power appears in the astonishing increase of the grass crops on the water meadows near Edinburgh since the water from the drains of that metropolis have been applied to their irrigation.* This result will not be surprising to any one who reflects on the composition of such sewerage; " its endless mixture of organic matters, its soot, its carbonate of lime, its decomposed animal matter, and above all its urine," combine to produce one of the most active stimulants of vegetation known.

But if farmers cannot at present in this country be at the expense of the vats for converting the whole or the most of their barn or stable manures into liquid manures, or the costly apparatus for its distribution, they can do much to prevent its waste by furnishing the means for its absorption, where there is an excess, as there usually is in the vicinity of the yard or stables, and thus save it for the use of the soil. To do this it is necessary, in the first place, that some cheap and easily constructed reservoir should receive these drainings when they are formed. In most yards a hollow may be made, without lining, if the soil is retentive, but if porous, with a lining of clay and imbedded pebbles, and this, if filled with swamp earth, the sandy wash from the roads, or even common earth, will absorb large quantities of thus liquid manure, and thus obtain a fertilizing power, equal, if not superior, to that of common barn-yard manure, treated in the ordinary manner. These earths brought to the yard, become thoroughly impregnated with the salts and other fertilizing matters of the yard, and thus preserve for the farmer what would otherwise be lost to his use. In many cases where the cattle and sheep are folded in open yards, a covering of vegetable mould, swamp earth, &c., spread over the yard after it has been cleared out, to the depth of a foot, will prevent much waste by its absorbing power, and being thoroughly mixed by the feet of cattle with the ordinary manure, will be found in the spring when wanted for use on the field a most valuable manure. In this way, some farmers add to their stock of fertilizing materials some hundreds of loads annually. One of the most successful farmers of New-England, Mr. Clark of Northampton, has pursued this system to a considerable extent, and with marked benefit. Others also, have tested its use, and speak highly of the practice, as corresponding perfectly with the theory.

Various opinions have been entertained of the utility of piling barn-yard manures when not wanted for immediate use, or the propriety of placing them under cover. It not unfrequently occurs that the stable or yard manures made during the winter, are not required for the spring crops, and are reserved for those to be sown in autumn. The question now arises, how shall this manure be disposed of during the summer? If it remains spread over the surface of the yard exposed to alternate sun and rains, it appears clear that the most valuable parts of it, the salts and animal part, must be lost in such a course. If piled, and left without farther care, it is very apt to be damaged by excessive heat in the fermentation, and the consequent escape either in the form of gas, or that of a thick black liquor from the base of the heap, of these essential agents of fertility. Some farmers, aware of these disadvantages, have piled their manures, but in such a way as to prevent the loss or escape of any of these valuable constituents. With a little extra labor, added to that required for ordinary piling, they have converted the contents of their yards into a proper compost, greatly increasing the quantity, while all the valuable qualities are retained. This is effected by placing the fresh manures in alternate layers with such earths as we have noticed before, these earths becoming impregnated with the evolved gases, while they at the same time absorb and retain whatever liquid matter may escape from the dung during the process of fermentation. The height and breadth of these mounds must depend on the quantity of manure to be treated in this way, and the facilities for piling it at the command of the farmer.

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* See an ingenious paper on " Vegetable Organography and Physiology," in the 77th No. of Professor Silliman's Journal. The instances given in proof, by Dr. G., are not satisfactory to us.—*Eds. of Cult.*

* See Quarterly Journal of Agriculture, No. 19.

Perhaps the most satisfactory test of the relative value of manures, may be found in the series of experiments instituted at the request of the Prussian government, by Professor Hembstadt of Berlin, and repeated with every kind of variation, by Professor Schubler, with the same results. The following table, prepared with great care from the record of those experiments, will show the value of the several manures named, on soil of the same quality or productiveness.

"If the soil without any manure yield a produce of three times the quantity of seed originally sown, then the same quantity of land when manured or dressed with herbage, grass, leaves, &c., will yield

	5	times	the seed sown.
When manured with cow dung,	7	"	"
With pigeon's dung,..........	9	"	"
With horse dung,............	10	"	"
With human urine,..........	12	"	"
With sheep dung,............	12	"	"
With human manure or bullock's blood,....................	14	"	"

Thus if before manuring, an acre of land with two bushels of seed, would give a produce of six bushels, the same acre manured with urine would give twenty-four bushels; and if with bullock's blood, twenty-eight bushels. Experience shows that with roots and grasses the difference will be about as great on soils of the same quality; and these facts evince more conclusively than any reasoning can, the value of such manures, and the necessity there is of the farmer's making the best possible use of them, if he would succeed in his occupation.

SILK.

At the present time, there are few branches of domestic industry, that promise so good a remuneration for the time and capital employed, as the production of silk. The mulberry fever is over; the best varieties of trees are now as much below their actual value, perhaps, as a year or two since they were above, and a man with the most limited means, can now put himself in possession of trees enough, to stock an acre, which would furnish foliage for as many worms as an ordinary family could attend. Experience has shown, that there is no more mystery in the production of silk in our country, than there is in growing potatees; that no where in the world, is the climate better calculated to promote the health of the worms, the growth of the best foliage, and consequently the finest qualities of silk. This is evident, from the numerous statements that have appeared in the journals, of the results of the last year, in the weight of cocoons, length of fibre, and also in the strength and beauty of the silk produced.

The experiments of Mr. Smith of Amherst, Mr. Clapp of Hartford, and Mr. McLean of Freehold, N Jersey, not to mention the names of many others equally successful, perhaps, show that there are few sources of profit so certain, requiring so little capital, so little hard labor, or so simple in practice, or requiring so little instruction to prosecute successfully.

One of the greatest hindrances to the silk business has been the difficulty attending the disposal of cocoons after their production. But this objection or obstacle is now removed, by the establishment of markets in all our principle cities and villages, where they are purchased with as much readiness as wheat, or wool. Perhaps, however, the best way of fitting silk for sale, is for the producer to reel, as well as grow it, and dispose of it in that shape to the manufacturer. Machines for reeling are to be had very cheap, and very little experience seems to be required to perform this operation well. In the domestic production of silk, two advantages are thus secured, the transportation of the reeled silk to market is reduced to almost nothing; and the profit on so much additional labor is retained in the family. Almost any of the Manuals of silk culture, contain directions sufficient to enable any one to perform this branch of production, after a few experiments, or a little practice.

That there will always be a market for all the silk that we can produce, can scarcely be doubted. The increase of our importation of this article shows, that it is fast passing from an article of luxury to one of common use, and that like cotton, were it plenty, as it may be, silks would be preferred to most other fabrics as summer clothing. The remarks made in Congress a short time since, on the petitions from the silk producers of Massachusetts, praying for a duty on manufactured silks, prove, that if it shall be found necessary, on the revision of the tariff, at the termination of what is called the compromise act, all needful protection will be cheerfully granted. On the whole we invite the attention of farmers and mechanics to the topic of silk culture, believing that in the present depressed state of things, there are few channels for industry, that promise better remuneration, than the domestic production of silk.

The Flour Market.

By the kindness of a friend, "C. C." to whom we are already indebted for many favors, we have been put in possession of a circular, addressed by the house of Baring & Co. to the bankers of Great Britain, on the grain crop of 1839, the causes that led to its partial failure, and its probable effect on the commercial, and of course monetary matters of that kingdom. The source from whence this paper emanates, and the exposition it gives, not only of the crops themselves, but of many other things interesting to all who wish to become acquainted with the causes that influence agriculture generally, and particularly those now operating, or likely to operate on our own market, induce us to give a few extracts from it, and a summary of its conclusions.

Many of our readers are already aware that while, in the U States, the last autumn was one of the finest on record, the season in G. Britain was as remarkably wet, and the grain crop suffered most severely in consequence. On this point the circular says:

"The most remarkable and distinguished feature of this time, however, is the almost unbroken series of wet days, from the middle of August, till the close of the year. There was only one period of seven successive days without rain during the five months, which terminated with the month of January, and that was during the hard frost of January; but that frost and the accompanying dryness, had only a limited range, for while the people of London, were skating on the ice, rain was pouring in Scotland and Ireland. With this exception, the most careful observer could not have noted three successive days, without rain during the aforesaid period."

As a consequence of this weather, it is computed that two-thirds of all the grain grown in England, was secured in a damaged condition, thus materially affecting the resources of that country for bread. The effect of the modern improved system of agriculture, in ameliorating the condition and climate of a country is thus alluded to: "The people of Scotland say, and say truly, that the extensive system of draining adopted, has entirely altered their climate. It has given them the power to raise productions of the utmost national value and importance, which a century since were scarcely known in that country; and has rendered that country a fit abode for man in the highest state of civilization. Such a season as we have now in contemplation, occurring two or three centuries ago, would probable have carried off one-fifth of the inhabitants of this favored island, with disease, generated by continuous wet, and defective food and clothing."

As illustrating the effect which draining and improved culture, has on a climate and soil, and also some of the peucliar differences between their agriculture and ours, we give the substance of the circular on these topics, showing as it does why what is called spring wheat in Britain, invariably proves winter wheat here, if sown at the time we sow our spring wheats.

In consequence of the improvement of soil and climate from the causes mentioned, the British farmer sows wheat at his convenience, in every month, from September to March inclusive. "On the 30th day of February," says the circular, "we counted between Newcastle and Berwick, on one field of strong land, nine plows at work, on another eight, and in several four or five." * * * "We are acquainted with very intelligent experimental farmers who have, in several successive years, sowed the same kind of wheat from September to March, and uniformly with the result, that that put into the ground in February, yielded the largest product. And this had established in their minds the conviction, that the first dawn of spring was the best possible time for wheat sowing."

After reviewing the state of the last crop, and the prospects of the coming one, the circular comes to the following conclusions, which we give in an abridged form, as, if just, they may be useful in forming conclusions respecting the probable demand for grain abroad, and the consequent prices at home At the present prices of flour in England and in this country, we shall probably export largely; whether they will be maintained or varied by other circumstances, remains to be seen. That the U. States have a considerable surplus remaining of the crop of 1839, which they would be happy to dispose of at any prices approaching to remuneration, there is not a doubt; and should the harvest of the present year prove favorable, that surplus will be much increased, and add largely to our means for exportation.

The conclusions, condensed, are as follows;

1. That the unprecedented wet season of 1839, deranged and retarded the operations of the husbandman very materially, not only in the securing of the growing crop, but in putting in the seed for the harvest of 1840.

2. That the quantity of wheat grown in G. Britain, in the hands of farmers at this time (March 1, 1840,) is greatly in excess as to quantity, over what they held at the same time in 1839.

3. That the stock of wheat and flour in the hands of merchants, contractors, or middle men, is unusually small, particularly of fine or marketable qualities; and that there has not been for 20 years, so great a scarcity of good wheat at this time of the year, as there now generally is in all the northern and western parts of the Kingdom.

4. That Ireland has abundance of grain, but put up in such a damp state as to preclude its use, unless dried either by long continued fine weather, or the kiln.

5. That with weather decidedly superior for the husbandman from this date till the next harvest, we should want no grain of foreign growth, except for the purpose of mixing with that of home production, and the quantity required for this would be under one million of quarters.

6. That with weather in the next degree inferior to that just assumed, there would not be more than a million of quarters required, to meet the demand for mixing with our partially damaged grain, or compensate for any deficiency arising from a continuation of the unfavorable weather into the spring months.

Last year 30 millions of bushels were demanded to supply, or rather prevent absolute starvation of millions in G. Britain; the conclusion above is, that 8 millions of bushels the present year, will be sufficient, when mixed with their damaged grain, to produce a similar effect. How much of this demand we shall supply, will depend on the rate of prices here and there, and on the means furnished by the country to enable farmers to get their surplus grain to market.

Setting Early Cucumbers.

Most are aware, that in the families of the *cucumis* and *cucurbita*, what are called the male and female blossoms are on the same plant, and that in ordinary cases when grown in the open air, there is rarely any difficulty arises from the non-fertilization of the female blossoms, and the consequent formation of fruit. The weavils, bees, and other insects aid effectually in the fecundation operation, by transporting the pollen or impregnating dust, and in the open air artificial assistance is rarely necessary. There are many cases, however, in which those who attempt the culture of the cucumber in frames or hot beds, find their hopes frustrated by the permature falling of the fruit blossoms, and in which artificial impregnation may be successfully practiced. The fact that such fruiting was practicable, has long been known, and in some instances practiced in the east. The date palm is a kind of tree of which the fecundating, and the fruit bearing flowers, grow on different trees. Where these are planted, or naturally grow in clusters of both kinds, as they usually do, nature requires no other causes to act, than those she has provided to secure fruit; but when, as sometimes happens one or more palms of the fruit bearing kind are found at a great distance from the male or fecundating palms, the natives to ensure a crop of dates, cut branches from those last, while both are in blossom, and conveying them quickly and carefully to the spot where they are wanted, shake them over the female clusters of flowers, and in this way secure a supply of this grateful, and to an Arab of the desert, almost indispensable fruit.

The following extract from Abercrombie, on the culture of garden vegetables, will show the importance of this process with the cucumber, and the manner of performing it.

"The cucumber bears male and female blossoms distinctly on the same plant. The latter only produce the fruit, which first appears in miniature, close under the base, even before the flower expands. There is never any in the males; but these flowers are placed in the vicinity of the female ones, and are absolutely necessary, by the dispersion of their farina, to impregnate the female blossom, the fruit of which will not otherwise swell to its full size, and the seeds will be abortive. The early plants under glass, not having the full current of natural air, nor the assistance of bees and other winged insects to convey the farina, the artificial aid of the cultivator is necessary to effect the impregnation. At the time of fruiting, watch the plants daily; and as soon as the female flowers and some male blossoms are fully expanded, preceed to set the fruit the same day, or next morning at farthest. Take off a male blossom, detaching it with part of a footstalk. Hold this between the finger and the thumb; pull away the flower leaves, or petals, close to the stamens and anthers, or central part, which apply close to the pistil in bosom of the female flower, twirling it a little about, to discharge thereon some particles of the fertilizing powder. Proceed then to set every fruit, as the flowers of both sorts open, while of a lively full expansion; and generally perform it in the early part of the day, using a fresh male flower if possible for every impregnation, as the males are usually more abundant than the female blossoms. By this management, the young fruit will be soon observed to swell freely."

Scours and Dysentery in Sheep.

The following directions for the cure of this disease, are from a paper by S. W. Jewett, of Weybridge, Vt. in the Farmers' Monthly Visitor.

"*Looseness in Sheep or scours*, is one of the most sudden and rapid disorders that attacks them, especially thin sheep and lambs. It is generally caused by eating raw, or early cut hay. The best method to cure and prevent is, to give them daily a few messes of wheat in the sheaf, a regular quantity of salt at all times. If it occurs in the winter, brine ripe hay in the seed. wheat chaff is good, as is a small quantity of oats, and a few pine or hemlock tops. Keep them a few days on ripe hay or corn fodder."

Sheep Tick—*Acarus reduvius.*

To destroy this troublesome and injurious animal, that infests so many of the flocks of sheep in all countries, some writers have recommended a wash made of

Arsenic finely pounded, one pound,
Potash, twelve ounces,
Common soap, six ounces,
Rain or river water, thirty gallons.

The ingredients to be boiled together for fifteen minutes, and the liquid, in dry weather, applied by pouring through the spout of a tea-pot or similar vessel, on the wool, which is rubbed at the time, to facilitate the absorption or passage of the fluid through it. This dressing applied twice a year is also security against the attacks of the fly, which by depositing their eggs on the skin produce worms and sores, often very troublesome.

We have never found it necessary to resort to such applications to clear our sheep from ticks, and have at shearing scarcely found one for years. The flock is a small one, varying from one hundred to one hundred and fifty, yet the means to which this exception is attributed would be equally applicable to larger flocks. We have for a long time been in the habit of using common soap pretty liberally at the washing of the sheep, and to this we think the absence of ticks is to be credited. A large tub is used for washing, into which a small stream from a brook is conducted, and the time is chosen after a heavy spring rain, that the water may be as soft as possible. The sheep is put into the tub and a handful of soap is rubbed into the wool of the neck and back of each one put in. The grease, scum, and filth, floats over the top, and as the stream flowing in is not large, the water in which the animal floats soon becomes a strong suds, cleansing the wool most thoroughly, and proving fatal to any vermin that may be about the sheep. The wool of sheep washed in this way will be very white and clean, but they should be allowed to lie in a clean grass pasture for a week or ten days, that the fleece may become again saturated with the animal oil so essential to softness and flexibility.

Wool washed in this way will be free from ticks, and though it may not weigh quite so much as if one half of the dirt was left in it, yet its superior appearance and quality, will secure a compensating price. If there are ticks in a flock it is best to wash or wet the lambs also, or the work will be but half done.

Geological Survey of the State.

The report of the select committee, to which was referred that part of the Governor,s message relating to this subject, is before us; and is a document well calculated to strengthen the impressions of the great utility of the undertaking we have always entertained. New-York has been justly celebrated abroad, and respected at home, for her great works of internal improvement; her system of universal education; her plan of prison discipline; and another ground of respect will be found in our Geological Survey of the State, should it be carried out in the spirit with which it has been conducted thus far, embracing as the survey does, not only the geology, but the botany, zoology, mineralogy, and agriculture of the state; the last, however, rather incidentally than as a distinct department.

The original time assigned for the survey was four years, which will expire in the coming July. The expense of the survey including the final reports was estimated at $104,000. Though the utmost diligence, consistent with the magnitude and interests of the undertnking, has been used by the able body of geologists and scientific men employed, it is found impossible to complete the survey in the time indicated, and the committee propose to extend the time until July, 1842. Most fortunately, however, time is all that is asked for, the original appropriation, being it is supposed, sufficient to cover the expense of the survey in the manner proposed.

The geological department will embrace the history of all the rocks and strata of the state, their character, position, dip, order of succession, and their effect on the soil, or in other words their agricultural nature. The botanical part of the survey will include a thorough "examination of the vegetable productions of the state, including the history and use of every tree, shrub, plant, grass, weed and moss." The zoological part will include a description of all the species of animals, birds, fishes, reptiles and insects, an account of their habits and rise, and their utility or injury to man. The department of palæontology, will include the figuring and description of the organic remains in the various formations in the state, thus furnishing an unerring indication to the nature, structure and place of any rock from the granite up to the coal formations. The mineralogical part will include a chemical examination and analysis of the metal, minerals, soils, mineral waters, &c. &c.

To complete these several divisions, with the maps, profiles, sections, drawings and figures required, even after the field labor is furnished, (which is as yet far from completed) it is evident will require much time and attention. That two years should be allowed for these purposes, is perfectly reasonable, and the more so, as an abrupt termination at the end of the first term proposed, would in a great measure render the labor and time already expended lost to the public. The work is a great one, worthy of the empire state, and the minds that projected and authorized it; and when perfected, will be another honorable proof of that tendency toward the universal diffusion of knowledge, which should constitute the glory, as it ensures the perpetuity of a republic.

The report before us points out some of the benefits already conferred on the state by the survey; particularly the correction of the erroneous opinions entertained with regard to the position of coal and salt, in searching and boring for which it is probable far more has already been expended in this state, where it is now well ascertained there is not a possibility of their existence, than the whole survey will cost. Besides these things, the development of the hitherto little understood resources of the state in articles of prime importance, and of great economical and practical use and value, has already exceeded the expectations of the best friends of the undertaking. By our readers, however, the influence which the survey will exert on the farming interests, will perhaps be the most anxiously looked at, and on this point we cannot perform a more acceptable service to our readers, than presenting that part of the report that relates to this subject:

"It is upon the relation which this survey sustains to agriculture, that your committee more particularly delight to dwell. Our colleges, academies and seminaries of learning, teach very litte that is of practical utility in the cultivation of the soil. All education doubtless strengthens the mind, and prepares it for continued progressive improvement in the knowledge of all subjects which fall under its observation in the various relations of life. 'But it has not been sufficiently understood that agriculture is a science as well as an art; that it demands the labor of the mind as well as of the hands, and that its sucecssful cultivation is intimately allied with the most profound investigations of philosophy and the most elaborate exertions of the human mind.'

"To give to this first and best pursuit of man, high intellectual rank in the estimation of public opinion, is now a great desideratum in human improvement. How can this be accomplished otherwise, than by placing within the reach of the sons of our farmers, the facilities for obtaining an education essentially agricultural. Being thoroughly acquainted with the sciences of geology, mineralogy, chemistry, botany and the other departments of natural history, the cultivator of the soil would find abundant occupation for his mind within the sphere of his daily avocations. Thus the tameness of a rural life would be relieved by a succession of the most agreeable excitements. The book of nature would be ever open for his perusal, and from its pages he would learn lessons that would enlighten his understanding and improve his heart. Labor would cease to be a mere drudgery, requiring simply the exercise of brute strength. The exercise of the mind would lighten his toil. He would discover in the administration of the laws of nature, which is continually going on around him, every thing to excite his imagination and arouse his intellect. While roaming over his farm and cultivating his crops, his sphere of enjoyment would embrace all the pleasurable excitements of poetry, and the severer contemplations of philosophy.

"The present time is most auspicious for directing public opinion to the pleasures and profits of agricultural pursuits, to the sciences connected therewith, and the wide field of honor and usefulness which is now open for improvement on those subjects.

"For many years past the current of business and of opinion, has been toward our large cities. Commercial pursuits and the inordinate profits of trade in all its ramifications, have been draining the country of the choicest of her youth, and of her best educated and most enterprising men. The slow profits of agriculture and the tameness of a country life, have not suited the excited temperament of the times. But a great change is now taking place in public opinion, resulting from a reaction in all the departments of trade. The prodigals in business, care worn and oppressed, shorn of their strength and subdued in their spirit, are beginning to understand that it is of more importance, so far as the great ends of human life are concerned, to secure a quiet and peaceful competency, with freedom from undue care and anxiety, than to hazard their peace of mind, their pecuniary prosperity and the welfare of their families, upon the uncertain ocean of commercial transactions. Hence the retired and peaceful occupations of the farm are beginning more than ever to elicit songs of praise from all men. Hence your committee believe there is at the present time a greater readiness than usual in the public mind to discern the moral and pecuniary advantages of an agricultural life, and to estimate more properly those studies which are calculated to enhance its profits and pleasures, and elevate its intellectual rank among the various occupations of man. Your committee hope and believe that the Geological Survey of the State, from the amount of information which it will disseminate on subjects about which very little hitherto has been known, will lay the foundation for a broad system of agricultural education, which they believe to be very much needed, and which they think the public mind is fully prepared to estimate and cherish. The public munificence will be well directed in continuing to an honorable completion this undertaking, if it shall contribute in any degree to awaken a spirit of inquiry among the cultivators of the soil. after knowledge in those departments of science which are intimately connected with the great art of agriculture, upon the successful promotion of which is based the best interests of our country.

"This survey presents itself to your committee in a most interesting point of view, when examined in the light of political economy. If the legislation of our country is well directed, when it aims at advancing the national wealth, by protecting and encouraging any branch of industry, or promoting facilities for rapid and cheaper intercommunication, why not also well directed when it seeks to unfold to man the bounties of Providence which lie concealed within the crust of the globe. When it shall be ascertained in the progress of our discoveries, that while one position of our state abounds in rich and verdant pasturage, another portion is remarkable for its successful tillage, another portion contains inexhaustible mines of valuable metals; one part yields its abundant supples of lime and marble, another part its contributions of gypsum, salt and coal, and every part its share in the great aggregate of our national wealth; and when the whole shall be brought under the active control of the ingenuity, the industry and enterprise of our citizens, and made subservient to the interest and happiness of man, who can set bounds to the extent of our resources, or sum up the total amount of our greatness.

"Great Britain is probably more indebted for her national aggrandizement to her mineral wealth than to all other causes combined. Without her coal, her metallic ores could never have been drawn from the depths of the earth where they lie concealed; or if found near the surface they could never have been profitably refined. Without her coal, her Birmingham, her Sheffield, her Manchester and other manufacturing towns would never have existed. Without her manufactures, her commerce would be prostrated. Without her commerce, her wealth and her influence among the nations of the earth would speedily pass away.

"The Geological Survey of the State, and the results which your committee hope it will produce, cannot be contemplated in a moral point of view without the liveliest interest. The wisdom and benevolence of the great Creator of the Universe are everywhere displayed in his works; and the more the investigations of philosophy and science are brought to scrutinize those works, the greater that wisdom and benevolence appear.

"In the formation of organized bodies, that is, in the structure of animals and plants, the most superficial observer cannot fail to discover a beautiful and refined mechanism; but if we cast our eyes upon the ground and look at heaps of gravel, sand, clay and stone, it seems as if chance only had brought them together; and that neither symmetry nor order can be discovered in their nature. But a closer examination soon convinces us of that, which reasoning from the wisdom and design manifested by other parts of creation, we might beforehand have very naturally been led to expect, viz: that in all the varieties of form and structure and change which the study of the mineral kingdom displays, laws as fixed and immutable prevail as in the most complicated mechanism of the human frame, or in the motions of the heavenly bodies; and if astronomy has discovered how beautifully 'the heavens declare the glory of God,' as certainly do we feel assured by the investigations of geology that the earth 'showeth his handiwork.'"

CANKER-WORM.

In the second number of the current volume, Mr. Moore, of Berlin, made an inquiry respecting this destructive insect, and whether any preventive to its ravages had been discovered. We have received from a "lover of good fruit," a supplement to the Connecticut Courant, giving a history of the insect, its transformations, and the preventive introduced by Mr. Dennis, of R. I., with certificates of its efficiency, which we may at another time lay before our readers; at present we can only give an abstract of the most essential parts of the paper.

This insect belongs to the Phalæna family; the female of the perfect insect without wings, while the male possesses them, consequently to deposite her eggs on the tree, the female must crawl up the body, and on this well known fact has been founded most of the plans adopted for preventing their devastations. If they once ascend, the eggs are deposited in thimble like clusters near the extremity of the branches, and these hatched by the warmth of the spring, produce the worms that do so much injury. Arriving at maturity in about four or five weeks, the worm descends to the earth, and undergoes transformation, and the perfect insect emerges to again run the same course of propagation and destruction. The larvæ of the canker-worm are known as inch worms, surveyors, or the *geometridæ* of the naturalist. To keep the impregnated female or grub as it is usualy called, from the tree, is the object of all preventional measures.

Tar has been recommended, and while soft or in a semifluid state it arrests the grub effectually. But when cold, or after rain, the surface becomes smooth and the grub passes without difficulty; besides tar, dried on the bark, must injure the tree. A trough made of tin and fastened to the tree has been recommended, the trough filled with oil, but tin is too unyielding, and cannot be enlarged, as easily as a material for that purpose should; and is too destructible by the weather. Flax bound round the tree tightly, will keep them down for a time, but they will eventually pass, and the covering were it effectual would be too expensive from frequent renewals.

To obviate these objections, Mr. Jonathan Dennis, of Portsmouth, R. I., invented, in 1836, a circular lead trough which is effectual, and has since been patented. "This trough and its roof is made of one strip of sheet lead, about three inches wide, but in the form of the top of the figure 2 inverted, with the foot cut off; thus forming a roof and trough in one strip, and then leveling it round the tree so as to conform to the shape of the tree. It is made so large as to leave a space of one inch in width between the trough and the tree. The ends are then soldered together, thus forming a trough completely around the tree with a roof over it. Three or more nails are tacked into the tree to support it; and the space between the trough and the tree is filled with seamed hay, straw, husks, tow, cotton waste, or any other substance which will prevent the insects from ascending between the trough and the tree, and can be evenly and easily pressed by the growth of the tree." The expense is from 30 to 40 cents per tree, or according to the size; and five gallons of fish oil that costs 40 cents a gallon was sufficient to fill the troughs for 115 trees, for one year. It is found necessary to replenish the trough about three times in the course of the year, and it is of use during the periods when the ascent of the grub is most common to sometimes stir the oil in the trough. The experiments made with this apparatus, the statements and certificates would seem to show have been very satisfactory; and, indeed it is evident thas as the grub cannot pass the oil, if other access to the tree is debarred, the tree must be safe. Whether the canker-worm is to be a permanent nuisance to our trees remains to be seen; in the mean time any preventive to their depredations will be hailed with pleasure by the horticulturist.

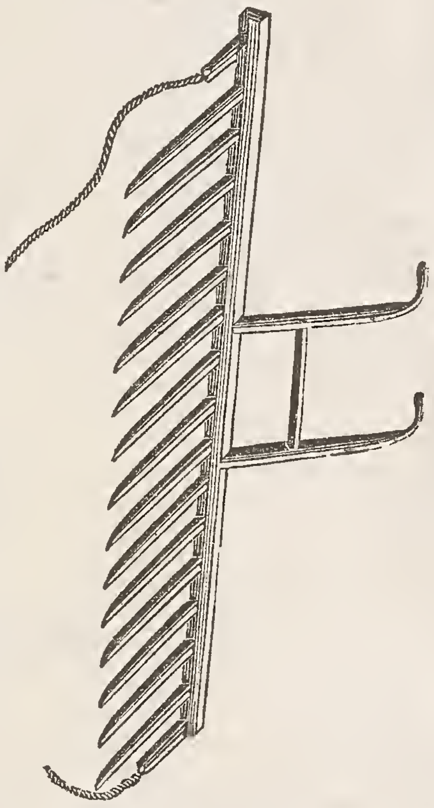
If the following mode of preventing the ravages of this insect should perform what it promises, it may be considered one of the greatest discoveries of the day for the fruit grower, in those districts infested by the worm. We copy from the Hartford Courant:

"Capt. Chauncey Treat, of East Hartford, has discovered a complete remedy against the ravages of the canker-worm, simply encircling the tree at the surface of the ground with Scotch snuff. The writer of this has examined the trees on Capt. Treat's premises, and found the circle of snuff completely fringed with thousands of dead worms. These trees were all tarred, and where the snuff was used, no worms appeared on the tar, and where the snuff was omitted the insects nearly covered the tar."

HORSE RAKES.

Having received several inquiries as to where these rakes may be had, the price, &c. and not being able to give the desired information, we publish the annexed descriptions and cuts, which are sufficiently plain, we trust, to enable any common carpenter to construct one, either of the common or revolving rake.

The Common Horse Rake—[Fig. 56.]



This is made of a piece of strong scantling, 3 inches square, and 10 feet long, into which about 15 teeth are inserted horizontally, and made of strong white ash or other tough wood. The teeth should be about 22 inches long, and one inch by 1¾ at the place of insertion, and tapering on the under side, so as to give them a slight turn upward at the point to prevent their running into the ground while using. The draught ropes are attached to the end of two projecting pieces of wood parallel to the teeth at each end of the rake. These projecting pieces should be about one-third of the length of the teeth. Those unskilled in the use of the rake, sometimes attach the ropes at once to the ends of the head; in this way, it becomes almost entirely unmanageable. The forward ends of the draught ropes are to be fastened to the horse's collar, leaving space enough between the horse and rake for the collecting hay. Handles, like those represented in the figure, (fig. 56,) are to be inserted in the head near the middle, for guiding the teeth and lifting the rake from the ground when necessary.

In using this rake, instead of the teeth moving onward upon their points, as in the common hand rake, they run along flat upon the ground, passing under and collecting the hay; when full, the handles are thrown forward, the rake emptied, and lifted over the winrow for another load. The rake thus passes backwards and forwards across the field, always emptying opposite the last heap, and thus forming regular winrows at right angles with the path of the rake. A few hours' practice will enable any one to use this rake without difficulty, the only skill required consisting in keeping the points of the teeth just so low as to pass under all the hay, and yet not run into the ground. When small obstructions occur, the handles are depressed, thus causing the teeth to rise, and the rake passes freely over. Large obstructions, as stumps and stone heaps, require the rake to be lifted from the ground.

The chief recommendation of this kind of rake, is its cheapness and simplicity. A good one need not cost more than two dollars. It may also be used on rougher ground than the revolving rake, as it is more easily lifted over obstructions. Where the ground is very uneven, the teeth should be much shorter. When one becomes well accustomed to the use of it, work may be done nearly as fast with this, as with a revolving rake, though much more laborious. Twelve acres of hay, part of it yielding nearly three tons to the acre, on a meadow of the writer, were raked into winrows, by means of one of these rakes, in about *six hours*, working time. It possesses another advantage over the revolving rake—it may be used for scraping the winrows into heaps for drawing, and if the hay is stacked in the field, for drawing the hay to the stack. A man with a rake and horse, not only raked the hay, but drew it at the same time to the stack, a distance of from ten to twenty rods, as fast as an active man could pitch with a fork. A hand rake need scarcely ever be used on the meadow, as all the scattered hay may be raked up in a short time after the rest of the hay has been drawn off.

The horse rake is very useful in raking stubble of wheat, and eminently so in pulling and gathering peas.

Shafts, instead of ropes, have been attached to the head of the rake, and have been strongly recommended; but they diminish the simplicity of the rake, and appear to possess no advantage on the whole, and for gathering and drawing hay, are positively detrimental.

The Revolving Rake.

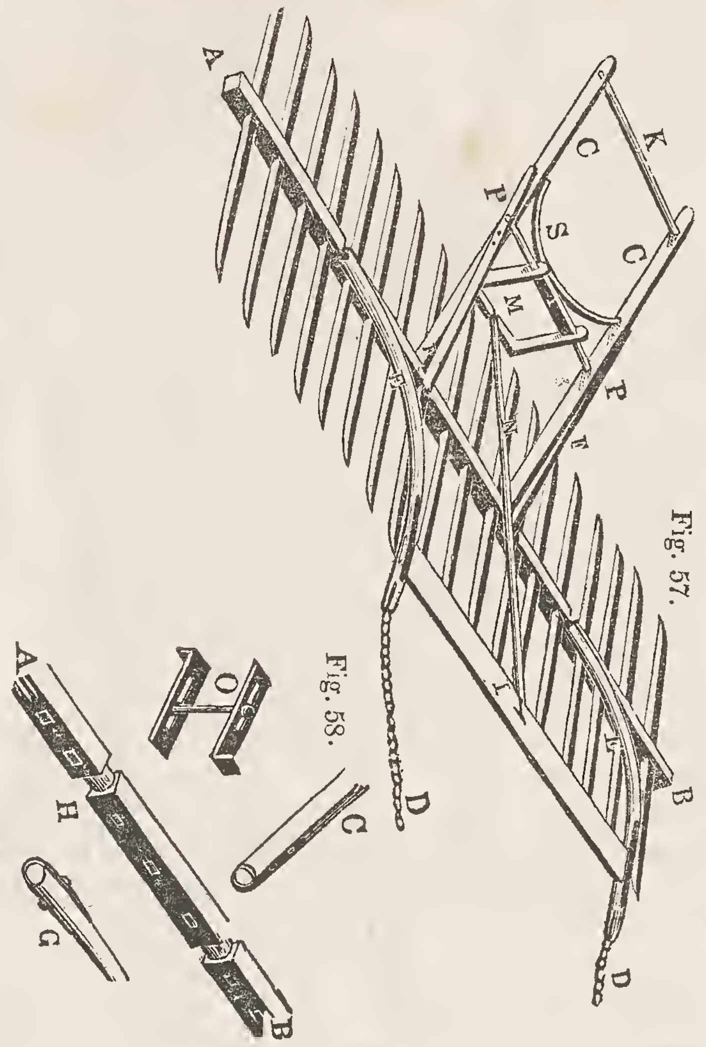


Fig. 57.

Fig. 58.

This is much more complex in its construction than the common horse rake, but possesses advantages over it in ease and expedition in raking. Its peculiar advantage is the facility with which it may be unloaded, requiring for this purpose but a slight elevation of the the handles, and without stopping once in crossing the whole breadth of the meadow.

Its construction is as follows: The head A B, fig. 57, is a piece of strong scantling, three inches square and ten feet long, through which eighteen holes, one inch square, are made to receive the teeth, which are pieces of the strongest white ash, one inch square and three feet long, projecting equally on both sides of the head when inserted, and forming a double row of teeth, each about eighteen inches long. The draught chains or ropes, D D, are attached to the forward ends of two curved arms E E, which are connected at their other ends to the head of the rake by iron straps passing round the head so as to allow it to revolve freely. G, fig. 58, represents a portion of one of the curved arms, showing the hole formed by the iron strap, and H represents a part of the head which turns in this hole. These arms are held firmly together by the cross piece I. An improvement in the curved arms is made by constructing them of two pieces at right angles, in a form similar to a carpenter's square, the first or shortest piece rising perpendicular from the head, and the other projecting forward, and to which the draught chains are attached. By this construction, more space is allowed beneath these arms for the collection of the hay.

The cross rod K, connecting the handles C C, serves for guiding and managing the rake. These handles are connected to the head by a contrivance precisely similar to that of the curved arms. At the middle of the handles is a cross rod P P, upon which turns the small frame M, which is connected (by turning joints) by means of the rod N, to the cross piece I. This rod must be of just such length, as to cause the frame M, when pressed down upon the teeth by the handles, to touch them within about half an inch of their points; by this, the teeth are pressed flat upon the ground while raking. To empty the load, this frame is raised by the handles beyond the reach of the teeth, and they pass it freely without touching. The rake is unloaded by means of the following contrivance. Outside of the handles C C, are two pieces of wood F F, turning freely upon the two projecting ends of the rod P P, as pivots with their lower ends resting upon pieces of iron fastened crosswise on the head of the rake, just outside of the joints connecting the handles to it. The shape of these pieces of iron is shown in a detached view at O, fig. 58. When the handles are raised, the pieces F F are thrown forward on these pieces of iron until they strike the projecting part of them, when they immediately act as braces, and cause the rake to rise with the handles. The points of the teeth thus strike in the ground, and the horse continuing in motion, causes the rake to make a semi-revolution, emptying the load, and throwing the back row of teeth forward to be filled as before. The handles C C, should be perfectly parallel, that the pieces F F, may play freely. S is a strong iron brace, fastened at each end to the handles, and at the middle to the cross rod P P.

The cost of this rake is about six dollars.

The revolving rake is better adapted for use on large farms and smooth meadows, and the common horse rake on small farms and rough meadows.

Report on Agricultural Schools.

We are gratified to observe that the important subject of agricultural and horticultural schools has not been lost sight of by our farmers; and we trust it will not be until either by private or public munificence, the influence of such institutions are fairly tested among us. We have the fullest confidence that a school on the plan of some of those existing in France, Germany, or Prussia, would not only render the most essential aid to the cause of agriculture, but be the means of rearing up for the public service a body of men with mental and physical powers, well trained for the most arduous employments or duties. One such school put in successful operation, would furnish an example for many; and we might hope to see in every state such schools, as we now see colleges, in every direction, diffusing the lights of science and knowledge.

We have before us an able Report, made to the Agricultural and Horticultural Society of Seneca county, at the annual fair, held in Ovid, on the 4th of March, 1840, by A. B. Dunlap, Esq. It is a well written and just exposition of the claims of the agricultural public to such institutions; of the benefits they would confer; and the principles on which they should be established. We should be glad to hear that the enterprising and wealthy farmers of that beautiful section of the state, had resolved to carry out the design here so skilfully presented, and set the Union an example of the first agricultural school this side the Atlantic.

Our space will only allow a few limited extracts, where we should be pleased to quote largely. In answer to the question, "Why has not the farmer attained that rank in society to which his dignified calling entitles him?" Mr. Dunlap answers correctly and obviously—"*The farming class is not sufficiently educated.*"

The report proceeds to point out the kind of education necessary for the farmer, the advantages accruing from such an education, and the impracticability of obtaining it at any existing institutions. On these topics he has the following cogent remarks:

> "No system of education at present in operation in this country, combines so perfectly the great objects to be aimed at, namely, the full development of the physical, intellectual, and moral powers, as would be done in an agricultural school. Here the student could obtain that kind of knowledge which would make him a thinking and observant being. Here he could be taught in such a manner, as would make him capable of inquiring into the cause of things, and of making his own logical deductions. Here he could obtain an education that would make him not a mere book-worm—but leave him an active, useful citizen. An education that would effect the greatest good possible, with the least expense."

Art, is the name given to the operations that arise from necessity; science is the result of leisure and reflection. Herschel has said that "science is the knowledge of the many, orderly and methodically digested and arranged, so as to become attainable by one." It is the union of art and science that is required to render agriculture what it should be, and what it assuredly will be, however long such a consummation may be delayed. On this point the Report says:—"There are no schools in this country where the science and art of farming are united—where theory and practice are combined. This is what is aimed at in an agricultural one—it aims to throw around what is often called a dull and plodding art, the dignity and allurements which science can impart—to place the business of the farmer upon the broad basis of the unchanging laws of nature. This end cannot be accomplished upon the farm to any good purpose, because there are no adequate means within the operator's reach. The farmer's son has not the implements necessary for the work; he has no one to direct him in his investigations. Years have rolled away, and how little progress has been made in investigating and understanding the laws of nature; and especially the bearing of these laws upon the cultivation of the soil. The great reason is, that the man of science is at present confined to his closet, and does not furnish the application of the general principles he inculcates; and even when he attempts this, he makes such errors as to bring his well established laws into doubt and contempt among the practical class. On the other hand the mere practical man, is looked upon as of an inferior rank in the scale of being, because he cannot explain none of the wonders, and is blind to so many of the beauties that surround him. The very reason why the business of the farmer has not attained that elevated stand to which it is justly entitled, is because the farmer is conversant with matter without understanding a single law by which it is governed; hence it is that science and art mutually aid and advance each other—that the one gives dignity and efficiency to the other."

The plan recommended in the Report, is the same in substance as the one recommended in the May number of the Cultivator, for 1839, and is probably one embracing all the essential points of an agricultural school. Experience here, as in Europe, would doubtless suggest improvements; but the grand object of such institutions is so direct and easily defined, that any trifling defects in arrangement could hardly vitiate their usefulness. Of the utility of such schools no one entertains a doubt; and their practicability we hope to see tested, either by state munificence, associated enterprise, or individual liberality.

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We have also received from the same source, an ADDRESS, delivered on the 20th of March, 1840, before the Agricultural Society of the south part of Seneca county, by Wm. R. Schuyler, Esq.

It is an excellent address, enforcing in strong and appropriate language the utility of such associations, and the immense benefits they confer on the community; and illustrating his positions by reference to recorded results, particularly those effected by the agricultural law formerly in existence in this state. One of the most favorable signs of the present time, we consider to be the multiplication of such associations, as they can scarcely fail to produce the best effects by bringing farmers into contact with each other, and making more extensively known the most esteemed and profitable modes of culture, the most valuable animals, and the most productive and useful vegetables. We have room for but a single extract from the address.

> "The rapid advancement making in the agriculture of other countries, admonishes us that if we wish to be successful competitors, we must become not only practical but scientific operators. Says an elegant writer, 'a nation must seek for wealth and power, by encouraging that active and profound knowledge, which ascertaining the principles, the proportions, the combinations, the affinities of the mineral; the habits, the productions, the qualities of the vegetable; and the manners, the instinct, the properties whether useful or noxious, of the animal kingdom, can give to every substance which it possesses or can obtain, every appropriate use; can procure for them their utmost value; can convert them at will into instruments of pleasure, of riches, of grandeur, and of power.' No people have yet attained this high point of national improvement; but exactly in proportion to the progress of improvement, will be the relative station which each and every country will occupy in the scale of nations. How important, then, to give to the pursuits of science connected with agriculture, every encouragement which they require or which they can receive."

We say to our public spirited farmers, go on. Give such associations energy and support, and in an increased product, and improved agriculture, you will find an ample reward.

Raising Calves.

In the interesting account furnished by Robert Colt, of Pittsfield, Mass. in reply to queries addressed him by the Commissioner, of his method of farming and its results, the following occurs as the 21st question and answer.

> "What is your management of calves intended to be raised?"
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> "Take the calves from the cow, and feed them with 3 quarts of new milk twice a day for three months, adding after they are 3 weeks old, a little rye and corn meal scalded, then weaned off upon dry provender and grass, roots, or hay as the season may be."

In the same number of the N. E. Farmer, in which we find the foregoing, a "Farmer" gives his method of rearing calves which we also copy:

> "Take the calf from the cow when quite young, say a day or two old, learn it to drink new milk first, in such quantity as it will take, as there is not much danger of its taking too much when so young. When it drinks well, skim the milk that has stood from morning till night, or night to morning, and heat it, so as to give it to the calf blood warm, and two quarts at a time twice a day; when the calf is a week or two old, let the milk stand longer before skimming, and as he grows older increase the quantity, till it gets to four quarts at a time, twice a day. If the milk is scalded, and then cooled to blood heat it will be better. If the milk is given cooler than blood heat, it causes the calf to scour, which is injurious."

We have tried repeatedly these distinct methods of feeding on new milk and on skimmed milk, and have never been able to perceive any material advantage in favor of the former. Feeding with skimmed milk makes rather more work than feeding with new milk, or allowing the calf to suck the cow, as is practiced by some, but the cream saved by using skimmed milk, will amply repay this extra labor, and in the course of the ten or twelve weeks the calf should be fed, the butter made, will nearly approach the actual value of the calf. Calves soon begin to pick a little hay or grass, and they should be freely indulged; roots, such as the turnep, or carrot, cut fine, or what is better, grated, may be given them early with advantage.

The Sugar Beet.

The following answer to the inquiry of J. J. B. of New-Rochelle, was accidentally omitted in the May number. His soil, a sandy loam, appears to be the right kind required for roots, *when made sufficiently rich.* To produce the roots in perfection, the soil should be by nature, or made such by cultivation, a deep vegetable mould, and *great* crops can be grown on no other. Where the land to be put into roots is not sufficiently rich, and manure is with difficulty obtained, that which is applied, should be so given, that the roots may derive the full and immediate benefit of it. If fresh stable manure is used, the manure may be placed in furrows, the depth of which must depend on the state of the soil, as it regards a capacity to retain moisture, and on the earth thrown back by the plow over this, the seeds are to be sown. In France and in England, where the sugar beet and the ruta baga are such prominent objects of culture, manure in the form of bone-dust, or poudrette, is deposited in the drill furrow by the same machine that plants the seeds; and a small quantity is in this way found to produce a greater effect on the root crop, than a much greater quantity would applied in the usual way over the whole surface. Roots of any kind require a vigorous start in the outset, and the application of manures directly to them secures this effect. Some soils are too dry and light for the beet or turnep. This difficulty may be removed by giving them more capacity for the retention of moisture, by the application of clay, or clay marl, a remedy which has been tried with the most decided success in a multitude of cases. Much of the desired effect of manures is lost on such light and dry soils, and their texture should be improved, before the cultivation of roots can fully succeed on them. We approve the determination of J. J. B. to grow roots. They are now one of the most important of our crops, and when a more improved and profitable system of farming shall prevail, their value both as a crop, and an ameliorator of the soil will be still better understood.

Washing Sheep in Germany.

Is is well known to wool growers, that the species of Merino produced from the Infantado or Nigretti flocks of Spain, have a superabundance of grease, almost of a pitchy nature, and which cannot be extricated without some labor and care. Mr. Carr, an English traveler in Germany, gives the following account of the process of washing this wool in the north of that country, where the Infantado is preferred by the small farmers as more hardy, though producing wool a shade inferior to the Electoral Merino, or what we call the Saxon breed.

> "The greatest care," says Mr. Carr, "is at all times necessary in the operation of washing. A warm mild day, without harsh or drying winds is indispensible, and care must be taken never to rub the fleece with the hand. A marl pit, with a depth of from 8 to 10 feet of clear water, is a favorite washing place, and is thought to become better every year. The sheep are thrown in from a stage, in the evening, and made to swim the whole length of the pond (20 or 30 yards) between rails, with boards on one side, from which women or boys assist them through their bath, by placing wooden rakes or crooks under their chins, and so passing them onwards. When the water has dripped from the fleeces for an hour or two, the sheep are put into the house for the night, as close together as possible, in order to cause the greater evaporation; and the next day are swung through the same pond three or four times, the last time the head being rubbed a little, and they are kept in the house (well supplied with clean straw) on dry food, for three or four days, until the wool by sweating, as it is termed, has recovered its characteristic softness, when the shearing takes place."

Mortality among Swine.

The New-England Farmer, of January 29, contains an article from the pen of G. P. Burnham, Esq., of Roxbury, giving an interesting account of a trial made by him in feeding swine with *hay tea,* that is using a strong decoction of hay to mix with their other food, which had been refuse cabbages, beets, carrots, with an occasional mixture of ruta baga, and as these partially failed, with more ruta baga and sugar beet, the whole boiled and mixed before feeding to them. Mr. B. was induced to adopt the hay tea, from the flattering account given of its properties by Mr. Saunders, an English breeder of pigs, whose account was copied into the "American Swine Breeder" of 1839. Mr. Saunders states that in a week or fortnight after using the tea, his hogs rapidly improved in appearance, and gave every indication of its nutritive power, and its agreement with them. Mr. Burnham's experience was directly the reverse of Mr. Saunders. From the commencement of mixing the *hay tea* with their food, they declined in appearance, their coats grew rough, and *all* breeders, shoats and pigs, fell off sensibly. Mr. B. did not attribute these results to his new mode of feeding, but continued its use, until nearly all his fine breeding stock, consisting of Chinese, Berkshire, and Mackay sows and boars, all of the best selected kinds, with numbers of pigs, both of the pure breeds, and crosses of several kinds were destroyed. The appearance, on dissection in most of the cases were very similar. "The lower intestines completely clogged and tied up into knots, the lungs spotted and inflamed, and the liver full of small biles or pustules." The knotting of the intestines was the same in all, but the more protracted the case of the animal was, the worse in general was the state of the lungs and liver. With the greatest care and attention Mr. B. was unable to pass any medicine after the attack, the contractions being impervious. His losses, as stated in his letter, were including young and old between 40 and 50. Mr. B. had discontinued the use of hay tea, and returned to his former system of feeding. He does not assert that the hay tea was the cause of his losses; but the probability is certainly very strong that it was. The hay used was clover and herd's grass.

There can, we think, be little doubt that the astringent qualities of the tea was the cause of the evil. We have given hay tea to calves, mixing it about half and half with milk, and they suffered no injury from that mode of feeding; but they fed daily on grass, which would have counteracted any such tendency. Consumption would have produced the results described by Mr. B., viz: indigestion, inflammation, and consequent death.

Every farmer and poulterer knows that nest eggs are very liable to be frozen and spoilt in the spring of the year, and when cracked are eat by the fowls. To prevent this, manufacture a few eggs from lumps of chalk, and while they are secure against freezing, they will be accepted by the fowls as veritable eggs, and prove very durable

Cleaning Fruit Trees—Pruning.

Mr. Willot, in the Horticultural Register, gives the following directions for cleaning fruit trees, and preserving them from insects.

> "The destroying of insects is also another important point in the culture and well being of fruit trees, which is effected by clearing and washing the outer bark—a process which I have reason to believe, can be done more effectually in the winter than in the spring. In the operation, care must be taken to remove all the loose outer bark, by scraping it from the tree so as to not injure the inner bark. In winter pruning, any large amputations or wounds made, should be pared smooth with a sharp knife, to which the following wash may be applied, viz: equal parts of clay and cow-dung, well mixed and composed together, and a moderate portion of potash added, and should be made of such a consistence as to be applied with a hair brush; but, if the trees are very badly *infected with insects,* I would recommend the same composition made into a thinner consistence, mixed with a quantity of the wash generally used for destroying the mildew on the grape vine, made of lime and sulphur, in the following proportions, viz: eight gallons of the composition to one pint of the wash, which apply to the bark of the trees in a thin, regular manner, with a brush, when the outer bark has been scraped and cleansed as before directed."

Mr. Willot is a strenuous advocate for winter pruning; and we think that either winter, or late pruning, is preferable to pruning in the spring, when the sap is flowing upwards freely, as is commonly practiced. The sap must be elaborated in the leaves before it can be converted into wood; and the more the tree is exhausted of the sap by bleeding, the less rapidly can the wound be healed by the formation of new wood. It would be much better if the pruning of orchards and fruit gardens was performed more frequently, and not at such long intervals, so as to prevent the infliction of the severe wounds made by the removal of large branches. On skilful and judicious pruning much of the quantity and excellence of fruit, as well as the health and duration of the tree, is depending. The opinions of the Chinese on pruning appear to be well founded, and worthy of notice. The writer is speaking of the mulberry, but the remarks are applicable to other trees—"The last month of the year (January) is the most favorable for pruning: the month that follows, less so. In the last month of the year the sap is quiescent, and the cessation of labor in the country leaves much leisure to the cultivators. Those persons who prune in the spring, only do it in order to peel them easily, (to make paper,) but that causes the mulberry or other trees, to lose a large quantity of sap."

DOMESTIC ECONOMY.

Plain Rusk Pudding.

Rusk your bread in the oven, and pound it fine; to five heaped table spoonfuls of it, put a quart of milk, three beaten eggs, three table spoonfuls of rolled sugar, a tea spoonful of salt, half a nutmeg, and three table spoonfuls of melted butter; bake an hour. It may be eaten without sauce.

Wheat Flour Pudding.

Stir into a pint and a half of flour, a quart of milk. It must be done gradually, so that there may be no lumps. Beat seven eggs and put in, and add two table spoonfuls of melted butter, and two tea spoonfuls of salt. Grate in half a nutmeg. Half a pound of raisins may be added, but if the pudding is to be baked, they must not be put in till it has cooked long enough to thicken, or they will sink to the bottom. This flour pudding may be either baked or boiled, requiring an hour and a half to bake, and two hours to boil. If boiled the bag must not be more than two-thirds full, or it will burst in the boiling. It must be put into boiling water and kept boiling till done. After boiling a few minutes, turn the bag over; it will render the pudding light. Flour puddings must be eaten when cooked, or they fall directly. Serve them up with rich sauce.

Boiled Rice Pudding.

Into a quart of boiling water put two tea-cupfulls of rice, two tea spoonfuls of salt, and let the rice boil till soft. Then stir in a quart of cold milk, and half a pound of raisins, first taking the rice from the fire. Put in a couple of beat eggs, and half a grated nutmeg. Replace it on the fire, and let it boil till the fruit is soft. Sauce, butter and sugar.

Baked Rice Pudding.

Boil a quarter of a pound of unground rice, in a quart of milk, till soft; then stir in a quarter of a pound of butter; take it from the fire, put in a quart of cold milk, two tea-spoonsfuls of salt, and a grated nutmeg. When lukewarm beat four eggs with one-fourth of a pound of sugar, and stir it into the pudding. Add half a pound of raisins, and turn the whole into a buttered pudding dish, and bake it three quarters of an hour.

Rice Snow Balls.

Take small tart apples, pare them, and take out the cores with a knife, filling the cavity with a stick of cinnamon or of mace. Put each one in a small floured bag, and fill the bags about half full of unground rice. Leave plenty of room for the rice to swell. Put them in a pot of water, with a table spoonful of salt to two quarts of water. Much water will be required, as rice is a great absorbent. Boil an hour and twenty minutes, then turn them carefully out of the bags into a desert dish, and garnish them with marmalade cut in slices. Serve them up with butter and sugar.

DICTIONARY OF TERMS
USED IN
Agriculture and its Kindred Sciences.

BREEDING. A term applied to the improvement of animals by crosses, or breeding from new varieties, by which new and superior kinds are obtained, and any desirable quality, whether of size, propensity to fatten, or for milk, secured. It is only within the last half century that the business of breeding has received the attention it deserves; and the astonishing improvement made in the animals of those countries where it is best understood and practiced, shows that few steps in reducing agriculture to a science, have been attended with happier consequences. Such has been the result in England and Scotland, that the average individual weight of the immense numbers of cattle and sheep now annually slaughtered at Smithfield, is nearly or quite one-half greater than it was at the time the first efforts at improvement by breeding commenced. Of the many who have distinguished themselves in Great Britain, as breeders, Bakewell and Collings, Culley and Berry, are noted for cattle, and Bakewell and Ellman have distinguished themselves in the improvement of sheep. The principles of breeding are few and simple. Let the object desired in any particular race of animals be distinctly understood, and the animals for breeding or crossing be selected with reference to these objects. It should be remembered, that in determining the character of the offspring, it is found by experience, that the influence of the male is greater than that of the female. It is by the observance of these, and a few other principles equally plain and simple, that Bakewell and the Collings raised the Durham short horns to so high a standard; that the first named gave to the Leicester sheep a form and weight of which former sheep growers had never dreamed; that Ellman has brought the South Down to within a few grades of the Merino in fineness of wool; and that the improved varieties of swine, such as the Chinese, Berkshire, and others, have so far exceeded in value and actual profit to the farmer, the common kinds of this animal. Great efforts are at this time making in this country, and with decided success, to raise the standard of our domestic animals, by importations from abroad, and careful breeding at home. The results are such as to encourage the belief, that in a few years first rate animals of all kinds will be as common here as they have hitherto, and most unfortunately been rare.

BROADCAST. The putting of seeds into the earth is performed in various ways, as by broadcast, planting in hills, drilling, and by dibbling. Grain in this country is usually sown broadcast, while maize, potatoes, &c. are planted. In sowing broadcast, considerable skill is required to spread the seed equally over the ground. A failure of this kind is not only injurious to the crop, but as when the grain springs up, it may be seen for a great distance, the unevenness of the sowing gives a most unfarmerlike aspect to the field. In broadcast sowing, it is requisite to take advantage of the wind, or guard against its drift, as in this way great inequalities are sometimes produced. When grain is sown broadcast, the plow or the harrow must be relied on for covering it; and unless these operations are well performed, much of the seed will remain uncovered, and be lost to the purposes of vegetation. In planting, the hoe performs the office of covering the seeds, and of course the depth can be easily regulated to any desired thickness of earth in covering. Drilling and dibbling are as yet but little practiced in this country, but they have many advantages to recommend them, both in the saving of seed and the equal manner in which the seeds used are distributed. (See these articles.)

BROKEN WIND. This is a disease of horses, in which the inspiration is performed by one effort, and the expiration by two; which is plainly distinguished by observing the flanks, and noticing that the expiration occupies double the time of the inspiration. The cause is, the rupture or running together of some of the air cells in the lungs, and the consequence is, that while the expansion of the chest fills the lungs with air, an unusual and double effort is required to force it out from the unnatural position it occupies. The origin of the disease is to be found most commonly in the previous treatment of the animal; though it is sometimes the result of inflammation of the lungs. Horses which are fed on bulky food, which are allowed but a short time to eat, or are naturally great feeders, and which are put to severe work on a full stomach, are the horses that most commonly are broken winded. Race horses, carriage and coach horses, that live principally on grain, or food of little bulk, rarely suffer from this disease, though their exercise is frequently of the severest kind. Farmers' horses suffer the most, as the food they receive is generally more bulky, and the time allowed for receiving and digesting it, is less than with the kinds named. The bulky food presses severely on the lungs, and while filled in this way to repletion, the horse is taken from the stable and put to the plow or wagon, where the result is such as might reasonably be expected, serious injury to the horse at the time, and fatal results hereafter. No person, we think, has ever seen a broken winded horse cured. Palliatives are all that can be expected to produce beneficial effect. The nature of the disease points out these. Food containing much nutriment in little compass; water sparingly given through the day, or while the horse is at work; the bowels kept loose; and above all, the horse must never be put to hard work while the stomach is full. Broken winded horses should not be turned out to grass; the food is too bulky; the stable and grain is their proper place and treatment.

BUCKWHEAT. A triangular grain produced by a plant of the *Persicaria* tribe, of which the *Polygonum fagopyrum* is the common cultivated kind. Its leaves are arrow shaped; its flowers purplish white. It originated in the north of Asia, and has been known in England about 200 years. Buckwheat is a valuable grain, and is grown extensively in Pennsylvania, and all the states farther north, as food for cattle, swine, and poultry. Buckwheat cakes, well made, are an excellent substitute for bread; and in some years have furnished a large part of the food of the laboring part of the community. When well prepared, such cakes have established a reputation, which, during the winter months particularly, renders them a welcome visitant at the tables of the most fastidious. Some farmers sow buckwheat for the purpose of plowing it in, as a green dressing for crops. Its quick and luxuriant growth renders it very suitable for this purpose. Buckwheat straw, if properly secured and kept from exposure, is one of the most valuable kinds of fodder for animals in general, but it must be cut before it is bitten by frost, to retain its good qualities. There is no plant which furnishes more abundant supplies of honey for bees, or for a longer period than buckwheat, and in some places it is sown for this purpose alone. It gives a distinct flavor to honey, when it is new, but it is by no means unpleasant, and it loses it by age. Within a few years, another kind of buckwheat, (*Polygonum tartaricum,*) or Indian wheat, as it is called by some, has received a good deal of attention in some parts of our country, and been highly recommended as a great bearer and excellent grain. Whether it will prove superior to the common variety remains to be seen. All kinds of buckwheat are valuable, as producing good crops on soils comparatively exhausted, and requiring but little seed to an acre. Indeed the great fault in sowing this seed is, that in spite of precaution, it is used too liberally. If sowed too early, there is danger from spring frosts; if too late, the fall frosts will be likely to overtake the plant before the seeds are ripened.

BUD. All plants, vegetable stems, and every branch springing from these, are developed from buds or germs, and these at first are so small, that no optical means we can command are able to determine their origin. When developed, the bud is found to contain within itself the parts that are to arise from it, in miniature, and folded up as it were, in the smallest possible compass. So true is this, that the future plant or tree may be considered only as an enlargement of parts already existing in the germ. From the fact, that each bud is a perfect plant, the practice of *budding*, or the insertion of buds in inoculation to propagate trees or plants, or substitute valuable varieties for those of inferior quality, has arisen. A bud so inserted, attaches itself to the tree, and with proper care, forms a new head to the original stock, the fruit or foliage of which is like the tree from which the bud is derived.

BULB. There are a number of plants, the roots of which are perennial, while the tops are annual; and as these seem destined to contain the nourishment of a new plant, they are enlarged, and either flatted or rounded as the variety or species may happen to be. Many of the finest flowering plants are bulbous, and in some places, particularly in Holland, the culture of such bulbs (tulips and others) for sale, is an important and lucrative branch of trade. Among farmers, the only two bulbous roots that attract much attention, are those of the onion and turnep. Bulbous roots, like the tuberous ones, are preserved with ease, requiring only a temperature of little above freezing, to prevent germination, and atmospheric dryness to prevent mouldiness or rotting.

BURNING. In agriculture, burning consists in taking the turf from land with as much of the earth as will adhere to it, drying it thoroughly, and then either with or without the aid of other fuel, burning it in large pits prepared for this use. The greatest benefits of burning are experienced on clay soils, where a mixture of other earths are required to counteract the natural adhesion of the clay. In burning, all the clay particles are converted to a kind of brick earth; and this, on being spread over the earth, together with the ashes and salts produced in the process, furnishes an excellent dressing, as well as a permanent amelioration in the soil. The brick dust acts as the addition of siliceous matter in rendering the earth more friable, and from its color, it retains the solar heat better than when in its former state. Paring and burning is also destructive of all foul seeds, and of all insects, unless their habitation lies below the turf. In this case, the ashes not unfrequently destroy or drive them away. The ashes so made are sometimes mixed with lime and vegetable or animal manures, in the manner of composts, and then applied to the soil with great effect.

BUTTER. Milk is composed of an oily, caseous and watery substance, from which butter, cheese and whey are respectively produced. There is scarcely an article of domestic production in more extensive use, or one which varies more in quality than butter. To produce the best, it is necessary that the food of the cow should be sweet and good; that the milk should be kept free while the cream is rising from all offensive odors or impure air; that the cream should be taken off before the milk sours and renders separation impracticable; that the churning should not be delayed, lest the cream become bitter and rancid; that the churning should be performed with the cream at a proper temperature, or not far from 63 degrees; and that the separation of the buttermilk should be complete. After the churning is commenced. and particularly after the formation of the butter is begun, there should be no interruption until the work is finished. The great cause of butter becoming rancid, or *frowy*, is the imperfect separation of the buttermilk, and neglect in salting. None but the best and purest salt should be used for butter; and when these several points are attended to, there is little danger that the article will not be of good quality. Butter made in this way, freed from milk, salted with pure salt, and every part of the process conducted with the neatness which is indispensable in the dairy, can be kept for any desirable time, if packed in close vessels that exclude the air, and kept at a low temperature. The quantity of butter a given quantity of milk will produce, varies much in different animals, the milk of some being much richer than that of others. Tall slender glasses are useful in determining the quality of milk, as they show the relative thickness of the cream. Cows will give of butter from 150 to 300 pounds in a year, and none but the best animals should be selected for a butter dairy.

CABBAGE. (*Brassica oleracea.*) This well known plant is extensively cultivated in most gardens for culinary purposes; and in some places is grown largely in the field for feeding to animals. The cabbage formed a prominent article in the plan of Cobbett, by which one-fourth acre of land was to support a cow the year round. In climates that are suitable, the plant called the tree cabbage will furnish a great amount of food, and is profitably cultivated for animals. The common cabbage requires a rich soil, and will thrive the best in loam. It should be planted from four to six feet apart, according to the kind; some varieties being much larger than others. Cabbages should be planted as early as the ground can be fitted for their reception, and those designed for summer use, should be started in hot-beds, where this convenience is at hand. In the preservation of cabbages for use in winter, they are generally put in cellars, but they are very apt to mould and rot; and if the temperature is not very low, the heads will crack open, and the new shoots put forth before the season for transplanting arrives, thus destroying the head. Burying in the ground where the earth is dry, the covering of earth comparatively slight, is probably one of the best methods of preserving them fresh and in good order. The cabbage will bear a considerable degree of cold without injury, if situated so that the frost is taken out gradually by the earth. Large quantities are annually made into sour krout, an article which forms an important part of all ship stores destined for long voyages, and to the use of which, much of the exemption of sailors from that terrible disease the scurvy, is now to be attributed. There are many varieties of this plant; but the general properties are the same.

CALCIUM. This is the name of a metal discovered by Sir H. Davy, and constitutes the basis of lime. It is of a silver color, burns with great brilliance when brought in contact with atmospheric air, and absorbs oxygen so rapidly, that it instantly assumes the form of lime. The term *calcareous*, as applied to earths containing lime, is derived from this word; and in the form of carbonate of lime, or common limestone, there is perhaps no substance more universally diffused, or which acts a more important part in the economy of vegetation.

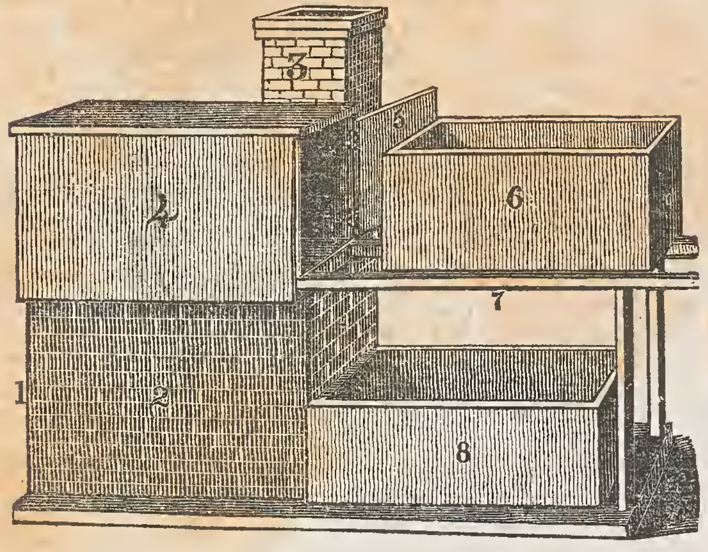
CALORIC. This is the name given to that agent which produces heat and combustion, and exercises a great influence on the principal phenomena of nature. It is imponderable, and appears to exist in two states, *free* or uncombined, and *latent* or combined. Perhaps there is nothing that has a more decided influence in nature than caloric. Under God, it seems to be the supporter of all vegetable and animal life; and it appears certain, that a state of absolute cold would be a state of absolute death. The opinions of learned men at the present time seem tending to the belief, that caloric, electricity, galvanism, magnetism, and light, are effects of one and the same agent, depending for the different appearances and effects on its accumulation, rest or motion. On agriculture, this agent acts with great effect, since the soil is cold or hot according as it retains or parts with the caloric it receives from the sun. Soils that are black or white receive the least benefit from heat; the black mould, while it acquires heat with great rapidity, giving it off still more freely; and the white soils, owing their color principally to clay that retains moisture very strongly, scarcely feel its influence, the heat being carried off in evaporating the water. The experiments of Rumford and Leslie show, that a vessel covered with lamp black radiated heat at the rate of 100 degrees, while one made of bright tin plate, gave out only 12 degrees. Soils in which mould or black earth is properly combined with silex and alumine, will retain heat the longest, as the black gives it out to the others instead of radiating it into space. A melon laid on a bed of powdered charcoal will ripen, when one on common earth will remain green and immature.

A Good Sheep.

A letter from a correspondent at Skaneateles, has the following:—"Jacob Vanatten, of Skaneateles, has a buck, from which he last year clipped 9 lbs. 12 oz. of wool, of excellent quality. This fleece made 8 lbs. 12 oz. rolls, from which was spun, $17\frac{1}{2}$ runs, or the filling of 19 yards of fulled cloth, equal to $9\frac{1}{2}$ yards of such cloth from one sheep."

Communications.

Robinson's Improved Root Steamer.—[Fig. 59.]



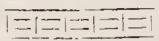
1. Plan of mouth of furnace.
2. Furnace 4 feet long by 1½ wide outside.
3. Chimney led off from one side of furnace.
4. Steam chamber, 4 feet long, 2 high, and 2 wide, made tight, of two inch plank, well clamped, and the bottom of sheet iron, nailed air tight.
5. Door, 4 inches shorter than the height of chamber, that space being for water.
6. Car, made just large enough to fill the chamber above the water; the wheels should be of iron, and run in a casing inside of car; the bottom of car to be made of slat or wire work, and hinged to open down; an iron handle is on an outer end of car to hook on to, to draw it from the chamber.
7. The rails laid in the steam chamber and extended out 12 or 15 feet.
8. A trough or vat 4 feet long, 2½ wide standing directly under the rails, and into which the whole contents of the car are emptied, by a single blow knocking the bottom open as soon as drawn from the steam chamber.

9 & 10. (not shown). Same kind of troughs.

Messrs. Editors of Cultivator—Enclosed I send you a very rough draft, of what I hope may prove a very useful invention. My drawing is necessarily rough, for the school in which I got the most of my education, had but one scholar and one teacher, and him not capable of giving many useful lessons in self-teaching, and this draft is my first lesson in that most useful and most neglected branch of education, which ought to be taught in every school.

The benefits of my "Rail-Road Steamer" are, that all of the very hard and unpleasant labor of handling the beet, potatoes or other roots, is saved; and much of the labor of filling the steam tub or box in common use is also saved. The rails should extend from the steam chamber to the potatoe bin, and all the potatoes or other roots to be cooked before freezing weather, could be kept on a floor raised just high enough for the car to run under, and then be filled through a trap door. Having three or more receiving troughs under the rails, into which the contents of the car would be emptied, would enable us to always have one of them cool.

Whenever it could be so arranged, these cooling troughs should be right along side of the feeding troughs, only having a passage between. When this is not practicable, put wheels to them, so that they could be run upon the floor, on rails extending out of the steam house to the hog pen. A pump should also stand near the steamer, whenever it can be so arranged. The steam chamber must also be furnished with two guage cocks, one close to the bottom, and one just at the top of the water line.

The plan of this steam chamber, is recommended for the cheapness of construction, but steam may be generated in any other way, and conveyed to a similarly constructed chamber. This chamber may be extended to any required size, even so that 100 bushels may be cooked at once. It will require no extraordinary mechanical skill to construct it. The joints should all be put together with white lead. The bottom should be made of sheet iron, of about 16 to 20 lbs. to the sheet, nailed on with broad headed wrought 4 inch nails, so that the heads will nearly touch each other. The bottom part of the clamp, must be an iron rod of course. If the sides of the chamber project 3 inches over the outside of the brick work of the furnace, the wood work will never burn while there is water in the chamber. While in daily use, water must be kept constantly in the chamber, and when out of use, it must be carefully cleaned, and a pound of tallow would do no harm, to keep the iron from rusting. The door should be made to shut into a rabbet, which must be *listed* with woollen list or cloth, which will make it steam tight. The fastening of the door should be the weakest part. I would recommend a weight and pully, so that in case of excess of steam, it would act as a "safety-valve." The quantity of weight, experience would soon give. The bottom of the car may be made of wooden slats, thus,  though I would recommend wove wire, on a frame like the sieves of a winnowing mill. The wheels of the car must run in a casing on the inside of the car, so as not to take up any space outside, and require only a short pin for axles. They should not project more than an inch or two below the bottom, and may be of wood or iron. The rails may be of narrow inch and a half plank, with strips nailed on the sides for flanges, to keep the wheels in the track.

Now, gentlemen, I hope by this description and the drawing, you will be able to understand my meaning, and that you will conceive the plan to be of sufficient importance to induce you to procure an engraving, showing the machine and the appurtenances much more extensively than I have done, and publish the same in the Cultivator, for the universal benefit of mankind.

I also enclose ten dollars, with which I wish you (if you think the invention worthy of it,) to procure a small working model of the machine, to be kept in your office, or such other public place as you may designate, for the benefit of those who wish to build. As I do not intend to take any patent, and as I am not abundantly able to bear the expense, I recommend to all who are able, who make use of the improvement, and find it to answer a valuable purpose, to contribute sufficient, and place it in your hands, to reimburse my expense for the above model, and also to make two elegant working models, one of them to be deposited in the Patent Office, and the other to be exhibited at the annual fairs of the American Institute. If I may be permitted, without incurring the charge of egotism, I would suggest that the machine may be called "Robinson's Improved Root Steamer." "With affectionate regard,"

SOLON ROBINSON.

Lake C. H. Ind. March 14, 1840.

FENCING.

Messrs. Gaylord & Tucker—As the spring of the year is the time when farmers usually repair their fences, I have been led to reflect much upon the subject of fencing, and the various utensils used for the purpose. The state of New-York and our whole country, with, perhaps, few exceptions, is greatly deficient in all kinds of materials for fence. Stone, in sufficient quanties on our best lands, are not found; posts and boards are scarce, and at too high prices, and the timber of our forest have almost wholly disappeared. Hedges, wherever tried, has, almost without exception, proved a failure. Surely, then, it becomes an inquiry of much importance, What are we to do for fence? My own opinion is, that our country must rely principally upon rails, as being the most easily raised, and the most durable. The discussions which have been going on for years, with regard to the best time for cutting timber, have brought to light many facts concerning the duration of rails. Unquestionably there are now a vast many rails in western New-York, which have been in use thirty or forty years, and these, too, not of the most durable timber. Even basswood rails may be found, which are now tolerably sound, that have been laying in fence forty years. If the rails of the least durable timber, by being cut at the proper season of the year, will endure twenty and thirty years, surely then it is not unreasonable to expect that rails of cedar, locust, and chestnut may last even a hundred years.

Many experiments and suggestions have been published in agricultural papers, respecting the raising locust and chestnut from seeds, and black ash from sprouts, for fence, and the quantity of land requisite to supply an ordinary sized farm, and the time necessary for their growth. I believe most writers consider twenty-five years sufficient. I will set down the quantity of land at five acres, to supply a farm of one hundred. Surely, then, a little forethought and providence for our successors may secure our country from that most desolate appearance of a land without hedge or fence. Being a native of western New-York, and having my earliest associations with log houses and worm fences, I confess a preference for a rail fence over all others for farming purposes.

My object is not, now, to urge farmers to set apart land for raising fencing timber, but to make some suggestions with regard to rail fence, manner of building, &c.

There are two prominent faults with the rails split by the first settlers. They are too small, and many of them crooked. I have found an advantage in having rails ten and twelve feet in length, as many trees will cut to better advantage ten feet than twelve. Rails, to be durable, should be sufficiently large to require but seven for the highest fence. The manner of laying fence is most important to its duration, appearance and usefulness. The best rule I have ever known, is as follows—Let the line be sufficiently designated by ranging stakes; and flat stones, of four or five inches in thickness, procured for the corners to rest upon. To give a uniform crook to the fence, provide a pole seven or eight feet long, well sharpened at the butt end and pointed with iron. At about eighteen inches from the pointed end, fasten a rod at right angles with the pole, and extending three feet four or six inches for rails twelve feet long; but for ten feet rails three feet, or thirty-eight inches if much exposed to winds. Place this pole in a line with the ranging stakes, and the end of the rod will designate the place for the corner. Lay the bottom rail which should be large and straight, the butt end forward, and the other end crossing the preceding rail, at the end of the rod of the ranging pole, so that the corners on each side be in exact line. Let the five following rails be laid the smallest end forward, and notched, if necessary, to make them lie steadily. Rails are many times injured by notching. A very slight notch will usually be found sufficient. The top rail should always be laid like the bottom, the butt end forward, and when the fence is not staked, should be large and heavy. A new method of staking fence is becoming quite common, and I think it a great improvement. The stakes are placed perpendicular on each side of the corner, and united by a cap as it is called. This cap is made of plank six inches wide and sixteen inches long, having two three inch holes bored through it, eight inches apart.

The cap should be placed on the fourth rail, and the rails above it will bind between the stakes, so as to render the fence firm and immovable. I have seen fence staked in this way, taken entirely off the ground on which it stood, by high winds, and yet had not lost its upright position. As a general rule, I think that new rails should not be taken to repair old fences, but rather let the poorest part of the old fence be entirely removed, and its place supplied by a new one. There is much advantage in laying over old fences, raising up the corners and taking out the defective rails. Many an old fence which is now almost useless, by raising the corners out of the ground, and putting it in a perpendicular position, might do service for years.

The most prominent objection to worm fence is, that it takes up too much land. But this is more imaginary than real. One mile of fence, even when you own the land on both sides of it, only occupies one acre; and this acre is far from being lost, as the grass is usually the sweetest and most abundant in the corners of it. It is true, worm fences, as frequently seen throughout the country, present a slovenly appearance; rails poking out here and there two or three feet from the line; stakes leaning hither and yonder as if pitched from the clouds. Such is not the fence I advocate.

A fence whose rails are of equal length, whose corners are in exact line, whose height is uniform, well staked with cedar stakes and white oak caps—such a fence will add beauty to the landscape; at least will fill the eye of every well bred farmer. Yours, &c.

MYRON ADAMS.

Ontario Co. April 25, 1840.

Apple-Tree Worms.

Caterpillar or Larvæ—The worm-like state in which insects appear on quitting the egg.

The species which I shall here treat of, are the two brown varieties, inhabitants of this state, which frequently do great injury to the apple and other fruit trees, by stripping them of their foliage, and preventing the setting of the fruits.

The two kinds which are the most destructive to our apple-trees, nearly resemble each other, of a brownish color with two white stripes on the back, a short and thin coat of hair, beset with ramified spines. When full grown, they vary from two to two and a half inches in length, and about the size of a goose quill.

Both kinds are generated from the *ova* of a grey butterfly, of an oblong shape, cemented together in a band by a gluey substance around the twigs of the trees in the month of July. The eggs are about the size of the silk worm's, of an oblong form, arranged in a regular compact, which forms a band around the small limbs, from one-half to three-fourths of an inch in length. They remain in this state until April, from which insects about one-eighth of an inch in length, are generated, as the buds begin to burst, and new leaves are putting forth.

One of the above varieties, rather the smallest in size, forms, immediately after hatching, a web or net, to protect them nights, and from cold and wet. The other variety makes no permanent web or shelter, but congregate side by side in one compact. When they retire from the foliage, they, like the first variety, let themselves down by a fibre from one limb to another, or drop to the earth on being disturbed.

In order to remove the gregarious sort of caterpillars, which are enclosed in great numbers in nets or bags resembling strong cobwebs, on the branches of trees, take a long, light pole with a band of flannel on the small end, and after twisting it in the net, crush them on the ground: by this method, vast numbers or nearly all of them may be destroyed. If the swab be dipped in spirits of turpentine, it will destroy all that it may come in contact with. The caterpillar which forms no web, I have had more experience with than was pleasant or agreeable to me. In the spring of 1825, I devoted my whole time with three more hands in destroying these worms, from their first appearance until they wound up. In an orchard of about one hundred and twenty-five apple-trees, what we killed in the space of six weeks, it was estimated that, if they had all been full grown, would have filled more than two hundred bushel measures.

This variety had not been noticed with us more than two years previous, probably on account of their small numbers, and because these nearly resemble those that make nests or webs.

Their direction of travel, when full grown, was northwardly. Some of them would traverse over more than one mile of departure, no doubt, before they changed into the chrysalis.

These worms, before they were half grown, by jarring the tree, or by any sudden noise, would all commence wagging their heads, and, if repeated, would swing off by a small thread or fibre.

We commenced, when they first hatched, by destroying them on the twigs and young leaves, by pressing them with the hand, and as they advanced in size, they would congregate on the larger branches—we then crushed them with paddles.

When those in the adjacent woods had entirely stripped it of its foliage, they made a bold attack upon the orchard. We were obliged to lay a band of fresh tar below the branches around the trunk of the trees, which did prevent their access to the limbs, and afforded an opportunity of killing thousands at one brush with the paddle.

Whole forests were stripped of its herbage this season; and, in many orchards not a green leaf could be found. The orchards and the wilderness only presented one vast scene of a scorching fire; and many of them did not resume their wonted vigor after. Cider advanced from one to four dollars per barrel—by the rise in fruit and cider, we were well paid for our enterprise, beside the preservation of a flourishing orchard from this destructive animal. The caterpillar, in the month of June, attains its full size, retires to some convenient spot, and securing itself properly to a leaf, or under the copings of walls or gates or palings, and about the eaves, doors and windows of houses, by a quantity of silken filaments, encloses itself in this wonderful garb, case, or cocoon of a conical figure. It there casts off its caterpillar skin, and commences chrysalis. In this state of rest and seeming insensibility, it remains four or five weeks, until the butterfly is ready for birth: it then quits the external covering wherein it lay imprisoned, and liberating itself from the skin of the chrysalis, remains till its wings, which are first short, weak and covered with moisture, are fully extended. This happens in about half an hour, when the animal suddenly quits the state of inactivity to which it had been so long confined, and becomes with pleasure an inhabitant of the air.

While in the period of chrysalis, cold and frequent rains do more to destroy and rid us of this voracious insect, than all other incidents, or human effort.

It has been frequently recommended to destroy them on the trees, by the application of strong soap suds; as soon as the soap water touches them they curl up and appear lifeless, but upon being dried in a warm sun, they crawl off as smart as ever.

This butterfly is bred from the chrysalis in July and August, and may be found in cloudy days and at twilight, depositing their eggs on the limbs of the trees. They live about eight or ten days, during which they eat little or nothing. One moth will produce from one to two hundred eggs. They seldom fly from one tree to another. SOLOMON W. JEWETT.

Weybridge, Vt. April 11, 1840.

Plans of Cheaper Houses Wanted.

Messrs. Editors—There is hardly any thing touched on in your paper, so interesting to the reader, as the plans of building houses—so important to convenience and comfort, and also to economy. The expense of building, here in Dutchess county, after almost any of the plans given in the Cultivator, would be from two to three thousand dollars, beside another thousand, for corresponding fixtures and furniture; enough to buy a small farm. And then we must have a shed behind it, to live in, for we here don't think of living in the front part of our houses, not even to go in at the front door. Why, sirs, what would you think of a family with a nice two story house, finished and furnished, who should leave their house empty, and live on the other side of the road?

Now you must know that a great majority of farmers are unable to build and furnish a palace; neither does good taste require it; for a small plain house, well arranged, *looks* as well as a large one; and it often happens, that where a large one is built, there are no funds to spare for corresponding fixtures; then, wo begone! is the appearance of the whole establishment.

I would that some of your ingenious correspondents would build us a smaller, cottage-like house, for one thousand dollars, and let us have about it a suitable lawn and trees, and I believe the sharpest critic will be pleased with it.

As for paint, although essential to the well-looking of a house, it is not absolutely economical. The siding of the house I live in has been on 59 years, which is yet good, without paint. To have kept this house well covered with good white paint, which must be renewed at least three times in sixty years, would cost twice as much as to renew the siding. Let paint, therefore, be set down to taste, not to profit. N. REED.

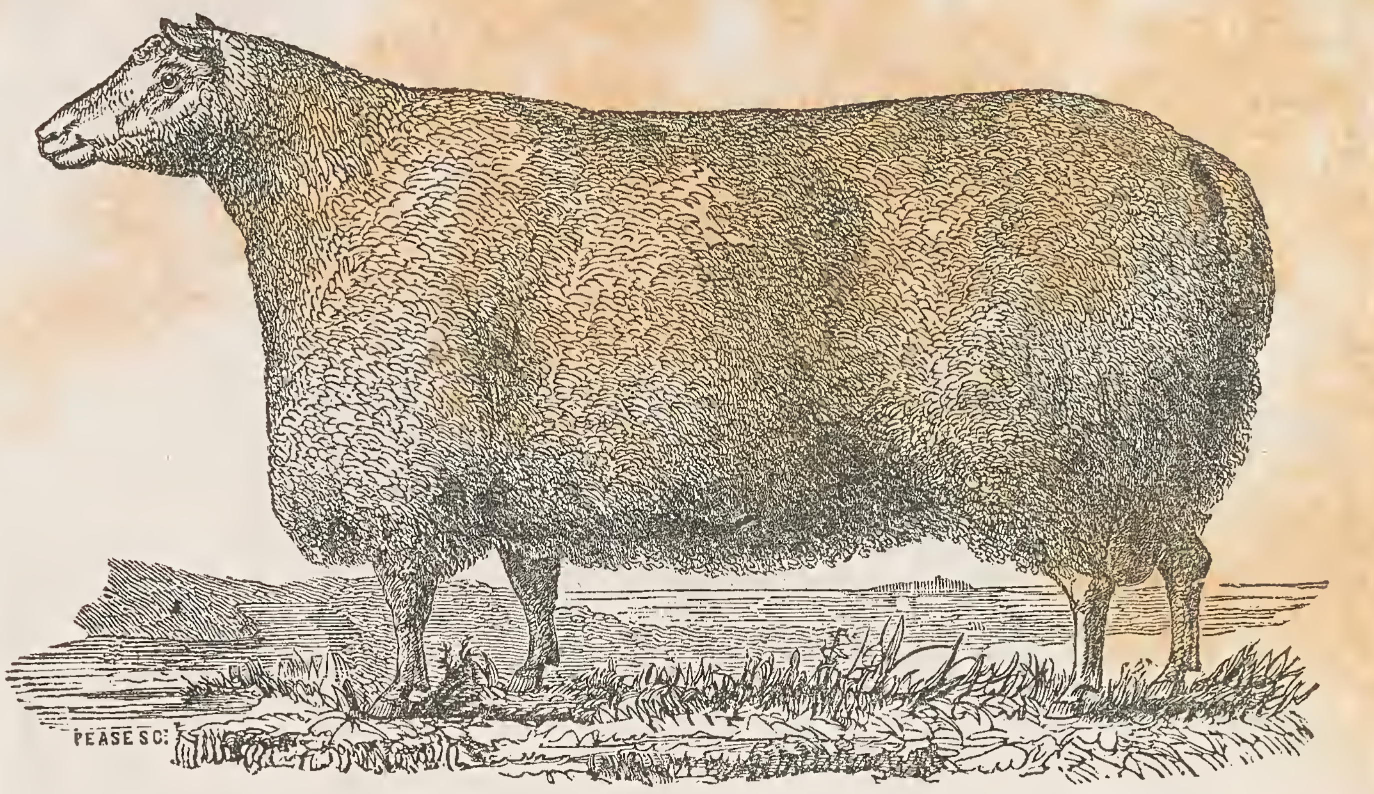
Amenia, March, 1840.

CURING HAMS.

Editors of the Cultivator—In the January number of the Cultivator, I observed a recipe for curing hams, much the same as I used for many years, until I found one more agreeable to my taste, which if you think worth the room in the Cultivator, may be communicated to your readers. For a barrel of hams, say 175 pounds, take 12 pounds salt, 8 pounds clean brown sugar, ½ pound salt petre, pulverize and mix thoroughly: rub the hams well with the composition, pack them in a tight barrel, head it, and lay it on the bilge; roll it over every day or two; it will soon make a pickle, which in four or five weeks will be nearly all absorbed by the hams; when they are ready to smoke, hang them butt end up in a smoke-house, rather open above, tight enough below to prevent the effect of wind upon the fire. In about four weeks they will be sufficiently smoked, when they may be put in cloth or paper bags and white washed, or put in a dry, cool dark place out of the reach of flies. Cobs or hickory wood are preferable to any thing I ever used for smoke. I make use of no water during the process of curing. Hams cured in this way improve for the first year. G. S.

Erie, Pa. Feb. 15, 1840.

LINCOLNSHIRE SHEEP.



Profile of Lincolnshire Buck, Nonesuch—[*Fig.* 60]—*owned by L. D. Clif.—four years old.*

Messrs. Gaylord & Tucker—As I observe that you have given quite a new interest to the Cultivator, by the representation of several fine cattle and hogs, I have thought that it would not be amiss to send you a profile of one of my Lincolnshire Bucks. It was taken by W. L. Brown, Esq., of Philadelphia, who, being on a visit to this section, kindly volunteered to lend me the aid of his pencil.

The Buck, of which the above is a just representation, is now four years old, and his measurement, taken in the presence of Mr. Brown, is as follows:

From nose to root of tail, ...	4 feet	7½ inches.
Height of fore shoulders,............	2 "	8 "
Height on the rump,................	2 "	9 "
Breadth across the shoulders,........	1 "	6 "
Breadth across belly,.....	1 "	7 "
Breadth across loins,..............	1 "	4 "
Girth round the brisket and shoulders,	3 "	10 "
Weight of Clean Fleece,................	10 lbs.	

This highly improved Lincolnshire Buck, together with sixteen ewes of the same breed, was obtained by me about three years since, and all were of that celebrated importation made by Messrs. *George H. Gossip & Brother*, in the year 1836, direct from Lincolnshire, England. These gentlemen, by the way, were English born, and had been reared farmers in their native country.

Previously, in the year 1835, I made an importation from England myself of two pair of sheep, one of which was of the Lincolnshire blood, and the other the Cotswold, and both were from the estate of the Earl of Lansdown, Yorkshire.

It is now something more than twenty years since I first turned my attention to sheep, and during that time I have bred the various breeds of improved mutton sheep, which have from time to time been introduced into this state; and for the last seven or eight years it has been the chief branch in my agricultural pursuits to introduce and raise sheep of this order. In my earlier attentions to sheep I became aware of the sad deficiency of constitution, (which has often been urged,) in most of the larger breeds of English sheep common among us, such as the Bakewell, Leicester, &c.; and that I might remedy this evil, I was induced to incur much expense, in order to obtain a race of sheep, hardy, well adapted to our climate, and altogether different from any familiar to our best breeders. I had always observed that a sheep well woolled, wearing a thick heavy fleece, with a well formed carcass, always thrived the best, and was better fitted to undergo the rigors of our climate. And now in offering to the public the Lincoln sheep, I can say that they possess not only this qualification in an eminent degree, but that they are in every way well adapted to this country, more so than any breed among us. And in this assertion I think I shall be borne out by all who have been at any pains to raise them. My experience in the breeding of the Lincolnshires enables me to speak with assurance as to their true merits. and what to me has been the result of experiment in their cultivation, I trust will not be laid to the charge of egotism. The following are some of their most prominent characteristics.

They are not over large, but carry great weight in their compass of carcass—have early inclinations to maturity and to lay on fat; the wethers being fit for the stall, if you choose, at two, and at the farthest at three years old—I have turned them to the butcher at both ages. In their expression of countenance and in their action they are lively and quick, full of cheerfulness and agility. Their head and ear small, set with the utmost grace and symmetry upon a round, compact, well turned carcass. Their skin the most delicate and soft to the touch, upon which grows a thick, long, and heavy fleece of wool, completely enveloping the whole body from the ears backward. In habits they are domesticated and easy of restraint; they are gross feeders, not so delicate in their choice of food as other sheep, and thriving upon coarse and scanty pasturage. It is said by English writers, of this breed of sheep that they thrive best on low marshy grounds. Of this fact I have no positive proof, (my farm being mostly upland) other than that their fleece and constitution would seem to warrant the assertion. But this I do know, and that too from trial, that I have never seen any breed of sheep which combines so many essential qualities for mutton sheep, and at the same time are so well adapted to the various climates in our wide-spread country. I have had occasion to send specimens of my flock to various quarters of the United States, even to their southernmost limit, and am happy to say, that I have heard good reports from all.

The Lincolns are fitted in constitution to either cold or heat, and their heavy fleece is a great safeguard in either extreme. To the latter, the lamb, when yeaned on a cold chilly day, often owes its salvation, when care is not at hand. One thing remarkable with the ewes of this blood is, that they always yean with great ease; and in several instances I have noticed that when my Lincoln bucks have been crossed upen small ewes of any blood whatever, these ewes, in consequence of the very small head and neck of the Lincolnshires, have had no difficulty in bringing forth, as is common, and to the great danger too, of the life of such ewes, when crossed upon the larger and coarser breeds of English sheep. And it is my candid opinion that no breed of sheep has ever been introduced into this country which offers so good a cross upon any and all of the various breeds common among us as the Lincolns. Their cross upon the Bakewells, Leicesters, and Cotswold is good, improving each of the latter in constitution and beauty of form; and my crossings have been upon ewes bred with much care.

As an evidence of the prolific nature of the Lincolns, and the hardiness of their offspring, I will state that I have raised in 1839, from 64 ewes (chiefly ewes 2 and 3 years old) 92 lambs, and have not lost a lamb by reason of any exposure whatever. When my ewes are older, more than half generally have twins.

My flock numbers in all about 250 head, and most of them have descended from their great progenitor, who stands represented at the head of this article. Hitherto I have taken no very great pains to bring the Lincolns into extensive notice, preferring to stock well my own farm, and to test fully their qualities and habits; and now that I have done so, I boldly offer them to my brother farmers as a mosts uperior article, not surpassed, in fact not equaled, by any sheep this side of the Atlantic. I keep on hand continually a considerable number for sale, the prices varying according to the grade of blood and quality.

The qualifications of these sheep for mutton may be judged of by the following statement. In February, 1839, I sold a lot of half bloods, two shear wethers, in the New-York market, at 25 cts. per pound—the average weight per carcass was 125 lbs. or 31¼ lbs. per quarter. Thus it will be seen that apart from every consideration of selling to agricultural gentlemen, it is an object to raise these sheep for the butcher alone; and this I am resolved to do if my brother farmers will not have them. The Lincolns are also great producers of wool, cutting in the clean from 6 to 10 lbs. per head. This commands a fair price at all times, varying from three to four shillings the pound.

As for myself, I always go in for the best stock, and I pledge myself that when any one will produce to me a better breed of sheep than the Lincolns, I will be his patron. I cordially invite all who take an interest in fine stock, to pay me a visit, and view my flock for themselves. My place can be found at Carmel, Putnam county, state of New-York.

It appears to me, gentlemen, that quite too little attention is given by our farmers, to the rearing and proper managemeut of sheep, and also in adopting or choosing the proper breeds suited to the different sections and climate of our country. I hold it as a *sound maxim*, that all sections of our country contiguous to markets for mutton, and in all sections where sheep can be raised as *stores*, and driven to the vicinity of those markets for fatting, *mutton sheep, properly so called, of whatever breed*, are, and must be always, by far the most profitable to breed; for instance, it is just as feasible to raise a sheep in the counties of Westchester, Putnam, and Dutchess, that would at maturity, bring in the New-York market, from $10 to $20, as to raise a Saxon or Merino, that would bring but from $3 to $6, and it is just as practicable for the farmers living in the western counties of this state, and on whom we are in the former section dependent for *stores*, to give us a sheep worth from 5 to 10 dollars, as one that is not worth but from one dollar to five. All the difference of these prices are and have been realized, by the farmers in these different sections, for a number of years past. For proof of this I will state that as low as the markets have been the present winter, I have obtained for a part of my lot of two shear wethers, from 15 to 17 cents per pound for the carcass, and several of my choicest I have yet on hand, having refused *them* at those prices. Last year you will see I obtained 25 cents per pound. I trust that it will not be thought by you out of place to state that both last year and the present, my Lincoln wethers have been considered by the butchers, who saw them both alive and dead, as superior to any other breed of sheep in their fine qualities of mutton, that has yet been introduced into the New-York market; for proof of this, the price obtained clearly demonstrates, it being as they say, both last year and this, higher by some 5 or 6 cents per pound, than they had paid for any thing of the kind. If, Messrs. Editors, such facts as these will not be duly appreciated by all those wishing to improve their breeds of sheep, I am yet content to breed the Lincolns, for the butcher only.

L. D. CLIFT.

Somers P. O., N. Y., March 4, 1840.

Durham Cattle—Crossing.

MESSRS. EDITORS—In the March number of the Cultivator, in a synopsis of the proceedings of the Highland Agricultural Society, you publish the remarks of Mr. Heriot in relation to that family of the Improved Short Horn breed of cattle, known as the "*Alloy*"—so incorrect in themselves, and so misleading in their tendency, that they should not be suffered to go forth without correction. The connection which Mr. Heriot appears in to the Highland Society, and the fact that he speaks *as* from *personal* knowledge and observation, attach to his assertions a degree of credit, which they do not deserve. The history of the precise manner in which the celebrated cross between the Short Horns and polled Galloways was effected, from which sprung the *Alloy*, though of little importance compared with the great point—*the consequences of that cross*—should nevertheless be truly stated, for the information of succeeding breeders, and even this, Mr. H. has not done. The following paragraph, which I quote from the London Farmer's Magazine, (the substance of which was given in the Cultivator,) presents his assertions in full, on both points:

> "In the number just published of the English Agricultural Society, a distinguished nobleman, in his article on the breeding of cattle and sheep, has been led into an error; for that noble lord says—"The most successful cross between two different breeds of cattle, of which I am aware, was the one between a Durham bull and a Galloway Scotch cow, made by Mr. Charles Colling. The produce of this cross sold for enormous prices at his sale. and at the present day, a majority of the best Short Horned cattle are descending from it." This is certainly a mistake. The cross was between a Galloway bull and Short Horned cows. From this cross were produced several splendid females; but eventually, he gained neither fame nor profit by the experiment; and, although by this time the stain is probably washed out, breeders who possess the best herds. have always carefully guarded against the blood thrown in by this cross, which has ever since been technically called "the Alloy."

The "noble lord" so categorically set right by Mr. Heriot, was Earl Spencer,[*] the President of the English Agricultural Society, of the Smithfield Club, &c. and probably the most extensive breeder of pure Short Horns in the world! It does not appear from the Herd Book, that Mr. Heriot has been the breeder or owner of *one!* The following is the real history of the cross, by the Rev. Henry Berry, and as it is adopted by Mr. Youatt in his history of British cattle. It should be remarked, too, that it is fully confirmed by the Herd Book, (an authority which Mr. Heriot acknowledges in a preceding part of the same paragraph, a portion of which is quoted!) as may be seen by referring to the pedigree of any of the animals mentioned by Mr. Berry.

> "Mr. Colling's Short Horned bull "Bolingbroke," was put to a beautiful red polled Galloway cow, and the produce being a bull calf, was in due time put to Johanna, a pure Short Horn—she also producing a bull calf. This grandson of Bolingbroke was the sire of the cow, *Lady*, by another pure Short Horn dam, and from Lady has sprung the highly valuable family of improved Short Horns, termed in reproach the *Alloy*. How far the alloy was derogatory, let facts testify. It will probably be admitted that the prejudice against this cross, was at the highest at the time of Mr. Charles Colling's sale. * * * * *Lady*, before mentioned, at fourteen years old, sold for two hundred and six guineas. *Countess*, her daughter, nine years old, for four hundred guineas. *Laura*, another daughter, four years old, for two hundred and ten guineas. *Major* and *George*, two of her sons, the former three years old, the latter a calf, for two hundred guineas, and one hundred and thirty; beside a number of others, more remotely descended from *Lady*, which all sold for high prices—in fact, in a sale of forty-eight lots, realizing £7,115 17s. Lady and her descendants sold for a larger sum than any other family obtained."

The sale here referred to affords a pretty decisive commentary on the statement, that Colling "gained neither fame nor profit by the experiment!" Mr. Heriot's closing assertion in the paragraph quoted above, that "breeders who possess the best herds, have always carefully guarded against the blood thrown in by this cross," is as inexcusably untrue. Earl Spencer, Rev. H. Berry, Mr. Charge, Mr. Champion, Major Bower, Mr. Whittaker, and a multitude of others among the most distinguished breeders of England, have bred the *Alloy*, and many of them have given it a decided preference. This was particularly the case with Mr. Whittaker, who, until his retirement, was perhaps the most fashionable breeder of England, and the most successful *seller* of Short Horned stock. His bull "Frederic," considered by him, I believe, the best animal of the kind in England, and "Charles" (sired by the latter) the names of one of which occur in the pedigree of almost every animal bred by him, were of the *alloy*. Mr. Berry's Actonia, whose portrait graces the work on cattle in the 'Farmers' Series,' as splendid a model of a Short Horn cow as any known, was of the *Alloy*. The American breeders almost to a man, have bred more or less deeply into this blood. The names of Williams, Munson, Rodman, Powell, Rotch, Orne, Henry Watson, Clay, Gibbons, Bement, the Messrs. Allen, the Ohio Company, &c. occur to me. Col. Powell's imported bulls, Gloucester, Bolivar, Bertram,[*] &c. were *alloy*-ed. Wye Comet, (owned by Henry Watson,) so celebrated in the eastern and northern states, possessed this blood. The present President of our State Agricultural Society,[†] acknowledgedly the most eminent breeder in the state, though commencing with animals clear of the *alloy*, has since introduced it into his herd, and his stock bulls for several years have all been of this strain. I might go on with the enumeration, but perhaps enough has been said to test conclusively the correctness of Mr. Heriot's assertion.

The consequences of Mr. Colling's successful experiment, have established decisively, the correctness of the principle of crossing, where circumstances require it. He resorted to it to obviate the deterioration produced by in-and-in breeding, which was slowly but surely leading to a hereditary debility of constitution. He not only renovated the blood of the Short Horns by the new infusion, *without injury to them otherwise*, but with masterly skill he improved a breed already near perfection, by engrafting on it the peculiar excellencies of another breed, in the main far inferior! This splendid solution of a much mooted and very interesting question, is too important in its general application, to be lost sight of or discredited under the assaults of any of that antiquated class of sticklers for the *ancien regime* of Short Horn blood, to which Mr. Heriot seems to belong. Mr. George Coates (compiler of the Herd-Book) was a memorable example of the same class. Once the possessor of one of the most valuable herds of Short Horns in England, he disdained to cross with the *alloy*, and Charles Colling soon distanced him in the competition for popular favor. Mr. Coates' herd sunk into obscurity and disrepute.[‡]

I do not design to be understood as advocating any *new* cross, having for its object the improvement of the full blooded Short Horns of the present day. As a variety they do not need it. That system of in-and-in breeding, which once made it necessary, has, as a general thing, long since been abandoned. It seems astonishing that intelligent breeders should ever have been willing to permit the incestuous connexion between the sire and his own progeny, his progeny's progeny, and so on to the third and fourth generation, yet such was the fact! The sire and grandsire of the celebrated Comet, sold by Colling for $5,000, was the same animal, Favorite. The Herd-Book abounds in instances where this direct in-and-in breeding has extended much farther. Indeed it was difficult, when the entire variety consisted of but few animals, to avoid entirely such a course, without merging to some extent their newly attained characteristics. When those characteristics became sufficiently stamped on the improved breed, to render their hereditary transmission certain, Colling had recourse to the Galloway cross. Had Bakewell resorted to a similar step, it is probable that the once famous New Leicesters would not have passed away, as they have done, like a dream. The number of Short Horns is *now* so extended, that it is practicable to breed from affinities too remote to produce any evil consequences, and, assuming that they are already the *best* breed, it is, as I have already remarked, unnecessary to cross them.

But, if a breed "near perfection," have been improved in certain particulars by admixture with an "inferior breed," the same experiment establishes conclusively, that the inferior breed received the greatest advantage from the cross. In other words, Lady, and her descendants were more improved from the Galloway cow, from which they sprung, than from their Durham ancestors; but with this difference—the Short Horn took but one cross of the Galloway, and then bred back to the pure blood: the Galloway blood, on the other hand, was merged and nearly extinguished by repeated admixture with the Short Horn. This is by no means a solitary example of the improvements effected by judicious crossing; and as it is a subject of much interest to our stock raisers, I will cite a few examples. The Ayrshires, so celebrated for the dairy, are, as has been remarked on a former occasion, the produce of a cross between the miserable and stinted original breed of Cunningham, and some of the earlier Short Horns. The admixture between the Durham and Holderness, or, in other words, between the *improved* and *unimproved* Short Horns, was signally successful; the produce being the favorite cow of all the English metropolitan dairies. The cross between the Short Horn and North Devon has increased the size of the latter, and very decidedly improved their qualities as milkers. An intelligent writer in the work on Cattle, in the Farmer's Series, says—

> "I have seen many excellent beasts bred from *Improved* Short Horned bulls and Long Horn (Leicester) cows: indeed, I never knew one of these bulls put to any cow, where the produce was not superior to the dam; but the cross which I advocate, and with which I am best acquainted, is that with the Devon cow. I have uniformly remarked, that each succeeding cross was attended with a proportionate improvement in size, quality of flesh, and aptitude to fatten. In every instance, they have shown themselves superior milkers. * * * A friend of mine had about a dozen North Devon cows, small in size, but nice in quality, and from these he commenced, about twenty years since, breeding with Short Horn bulls. He has since invariably used those bulls. With every succeeding cross the stock have rapidly improved in every essential, and the only trace of the Devons I could perceive, was a peculiar richness in their color."

It is well known that Mr. Berry was very partial to this cross. The various sub-varieties of Long Horns existing in the midland counties of England, and in Ireland, have been interbred with the Durham, with manifest advantage to the milking and grazing qualities. And, lastly, that heterogeneous melange, known as the "native breed" in the United States, have been equally ameliorated by a Short Horn cross—rendered more valuable for the dairy and the shambles, improved in the property of early maturity, and in docility of temper. I do not recollect to have seen this last fact publicly noticed, yet experience has amply convinced me of its correctness.[*] Mr. Jaques' "cream-pot breed," as he chooses to designate them, are but one among a thousand instances of successful interbreeding between the Short Horn and our "native" cows. To sum it all up, substantially, in the language of Mr. Bolton, quoted above, "the produce of any cow (of another breed) put to a Short Horn bull, will be superior to its dam."

"Take *but one cross*," it is often said, and this is correct in one point of view. It must be understood to mean, however, "take but one cross" of native or other inferior blood, and then breed steadily *towards the Durham*. The produce of the first cross will possess one-half of the Short Horn blood; the second, three-fourths; the third, seven-eighths; the fourth, fifteen-sixteenths, and so on. The contrary course, that is, the taking of but one cross of the Durham, and then *breeding back to the inferior variety*, has always resulted in ill success and disappointment. Did limits permit, I might cite many instances both on record, and which have come under my personal observation. I will name but one. I have alluded, in a former paper, to some admirable cows in Cortland county, the produce of a son of Wye Comet and common cows. The descendants of these cows, bred back toward the native stock, after the first generation, are in no way distinguishable from common cattle.

I have formerly alluded to the individual characteristics of the Short Horn bull, and native cow, supposed to be most suitable for interbreeding. I will now add, that in following up this cross, the great aim should be to continue to adapt the sire to the individual characteristics of the dam. *Pure blood is not all that is requisite in the bull*, and it will rarely or never happen, that the same one is adapted to each individual cow in a whole herd. Take, by way of illustration, the "Hoosier calf" of your Indiana correspondent "C." (given in your last) which is beautifully formed back of the shoulder, but has a heavy, coarse neck. On the other hand I can see from the window where I write, a half blood heifer which I call "Princess," which in the head, neck and crops, I have never seen excelled, even in a full blood, but the rump, back of the hips, is a little too thin—the hind legs somewhat crooked, and the hocks turned in. Now, it must be evident to any man, that the "Hoosier calf" should be crossed with a bull peculiarly delicate in his head and neck, even at the expense of a little of the fullness of his points behind—while "Princess" requires a bull unusually thick and full where she is too thin, straight in the leg, &c. The rule is, or should be absolute—never to breed from a sire and dam possessing *the same defect*. The bad point will appear increased in the progeny, and, it has been asserted, to an extent equalling the amount of the same defect in both parents *added* together! I am not sure that Nature is quite so mathematical as this in her proceedings, but she always punishes an infraction of her wholesome laws. The last point which I shall notice is, that the bull as well as the cow, should be descended from a family of good milkers. Though some have regarded this as mere theory, experience has satisfactorily proven that milking properties are hereditary in the male as well as the female line.

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[*] Better known perhaps to breeders under his former title of Lord Althorp.

[*] All of the three named, were sired by Mr. Whittaker's Frederick.

[†] Francis Rotch, Esq. of Louisville, Otsego Co.

[‡] NOTE BY THE EDITORS—The error of Mr. Heriot is ably exposed by our correspondent; but, as the subject is one of considerable importance to the cattle breeder, and has been much misunderstood in this country, as well as, it seems, in England, we have introduced here a statement by H. Cotterell, Esq. one of the best authorities on the matter. It is from the Farmer's Magazine for Dec. and corroborates fully the position of our correspondent:

"In the next paragraph [of Mr. Heriot's statement,] Mr. C. Colling perceiving that by continuing this close breeding, he was rendering the stock delicate, took the remarkable step of putting a *Galloway bull* to some of his best cows; and that a noble lord [Earl Spencer] was in error in saying, "The most successful cross between two breeds of cattle, of which he was aware, was the one between a *Durham bull* and a Galloway Scotch cow, made by Mr. Colling."

"Here, again, Mr. Heriot is in error. Mr. C. Colling did not breed as here asserted by Mr. Heriot, nor are his Improved Short Horns got by a Scotch bull, but the cross was as asserted by his lordship.

"The celebrated cow, Lady, (page 354) was got by a grandson of Bolingbroke—dam, Phœnix, by Faljambe.

"The grandson of Bolingbroke (No. 285) was got by O'Callaghan, son of Bolingbroke—dam, by C. Colling's lame bull.

"O'Callaghan's, son of Bolingbroke, (No. 469) was got by Bolingbroke—dam, a *red polled Galloway Scotch cow*.

"What breeder of Improved Short Horns would not be possessed of Major, or Western Comet, Lady's son and grandson.

"This gentleman [Mr. Heriot] appears to be running a wrong scent. Hubback's pedigree was endeavored to be stained by the assertion of having Scotch blood in him; not only John Hunter (whose father bred his dam) denies it, but Mr. Charles Colling informed me, that he had not the least doubt but Hubback was a *true bred Short Horn*."

[*] I have never known a pure Short Horn that would kick; and rarely a bull of this breed of any age, that would even menace with his horns. The grades invariably, so far as my knowledge has extended, preserve the same characteristic.

HENRY S. RANDALL.

Cortlandvile, April, 1840.

Labor-Saving Soap.

Messrs. Gaylord & Tucker—As you admit into your useful paper articles on domestic economy, I venture to send you the following, which, on a trial of a year and a half, has proved fully equal to all the statements made in it. Any house-keeper, who will try it carefully and faithfully, need not fear disappointment.

Take 2 lbs. sal soda, 2 lbs. yellow bar soap, 10 qts. water, or in like proportion. Cut the soap into thin slices, and boil all together *two* hours, then strain through a cloth into a tight box or tub, let it cool, and it is fit for use. It should be placed in the cellar, at least during the winter, for freezing injures it.

DIRECTIONS FOR USING THE SOAP.

Put the clothes in soak the night before you wash. The next morning, put water into your kettle or boiler, (a boiler with a cover is best) *one*, *two*, or *three* pailfuls, according to the quantity of clothes you intend to wash, (2 pailfuls will be enough for most families) and to every pail of water add about *one* pound of the soap. As soon as the water, with its dissolved soap, begins to boil, wring out the clothes and put them into it, without any rubbing. Let them boil *one* hour, then suds them and rinse them in a good supply of water, and they will be clean and white. They will need no rubbing except a little on such places as are most soiled, and for that, no washboard will be required. If you have more clothes than you can conveniently boil at once, you may boil another set in the same suds in which you boiled the first, and with equal success. The suds are good also for cleaning up.

Colored and wollen clothes must not be boiled as above, but they may be washed in the suds weakened with a portion of water.

The advantages of washing with labor-saving soap, as above directed; are,

1. Much less hard work.
2. Less time.
3. The clothes will last longer.
4. The hands are less injured.
5. Less expense for soap, if you buy the materials as cheap as they may be bought, and make the soap yourself.

Six pounds of sal soda, six pounds of bar soap, and 30 quarts of water will make about 50 lbs. of the soap. For the soda, I have paid 7 cents per lb. taking 20 lbs. and for the soap 8 cents per lb. taking half a box. The expense therefore for 50 lbs., making and all, could not have been much over 2 cts. per lb. I have paid 5 cts. per lb. for labor-saving soap in Boston, by the box, and the virtue of that made at home was fully equal to that which was bought.

A pint measure will hold a pound of the soap, or a quart measure 2 lbs. The soap may be crowded in without much force, and thus the trouble of weighing, every time you wash, may be avoided.

Every person, on a little reflection, must see the reason why the above mode of washing possesses superior advantages. The philosophy of the process is too obvious to require description. Let it be tried. One experiment will cost but a trifle.

Those who have soft-soap may turn it into hard-soap, which boiled 2 hours with soda in the proportions above named, will make as good labor-saving soap, as that made with bar soap from the shops. The following directions for turning soft-soap into hard-soap, are taken from Gov. Hill's Monthly Visitor:

"To every *three* gallons of soap add about *one* quart of salt. Boil all together *half* an hour, then turn it out into a tub to cool. Cut the cake which swims on the top into pieces, and scrape off froth and other impurities, melt again (without the lye and water underneath of course) and pour it into a box to cool. You may then cut it up into bars of proper dimensions for drying. By adding a proportion of rosin, well pulverized, at the last boiling, you will have yellow soap, like that made for market."

Some have said, the use of soda in washing, turned the clothes yellow. I am assured by those who ought to know, that used as above, it has no such effect. The repeated encomiums of the women of my household on the virtues of labor-saving soap, have induced me to take an account of the whole process of making and using, from their own lips, and I send it for insertion in your numerously and widely circulated paper, hoping that the wives of your subscribers will be profited thereby, and if they like it, make known the same to their neighbors, who do not read the Cultivator. I think they will save enough in one year to pay for a volume of the Cultivator.

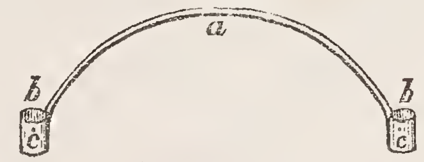
N. H.

Yoke for Breachy Cattle.

Messrs. Gaylord & Tucker—I deem it the duty of every subscriber to an agricultural paper, who believes that he himself derives any benefit whatever from its perusal, to endeavor to contribute something besides his subscription, toward the benefit of others. This, too, he should attempt, whether he estimates his contributions as of great or only small value; for, if no more than two or three of his brethren can gain useful information from it, he ought to think his trouble sufficiently rewarded; since nothing is more certain than that we were all sent into the world, to labor for others as well as ourselves. He should ever bear in mind the truth of the quaint, old saying of William Camden, the great antiquary, that *"many a little makes a mickle;"* and, therefore, should always be willing and ready to add that little, however small it may appear, to the general stock. If he waits until he can make a contribution of such seeming importance, as to cause his name to be ranked among the agricultural benefactors of our country, he will either communicate nothing, should he be a modest man, or something, if he be self-conceited, that will be more wearisome than instructive to his readers, and much fuller of vanity than of useful information.

This brief preface must plead my excuse, should any be deemed necessary, for my present unconnected and desultory epistle. For I address it to you on the principle first stated; and likewise from a belief that the experiment which I am about to recommend, is well worth making; and that at least one of the subsequent inquiries may elicit from some of your numerous, intelligent correspondents, highly useful information upon a very important branch of husbandry, in regard to which multitudes of our brethren are either most deplorably ignorant, or unpardonably neglectful. This experiment, if made, will test the utility of a very simple contrivance lately described to me, which seems well calculated for preventing the mischiefs so often done, by what our brethren "down east" have most aptly denominated *"breachy cattle;"* and which are so common, I believe, in every neighborhood throughout our whole country, as to require no particular description. They are, in fact, the certain consequences of bad fences, scant feeding, and inexcusable carelessness in their owners—things, by the way, which may too often be noticed by any who will take the trouble to look around them. But what is still worse, these same "*breachy cattle*," together with our other farming stock of similar provident propensities, created by similar neglect, are the lamentable sources of more feuds, quarrels, and bitter animosities among neighbors engaged in agriculture, than all other causes of dissension put together. Any contrivance, therefore, which promises well to prove even a partial preventive to these sore evils, seems entitled to a trial. On this ground, permit me to give you a sketch of the one already referred to, as it was described to me—thus:

[*Fig.* 61.]



In this rough representation, which I make solely from verbal description, *a* is intended to represent a bow made of round iron, about five-eighths or three-fourths of an inch in diameter: *b*, *b*, two rings at the ends of the bow, of a size to fit near the extremities of the animal's horns, (if they have any,) to which they are fastened by small nails or screws, as at *c*, *c*. The curvature of the bow must, of course, be made to fit the particular shape of the horns which it is intended to render harmless; and so must be the size of the rings. This I offer merely as a thing worth trying, for I cannot yet speak of it from my own experience. But this is not necessary to convince me, that such a bow must be far preferable to the numerous awkward and cruel contrivances usually resorted to, for preventing the injuries inflicted upon ourselves as well our neighbors, by our own cattle: such contrivances, for example, as heavy boards swung over the creature's faces which nearly deprive them of the use of their eyes; enormously heavy yokes; and even large logs fastened to their necks by grape-vines, which soon cut through the skin, thus making painful sores, while the weight that they are compelled in this way to drag, almost take away that power of locomotion so vitally necessary to all animals, which are obliged to shift for themselves.

Selection of Seed—Shelter for Sheep and Cattle.

As to my inquiries, they will relate, on the present occasion, only to the two subjects comprehended in the following questions:

Is there not an important difference between the quality of the seed of the center stems, and lateral branches of all such plants as produce their seed like the carrot and parsnip?

Which is best—to shelter, or not to shelter, sheep and cattle from snow and cold rains?

It is probable, I think, that to some of your readers, the first query may appear trivial, and the second, even silly, unless I assign some good reasons for asking them. I must, therefore, take the liberty to state such as have prompted me to make the inquiries. We are all aware that the culture of root crops has become a matter of constantly increasing interest; consequently, every probable means of improving them, both in quality and quantity, ought to be subjects of a proportionate degree of attention. Again—most, if not all of us believe, that this improvement depends, in a great measure, upon the purity and excellence of the seed which we sow. Surely, then, it is well worth attempting to ascertain as far as practicable, every circumstance which can in any way deteriorate them. One cause of this deterioration certainly is, that the abominable lust of gain tempts too many of our professional seedsmen, to increase the quantity at the expense of the quality of what they sell, by mixing ripe and unripe seed together. This is obvious—even to the purblind, in all those kinds wherein the mixture can be detected by the eye: such, for instance, as beets and mangel wurtzel. And the fact is undeniable, that in almost every parcel we buy of these kinds, a large portion of the seed in each will be found to be scarcely half the size of others, and of a greenish instead of a brown color; showing, most manifestly, that they were gathered before they were ripe. Yet, we all continue to submit silently to this gross and fraudulent imposition, instead of publicly exposing the perpetrators of it, as we ought to do, for the general good. Another proof of this mixture having been made, may be seen when the roots are dug up; for some will be four or five times the size of others, although growing within a foot or two of each other, and in soil precisely of the same texture and fertility. Now, if this great difference in the size of beets and mangel wurtzel, be attributable, as I believe it is, chiefly, if not entirely, to the sowing of ripe and unripe seed together, is it not probable that the similar inequalities of size in carrots, parsnips and other roots which produce their seed in the same manner, may be owing to the cause which I suspect, and that is, the difference in quality between the seed of the centre stem, and of the lateral branches? But, be this as it may, I trust you will deem it a matter worthy of investigation.

I will now state my reasons for asking the second question. Know, then, gentlemen, that multitudes of our brethren—at least in the middle and southern states—have adopted, in regard to sheep, and, in many cases, to cattle, also, the favorite *"let alone principle"* of the advocates of "free trade." Nay, to such an extent have very many of them carried it, as to afford just grounds, if we judge by their conduct, for considering them so marvelously diffident of their own pastoral skill, as confidently to believe, that their *sheep certainly*, if not their *cattle also*, have much more sagacity and ingenuity than themselves, not only in guarding their own bodies against the inclemencies of the weather, but in protecting their own stomachs from the painful assaults of daily hunger—being left in instances innumerable, to choose for themselves in both particulars—although that liberty of choice, in countless cases, is worse even than Hobson's, who had, at least, *one* alternative of some value presented to him.

To both my queries I respectfully beg answers from such of your correspondents as can speak from their own experience, for I confidently believe that many will be benefitted thereby—especially, if they can give us the results ot the *"let alone,"* and the opposite practice. Not that I anticipate the slightest advantage to the followers of the former, who belong, in general, to the anti-book farming class—gentlemen, whose habit it is to sneer with most ineffable contempt and self-complacency, at every thing they see in print; for, although like Toney Lumpkin. they can manage to read "your print-hand pretty well," they rarely take the trouble to do it, unless for the purpose of indulging in a senseless laugh at the author's labors.

With sincere wishes for the success of your highly useful paper, I remain, gentlemen,

Your constant and much benefitted reader,

JAMES M. GARNETT,

April, 10, 1840. *Of Essex Co. Va.*

Peaches—Change of Fruit.

Messrs. Editors—I have one thing which I wish to communicate to the Cultivator, concerning peach trees, viz: I have a number of trees of the yellow kind, which ripens usually about the first of October; but last the season they bore fruit resembling the red rare ripe, and ripened about a month earlier than ever before. Now, the question is, What was the cause of this change of color and time of ripening? I can not tell, unless it is caused by some disease which may cause the premature death of the trees.

DAVID FOOTE.

West Chester, Ct. Feb. 1840.

Value of Agricultural Papers.

Messrs. Gaylord & Tucker—We often hear the old adage, "never too old to learn," and I think we might safely add, none are too wise to learn. In calling on my neighbors to subscribe for the Cultivator, I find many who are too well versed in agriculture to be taught; they understand the business perfectly well in all its branches, and as for paying away their money for that which is worse than nothing, they will not do it. Now I am fearful such men stand in their own light. I know I have been prejudiced myself, and I fear there are others in the same situation. I once thought agricultural publications were useless—that they treated on new notions and the like, that were of no consequence to any one; but I find I was much mistaken. My views on the subject were altogether incorrect. I never have read a number of the Cultivator, without obtaining some useful knowledge from it. I have found many facts laid down in its columns, that I had learned before by dear-bought experience, and much too, that probably I never should have learned in my own private sphere. Thus we see that by mingling our minds together, and giving each other the results of experiments fairly tested, all are benefitted; and I am fully persuaded, if any one is benefitted more than another, by agricultural publications, it is the experienced farmer. There is no one so capable of judging of the different kinds of soils, and making the best selection of different crops, and applying manures to secure a rich reward for his labors, as the observing farmer; yet to arrive to perfection on this point is past the comprehension of man.

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Management of Milch Cows.

I have read with much interest the remarks of your able contributors on stock, and especially on milch cows; yet there is one particular in the management of milch cows which seems to have been passed over unnoticed—that is *milking*. Perhaps there is no one point of dairying treated with so much neglect and indifference, and attended with as great loss to the dairyman as milking. Not more than twenty-five years ago, it was considered a good lot of cows to produce 200 pounds of cheese to the cow on an average, and the farmer who obtained that, was a skillful dairyman; and even at the present day, many keep along in the same old track, doing well enough as they term it, while others obtain 500 pounds, and some have gone as high as 600 pounds and over, besides a good quantity of butter. How is this difference to be accounted for? One reason I would give, is milking. A cow, to give a large quantity of milk, should have one steady hand to milk—one that can draw the milk quick and easy; care should be taken to milk the cow perfectly dry (or in other words clean.) Another important object is to milk at regular hours. In long days, cows should be milked and turned to the pasture before sunset, that the time between milkings may be nearly equal; yet the practice with some is to work in the field as long as they can see, then drive up the cows and have them milked by inexperienced hands, and those too who take no interest in the business; then leave them in a close yard during the night. I have always noticed that those who make an odd job of milking, never realize much profit from their cows. That there is a great difference in cows, I will admit, though I think there is more in the management of them than in the quality; yet the farmer should be very careful in the selection of cows for the dairy. I find some of my best cows would be counted worthless if they had different hands to milk them, and those, too, who were inexperienced in the business. I am often told by my neighbors that I have some peculiar method of making more cheese from the same quantity of milk than they; and it is true there may be something to be considered on this point; but I never as yet have found the secret of making butter and cheese without milk.

Another reason is, *good keeping*. Cows should be kept in warm stables, well littered, until late in spring. The practice of letting cows lay out on the cold wet ground as soon as it is bare, is a bad one. They should be kept up and well fed, that they may be in good heart and high order when turned to grass. Salt should always be kept in troughs under sheds that cattle can have it at their command throughout the year. Another fact of much importance is stabling cows early in the fall. As soon as cold storms come on they should be stabled, which will add one-third to the quantity of milk. Stantials are to be preferred for putting up cattle, allowing each one three feet, and boarded between the stantials to keep the fodder from wasting; the stantial fastened at top by running thro' the upper timber and a long iron link, made to drop on the top, which by raising one end will loose the moveable stud of the stantial. Stable-floors should be a little sloping, that a dry bed may be kept to keep the cattle clean and comfortable.

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Horn Ail.

I have perused with deep interest the remarks of different writers on the subject, of horn ail. I can fully accord with Mr. Payne and Mr. Warner, as to the cause of murrain or horn ail. I have been troubled with that dreadful scourge among my cattle for more than six years, and wish I might be informed of a sure preventive from some one of your numerous subscribers. I have tried many experiments, and I think to some advantage, but have found no certain remedy—that the complaint arises from an obstruction of the gaul duct, I think there can be no doubt, and any thing that would assist that organ in the discharge of its regular functions would in a certain degree prove effectual. The cattle which are most liable to this complaint are those in high order; yet I think those in poor flesh and very weak might be alike subject to the disease. The complaint is sometimes discovered first by bloody urine, sometimes by swollen udder, and sometimes by the animal's shaking the head, the eyes and head swollen; at other times, comes on gradually, the victim standing with the head against a fence or barn, eyes dull and sunken, horns generally cold, though not in all cases, and when bored are found to be hollow. I have generally been very successful in saving my cattle when attacked with it. My method is to bore the horns on the under side near the head, and with a syringe force in a composition of salt, pepper and vinegar; put spirits turpentine on the head and horns, bleed in some cases, and keep the holes open in the horns that they may discharge freely if requisite; soot and pepper given internally is good. I have lengthened out my letter too long already, yet there are some other things I should like to notice, but shall leave them for more able pens.

A. B. COLE.

Williamstown, (Mass.,) March 24, 1840.

Experiment in Pork Making.

Messrs. Gaylord & Tucker—I notice your excellent correspondent, Mr. Robinson's no less laughable than true picture of the "Hog Illustration" in this month's number of the Cultivator, just at hand, but as I have lately had my say pretty extensively on the subject of the improved breeds, I shall leave the reversing of the "illustration" to the graphic pen of Mr. Bement, and give you in lieu thereof my first experiment in making pork, as a pendent to that of Mr. Robinson's.

Tho' bordering on the populous and commercial mart of Buffalo, my farm is still mostly in the original forest, and backed to a great extent by woodlands, the home, in large herds, of the veritable originals from which were drawn the faithful portraits of the savage Alligator and desperate Landpike. From this prolific herd, I was constantly favored, morning, noon and evening, by *friendly* calls, and without deigning to ever say, "by your leave, sir," they unceremoniously helped themselves to whatever lay in their way; all species of grain and roots seemed alike delectable to their omniverous appetites, and if a brood of chickens, goslings or ducks, or even a young lamb got astray, wo worth the day! it was but *presto!* and a smack of their greedy jaws, and goose and biddy, and duck and lamb, had gone to their last account. I believe even that they once devoured a fine large calf for me.

Conspicuous in this train, I frequently noticed a tall, long, lean, gaunt sow, with nine whopping pigs, the beau ideal of her gentle self. She was apparently the "queen o' the herd," in the forest round, and her genius and exploits cannot better be described, than in the language of the poet,

> "'Twas her that led thro' every fence,
> O'er field, o'er bog, by woody dell;
> 'Twas her whose clap of cavern'd jaws,
> To all things living rung the knell."

Well, gentlemen, this at length became unendurable; and as with all my diligence of inquiry I could find no owner for the roaming brutes, I determined on the next foray, if possible, to make prisoners of at least the head and offspring of the offending moss troopers, and cage and fasten them. Alas, for the then innocent simplicity of my knowledge in hogology! I supposed that a pig was a pig the world over; that the wolfy gauntness described arose from much roving, and a scantiness of food, and that confinement and plenty to eat, would soon put them into the *daintiest* of pork. So the next time my lady queen and her progeny made their appearance on my open premises, I sent a couple of men to drive them into the yard. They pretty soon returned breathless with their chase, and a report, "that them are critturs wan't to be cotched no how, and wouldn't drive even the way a body knocked 'em down and dragged 'em." Well I detached a *corps de reserve* of four men more, who soon came back in the same condition, and with a similar report to the first. So *messieurs les sauvages* won't come in and surrender; very well, like Uncle Sam in the Florida war, I resolved to call on the aid of my dogs, and have here to add, that I was rather more successful than the old gentleman seems to have been as yet with his Cuba Bloodhounds, for no sooner were an Irish Greyhound, a stout Newfoundlander, and a pair of bull Terriers put on the scent, than the men soon had the land loafers by the heels, and into a double planked high roofed pen.

Now, sirs, came the tug of war—potatoes were just ripe, and a man was set to digging, boiling and feeding. Well, dig and boil, and feed, he did and nothing else, from day break in the morning till dark at night, steadily, day after day, which was responded to on the part of the hogs, by gulping down and wasting the food as fast as they could get at it, squealing and fighting with each other, pawing, rooting and tearing at, and gnawing the thick oak planks that hemmed them in. I occasionally paid them a visit, and they universally received me with a general yell, and springing up toward the open place of the pen as high as they could reach. To my great astonishment, so far from witnessing any gain from week to week, it, on the contrary, seemed that they only grew more gaunt. I thought it was the fault of the food, and I ordered it changed to a varied mixture of oil meal, oats and barley, but still the result was the same. I then put them to corn, and lastly, corn meal made into thick pudding, but it proved but another edition of the nursery ballad, of the wife that sought to rid her hands of the stain from the blood of her murdered husband:

> "The more she washed the more she might,
> 'Twas down by Linkum-lidie."

By way of interlude to all this *fatting* tragedy, I had in the mean while, the pleasure of various daily calls from my distant neighbors and travelers on the road, humanely inquiring—"What could be the matter with my hogs? Want they starved? Did'nt the feeder abuse them? Want they caught in a trap somehow," &c. &c. After each interrogatory, I ordered fresh litter, extra feed and attention, but Mr. Robinson has graphically told the whole story, and I will not repeat it; and to cut the matter short, after the hogs had devoured thrice as much food as their carcasses could ever be worth, I ordered them killed, in despair of ever seeing any fat accumulate on their ribs. Nor was I here at all disappointed, for when I came to inspect them dressed, there was *primus* a thick rhinoceros rind, about half an inch of bluish white gristle, *secundus* a streak of tough lean, and lastly, a great thick bone!

Now for the pork. As a commencement, a barrel of it was sent out to some wood choppers, hutting it in a shanty, and who, tho' blessed with appetites akin to a polar fisherman, and that had *gone it* occasionally on a *lean coon*, they could not stand this, and after frying and boiling, and baking, and roasting, they shouldered their axes and rebelled in a body. I then ordered it fed out to the dogs who had been instrumental in aiding to catch the living subjects, but tho' long and *elaborately* cooked, it was soon no go, and they too rebelled upon the stuff, and the last that I saw of the barreled pork, was the upsetting of the same by the gardener, together with the brine and salt into a compost he was manufacturing into manure.

Now all these are veritable facts, without a shade of embellishment; it was my first experiment in Alligators, Landsharks and Pikes, and I *guess* it will be the last. I immediately after this set myself to reading, inquiring and searching for the best breeds of swine, and soon lit upon the quiet little Chinese. These were in a short time followed up by a choice selection of the splendid Berkshires, from the stock of Messrs. Lossing and Bement, of Albany, those excellent breeders the Shakers of Watervliet, and the Messrs. Brentnalls of Canterbury, together with some fresh importations direct from the best bred stocks in England, on my own account, and any time that any person can show that he has better breeds than the above, that moment will I sacrifice my present carefully chosen and high bred animals to the knife, and become his purchaser. Your ob't serv't.

A. B. ALLEN.

Buffalo, May 12, 1840.

Whitington Wheat and Chinese Corn.

Gentlemen—The Whitington wheat, which the late Jesse Buel, in the January number of the Cultivator, for 1839, said was "the handsomest sample of wheat we have ever seen of any kind, although it is a spring wheat. The berry is large, plump and very white, the skin apparently thin, the heads seven inches long, the straw stout and bright," &c.; has I understand been a complete failure in this country *as a spring wheat*. Permit me to communicate my experiments on its culture, which may show that we have still a fair prospect of cultivating, with success, this new and beautiful variety of wheat. On the 9th of April, I sowed half a peck on a light gravelly soil; it grew with surprising luxuriance, throwing out the most vigorous stems, averaging, I should think, fifteen to each plant. They continued for sometime growing and spreading over the ground, so as to make me regret not having giving the half peck three times the quantity of land. Half the plants were soon destroyed by a large white worm, but there were still remaining sufficient to justify the hope of an abundant crop. The stems, however, never rose from the ground, nor did they throw out a single seed stalk, but gradually died. This convinced me that in this country it could not be a *spring wheat*, whatever it might be in the different climate of England. Having reserved about half a pint of seed in case of accidents, on the 12th of September, I planted thirty-six grains in rows, ten inches apart, and six inches distant in the rows, to allow room for its peculiar spreading growth. Thirty of these grains vegetated with remarkable vigor. When the snow disappeared in the spring, they presented a very healthy state, spreading their numerous stems so as to completely cover the ground; unfortunately a fence was blown down by a violent wind, which admitted some geese to eat it off close to the surface of the earth. They are now recovering from this accident, and look particularly strong and healthy; though the leaves are not yet of that remarkable size they were before. On the 21st February, I sowed the remainder of the seed, which appeared above ground on the 15th day, and although a considerable quantity was destroyed by fowls, the rest looks very well. This last sowing has been exposed to the influence of the subsequent frost and snow, without being injured in the slightest degree. By these two experiments, I hope to be able to test its qualities in this climate as a winter, and as a very early spring crop, and also to prove that its failure as an ordinary spring crop, must be attributed to the difference of climate alone, and not to any misrepresentation of Mr. G. Thorburn or Mr. Whitington.

One word on the "Chinese Tree Corn" to conclude.

From my experience with this corn during the last year, and from all the contradictory evidence brought forward, for and against it, I am strongly inclined to think that mistakes have arisen in the seed, that is, that the Chinese has been confused with the corn called the "Baden," both new varieties introduced last year. I tried both. The Baden exactly resembles the description of the Chinese given by some writers; it grew very high, ten or twelve feet, produced its ears when other corn was ripe, remained green till the end of October, and was then quite soft, requiring to bring it to perfection two of our summers. The Chinese, planted in hills in the usual way, presented no difference from common corn. But ten grains, planted in a row of eighteen inches asunder, each seed threw out five distinct and perfect stalks (not suckers) having from one to four ears on each; some of these did not arrive at perfection, probably owing to the land not being sufficiently good, yet, although it was all blown down and much injured, with two of the ten plants eaten off by a horse, from the remaining eight, I gathered thirty-three ears, at least as good as the seed, thus averaging rather more than four good ears from each seed planted. It was ripe full three weeks earlier than the common corn of the country. Although the seed was planted in single grains, eighteen inches apart in the row, they were much too close and crowded, each plant resembling a hill of common corn in which five grains had been planted. I propose this year to plant two grains at a distance of at least two feet, and pull up the weakest so as to leave more room for them to spread. Should the result be worth communicating, you shall hear of it. W. R.

April 5, 1840.

Remarks on the Study of Meteorology.

In the former papers on this subject which have been published in the Genesee Farmer, my object has chiefly been to prove the practicability of advancing meteorology,—in the first place from what has been already done in a desultory way, compared with what might be done by increased attention; also,* from the general similarity of the objects embraced in this science, to those embraced in other sciences, in which great advancements have been made. In those papers, also, some remarks were made upon the kind, and method of obtaining those facts or data, by the study and comparison of which, the proposed improvements are to be effected. It is to this part of the subject that I design at present chiefly to confine myself.

The meteorological observations for this purpose may be divided into, 1st, those of the clouds; 2d, of the wind; 3d, of the state of the air; 4th, of occasional meteors.

I. That part of a meteorological register relating to the CLOUDS, should embrace an account of the modifications to which they belong, their motion and their quantity, with the particular appearances of the different modifications or species of clouds. 1. The *modifications* of the clouds have been already well described in an article in the Genesee Farmer, and under the article Cloulds in Dictionary of Agricultural Terms in the same work, which two, especially the former, render any thing farther on that part of the subject unnecessary at present. 2. The *motion* of the clouds includes their course and velocity. Both of these may be known with tolerable accuracy, (the latter perhaps rather vaguely,) by observing them as they pass some elevated fixed object, provided a meridian line is known, and they are observed at or near the zenith. As the different strata of clouds frequently move in different directions, and with various apparent velocities, it will be important to observe the motion of each stratum separately, when circumstances admit of it. When the clouds cannot be observed at the zenith, which is sometimes the case, the zenith motion should be estimated from the observed motion. Observing the motion of the clouds may be facilitated, and perhaps rendered more accurate, as the writer has partially tried, by laying a looking glass or mirror on the sole of a window in a horizontal position, so that the eaves of the house or some other fixed object above, with the clouds passing it, may be visible in the glass; then if the position of the latter, or of lines drawn upon it, be known with respect to the points of the horizon, the course of the motion may be determined with considerable accuracy, and the velocity may be known relatively, by noting by a watch the time occupied by the image of the clouds in passing a certain space on the surface of the glass. These hints may obviously be varied or improved upon according to circumstances, but those whose business calls them to the fields, (in some respects a very proper place for such observations,) will frequently have to content themselves with ascertaining the motion in the manner first alluded to. 3. The necessity of registering the *quantity* and *particular appearances* of the different modifications, is too obvious to need much elucidation; as an example, however, it may be observed, that rain is almost sure to follow immediately a certain appearance of cirro-stratus, yet the whole sky is often covered with that modification in a different appearance, and fair weather the immediate consequence; and some account of the quantity of the clouds, and of each modification, and whether the sky is entirely, partially, or in what proportion it is covered with them, appears obviously to be little less important. To this part of the register of the clouds, belongs the description of those circles and other similar phenomena which sometimes attend the sun and moon, and occasionally the stars, and are caused by the refraction of their light in its passage through the clouds and vapors of the atmosphere: hence as the varying height, structure, and density of the latter, cause the different phenomena of circles, coronas, parhelia, &c. with their subordinate varieties, it appears reasonable that an accurate description of the different circumstances of color, distinctness, &c. and an exact measurement of their apparent dimensions would form one of the most important avenues of information upon the state of the clouds, which the meteorologist could possess.

II. The WIND is to be observed in regard to its course and strength. Both of these may be ascertained by means of an instrument called an anemometer, of which several kinds have been invented. That part of the instrument which shows the course of the wind, exists in a simple form in the common vane or weather-cock, often placed on buildings, and which, if properly constructed, and so elevated as to be unaffected by surrounding objects, as hills, forests, buildings, &c. will answer that part of the purpose of an anemometer; and the observer may, of himself, by attention, form a tolerably correct idea of the relative strength of the wind. It is very desirable, however, that the strength of the wind should be more accurately known, but as the description of an instrument for that purpose so as to enable the reader to construct one properly, would occupy too much space, I shall omit it.

III. The STATE OF THE AIR is subject to variation in four different respects, viz: temperature, gravity, moisture, and electricity. 1. The thermometer is the instrument used to determine the *temperature*, and is sufficiently well known to render a description in this place unnecessary; and the small price at which it may be obtained, places it within the reach of at least any farmer. The thermometer (and the same applies to other instruments,) should be observed at stated periods, and as frequently as practicable. 2. The variations in the *gravity* of the air are determined by the barometer. This instrument, in its usual form, consists of a glass tube about 34 inches long, fixed in an upright position, closed at the upper end, and having the lower and open end placed in a vessel of mercury, a column of which is supported in the tube by the pressure of the air, the height of which consequently varies with that pressure, that portion of the tube above the mercurial column being a vacuum. This apparatus is attached to a frame or board much in the manner of a thermometer; near the upper end of the tube a scale of inches and decimal parts is drawn upon the beard, estimated from the surface of the mercury in the vessel. The mean height is about 29½ inches, and the range varies in different climates from about 1½ to 3 inches. Various alterations have been proposed in this instrument, chiefly for rendering its scale of greater extent, but few of these are to be as much depended upon as the usual form. The cost of this instrument, though greater than that of the thermometer, is not such as should deter the owner of a score of well tilled acres from obtaining it. 3. The instrument used to determine the *moisture* of the air is called the hygrometer. The various constructions of this instrument appear to be so little adapted in its present imperfect state, either from a want of accuracy or convenience to the purposes and persens, (generally) proposed in these papers, that (from this cause, and from a want of space) I am induced to omit some remarks I had intended to make upon the construction and use of it. The hygrometer, however, is certainly a very important instrument, for the quantity of moisture which the air contains must have a great influence on subsequent weather, and it appears to be the more important as our natural senses are but little capable of determining changes in atmospherical moisture with precision, and hence improvements in it, either with respect to accuracy, convenience, or cheapness, so as to place it within the reach of persons of limited means, are much to be desired. 4. The *electricity* of the air is shown by the electrometer, the form of which is usually somewhat varied to adapt it to this purpose From a want of space, and likewise because our knowledge of the influence which local circumstances undoubtedly have upon the indications of this instrument, is too limited as yet to enable us to ascertain the actual relative strength of atmospherical electricity from observations made under different circumstances, I shall omit any account of it for the present. However as our knowledge of these irregularities and the means of obviating them, is chiefly to be acquired by observing the electrometer under those different circumstances, and also in connexion with the other meteorological observations, it will evidently be proper to insert its indications in the meteorological register wherever it can conveniently be done: and this is the more to be desired, as modern discoveries would appear to indicate a much more extensive and general agency of the electric fluid; and especially (it may be supposed) in the atmosphere, where its effects are often so strongly exhibited.

IV. The OCCASIONAL METEORS are chiefly rain, snow and hail; to these may be added dew and frost. With respect to the former, the principal points to be observed are their quantity, the rapidity with which they fall, the size of the drops or particles, with any additional particulars that may be thought worthy of notice. The quantity and rapidity of the rain may both be observed by the pluviameter or rain gauge, the best form of which is perhaps that of a narrow cylindrical vessel, placed in an upright position with an enlargement or funnel at top. A light rod about as long as the height of the vessel, is attached to a float which fits the inside of the vessel like a piston, but quite loosely, the rod passing freely through a hole in the middle of a cross bar placed where the vessel joins the funnel. The rod is marked into divisions which bear the same proportions to inches and parts that the area of the opening or top of the funnel, bears to the area of a section of the vessel: the rain which falls within the funnel descends into the vessel, and raises the float and the rod, the divisions on which that have passed the cross bar show the inches of rain that have fallen. Snow and hail require to be melted for the instrument, but their depth should likewise be measured as they lie upon the ground. If the top of the funnel is six and the cylindrical part two inches in diameter, hundredths of an inch may be easily observed by it, each division on the rod corresponding to an inch, being just nine inches; in this case the vessel ought to be at least 36 inches high. It may be constructed of strong tin plate or sheet copper at a moderate cost. The rapidity of the fall of rain, &c. may be known by observing the rise of the rod at short intervals, but something further respecting the apparent copiousness or slowness of the fall, together with the size of the particles, the times of beginning, continuance, &c. should be carefully observed and noted. Dew and frost, (by which latter is meant frozen dew,) should be noticed when they occur in regard to their quantity, and other attendant circumstances that may be thought worthy of notice.

I shall dismiss the subject at present with some concluding remarks.

In describing the appearances of the clouds (which is perhaps the most difficult part, and the other atmospherical phenomena when the observer is not provided with instruments,) it is particularly to be desired that the least ambiguous terms should be made use of, and the same terms used as exclusively as may be to express the same thing. In short, such a description should be given that not only the writer, but another understanding the fixed construction which is given to any peculiar terms, may with ease obtain a correct idea of all the circumstances of the weather from reading it. This rule may seem superfluous, but it is thought it will not be found so, for though the keeping of a register of this kind is not difficult, yet this thing is rather apt to be lost sight of, especially in describing the clouds. The importance of a nomenclature of meteorology or system of terms, adapted to express both singly and in definite classes, the various objects and phenomena connected with the atmosphere, will, (it is believed,) become obvious to most of those who may follow up these suggestions: but the framing of such a nomenclature seems improper to be attempted as a preliminary step; much meteorological knowledge may doubtless be obtained without it, simply by employing terms of common language with a few slight alterations, a certain amount of which knowledge is requisite to form one on such principles that constant alterations shall not be necessary. In corroboration of which may be mentioned the course of our present state geologest, (of Penn.) in "studiously abstaining from framing a nomenclature for the several foundations * * * * until he becomes entirely familiar with the many modifications they undergo;"* also, it may be observed that many of the most important chemical discoveries were made before the adoption of the nomenclature, which has, (indeed, justly) added so greatly to the fame of Lavoisier and his colleagues.

Montgomery Co. Pa. Feb. 28, 1840. B. S.

Culture of Wheat.

MESSRS. GAYLORD & TUCKER—The mode I would recommend, would be to sow on the young wheat 6 qts. per acre of the largest kind of clover, as soon as circumstances will admit in the spring. After the wheat is cut, the young clover will be convenient to turn your lambs upon, after taking them from their mothers. If you have no sheep, turn in your cattle, but sheep are much the best; they are not likely to pull up the young plants by the roots, and the closer they are eat to the ground, the greater will be the growth the succeeding spring; when, let it grow some 4 or 5 inches before you suffer any thing to pasture on it, then you may turn in your young cattle, which will soon make them fleshy, and such beef will always sell at a remunerating price; but do not depasture too bare, taking out your stock so as to allow a heavy growth of clover by the middle or last of June, at which time plow it under by the help of a chain, fastened round the beam back of the colter, and the other end hooked to the off side of the off horse's wiffletree, allowing the chain to belly down and drag the ground, which will enable you to turn in nearly every spear of clover; in about a week drag it; on the first of August drag it again, or as many times as it may require previous to the middle of August, at which time have it plowed, running your furrows the contrary way to your first plowing; then drag it across the furrows. By the first of September have it again plowed, the furrows running the same way as when you first plowed it.

Sow the wheat (at least 2 bushels an acre,) and drag it in, *leaving as many clods or nubs as you can*, that is, *not* drag the ground fine. The wheat will attain a great growth in the fall, and get well rooted, consequently the frost will have little or no effect, and I think not as likely to blast in the summer.

In the spring, the frosty nights and warm days will cause the clods to fall to pieces around the roots of the young wheat. Rolling in the spring has a beneficial effect; but rolling in the fall ought to be dispensed with, as being very deleterious.

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* Gen. Far. vol. IX, p. 222.

* 2d Annual Report, p. 20.

Before sowing the wheat, if not free from weeds, soak it in brine strong enough to bear up a potato, and afterwards roll it in lime. By this mode of farming, the land is enriched, or at any rate not impoverished, and by apportioning two parts of his farm to be cropped alternately, the farmer may nearly always raise about double the quantity than under the old system; but it is no use to sow wheat or any other grain on land that is not congenial to its growth.

Yours, in the hope of better times,

Skaneateles, Feb. 4, 1840. R. C. F.

The Osage Orange for Hedges.

To the Editors of the Cultivator—Your letter enclosing some inquiries from one of your corespondents on the subject of the Osage Orange for hedges, has been duly received; and I take pleasure in giving all the information in my power. For several years I have endeavored, on all suitable occasions, to recommend this plant to notice, under the conviction that it will prove far more valuable than any other now cultivated in this country for hedging.

The Osage Orange (*Maclura aurantiaca*) is a native of Lousiania and Arkansas: but it is perfectly hardy in this climate. It forms a tree of the second or third class, is very branching, each branch armed with a number of rigid spires; and grows well in any good soil. The wood is remarkably tough, and is probably as durable as the locust. It bears transplanting as well as any plant I have seen. Some of the trees are barren and some fertile. The fertile, or female tree, bears fruit abundantly in a few years, each fruit or berry weighing from twelve to eighteen ounces, and containing from 100 to 250 seeds. Planted early in the spring, the seeds are certain to germinate; and the plants grow so rapidly that in a short time they will make a beautiful and impervious hedge. The first tree that I planted, which is now about twelve years old, is fifteen or eighteen feet high and very spreading; and has produced as many as 200 berries of a season. I have some doubt whether it will perfect its seeds as far north as Albany, but it has borne fruit in the neighborhood of Philadelphia.

Although I have been in possession of the Maclura for several years, and have raised a number of plants from the seed, yet circumstances have prevented me from fully testing its merits for hedging. No person, however, can entertain a doubt of its adaptation to this purpose, who will carefully examine its growth. I have seen an excellent hedge of it between Philadelphia and Germantown, which was apparently four or five years old, and very dense—though less dense than it might have been rendered by closer pruning.

It would be desirable that some of our enterprising seedsmen should promote the general interest as well as their own, by obtaining a parcel of the seeds and offering them at a fair price. Any gentleman, however, may readily get them for his own use if he has a correspondent residing in the vicinity of the Red river. They should be brought round in the fall or winter, and not picked from the berries until the time of planting. There are 600 seeds in an ounce. When a small number of plants are had from the nurseries, the male and female should be both ordered, and set contiguous to each other. I have occasionally disposed of seedlings of the Maclura for the accommodation of those who wished to make some trial of it; and I think they may be afforded at a price not much exceeding that of the thorn, for an equal length of hedging. From one and a half to two feet apart would be sufficiently close.

Among the uses to which the Osage Orange may be applied, is that of feeding silk worms. It is a milky plant, and belongs to the same natural order as the mulberry, and I have found the worms to feed on the leaves with as much avidity as they do on the multicaulis. The silk is very glossy, but I have thought the fibre somewhat finer than that produced from the mulberry. THOS. S. PLEASANTS.

Beaverdam, Va., 5 *mo.* 4, 1840.

Management of Bees.

Messrs. Gaylord & Tucker—I will relate to you some of our experience in regard to the management of bees. It was our practice formerly to place them in hives in an open bee-house, by which method we were liable to losses in three ways, viz: by swarming, by the moths, and by severe weather in winter; beside which, in order to obtain honey, we were obliged to destroy the bees.

A few years since, we adopted the following plan, which has thus far been very successful. A hive of bees was placed in a small dark room near the wall with an outlet large enough to permit them to pass in and out freely. A box was then placed near the hive, with the open end facing it, so that it might easily be detached from its resting place, and the bees were permitted to work unmolested until the autumn. When the cold weather has driven the swarm to the larger hive, the box is taken off without destroying a bee. I might add that it is not essential that a box should be used, as they will work on the outside of the hive without it. Our practice has been to take up a part in the fall and part in the spring, so that they may have enough to winter upon.

We have this year taken off sixty or seventy pounds, the product of one swarm. By this method of treatment we avoid the losses to which we were before exposed, and have besides an abundance of the best of honey. I ought perhaps to say, that our bees are in a chamber, which may be the reason why they are not troubled with moths. Respectfully yours,

S. G. HUNTINGTON.

Hadley, Mass., March 7, 1840.

On the Culture of Cotton.

Messrs. Editors—Permit me to offer some answers to your Princeton (N. J.) correspondent, dated 16th November, 1837, published in the Cultivator, vol. 4th, page 163.

Question 1. What soil and climate is the most suitable for the culture of cotton?

Answer. A dry, rich, friable soil, and warm climate.

Question. What kind of seed is found in the southern states to be the most productive and profitable?

Answer. In the northern section, the common green seed is best; and in the southern section, Petit Gulf.

Question. What is the best method of, and best time for, planting?

Answer. As soon as there is no probability of the plants being destroyed by frost. In this latitude (35 degrees,) about the 10th of April is thought the best for planting. The usual method is to make ridges by throwing four furrows together, with a plow having a mold-board; then run a small plow with a harrow tooth or colter; sow the seed in this furrow, at the rate of five bushels to the acre, when the rows are $3\frac{1}{2}$ feet apart, and cover by drawing a block, having a notch in it to fit the ridge, over it. The seed should be covered from one-fourth to one inch deep, and not deeper.

Question. What tillage must precede and succeed the planting? Can two crops be obtained in one season?

Answer. If the ground has been well cultivated the preceding year, nothing more is necessary than putting four furrows together for a ridge; after planting break up the middles; as soon as the plants are up, weed them with a cotton-hoe, (a light hoe much used in the south,) then plow it as often as every fourteen days if practicable, with some light plow. The side harrow is of great service in cotton culture. (It is made by putting a piece of scantling 22 inches long, $4\frac{1}{2}$ inches square, across a beam at an angle of 45 degrees, in which is placed five common flat-foot harrow teeth.) In plowing, nothing more is necessary than to keep the surface mellow and clear of grass and weeds, except in very dry weather, when it should be plowed deeper to make the ground moist. The hand-hoes should go over it every eighteen days carefully, taking out such grass as may be left by the plow or harrow, and thin out the stalks gradually, to four inches. One crop is all that can be made in one season.

Question. When and how should it be gathered? and how can it be most expeditiously cleaned, pressed, and prepared for manufacture or exportation?

Answer. It should be picked as soon as it is sufficiently opened, so that a hand can do good work. It is gathered by one hand's going between two rows with a small hamper basket, which will hold 30 lbs. called a hand-basket: he picks alternately from these rows until he fills his hand-basket, then empties it into a large one, which he keeps for that purpose—when this has as much as he can carry, he takes it to the gin or cotton-house, where it is sunned if necessary, and housed. A hand will pick in the early part of the season 100 lbs. of green seed, and 200 lbs. of Petit Gulf. It is cleaned by a very common machine called a gin, which will pick about 1,800 lbs. of seed cotton per day; and pressed by a vertical wooden screw into bales of 400 lbs. requiring 5 yards of bagging and seven ties of rope to hold it in shape.

Question. What is the fair average yield, cost of culture, bagging, machinery, &c. and the nett profit per acre?

Answer. In this latitude, 800 lbs. is as much as may be calculated on. On the rich lands of Mississippi, South Alabama and Florida, 1,600 lbs. may safely be calculated on. A gin is worth $150; screw $50; negroes of good qualities and suitable age, sell for men $700; women $500; girls, boys, and those advanced in age, less. There is little cotton made by hirelings. One hand can cultivate 10 acres in cotton, and make a sufficiency of corn, wheat, oats, &c. for family use, on a large farm, and something less on a small one. The price of cotton varies, as well as bagging or rope. A great portion of cotton is made by slave labor. Cotton in bale, averages 8 cents per pound, and bagging 3 *a* $3\frac{1}{3}$ cents per yard.

Question. To what diseases is the cotton plant of our country liable, and how remedied?

Answer. Lice, when young; remedy none. When more advanced, rust, which is more destructive than every thing else. This is also caused by a minute insect scarcely discernable to the eye, which deprives the plant of its sap, and it turns of a russet color, whence its name. Cotton is also sometimes much injured by the common cut-worm, and by a small worm called the army worm, from their going in vast quantities together; sometimes grass-hoppers are troublesome.

Question. Is the soil or climate of East Florida, 50 miles south-west of St. Augustine, adapted to the growth of cotton, and what kinds?

Answer. The climate is suitable in any part of Florida, and so is the land when dry and rich enough. There is some fine land in the direction spoken of, on How Creek, Dunn's Lake, Lake George, and the St. John's river: (though, perhaps, sugar would be a more profitable crop.) The Petit Gulf, or Mexican, is the best cotton to raise in Florida, except just on the sea-coast, where the Sea-Island grows. I think in the vicinity of Fort King, and in Alachua county, the best cotton country I saw in Florida. Cotton, rice, indigo, sugar, Spanish tobacco, Indian corn, all grow well in Florida—it is susceptible of being a fine silk and wine country. With respect, I am, &c.

CHARLES S. JONES.

Bolivar, Alabama, March, 1840.

The Place to Dig a Well.

I observe in the second number of the Cultivator, a communication from Myron Adams, on the method of determining the places of underground streams of water, by a twig from the peach tree. As I have also seen that method practiced in former years, I wish to state briefly my experience. The principal experiments were made by a friend, of unimpeachable uprightness and honesty of character.

A well had been dug, but the quantity of water was found insufficient. The person to whom I have alluded, came on the ground with his forked peach stick, and by carefully holding it with his hands, according to the usual method, as he walked across the ground, found it to turn and point downwards, within a few feet of the well; and the stream thus indicated, was pronounced from the nature of the experiment to be with, in a few feet of the surface. By repeated examinations, the stream was traced to a distance of many rods up a gradually rising field, the twig always turning as he passed over the line of the stream, from whatever quarter he approached it. The experiment was considered very satisfactory.

Before quitting the ground, however, he instructed a by-stander, who had never seen the experiment before, in the manner of holding the twig; who, also, found it to turn at the stream. This was particularly gratifying, as but few appear ever to possess this faculty. But the latter soon found that it would turn at *any place;* and doubts immediately arose of the infallibility of the indications by the former. The experimenter accordingly very obligingly consented to be blindfolded, when the trial was repeated. The stick no longer pointed downwards to the stream, but at irregular and unconnected points. The experiment in short proved an entire failure. It may be proper to add, that a deep narrow ditch was afterwards cut from the well, beyond the point indicated, and below the depth stated, and in fact nearly the depth of the well, but no stream of water was found.

Did the experimenter mean to deceive? By no means—the farthest from it possible. But from the peculiar manner of holding the twig, its weight throws it down very easily, acting with considerable force at the points of turning. Hence, at certain places a slight motion, or movement of the fingers, would cause it to descend. Those who know with what force the imagination acts upon a tense and excited nerve, even with the person himself knowing nothing about it, and sincerely believing in another cause, will perhaps consider this as a sufficient explanation. If so, it will be easily understood why the twig should turn at points where it would be *expected* to do so.

As this method of finding water cannot be accounted for by any known principles of electricity, of attraction, or even of *animal magnetism,* it requires exceedingly strong proof to establish its correctness. I have known many wells to be dug, but never but one or two where a sufficiency of water was not obtained at a greater or less depth; in fact, there appears to be numerous underground streams; or the earth appears, in other words, to be nearly saturated with water at a little distance below: hence, water is nearly always found; and, hence, also, the usual success inspires confidence in the method, while failures are more apt to be forgotten. A theory, sincerely believed in, is much more apt to cause us to remember all in its support, and forget what there may be against it, than one which is more doubted. Very respectfully,

J. J. THOMAS.

Macedon, 3d mo. 1840.

Weight of Berkshire Hogs.

Messrs. Gaylord & Tucker—As to the character of the Berkshires which I have, I will state the weight and usage of a pair of barrows, which I killed last winter. The summer after they were pigged, (in the spring,) they were kept in the pasture field, without any other feed than grass; in the winter they had the common usage with other shoats, and were turned out again early in April on sheep pasture, and ran in the fields with the sheep the whole season until October, when they were shut up and fed on corn and rye, boiled beets, potatoes, &c. They were butchered in February, and weighed 1,020 pounds dressed. They were not fed more highly than hogs usually are, nor in any way forced. The pork was pronounced by all who tasted it, as decidedly superior to the meat of the common breed of hogs. J. R. CALDWELL.

New-Windsor, April 16, 1840.

The subscriber would submit the following statement relative to the weight of a Berkshire sow, fatted by him last fall. The 1st day of May, was turned out to pasture, and had no feed but grass until the 1st day of September, when she pigged. The pigs run with her until the first of October, when they were taken away. She was then put up and fed 66 days; when killed weighed 396 pounds. I make the statement in order to correct some erroneous opinions relative to the size of the Berkshire hogs. I am fully satisfied they are (when thorough bred) the largest and best breed to be found in this country. Yours respectfully,

J. C. DEWEY.

Leeds, Greene Co., March 21, 1840.

A New Plan for a Bee-Hive.

Editors of Cultivator—I have in my mind a new plan for a bee-hive; a description of which I intend giving you, that those better acquainted with these industrious insects, than I am, may say whether it is a good one or not; and also, that if it is an improvement, that it may be brought into use.

It may be denominated the "Book-Case Hive," and by reference to books standing upon a shelf, I can best illustrate my idea. Let the books be made of tin, or other metal, or wood, but tin is preferable, 15 inches high, 10 inches wide, and 2 inches thick. The back of glass, and one of the sides made to slide in a groove, so that it would in fact be a tin box, with a sliding lid. Each of these "books" or boxes, must have holes through the sides exactly opposite each other, with small slides to shut. I would make the holes at the lower corner, next the back. When in the case they would form a communication from one to another, and also out to the open air.

To put a swarm in, take out one of the centre boxes, and the slides from the two adjoining ones, and put the bees in the space; then replace the other box, having drawn the slide also of that, and push gently in until the bees crawl into the other boxes; then shove in the slides and shut the door of the case. By opening the case door at any time, the operations of the bees can be seen through the glass backs of the "books," and whenever it is seen that a book is full, and you wish to peruse its contents, drive the bees out of that book, if any remain in it, into the adjoining ones, by tapping on it, or insert the nose of a bellows in a hole made for the purpose in the back of each book at the top end, and close the little slides over the holes in each side of the adjoining books, and withdraw your book, and put an empty one in its place, and open the side holes again and admit the bees to fill again the empty book.

You will perceive that it is not necessary to empty the full book, because it is now a neat convenient tin box, with a sliding lid to keep out all insects and dust, until you have used up the contents. To open it, slip a knife under the lid and cut the adhering comb loose.

You will see that the book case may be extended to any length, and may be placed in any situation, and may contain two or more swarms, by stopping the passage from one book to another. It might be made a neat and handsome piece of parlor furniture, and the bees conducted to the outside of the house through a tube, wherever they would not be an inconvenience on the out side.

Whenever you wish to form a new colony, all you have to do is to withdraw one or more of the full books of bees, and place them in a new case.

If this is a new and good improvement, I hope those who like it will use it immediately, because after proving its value, I may incline to patent it. I hope to hear free remarks upon the subject.

"With affectionate regard,"

SOLON ROBINSON.

P. S. Another convenience of my "book case hive," would be the facility of moving, as by closing the passages through the books, they could all be withdrawn and carried about with all the contents undisturbed, and the empty case, however large, could then be removed. I now have my bees in the chamber of my house in boxes, upon the plan of the "Kentucky bee house." It would be very troublesome to move them. In summer time, almost impossible.

The "book case hive" might be made to hold a large colony, or no larger than a single hive, which might as usual stand out door, and could be prevented from swarming by a timely withdrawal of the book containing the new queen. Single hives standing out, should always be raised about an inch from the bench, by driving in four nails to serve as feet for the case to rest upon, and the bees admitted inside through a long narrow passage.

I am satisfied that bees would fill a new book placed in the centre of their operations, much sooner than they would the same space in the "double box" or "drawer hive." In withdrawing a book, no disturbance would be created in the hive, no broken comb, no honey spilled, no shifting from one vessel to another, no loss, or dirt or dead bees.

If the plan works as well as I anticipate, I intend to provide ways and means, to have a case exhibited at the next exhibition of the American Institute, unless some friend to agricultural improvement, who resides much more convenient than I do, will undertake to do it in a manner creditable to American enterprise.

SOLON ROBINSON.

Lake C. H. Ia. April 2, 1840.

To Break Dogs from Sucking Eggs.

Break an egg, and after pouring ont a part of the white, put in 7 grains of tartar emetic; lay the egg in the yard where he will find it; he will be sick for a day, but not injured. Should 1 dose fail, repeat it. I never knew a hound to take more than 3 doses—very often one will do. C. S. J.

Rural Architecture.

Messrs. Gaylord & Tucker—Not long since, the columns of your valuable paper were devoted to an inquiry into the most suitable forms and plans for farm houses, the result of which will doubtless be beneficial to the country at large. There is another subject, intimately connected with this, which, I think, is equally deserving of attention; and, as I know of no other medium, through which the information referred to, can be so extensively disseminated, as through the columns of the Cultivator, I propose offering a few remarks thereon.

Next to the wants of the great mass of agriculturists, who require a plain, economical and convenient house, come those in more affluent circumstances, who are able to expend a little in erecting more substantial houses, in which taste and convenience may alike be studied. But this branch of building, called Rural Architecture, you are aware, has attracted little or no attention among us. It is not because people are unable or unwilling to erect dwellings of this description, that we do not see them, but because they have never studied this branch of art.

In England and France—in fact, throughout the continent, rural architecture is studied by all classes in the country; hence, the beautiful villas and cottages, that strike the eye of the traveler in those countries. The expense of erecting a cottage, or villa, and laying out the ground adjacent in a tasty manner, adapted to its situation, is not greater than to build up a rude mass of brick and mortar, without regard to either convenience or taste. It is the same where wood is the material; for this can be the more easily wrought into any desired form.

There is no part of the world, where more eligible, I may say delightful, situations may be found than within our own state, and particularly in the vicinity of New-York, for a display of taste in rural residences, whether for a cottage or an extensive mansion; yet how few have improved them.

On either bank of the East River, to its union with the waters of the Sound, the locations are unsurpassed for beauty. Every variety of scenery is here presented. First, a valley, then a sloping hill. Next a bold and rocky promontory, and again a level plain. All are in sight of the river, which, from its windings, frequently presents all this variety of scenery in the same landscape.

It is true, that there are many residences in these romantic places, and that they appear agreeable to the eye, as we pass along in the steamers: it is not the houses that attract attention, but their situations. Art has done nothing for them, but nature all.

Then we have the noble Hudson, whose banks present another variety of landscape. Here, wild, rugged and mountainous; there, cultivated and subdued. But no rural villa, or stately mansion, or simple cottage, is here seen, that exhibit taste or refinement. The old fashioned square farm house is the predominant style, though, in a few instances, are some that make pretensions to beauty. These are mostly Grecian, and present the appearance of temples. I do not deny that the Grecian order of architecture is the most beautiful and chaste, that we practice; but that it is adapted to every style of rural residences as here practiced, I utterly deny For churches, public buildings, stately mansions, it will do very well, but not for the latter, unless the situation is adapted to it. The Grecian styles may be varied and adapted to mansions, or to a more simple dwelling; but where they are employed, they present the same form, with ranges of columns and large porticos. Take, for example, one of the mansions alluded to. You see a building resembling a Grecian temple, with the addition of green blinds. Near by is a huge barn, and perhaps the whole is surrounded with a rail fence. A few poplar trees may have been planted, and a cabbage garden flourishing in front, with an occasional sun-flower or hollyhock. Such is the want of taste and proper arrangement among our wealthy farmers, or among gentlemen who have retired to the country.

The question then arises, how are these evils to be corrected, and the public taste so improved that buildings may be put up, which are adapted to every situation, whether a simple cottage, or an extensive mansion, that a gentleman when he has selected a spot for his residence, may know how to improve and regulate his ground; to adopt a plan for a house, adapted to its situation; how to place his barns and out-buildings, so that they may not injure the appearance of his house; how to arrange them in the most convenient and economical way—in fact, how to arrange his whole establishment with regard to convenience, economy, and effect. As this is a science with which we are little acquainted in this country, we want examples from abroad, where it has long been practiced, and is well understood. I do not, therefore, wish to see any particular style of rural architecture adopted, or even to suggest what is most striking to my taste. I want to disseminate all the information that can be obtained in books, among those who can be benefited by them. I want to see the beautiful situations that abound in our state, properly appreciated and improved. The banks of the unrivaled lakes in the western parts of the state, and of our rivers, present the most delightful situations; yet, but few are improved as they ought to be.

Without entering farther into this subject, the importance of which must be obvious to all, I beg leave to refer the readers of the Cultivator to a series of works on Rural Architecture and Farm Buildings, which, if properly read and examined, will effect all that is desired. They are the most recent works published on the subject, and enjoy the highest reputation in England. They are all by the same author, P. F. Robinson, Esq. Vice-President of the Institute of British Architects. Their titles will fully make known their contents. They are the following:

1. *Robinson's Rural Architecture,* being a series of designs for ornamental Cottages, Residences, Parsonages, Alms-Houses, Farm Houses, Dairies, &c. with Ground Plans, Elevations, and Admeasurements, with estimates. In 96 plates, 4to.
2. *Robinson's Designs for Ornamental Villas,* adapted to the wants of individuals of moderate income, intended to elucidate the possibility of producing Architectural Effects, combined with comfortable arrangements, without increased expenditures. Including Residences in Swiss, Grecian, Modern Italian, Tuscan, Old English, Castellated, Elizabethan, Ancient Manor House and other styles; also Stables, Garden House, Watermill, &c.; with Ground Plans and Elevations. In a series of 96 plates, 4to.
3. *Robinson's Designs for Gate Cottages, Lodges and Park Entrances,* in various styles, from the humblest to the castellated. In 48 plates, 4to.
4. *Robinson's Village Architecture,* being a series of designs for the Parsonage, the Inn, School House, Market House, Town Hall, Church, &c. illustrative of the observations contained in the Essay on the Picturesque, by Sir Uvedale Price. In 41 plates, 4to.
5. *Robinson's Designs for Farm Buildings,* with a view to prove that the simplest forms may be rendered pleasing and ornamental, by a proper disposition of the rudest materials. Including the Laborer's Cottage, Farm House, Barn, Granary, Cow House, Mill, Dairy, Shed, Reservoir, &c. in the Old English, Italian, and Swiss styles. In 56 plates, 4to.
6. *Robinson's New Series of Designs for Ornamental Cottages and Villas,* with estimates of the probable cost of erecting them, forming a sequel to the other works on Rural Architecture. With 56 plates, 4to.

The last mentioned work contains designs of cottages and villas, which have actually been erected by Mr. Robinson, since the publication of his former works. It also contains estimates of each, which vary from £100 to £1,600, or $500 to $8,000. Many of these were old houses altered—a system which might be extensively adopted with us; as it is not always necessary to remove a good house, because it is not properly built.

In the reviews of these several works of Mr. Robinson, by the English papers, the highest praise is bestowed on them, and he has the credit of having done more than any other man, in improving the taste of the English people. Feeling great interest in the subject myself, I have procured all the works named, and hope by their means to improve the style of building among us. They are all published by *Henry G. Bohn, London,* from whom I obtained my copies, though, I presume, they may be obtained of the booksellers in New-York. They are got up in a superior style, both as to engraving and printing, and are much more elegant ornaments for the drawing room and center table, than the useless annuals that are usually found there. J. R. B.

Preservation of Cabbages.

Messrs. Gaylord & Tucker—The following methods of preserving cabbages for winter use, which are the result of experience, may be of use to some of your numerous readers.

The cabbages should be gathered before injury is done them by the severe fall frosts; the heavy outside leaves should remain on the stalk. Fix a string or cord round the stump, near the roots, suspend from the sleepers with the heads downward in a cool cellar, and they are ready and fit for use at all times. Cabbages kept in this manner retain all their peculiar flavor and sweetness; the whole virtue of the stump and leaves is concentrated in the part which is used, are handy of access, occupy but little room which would be occupied by other purposes, and seldom, if ever rot; the outside leaves wilt and contract, and in time become quite dry, which forms a sort of coating that serves to exclude the air from the inside of the head.

Another method praticed by some, and highly recommended, is to cut the head from the stump, pack close in a cask, taking care to fill up all the vacancies with dry chaff, thereby excluding the air, and keep in a dry cellar.

Making Vinegar.

Vinegar (an indispensible article in house keeping) may be easily made by observing the following simple rule, viz: procure a clean oaken cask, of the size of a common barrel, or wine cask, place it in a warm room, if in the summer time, the garret, near a roof which is exposed to the warm rays of the sun; put in say one or two gallons of clear fermented cider, leave the bung out so that the air may have free circulation; in the course of two or three weeks it will become sharp vinegar fit for use. Cider may then be added from time to time in small quantities, and increased at pleasure, taking care to never add more cider at any one time than there is vinegar already in the cask; in recruiting care should be taken that clear fermented cider be used; excluding all such trash as cider emptyings from old casks, tea grounds, &c. &c. C. M.

Marcellus, February 24, 1840.

Preserve your Papers.

Messrs. Editors—I wish to make a few remarks on the propriety of subscribers to the Cultivator, and other valuable papers that are adapted for binding—preserving them for future reference or reading. It requires but little attention at the time, and, to every farmer, may be of considerable importance. There are, in such papers, a multitude of valuable facts stated, recipes given, &c. &c. which no one can pretend to remember, and which, when most wanted, cannot be made available, for the reason that the papers have not been preserved. I have been a subscriber to both the Genesee Farmer and the Cultivator from the commencement of each, and I have them, now, bound and complete. Circumstances have placed within my reach, a number of the most valuable foreign agricultural works; yet, there is none that can be consulted with so much profit as these two series.

My method of proceeding with these, and other papers I wish to preserve, is this. I take my papers as often as is convenient, or when time can best be spared, dampen them, hold them to the fire till nearly dry, and then, with a smoothing iron, moderately hot, dry them thoroughly. They will now be as smooth and free from breaks as when they came from the press. They are now carefully folded, and laid away, or, if desirable to have them in use, they are placed in a cover of brown or other paper, and thus kept until the volume is complete, when it is sent to the binder, and takes its place in the library ready for reference at all times.

I will state one fact, which will show the utility of pursuing this course. A gentleman assured me, a few days since, that a reference to preserved volumes of the Genesee Farmer, saved him an improved Durham calf, which is now two years old, which has earned him 150 dollars the past season, and for which several hundred dollars have been offered and refused.

X. Y.

Vanfossen's Patent Grain Cutter.

Messrs. Gaylord & Tucker—Having been for some years engaged in agricultural pursuits, and feeling deeply the necessity of adopting some plan to avoid the great losses to which farmers, especially of this western country, are subject, by the difficulty of procuring help, and consequent injury of their crops, at that most critical and important period, harvest time, I have been induced to make numerous experiments within the last two years, the result of which is, the invention of a machine, (the Patent Grain Cutter,) the use of which obviates the evil alluded to.

This machine is calculated for both hand and horse power. It cuts the grain, lays it in a swath, and the horse machine also rakes ready for binding. With the hand machine, a man will accomplish with ease, in a given time, as much as two or three can do in the ordinary way.

The amount of work accomplished with the horse machine, will be proportionably greater as the propelling force. Almost any boy can manage this machine, that is capable of managing a horse.

The expense of constructing the Grain Cutter, is comparatively trifling, as it is very plain and simple, and its cost will be no obstacle to its general use wherever there are raised large crops of grain. This machine can be examined by any one calling at the residence of the subscriber, who is now preparing to take out a patent, and hopes soon to be in readiness to sell rights or machines.

I intend to deposite machines or drawings soon at the office of the Cultivator, Albany; at Rochester, and at various other places, for examination.

T. J. VANFOSSEN.

Sylvania, Lucas co. O. March 30, 1840.

To Preserve Cabbages from Lice.

Messrs. Gaylord & Tucker—Having always been of the opinion that the all-wise Creator made nothing in vain, yet I could not possibly conceive, for what purpose he created that most uncomely reptile the toad, until some years since, having a fine lot of cabbages that I was endeavoring to bring to the greatest perfection, which were completely covered with the cabbage lice, so much so, that I gave them up as so much labor lost, until one morning I discovered a toad mounted on a large leaf; I watched his movements, until he had cleared them all off, and mounted another leaf, which he quickly cleared. I then took my basket and went a toading; found about a peck, and turned them in; and to my astonishment, in two days the whole field of cabbages was perfectly free from lice. For a number of years I have never found this plan to fail.

Should this hint be of any use to the sour-krout brotherhood, or the good people of Communipaw, it is at their service.

As one of the subscribers to your invaluable paper, I am, gentlemen, your ob't serv't. N. STARR.

Middletown, Ct. April 18, 1840.

Imported Hogs in Upper Canada.

A breed of hogs imported from England, bred by the late Edward Ombler, Esq. of Cameston, county of York. Their principal quality consists in arriving at a great weight at an early age. Several of the breed have been slaughtered in Guelph, at the age of one year, that have exceeded the weight of four hundred pounds. They are a pure white, and possess remarkably fine bone. JOHN HARLAND.

Guelph, U. C. March 14, 1840.

Peach Trees.

Messrs. Editors—I planted an orchard of peach trees in the spring of 1836, which have been very much injured by the grub-worm; I have cut and cleared them out several times, and put fresh and leached ashes around the trees frequently without having the desired effect. In the spring of 1839, I put charcoal dust and dust from a coal hearth around several trees, which partially prevented any further injury from the worms. 1840, a few days ago, I commenced applying spirits of turpentine to the trees, according to a direction in the Genesee Farmer last summer; I am also applying tan bark (just taken from the vats,) to my trees, as a neighbor of mine had a lot of trees, very much injured by the worms, rescued, and the ravages of the worms entirely prevented, by putting tan around his trees. I would be very thankful for any information, in relation to the effect produced by putting ashes or tan around fruit trees. H. HAMMOND.

Lewisberry, Pa. April, 1840.

Messrs. Editors—I have been a constant reader of the Cultivator for two years, and though living in the city and following a mechanical business, I am always glad to see the postman come with my paper; and I assure you, 'tis with no small satisfaction I hear of the improvements that are making in agriculture. I should think that man a foolish one indeed, who after having once seen your paper, would be without it. Having friends living in the country, who I know do not take your paper, and who perhaps never will, unless some pains are taken to show them the value of it, I send a year's subscription for them, and you will please send me two papers, instead of one, for the present year. A MECHANIC.

Cure for the Black Tongue.

A handful of fine salt rubbed upon the tongue of a horse that has the black tongue, will cure it, in at the most two applications. It is infallible, and simple and cheap enough. In 1833, I tried it upon four of my own horses, and the stage proprietors cured over 30 horses with it, without one failure. C.

Mar.hall, Mich. March, 1840.

To Correspondents.

We have been favored with the copy of the Address delivered before the Horticultural Association of the Valley of the Hudson, at its Meeting at Niblo's Garden, New-York, last autumn, by Wm. Emerson, Esq. which we shall publish next month.

The plan of Mr. Frost's Piggery—the plan of a House from A. H. N., and the drawing of Mr. Bodden's Harrow, together with a portrait of the Short Horn bull, President, owned by Messrs. Gaylord & Fuller of Skaneateles, will appear in our next number. Also, several communications, among which is one from S. Guthrie, Esq. detailing his experience in feeding the sugar beet, &c.

"A Subscriber" wishes to know if "a graduate of one of our New-England colleges, is likely to make a good farmer?" Though he may not have obtained at college the information most necessary for a farmer, there can be little doubt, but that, with proper industry and observation, he may yet become a good one. The day has gone by, when ignorance was considered requisite to constitute a good farmer.

R. Foster will find his inquiry answered in the excellent communication of James Byrd, in the last number of the Cultivator.

ACKNOWLEDGMENTS.

Two copies, elegantly bound and lettered, of *The Young Gardener's Assistant*, by T. Bridgeman, Gardener, Seedsman, and Florist, New-York. Eighth edition, 1840. From the Author, who will accept our thanks for his excellent work, which, we are pleased to learn, meets with so ready a sale, as to require a new edition annually.

The Journal of the English Agricultural Society. Part III. from G. C. Thorburn, Seedsman, New-York.

We have also received, through Dr. Beekman, the last two numbers of the Edinburgh *Quarterly Journal of Agriculture*, and the London *Farmer's Magazine*, for February, March, and April. Our copy of the latter work for February and March, failed to arrive.

The *Edinburgh Evening Courant*, with its supplement, containing the Highland Society's List of Premiums for 1840, from W. L. Mackenzie, Rochester.

Third Report of the Agriculture of Massachusetts. By Henry Colman, Commissioner for the Agricultural Survey of the State, from the Author. This volume of 250 pages, octavo, is devoted to the subjects of Wheat and Silk.

Speeches of Mr. Webster and Mr. Silliman, at the Agricultural Meeting in Boston, last winter; with notes by Mr. Colman. From the Hon. Daniel Webster.

A superior *Berkshire Pig*, from Z. Standish, No. 226 Washington-street, Albany, who desires us to say that he can furnish his friends, from several litters now on hand, and others soon to come in, with pigs equally beautiful and pure blooded.

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All the published volumes of the Cultivator can be furnished to new subscribers. The price is, for vols. 1, 2, 3 and 4, 50 cents each—vols. 5 and 6, $1.00 each. They are handsomely done up in printed covers, and can be sent by mail at the expense of newspaper postage.

THE MARKETS.

New York, May 23—There is a fair demand for Ashes at $4.50a$4.88. The sales of Cotton are 6,500 bales at 6a11 cts., prices firm.

The closing sales of Genesee Flour have been at $4.88; Ohio, via Canal, $4.62a75; Georgetown, $5, New Orleans, $4.62. Rye Flour and Corn Meal dull, at former prices. Sales Northern Rye at 54a55 cts. Southern Corn has sold at 53a54 cts, wgt. Northern Oats are plenty at 36a37 cts; Jersey 32 cts.

Beef and Pork are in good demand. Lard is a little dearer. The sales of Rice are 300 tcs. at $3a3.31.

FROM THE STEAM PRESS OF
C. VAN BENTHUYSEN,
ALBANY, N. Y.

THE CULTIVATOR:

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

BEES.

Few insects, or animals, furnish more materials for instruction or reflection than the honey bee; their wonderful instincts, their labors, their social regulations, are alike deserving the study and notice of all; and while their labors contribute so much to the comfort of man, they should receive a proportion of his care and attention. The blind Huber was the first to give mankind a history of the bee, its habits and instincts, worthy of the subject; and, although many entomologists have since devoted much time to this matter, it is surprising how few facts they have added to those accumulated by the patient and persevering labors of the blind observer. In the management of this domesticated insect, in the best mode of availing ourselves of its stores without taking its life, and in the protection of it from its numerous enemies, some advances have been made, and to no individual are the public more indebted on this score, than to Mr. WEEKS, of Vermont, whose Manual on the management of the bee, is deserving of great praise for the intimate acquaintance shown with the subject on which he treats, and the great amount of practical information he has condensed into a very small compass. It is a book that should be in the possession of every bee owner, as they can scarcely fail of receiving much valuable instruction from its pages, even should they not be in possession of the hive he has invented, which experience shows to be admirably adapted to aiding in the management of the bee, and to which, as a matter of course, many of his remarks and rules have reference.

There are two methods adopted in keeping bees—one, in either the common or the improved hives, when they multiply by swarming; and the other, when one or more swarms are put into a house or chamber, so large that their labors can be continued for years without swarming. Both methods have their advantages and their disadvantages. Small hives are more liable to be attacked and destroyed by moths, or to be robbed, than very large ones in which there are abundance of bees; but they multiply more rapidly, and starting with a given quantity of bees, will, in a term of years, if safe from accident, produce a greater quantity of honey; at least, some experiments seem to show that is the case; while bees in houses or large hives require less care, as they rarely swarm, and the honey can be taken when wanted without destroying the bee. This objection of destroying the bee, is obviated in Mr. Week's hive, as well as in some other of the improved or patented ones.

Every one who keeps bees should have his hives in readiness, before the time of swarming arrives. They should be made of good stuff, well seasoned and jointed, planed and made carefully, so that the moth may find no cracks in which to deposit its eggs, or the young grub to hide. Hives must always be kept clean and sweet, and if so, a hive that has been used, is as good as one in which no bees have ever been. The hive should be ready for the swarm, as, if one is not offered them soon after coming out and alighting, an embassy is sent out to find one, and the result is, the swarm is lost.

It is still the custom with many, while the bees are swarming, and before they alight, to make all sorts of noises with horns, tin-pans, bells, &c.; but this is wholly useless, and only serves to irritate the bees. When, after once lighting, they have again risen to go away, we have seen a few pails of water, thrown among them, appear to produce a good effect, caused probably by the wetting of the queen bee's wings, and compelling her to retreat from the apparent shower. In most cases, however, when the bees show a disposition to go off, they will generally do it sooner or later. We have known them to leave a good, new hive for the woods, after they had formed several considerable pieces of comb, and been apparently contentedly at work for thirty hours. There is usually very little danger in taking care of bees while swarming, as the workers invariably leave loaded with wax and honey for the preparation of their new home, and are consequently little disposed to be pugnacious.

Many apiarians are very careful to regulate the size of their swarms of bees, by putting two or more small, weak swarms into one hive, especially when such come out late in the season. Mr. Weeks says—

> Second swarms are generally about half as large as the first, and the third swarms half as large as the second ones. Now, if second swarms are doubled, so as to make them equal in numbers with the first, the owner avails himself of the advantage of a strong colony, which will not be likely to be disheartened for the want of numbers, nor overcome by robbers from stronger colonies.

He might have added, that by more fully covering the combs, these are better protected from the moths where the bees are numerous, than in weak swarms. In regard to doubling swarms, Mr. Weeks adds—

> "The operation should be performed with in two or three days, [after swarming,] at the farthest four days. The sooner it is done the better, and the less hazardous the experiment. As a general rule, second swarms only should be doubled. Third and fourth swarms should have their queens taken from them, and the bees returned to the parent stock."

The most formidable enemy the bee owner has to encounter, is found in the bee moth; and these, if they once obtain a lodgment in the hive, and deposite their eggs in safety, in the comb, or in the glutinous matter with which the bees line their hives, they are expelled with difficulty, and the destruction of the bees is the common result. The egg of the moth or miller produces a small grub or worm, which burrows in the comb, or lining of the hive, for a time, or secretes itself in crevices of the hive, so that the bees cannot get at them, to remove them or destroy them in the hive. As the grub increases in size, it spins a cocoon or web, which it enlarges as it proceeds in the work of eating the honey and comb, and which protects it from the attacks of the bees. Where there are many bees in a hive, the miller finds it difficult to make a lodgment, and if the eggs are deposited, it is hardly possible for the young grub to escape their vigilance; but a weak hive, will, in such a case, scarcely fail of being lost to the owner. A great variety of methods have been practiced and recommended, to prevent the attacks of the moth. It was at one time supposed that hives placed in the chambers of elevated buildings, would be above their reach; but some instances have occurred in which hives in the garrets of three story stores have been destroyed; and besides, every bee hunter knows it is not uncommon to find the moth or the grub in the most elevated trees in which the bee is found. Dr. Thatcher, a few years since, announced as an infallible preventive, placing the hive in the bee house, on a layer of sweet clean mold or sand, as the miller would not deposit its eggs in such a position. Mr. Weeks, however, as well as others, found that where the moth was numerous, this method afforded no security, as, after standing a few days, the earth under the hive was found full of grubs, which found in it a safe retreat from the bee. As it is found that the moth usually deposits its eggs under the margin of the hive, it is also found that placing the hive on small square blocks at each corner, so as to raise it half an inch from the board, and thus enable the bees to keep the exposed portion clean, is one of the best preventives known. Frequently sprinkling a little fine salt under the margin of the hive, renders the place untenable to the grub, and is not displeasing to the bees. A gentleman of our acquaintance, who has been very successful in his management of bees, uses a preparation of spirits of turpentine, oil of spike, &c. to keep the moth from the hive. These substances are mixed, put in a saucer, over which a piece of muslin is securely tied, to prevent the bees from getting into it; and this is placed under the hive during the time that the moths are the most active. He assures us he has not lost a swarm from the moths, during the time he has used this preparation. We believe those who have adopted the Vermont hive, have found little inconvenience from the moth, and think it probable, that, with such a hive, and frequent examination, (which is indeed necessary with any hive,) bees may, in most cases, be preserved in safety.

When bees are kept in improved hives, or in a common house or chamber, the honey may be removed at pleasure, without interfering with their labors, or causing that irritation which, if repeated, will render bees cross and dangerous. Much more honey will be made in a hive, from which it can be removed when filled, than in an ordinary hive, as the instinct of bees impels them to desist from labor, only where there is no space to store its fruits. When a hive is filled, they only provide their daily supply; if part of the honey is removed, labor is immediately recommenced to replace the quantity abstracted. But, unless there is an abundant supply for the wintering of the bees, none should be taken from the hive late in the season, as starvation and the loss of the whole stock may be the result.

It is sometimes necessary, in unfavorable seasons, or when swarms are late, to feed them to prevent the death of the bees, and the experience of many apiarians would go to prove, that the most proper time for this is during the warm days that occur in the fall, before the commencement of continued cold weather. If the weight of the hive and bees is known, and both should always be ascertained, there is no difficulty, when the season of making honey is closed, in determining, by again weighing, the quantity of honey made, and consequently whether feeding will be required. In feeding, honey in the comb, or strained honey, may be used; but if the last, a thin board pierced with numerous holes, must be laid on the surface of the honey, through which they can obtain the food, or many will get in the honey, and be lost. Unless bees are nearly destitute of honey, it is bad policy to feed them in the spring, as they fill up the combs that should be occupied by the young bees. From twenty to twenty-five pounds of honey will be required, to carry a swarm of bees from November to the middle of April, or the time when they can recruit their stores. Where honey cannot be had, sugar dissolved, or molasses, may be substituted; but honey is always to be preferred where it can be obtained, as all other kinds of food are more or less apt to induce disease.

There is a very great difference in the qualities of honey made in different places, owing to the nature of the flowers from which it is principally extracted. The honey of a considerable district on the southeast shore of the Black Sea in Asia Minor, is noted for its intoxicating or rather maddening qualities, when new; qualities supposed to be owing to a species of Hypericum, which abounds in that region. Bees always extract more or less of the peculiar matter of plants with the honey, and hence new honey is more liable in all cases to induce disease, than that which is old. It is the opinion of many that honey is always pure, no matter from what source it is derived; but this is altogether a mistake. Mr. Weeks says—

> "Bees never make honey, but extract it from such flowers, and other substances as yield it, without producing any change from its original state. Good honey is principally taken from white clover, orchards, sugar maple, bass or linden, and other forest trees, while in blossom. Poor honey is extracted from buckwheat, and low land flowers; hence, those who would save their good honey unadulterated by that which is poor, will remove it before the latter can be extracted."

Various modes have been tried of wintering bees; all of which, perhaps, have been more or less successful. The dangers, to be guarded against, are principally those of starvation, extreme or long continued cold, and too much moisture or dampness. The first can be prevented by proper attention to late or early feeding. Death from freezing more rarely occurs, but almost every apiarian, in high northern latitudes, must have lost bees from this cause. Extreme cold also produces death from suffocation; by freezing the breath or vapor of the bees, and so effectually closing all the openings of the hive by ice, that the air becomes incapable of supporting respiration, and death is the inevitable result. Where too much moisture exists, the combs become moldy, and the bees become diseased and unhealthy, and frequently perish. If cold weather continues for any great length of time, the hives should be examined, and if the bees are likely to die, they must be at once removed to a room of a moderate temperature, and where the animal heat can be gradually restored. Some apiarians are in the habit of burying their bees late in the fall, and allowing them to remain in that condition until the spring is so far advanced, that they can gather honey from the early flowers for themselves. Their argument is, that, as bees during their torpid or inactive state do not consume honey, by prolonging this state, the danger of starvation is avoided, death from freezing cannot take place, and if the earth is dry, the combs will not mold so as to produce injury. Mr. Weeks says—

> "A cellar made in the side of a dry hill, so covered as to keep out water, is a good storage for wintering bees. There should be two ventilators at the two most extreme parts of the cellar—one near the bottom and on its side to admit pure air—the other through the top or covering to allow the bad air to escape."

Want of air is the most frequent cause of death to bees, and this danger of suffocation requires to be more carefully guarded against than any other. Dryness is indispensable to health; and it should always be remembered, that any extra care which bees may receive, which is necessary to their safety or comfort, is usually amply repaid by the additional quantity and quality of the honey produced.

SILK—PREPARATION OF COCOONS.

In engaging in the manufacture, or rather the production of silk, many have experienced much difficulty in killing the larvæ in the cocoon, or in curing the cocoon, as it is termed; an operation on which much is depending, as, if not killed, the cocoon is destroyed by the perfect insect in making its way out; and if improperly done, the silk may be seriously injured, or reeled with great difficulty.

Plunging the cocoon into boiling or hot water, exposing them in a heated oven, and some other methods have been used and recommended, but the following process, described by Miss Gertrude Rapp, of Harmony, and which was used in producing the beautiful silks exhibited by that lady at the meeting of the American Silk Society, is probably superior to any other, both for certainty in destroying the worm, and for its effect on the silk. The silks forwarded by Miss Rapp for exhibition, and manufactured last year under her superintendence, consisted of thirty-three yards of black figured dress silk, twelve yards lavender figured dress silk, one and one quarter yards of green velvet, one and a quarter yards of black velvet, three yards plain black satin, twelve yards figured satin vestings, thirteen pieces fancy ribbons, (165 yards,) four pieces plain ribbons, and a raw silk handkerchief; all of the first rate quality, heavy and durable. But to the process of Miss Rapp:

> "Since we are killing our cocoons with camphor, we find them as easy to reel at any time after the regular season, as when freshly taken from the spinning shelves. We do it as follows: for 100 pounds of cocoons in the floss, we take a well made box, large enough to hold them; then we take about 3 ounces of camphor, which we moisten with as much alcohol as is necessary to rub it into a powder, a part of which we sprinkle on the bottom of the box, then we fill the box by making five or six layers of the cocoons, and spread a proportional part of the camphor between each of them; we then screw on the lid, and paste strips of paper on all the splits and joints, to make it air tight. After three or four days we take them out and dry them in the shade, till perfectly light. They must be assorted before camphoring, or else the bad cocoons will destroy the good ones."

Miss Rapp thinks highly of the Multicaulis, but advises silk growers not to neglect the cultivation of some other variety, such as the white mulberry, morus expansa, or Brussa, which are hardy, that a supply of early leaves may be secured. For this purpose, the expansa is preferred by her, as the leaves are "large, heavy and glossy," and can be gathered with much less labor than those of the Italian or white mulberry.

Mr. Gill, of Mount-Pleasant, Ohio, has also exhibited at Washington, a large quantity of silk velvets, tippet plushes, and hat plushes, which the Native American says, would not suffer in a comparison with the best imported articles. Mr. Gill's silks were made from trees produced from the first year's planting; a vest was made for himself in thirteen weeks from the time he planted his multicaulis buds; and he finds by exact calculation, that every acre of multicaulis buds planted by him last year, has yielded him $350 nett, a handsome profit certainly. Such exhibitions as these, of Miss Rapp and Mr. Gill, with the statements of Mr. M'Lean, will convince the most sceptical that we can grow silk in this country abundantly, and that the multicaulis is not yet wholly worthless to the nation.

MASSACHUSETTS PREMIUMS.

The Agricultural Society of the Old Bay State does not grow weary in well doing, as the following abridged list of its premiums offered for the year 1840, fully shows. They are certainly magnificent, and should induce extensive competition among the farmers of that state. We are pleased to learn that the condition of the society is prosperous; that its funds are ample, the list of premiums demonstrate.

For the best farm, produce, cultivation, and appearance considered, four premiums of $200, $175, $150, and $75, for the first, second, third and fourth best.

For the best specimen of rotation in crops, the premium to be claimed in 1840 or 1841, $75.

For the greatest quantity of vegetables raised for stock, (grain, peas and beans excepted,) regard being had to the size of the farm, number of stock kept, value of the vegetables, and expense of cultivation, $30.

For roots, the list of premiums is ample, and should induce the cultivators to whom it is addressed to make vigorous efforts at securing them; not perhaps so much for the sake of the cash itself, as for the increased profits, and enhanced fertility of the soil hereafter. The man who manages so as to secure a good crop of roots, may be very certain that the succeeding ones of grain and grass will not be inferior. For potatoes, not less than 500 bushels to the acre, $30; carrots, 30; mangel wurtzel, 30; sugar beet, 30; ruta baga, 30; English turnep, 20; onions, 20; and cabbages, 20; for half acres, half the above premiums.

Wheat, to the acre not less than 25 bushels, $20; corn, not less than 80 bushels to the acre, and 75 lbs. in the ear to be considered a bushel, $20; barley, not less than 45 bushels to the acre, $20; rye, not less than 30 bushels, $20; peas and beans, $20 each.

The following premiums are important, and we hope will receive attention, as the subjects are of general interest to the country. We infer that these premiums are open to all who choose to compete for them, whether citizens of Massachusetts or otherwise.

For an effectual mode for extirpating the locust borer, $100; do. for the appletree borer, $50. We think that premiums directed to the effectual prevention of other insects, such as the canker worm, caterpillar, wheat fly and worm, together with such as prey on the turnep, cabbage, &c., would have been of service.

For the best plow, regard being had to its strength, neatness of work, and cheapness, $100; raw silk, not less than ten lbs., $20; best experiment of turning in green crops as manure, $50; best mode of rearing, feeding and fattening cattle, $20; for a plow to lay the sod on edge obliquely, regard being had to its other qualities, $75; best plantation of white oak trees, $50; do. of locust, beach or white ash, $25; best live hedge, not less than 50 rods, $30; best communication on the mulberry in relation to silk culture, showing by experiment or otherwise what species is best suited to our climate, and how best managed, with the effect of the winter on the tree, $30.

We learn from the N. E. Farmer with some surprise, that censure in some quarters has been cast on this noble society for having not done more or the promotion of agriculture. The censure is clearly undeserved; for if all that could be wished has not been accomplished, all that could reasonably be expected from the well directed efforts of such a body, has been performed. Massachusetts has been peculiarly fortunate in the individuals selected to manage her agricultural affairs; and under their enlightened guidance and supervision, the most cheering results for the future may be safely anticipated.

MR. COLMAN'S THIRD REPORT.

We have had the pleasure of examining the report of the Agricultural Commissioner for the past year; and are happy to bear our testimony to the ability and zeal with which his arduous duties are performed, and the beneficial effects his labors are calculated to produce. Mr. Colman's first report related to the agriculture of some of the eastern counties of Massachusetts; the second report was devoted to the survey of the county of Berkshire; and the present is occupied with the great subjects of wheat and silk.

The legislature of Massachusetts, in 1838, offered a bounty on the cultivation of wheat, and the present report illustrates the effect of that law, by showing the number of claimants, the acres sown, and the amount of wheat produced. The number of claimants for the bounty was 3,642; acres sown, nearly 7,000; bushels produced, 108,570: and the average not far from 15 bushels per acre. We acknowledge this result is rather unexpected to us; having heard so much of the incapacity of the New-England states to grow wheat; for we much question whether the *spring wheat* crop of any considerable part of New-York will average more than the one stated.

The returns from the several towns are very full, and embrace much valuable matter, which has been skilfully condensed in the report. From an examination of the returns, it appears that much injury was done by the grain insect or worm; that there was much smut; some blight from causes unknown; and much suffering of the crop from drouth. "It appears also from the returns, that there is scarcely an instance named in which lime or plaster has given any decisive and well authenticated favorable results. Wood ashes have been frequently used, and large crops have followed." Ashes, however, sometimes failed.

Mr. Colman enters into an extended argument to show that Massachusetts would find her account in producing her bread from her own soil; and his reasonings are in our opinion conclusive. No people can permanently prosper, who depend on others for their bread. Every other kind of business must fluctuate; and while some individuals or states grow speedily rich from manufactures or commerce, the tiller of the soil, he who grows his own bread, is alone independent. Mr. Colman has most truly said, that "Agriculture, in the view of every sound political economist, is the foundation of national wealth." All other means are only accessories.

The report enters largely upon the cultivation of wheat; its diseases, varieties, methods of improvement, and the best mode of culture. The causes of failure he arranges under the head of rust, smut, mildew, and insects. On all these topics his observations are worthy of being studied by every wheat grower, as embracing much condensed information, which will be every where useful. The grain worm is doubtless the most formidable enemy the eastern wheat grower has to encounter, and on this subject Mr. Colman recommends most strenuously the use of newly slaked lime, dusted thoroughly over the grain just as it is coming into flower. A single application has proved successful, while in others repetition was necessary. Mr. C. announced this preventive, some years since, in the N. Y. Farmer, but the results of some experiments made by farmers in the Valley of the Hudson, did not seem to justify the opinions entertained of its efficacy; the difficulty might, however, lie in the lime, or the period of its application; and it is well worthy of trial wherever the worm makes its appearance in the wheat crop. There are two kinds of worms which feed on wheat in the ear; one, which has been known for a long time in western New-York, and has sometimes produced some injury, though little, when compared with the ravages of the other species in other parts of the country. The other is the worm of New-England and the Hudson valley, which, there is reason to hope, has passed the period of its greatest ravages, as it has been less numerous and destructive to the wheat crops for the last two years, than for several years previous.

On the subject of plowing in clover for wheat, Mr. Colman has the following remarks: "I have always been inclined to the belief, which generally prevails, and which Mr. Phinney maintains, that the higher the state of luxuriance in which vegetable matter was turned in by the plow, the more the land will be enriched by it. But the experience of one of the best farmers in the state has satisfied me, especially as it has been confirmed by another equaly intelligent farmer, and wholly unbiased by the judgment of any other person, that the land is more benefited by the turning in of the clover crop after it is dried, than when it is in a state of greenness and full of sap. The opinion is, that if green, it creates an acidity in the soil, prejudical to the succeeding crop."

In support of the opinion here expressed by Mr. Colman, we may adduce that of one of the most successful wheat growers in the western counties, whose crop is usually from 1,000 to 1,500 bushels. He assured us several years since, that he had done turning in clover when in full vigor for wheat, as from his experience, he knew that it "soured the soil," and that it would not recover from such a dressing, under three or four years. Still clover was the main stay of his wheat husbandry; but instead of turning it in, he fed or trampled it down upon the land, by cattle or sheep, he preferring the latter, and keeping some three or four hundred for that purpose. His lands are broken up in the fore part of summer, before a great growth of clover is attained; wheat is sown in the fall, and clover seed in the spring. The wheat is plastered, and also the clover in the next year; his course embracing four years. Large quantities of clover decay on the ground, and this, mixed with the manure of the animals, and the mass of clover roots at the time of fallowing, gives a progressive improvement to his soil and his crops, which certainly speaks well in favor of the system.

It appears from that part of the report relating to manures for wheat, that lime has been of little or no value when used, and that crops of wheat of about 30 bushels per acre, have been grown on soils in which not a trace of carbonate of lime existed. There was a small quantity of phosphate of lime, however, present, one and a half per cent, and this could not have been without its influence. It is surprising to witness the discrepancy between the results from the use of lime in Mass., as given in the report, and those produced by the same article, in some of the middle states. The reason of this want of efficiency in the northern soils, does not appear to be satisfactorily ascertained; but the subject is one of such consequence, as to demand the most rigid investigation. We are inclined to the opinion, that where the other matters in the soil are right, a very small quantity of lime is sufficient for all the purposes of vegetation; but as lime appears to be an essential part of the wheat and clover plants, it seems clear, that more or less of it is indispensable to their growth, and the perfection of their seeds. The Berkshire marls have not produced the effect expected from them by some; but, if made into compost in mixture with peat, vegetable mold, or animal manures, we doubt not the value of all would be greatly enhanced. Mr. Colman's remarks on cleanness of cultivation, and recent agricultural improvements, are very just; but we have room here only to refer to them, and must pass to the second part of the report; that which relates to silk.

The report of Mr. Colman on this subject, one which we consider of vast importance to the nation, is without question, the most valuable document yet given to the American public on this topic, and should be in the hands of every one who proposes to enter on the production of silk. His opinions and facts are advanced with fearlessness and discrimination, and the amount of information he has collected and condensed in the report, is truly great. On the subject of the mulberry, the kind of worm, the different methods of feeding, the cost of production, the demand, and the profits of production and manufacture, are all well treated, as well as many other incidental topics connected with these. The report is not intended as a manual for the producer or the manufacturer, but as a general guide to the inquirer; and in this respect, will be found unrivaled.

In determining the question of the capability of this country to produce silk, Mr. Colman very justly distinguishes between the mulberry speculation, and the growth of trees for silk only. To whatever cause we may attribute the mulberry fever of 1838 and 1839, whether, with Mr. C. to a conspiracy among a few individuals to defraud the public in this way, or to an ignorance of the results certain to ensue from excessive multiplication, or, whether we consider it as only one of the many modes in which the mania which infected the whole nation in those years, developed itself, it now matters not; the bubble has burst, and thousands of the mulberry speculators, as well as those in western lands, corner lots, and lithographic cities, have been ruined.

The conclusion to which Mr. Colman arrives, after a survey of the whole ground, and we think it is a correct one, is, that we can, and should, make our own silks. After discarding all the extravagant calculations that have been made, after rigorously making every necessary deduction for the expenses of production, it appears that the silk culture offers as handsome a remuneration for labor, as any of the agricultural pursuits of this country, and in its prosecution embraces the labor of individuals, that could be of little service in other pursuits. The production of silk by companies, has proved a failure in this country, so far; and it appears very certain that the business, if it succeeds, must be prosecuted as a branch of domestic industry. The manufacture of the material when once produced, is another matter. The production of the raw material, introduced as a collateral branch of industry, not as a principal one, must prove a source of eminent comfort and wealth. There is clearly nothing mysterious in the business; all is simple, and easily understood and practiced, by any one that chooses to bring to it the necessary attention and skill. We fully concur in the opinions expressed in the following extract from the report:

> "I take particular pleasure in recommending the culture of silk, to my respected friends, the Shakers. They have every element of success; intelligence, skill, exactness, perseverance, abundance of labor, land enough, and buildings already prepared for their operations. They, if any among us, would be the fittest persons to undertake the artificial method of M. Beauvais. Their female aid is of the best description for this culture. They may pursue it to any desirable extent; and I cannot have a doubt, if they should undertake it with

their usual care and determination, their enterprise would be crowned with success."

We should be pleased to extract largely from these reports, and shall have occasion often to refer to them as a magazine of facts collected with great skill, and particularly valuable as illustrating all subjects connected with the matters to which they are devoted.

WHEAT.

The experiments which have been made, under legislative encouragement, in some of the New-England states, would seem to have demonstrated satisfactorily, that that part of the United States is abundantly able to produce its own wheat, as well as its corn or potatoes, although as circumstances and prices are, the matter of profit does not seem quite so certain. It has for some time appeared probable to us, that in ordinary cases, when the ease with which wheat is raised in the west is considered, and the low price at which it is afforded, taken into view, eastern farmers, or the most of those in the Atlantic states, can better employ their lands and labor in producing other articles than in raising wheat. There are a multitude of crops of great value, such as corn, grass, oats, roots and other vegetables, of certain growth and ready sale, affording, perhaps, a greater profit than wheat at the present time, and as well calculated to improve the soil and promote permanent fertility as that crop.

It becomes, therefore, a calculation of simple profit or loss, with the eastern farmer, whether he will at a great expense of labor and manure raise his own wheat, or by applying that labor and manure to other crops, usually considered more certain, find the means of purchasing what flour he finds necessary for his consumption. In the west, the attention of the agriculturist must necessarily be turned to wheat, as it is the only crop that can bear transportation to market, and of course, the only one in which the fertile new lands of the west can be brought into direct competition with the more worn soils and laborious culture of the east. As a material for bread, as a food for animals, and as an improver of the soil, Indian corn is not behind wheat in importance; and so long as the west is compelled to furnish us her flour at so low a rate, it may be considered questionable whether, as a general crop, corn should not be preferred to wheat.

In the west, the culture of crops is performed in the most simple way possible. In wooded lands, the process is merely cutting down and burning off the brush and timber; the rooty surface is scratched with the harrow, and as it is usually thoroughly burned over, there are no weeds, but only a clean earth in which the seeds are deposited. The settler has now done his part; nature does the remainder, and the crop rarely disappoints the expectations. We have often seen on such lands Indian corn cultivated by simply taking an old axe, striking a blow into the earth, and depositing the seed in the opening so made, a step with the foot in passing being all the covering required; there was no plowing or hoeing performed, yet such cultivation gave from fifty to seventy bushels per acre. In the rich prairies and river bottoms of the west, corn is grown with still greater facility, but it cannot be brought into competition with eastern grown corn, unless after conversion into the shape of beef or pork, in which its influence is little felt, and beneficially rather than otherwise. The time will probably come, when the strong vegetable properties of these western soils being exhausted, labor and manures will be required to continue their productiveness, and then the natural increase in the price of flour may render it proper for the east to enter more fully into its culture.

There is a feeling among many eastern farmers, notwithstanding the proof that the experience of the last few years has afforded, that the east can never, under any system of farming, be made to produce wheat as it once did. This opinion is absurd; wheat is properly the grain of the world, and is now grown in increased quantities on lands from which it has been cropped since the days of Julius Cæsar. The renovation of lands, after being reduced almost to sterility, it is true, must be a work of time, and requires usually far more skill and labor than to preserve lands, naturally in good heart, permanently in a state of productiveness. The true course seems to be, to lessen the quantity of land under cultivation, where it is nearly run down, and thus give to less land the labor and the manure now spread over a larger surface. The deterioration caused by naked fallows can and must be remedied, by a rotation of crops, deeper and finer tilth, and liberal and judicious applications of manures. Naked fallows should never be permitted, unless they become indespensably necessary to free lands from foul stuff; and the cultivation of hoed crops will, if the course is thorough, usually effect this object in a still more complete manner. Green crops, (the roots, &c.) which, having large tops, draw much of their nutriment from the atmosphere, must be alternated with the grain crops; the skinning system abandoned; the ambition to cultivate a great number of acres done away; and in its stead a desire to reap a large product from a few acres, implanted; the principles of the new husbandry be studied and practiced; and the time will come when wheat crops of thirty bushels an acre will not be a novelty on lands now pronounced utterly unfit for its culture.

The excellence and nearness of markets in almost every part of New-England; the facilities with which every product of the earth can be disposed of at a handsome profit; the varieties of pursuits, such as the manufacturing, mechanic, and commercial, which furnish profitable employments for multitudes, and prevent the weight of population from pressing on the agriculturist, as it must of necessity do more or less in the west; all contribute to render the production of any single crop of comparatively little moment, and perhaps that of wheat, as a whole, the least of any. Nothing can be more true than that the farmer, if it can be done at a reasonable expense, should grow on his own farm all that he requires in his family, of which the soil is susceptible; but it is also true, that if his bread is the product of his own labor, it in effect matters little whether that labor has been given to wheat, or corn, of vegetables for market, or silk, or any of the thousand things which by exchange can be converted into food with mutual benefit to all parties. But whatever crop may be attempted, the grand object to be kept in view, is the permanent improvement of the soil, and any one that effectually accomplishes this, be it wheat, or corn, or roots, cannot in the end be an unprofitable one.

Mr. Webster and English Agriculture.

There are no individuals more fond of travel than the people of the United States; and not a year passes in which men of ability and the talent for accurate observation, do not spend more or less of their time abroad. It is unquestionably a pleasant and instructive manner of spending a few months, or even years, in this sight-seeing in Europe; but while volume after volume on the antiquities, the customs and habits, and the works of art and luxury observed by tourists, have appeared, we do not recollect a work by an American on the state of foreign agriculture, or scarcely so much as an allusion to the topic by any one. This may in part have arisen from the fact that few tourists are acquainted with agriculture at home, and therefore incompetent to describe its situation or processes abroad; or that in a rapid transit over a region, there is little opportunity for accurate observation; still, to whatever cause it is owing, it cannot be otherwise than a subject of regret that the cultivation of the soil has attracted so little notice by those who have witnessed the state of farming and its improvements in other countries. We should know what others are doing, that we may determine whether our course is the most beneficial; if we buy our bread of a neighbor who has no larger or better farm than we have, it becomes an important inquiry to us, how he manages to sell, while we are compelled to buy.

There are, however, some honorable exceptions to this apathy on the part of American travelers in Europe; men of the first standing, who have not thought it beneath them to attend to the farming operations of those countries, the methods of agriculture pursued, the influence which climate has on the productions of the earth, and the causes of that general superiority which their husbandry exhibits over ours. One of the latest of this class of observers, is Mr. Webster, who appreciating the importance of the agricultural interest to the country, and the necessity of advancing it by every practicable method, gave to the subject much of his attention during his late residence abroad. The results of his observations, which he presented in an address, before one of the agricultural meetings of the Massachusetts legislature last winter, and which has been revised by himself before publishing, now lies before us, and is an interesting and instructive paper, fully proving the discrimination and extent of his observation, and the benefit which would ensue, if those who travel would avail themselves of their opportunities as successfully as he appears to have done. As we cannot find space for Mr. Webster's remarks in *extenso*, we must be content with giving a brief abstract of the most important points alluded to by him.

> "The primary elements which enter into the consideration of the agriculture of a country, are four; climate, soil, price of land, and labor."

In all these points England differs from this country. The climate of each country is materially affected by its respective situation in relation to the ocean. As the prevailing winds in both countries are from the west, the equalizing and moderating influence of the ocean is continually experienced on the temperature there; and the consequence is, that our winters are colder, and our summers hotter than in England. This alone creates a material difference between their agriculture and ours.

> "The soil of England is mainly argillaceous; a soft and unctuous loam on a substratum of clay."

This was the predominant characteristic in the parts he visited. The soil in this country is generally harder, containing more stones, and in that respect more difficult to work, than in England.

The price of land in that country is another important element in agricultural calculations; it may be stated three times as high there as in Massachusetts.

The price of labor differs, in different parts of England; but on an average it may be set down at one half the price it commands here.

English cultivation is more scientific, more systematic, and more exact, a great deal than ours. A great population is to be supported on a small surface; lands are dear, rents are high, and labor cheap; careful and skilful cultivation is the natural result of this state of things. It is on the fundamental idea of constant production without exhaustion, that the system of English cultivation, and indeed of all good cultivation, is founded. England is not original in this. Flanders, and perhaps Italy, have been her teachers. This system is reduced to practice in a rotation of crops. White crops are not allowed to follow one another. White crops are wheat, barley, rye, oats, &c., and in this country corn is to be included, though not as exhausting as some of the others. The green crops are turneps, potatoes, beets, vetches, tares, &c., but the turnep is the great green crop of England, and its cultivation has wrought such changes, that in fifty years, it may be said to have revolutionized English agriculture. Plants derive a large part of their nutriment from the air. The leaves of plants are their lungs; and the larger the surface of leaves exposed, the greater the supply of food from this source, and the less exhausting the crop. A large proportion of the turneps are fed off where they grow, and thus the earth receives the direct benefit of the manures, both solid and liquid. A large amount of land is cultivated in turneps, and fields of three, four, and even five hundred acres, are met with. The rotation of the white and green crops judiciously arranged, keeps the fields continually productive, and constantly improving.

Draining is another part of farming in which the English have made great progress. Covered and tile draining is preferred, and if expensive at first, the increase of the crops, and the permanent amelioration of the soil, amply rewards the outlay. Draining, owing to the difference noted in the character of the soil, can never be as extensively required or practiced in this country as in England and Scotland; yet there are large quantities of land in this country, now almost worthless, which draining would render most valuable and fertile. Experience also proves that draining contributes materially to the health of a district.

Mr. Webster gave some examples of the manner in which irrigation is practiced in some districts, and the beneficial results. For irrigation, a stream below a town is preferred to one above, for the reason that it contains more fertilizing matters. From such a stream the water is taken in a canal and carried in such a manner that it can be allowed to escape in small quantities as required, and after irrigating one set of meadows, is again received in another canal and performs the same effect in other and lower places. The land is not flooded in this case; the water does not stand upon it, but is applied for a few days, several times in a year, say in March, May, July, and October. On lands thus irrigated, three crops of hay are cut in a season, of not less than two tons per acre at each cutting.

With respect to implements of husbandry, Mr. Webster was of opinion that the English on the whole had no advantage over us. Their wagons and carts were no better, their plows he thought were no better any where, and in some counties far inferior because unnecessarily heavy. As a whole he thought English implements cumbersome and heavy, requiring more strength of team, or power in movement, than American ones, and their performance no better.

Of the plants cultivated in England, and but little known in this, the common English field bean is the most important. It produces from twenty to forty bushels per acre; is one of the best kinds of food for animals, particularly the horse, and requires a well manured strong clay soil.

The raising of sheep in England is an immense interest. She probably clips fifty millions of fleeces this year. "The average yield may be six or seven lbs. per fleece." The principal classes are the *long* and *short* wooled, and the Leicester and South Down may be considered the types of these respective varieties. The common clip of the former was from seven to eight, and the latter from three to three and a half or four pounds.

Oxen are rarely trained in England for the yoke; though in Devonshire and Cornwall ox teams are sometimes employed. In traveling thousands of miles in England, Mr. Webster saw only one ox team, and here they were harnessed like horses, and worked one before the other. Cattle are reared for the dairy and the butcher almost exclusively.

The cattle of England had greatly improved, and were still improving. He had seen many of the best stocks and best animals, and thought the Short Horns imported into this country were often good specimens. He thought the improved Short Horns the finest cattle in the world, where plenty of good feed and some mildness of climate invited them. But since we must raise animals for work, he thought the Devonshire furnished excellent animals for our use; and their hardy nature made them better suited to the coarse and sometimes scanty herbage of New-England, than the Short Horns. The latter he thought the best, altogether, for the western states, where there is an overflowing abundance, both of winter and summer feed, and where, as in England, bullocks are raised for beef only. The Leicester sheep were like the Short Horns. They must be kept well, and should always be fat. The South Downs are highly esteemed, both for wool and mutton, and are well adapted to their light soils, hilly lands, and a scantier herbage.

In conclusion, Mr. Webster said—

> "Agriculture feeds us; to a great extent it clothes us; without it we could not have manufactures, and we should not have commerce. These all stand together, but they stand together like pillars in a cluster, the largest in the center, and that largest is agriculture. Let us remember too, that we live in a country of small farms, and freehold tenements; in a country in which men cultivate with their own hands, their own fee simple acres; drawing not only their subsistence, but also their spirit of independence and manly freedom, from the ground they plow. They are at once its owners, its cultivators and its defenders. And whatever else may be undervalued, or overlooked, let us never forget that the cultivation of the earth is the most important labor of man. Man may be civilized, in some degree, without great progress in manu-

factures, and with little commerce with his distant neighbors. But without the cultivation of the earth, he is in all countries, a savage. Until he stops from the chase, and fixes himself in some place, and seeks a living from the earth, he is a roaming barbarian. When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization."

RECLAIMED MEADOWS.

There are in all parts of our country more or less lands called swamps, bogs, or bog-meadows, as they may happen to be bare, or productive of a little worthless grass. Now such spots are usually the richest part of a farm, being points on which for ages the most valuable parts of the surrounding fields, the salts, manures, and fertile mold, have been centered, and where they have been preserved as in close reservoirs ready to reward the hand and the labor that, directed by skill, should endeavor to turn them to account in the cultivation of land.

One of the surest indications of an improved agriculture in this country, is the notices that frequently meet our eyes in the contemporary journals, as well as those furnished for the Cultivator, of the reclamation of these long neglected places, and their extreme productiveness when brought under cultivation. They are found not only to be reservoirs of the richest manures, requiring only to have the acidity which such wet places are sure to give the vegetable matter collected in them, corrected by lime, or fermentation, by mixture with other manures, but by proper treatment, to be capable of giving crops of roots or grass of the most luxuriant kind.

If it is desirable to convert the earth of these natural meadows into manure, the best method is to draw it in the summer or fall to the barn yard, which should be covered to the depth of at least a foot, with the transported material. This will absorb the liquid manure of the yards, be mixed by the feet of the animals, with the long manure made from waste stalks, hay, straw, &c. and in the spring, when wanted for the crops, will be found more valuable than barn yard manure usually is.

If it is desired to cultivate the earth where it is, or convert the swamp into first rate tillable land, thorough draining in every part must be attended to, or nothing can be done to advantage. If made dry enough for the plow, let the surface be fully pulverized with that implement. If bogs or brush abound, they must be grubbed and burned; and a dressing of lime or ashes, or even mere common sand or gravel, will produce an excellent effect. The expense of reclaiming such lands is considerable at the outset, but if well performed, the first crop will usually pay for the improvement; the land will generally be doubled or trebled in value; and not unfrequently a source of malaria and disease removed from a farm or neighborhood. The reports on reclaimed meadows in the Transactions of the Essex County Agricultural Society, show the importance of this improvement most decisively, and the successful results should stimulate all who have such lands, to reclaim them without delay.

THE HOP FLY.

J. H. D. of Hamilton, wishes to learn whether we, or any of our correspondents, know of any preventive of the ravages of the hop fly, generally known to hop growers as the *green fly*. For ourselves we can answer we do not, and though our experience in their growth has been limited, we have found no remedy of much or indeed any avail, when once the plant was seriously attacked by this pest. If any of our correspondents or readers have been more fortunate, we shall be most happy to lay the information before the public.

The green fly is a species of Aphis, peculiar to the hop, and is its most formidable enemy. Its rapidity of increase is not overrated by Mr. D., and is owing to the singular power possessed by this insect, in common with some others of the Aphis tribe, of being fertile through several generations; Reamur says six or eight, from a single parental impregnation. The young Aphis, too, of the earlier generations are nearly all females, and as only a short time is required to arrive at maturity, their increase, when they once establish themselves on a plant, is astonishing. Their position, too, on the under side of the leaf, renders them secure against any application that would not be fatal to the vegetation. In the hop districts of England the only plan that holds out a prospect of relief, is frequent examination of the fields during the time the Aphis usually makes its attack, and if discovered in its first colonization, the extirpation of the whole, vine and insect, is immediately performed. The work on the hop, published by the London Society, in describing the diseases of the plant, and the insects that prey upon it, says that when the fly first appears, "efforts are continually made to check its progress and prevent the injury by burning heaps of damp straw, fern and other matters, during a day or two on the windward side of the grounds, together with sulphur and damaged tobacco, in order to fumigate the plants; a practice from which no harm can arise, for if it does not always drive away or destroy the fly, the ashes spread will tend to destroy the insect larvæ that may be in the ground."

Mr. Loudon, in his account of the hop and the green fly, says, "This insect is ignorantly supposed to be produced by the prevalence of the northeasterly winds. Under such a state of the winds they rarely fail of covering the leaves, and propagate with such rapidity as frequently entirely to destroy the crop; as when they have once obtained possession, they seldom or never leave them until the leaves are destroyed. This insect generally attacks the forwardest and most luxuriant hop vines. Their removal depends chiefly upon the wind changing to the south, and the setting in of more mild, warm and temperate weather." Many fields, however, are so injured in a short time, as to be abandoned to their fate.

So long as the hop is liable to insects and diseases for which no preventive is known, it will continue to be, as it has hitherto been, one of the most fluctuating and uncertain of crops, and of course one of the variable in prices. The discovery of a preventive of the attacks of the hop fly, would be a public benefit, as noxious articles are sometimes employed, when hops are scarce, to give to beer the bitter flavor only conferred in perfection by the hop.

VALUABLE IMPORTED STOCK.

One of the most important importations of cattle and sheep that has ever taken place in this country, has been made by the Hon. ERASTUS CORNING of this city, and WM. H. SOTHAM of Jefferson county. It consists, as will be seen by the list given in another part of this paper, of twelve cows, calves and heifers, and twenty-five sheep. The cattle are of the Hereford breed, from Herefordshire, and the very best animals that could be selected. The sheep are of large size, being the Cotswold cross with the Bakewell, and probably as fine animals of the kind as ever imported. No one can avoid being struck with the extraordinary size of the cows, their fine forms, and their muscular development, denoting strength and power, and showing the basis of the reputation which the Herefords formerly had for working cattle, and now have for feeding. The expense of the importation was nearly eight thousand dollars.

The attention of cattle breeders has, within a few years, been much directed in England to the improved Herefords, and principally in consequence of the numerous prizes which these cattle have taken at the great Cattle Shows of Smithfield, and lately at the Fairs of the English Agricultural Society. Although they have not, in general, reached the great weight of some of the Improved Durhams, yet the rapidity with which they take on flesh, the superior excellence of the beef, and their early maturity, render them great favorites with the English feeders, and the Michaelmas Fair of Hereford, is one of the finest shows of cattle in that kingdom. We copy the following from the Encyclopedia, published by the Society for the Diffusion of Useful Knowledge, vol. xii. article *Herefordshire*, as an accurate account of the general qualities of the breed:

> "The prevalent breed of cattle is that for which this county is justly celebrated: their color is red, with white or mottled faces, and frequently white along the back and about the legs. Good milkers are occasionally found among the cows, and it is possible that a race might be reared from this stock, that would be useful for the pail, but dairy farming is never practiced here, and the milk of the cows, which are kept only for breeding, is given to the calves. It was formerly the custom to work the oxen at three or four years old, and to feed and send them to market at five; but there is now a complete change of system. The oxen are no longer worked, but are commonly fed when they are two years old, and sent to market before they are three: their early maturity and the readiness with which they fatten, make them suited for this system of farming. Graziers from the south and the middle of England drive a large number of this popular stock from the Hereford Candlemas and October Fairs. The Hereford ox feeds more readily than the Devon, and in proportion to the quantity of food consumed, lays on a greater weight of flesh than a Durham ox; the result of a trial of this kind may be seen at page 34 of Youatt's 'Cattle.' That the flesh of the Herefords is of a finer quality than the Durhams, is proved by the superior price per stone which it obtains in the Smithfield market."

Comparatively few of the Herefords have as yet been introduced into this country. Mr. BEMENT, of this city, has a bull and a cow of this breed, which are fine animals; the Hon. W. C. RIVES, of Virginia, and the Hon. HENRY CLAY, of Kentucky, have made importations of these animals, and they have been in their possession so long, that either of these gentlemen could speak fully of their value as compared with the Short Horns, in the points of feeding, milk and endurance of our climate; and we think at this time, when attention is turned to the subject, they would confer a great benefit on the American public, by stating the results of their experience, and their opinions with regard to these cattle. We need not say we should be happy to be the medium of presenting such history and opinions to the public.

We have presented these remarks, in the hope of eliciting from some who are qualified for the task, a discussion of the comparative merits of the Herefords and the Short Horns; and their adaptation to our country for the purposes of feeding and the dairy. Both are valuable breeds; the question to be decided is, which, in all respects, is the most proper for us.

New-York State Agricultural Society.

We give place with pleasure to the communication of "*Agricola Publicola.*" The few who attended the last meeting of the Society, convinced that some more active measures were necessary to give interest and animation to its meetings, and to enlarge its sphere of usefulness, were unanimously of the opinion, that autumnal meetings of the society should be held alternately in different sections of the state, and a resolution was passed, directing a semi-annual meeting of the society to be held the ensuing autumn, at such time and place as the Executive Committee should deem it expedient to select, in conjunction with the meeting of some of the county societies. We hope the officers of the State Society will take early and efficient means to carry their resolution into effect.

"IMPOSITIONS OF SEEDSMEN."

We have received from our friend, D. Fullerton, Esq. of Orange Co., a communication of considerable length, and commenting with much severity, on what he, in common with many others, denominates the fraudulent practice of many of those engaged in the business of seedsmen. As several papers, however, have appeared in our columns on this subject, some of them having reference to the particular items enumerated by him, our correspondent will pardon us, if we submit only the material part of his communication.

To show the profits resulting from this business, Mr. F. submits the following table of articles purchased by him, at the prices annexed:—

"Skinless oats, 3*s.* per qt.......	$12 00	per	bushel.
Dutton corn, 2*s.* per pint,.....	16 00	"	"
Rohan potatoes, 6 cts. each,..	12 50	"	"
Millet seed, ...	4 00	"	"
Pumpkin seeds, 3 cts. each,...	3 00	"	100.
Chinese tree corn, 2*s.* per ear,	64 00	"	bushel."

Of his experience with these costly articles, Mr. F. found his oats "*meatless*, as well as *skinless*, smutted and shriveled;" his Dutton corn he was pleased with, "but has never been able to sell as high as the purchase price;" his Rohans "promise to be a valuable acquisition," and says, "I think if I could retail them at the seedsman's price, I could make a living by tilling the ground;" of the pumpkin seeds, there is no complaint, so it is right to infer, that "Yankee notion" did well; and the same of the millet; but the Chinese corn, that "God-send from the Celestial Empire," proved, with Mr. Fullerton, as with thousands of others, the veriest "take in" that can be well imagined.

That, in some few instances, the conduct of seedsmen may have deserved the severest condemnation, cannot be denied; and such cases should be held up to the public in their true light. The man who knowingly imposes a worthless article on the public, or which he knows is not the one the purchaser supposes it to be, and possesses none of the qualities attributed to it, must expect the execration of every honest man. But the great body of a most useful and deserving class of citizens, should not be made responsible for the misdemeanors of a few; and justice demands that the difference between intentional imposition and unintentional errors, should be recognized. A seedsman is the avenue through which a multitude of new things, plants, seeds, and implements, find their way from the first propagators or inventors, to the agricultural public. They cannot, in all cases, have tested them themselves, and must of necessity, offer them on the recommendation of others. They may be valuable; if so, the public is a great gainer, as in the case of the Dutton and Brown corns, the Rohan potatoes, &c., or they may be worthless to large parts of the country, as the Chinese corn and Skinless oats; but in this there is no imposition, unless the fact of their being different from what they are represented to be, is known to the vender.

That the price of plants and of seeds on their first introduction, should be higher than afterwards, is what naturally must be expected. They are frequently procured at great expense, on account of the recommendations they have received, and must be sold at corresponding prices. Of their value for any particular purpose or location, the farmer is as good a judge as the seedsman, and one, and sometimes both, may fail in their estimate of the adaptation, or actual value, of a new seed or plant. The loss is, however, to the farmer usually trifling, and unless there is evidence of wilful deception, such failures cannot in ordinary fairness be charged upon the seedsman. In the agricultural operations of the day, the seedsman holds a most important station; and while departures from rectitude, or indications of dishonesty, should be visited with the severest reprehension, occasional mistakes, or errors of judgment, must be tolerated for the sake of the greater good conferred by these servants of the farmer. Our correspondent will accept our thanks for his kind wishes, and we assure him, we shall at all times be happy to hear from him on subjects of interest to the readers of the Cultivator.

INJURIOUS EFFECTS OF WEEDS.

The question has been asked, how it was possible for China and Japan, with the ordinary products of agriculture, to furnish bread for a population, equaling, according to the latest census, about 300 persons to a square mile. The answer is to be found in the care with which every foot of ground is cultivated; in the fact that few animals are kept, either for labor or food; and more perhaps than any thing else, in the entire freedom of the crops from every thing that can reduce their quantity or quality. Not a weed of any kind is to be found in the fields, and the most positive enactments and most assiduous attentions are directed to keeping the country free from them.

Few are aware how much weeds, or grasses, growing in a grain crop, detract from its value, by lessening the product. A vigorous root of charlock or thistle will draw from the earth the nutriment that would have given fullness to half a dozen ears of wheat; and where these, or any other foreign substance is permitted in a growing crop, that is sure to suffer in proportion to the quantity of the foul material present. Weeds injure a crop in two ways; by the room they occupy, to the exclusion of the valuable plants, and by the nutriment of which they rob the growing crop. We have seen fields in which the wheat maintained a dubious struggle with the red root, charlock, or thistle; and where the stem and the ear both showed how much they needed to be relieved from such crowding and unwelcome neighbors. On the best cultivated farms of England or Belgium, not a plant or weed of any description can be found in a growing crop; and in some years the Earl of Leicester has offered a reward, but without success, for the smallest or any weed that could be found in hundreds of acres of his turneps, or his wheat.

In this country, but few experiments have been made to show the difference of product between clean and foul fields, but several are recorded in Sinclair's Code of Agriculture, some of which we shall give, to call the attention of farmers to this point, and show that the labor expended in clearing fields or crops from weeds, is far from being lost, as many would seem, from their negligence in the matter, to suppose.

“1. *Wheat.* Seven acres of light gravelly land were fallowed, and sown broad cast; one acre was measured off, and not a weed was pulled out of it; the other six were carefully weeded. The unweeded acre produced 18 bushels; the six weeded acres 135 bushels, or 22½ bushels per acre; which is 4½ bushels, or one-fourth of the whole, in favor of weeding.

“2. *Barley.* A six acre field was sown with barley, in fine tilth, and well manured. The weeding, owing to a great abundance of charlock, cost 12*s.* per acre. The produce of an unweeded acre, was only 13 bushels; of the weeded, 28. Difference in favor of the weeding, 15 bushels per acre, besides the land being so much cleaner for succeeding crops.

“3. *Oats.* Six acres were sown with oats; one acre plowed but once and unmanured, produce only 17 bushels. Another six acres plowed three times, manured, and weeded, produced 37 bushels per acre. This experiment proves that oats require good management, and will pay for it, as well as other crops. Ten bushels of the increased produce may be fairly attributed to the weeding, and the other ten to the manure.”

It is admitted that the labor and expense of weeding a crop, is considerable; but if the difference be such as is here stated, and there is no reason to doubt it, as it is abundantly corroborated by other experiments, then it should be more generally and promptly attended to than it is. If our farmers could raise 4½ bushels of wheat, 15 of barley, or 10 of oats, additional to their usual crop per acre, the effect would at once be felt in every department of labor in our country. No one can travel through our country before harvest time, without being convinced that millions of acres might have their products increased in as great a ratio as the above, by entire freedom from weeds. Farmers would be gratified could they have their lands tax free; but experience shows, that to have them *weed free*, would be of far greater importance to them.

BELGIAN HUSBANDRY.

In no part of the world has the art of cultivating the soil attained greater perfection than in Belgium, and the numbers devoted to a description of the husbandry of that country, and the manner in which, by persevering industry, its barren sands have been converted into the most fertile of soils, are not the least valuable of the series published by the London Society.

Farmers in this country frequently speak of the impolicy of extensive outlays in improving their farms; it will not pay the expense, is the objection most frequently made, and one which is the most forcible, in reply to those who urge upon them systems for the permanent amelioration of their soils. We have sometimes been disposed to consider this feeling of regard to immediate expense or profit, more as the natural result of that restlessness of character which is said to belong to us as a people, and which leads us to suppose, with reason, that what will not pay *now*, may be lost to us, (as from our known migratory propensities, it is scarcely probable our lands will remain in our hands or those of our children, for any considerable time,) rather than of any disinclination to encounter the labor which an improved husbandry requires.

The benefits of a good system of farming, or the evils of a defective one, can only be fully seen and appreciated in a considerable term of years. On such lands as the greater part of those in this country are, when brought under cultivation, what may be called the skinning or scourging system, in which repeated crops, with little labor and no manuring, are taken off, may be the most profitable for the time, though fatal to the soil, and the prosperity of the farmer in the long run. But when the permanent value and productiveness of lands are taken into consideration; when it is remembered that it is much easier to keep lands in heart, than to restore them when reduced to sterility; and that the eventual agricultural prosperity of a country is depending on a correct system of management, the importance of selecting the best models, and conducting our farming operations with reference to future results, as well as present profits, becomes perfectly evident.

To illustrate the effects of the two systems of farming, or rather to show the results of the improved one, as compared with the one generally practiced with us, we give a few extracts from the papers on Belgian farming, and the first is a description of a farm of 140 acres on the river Lys, near Courtnay.

“Of this farm about 20 acres are in fine meadows, along the river, occasionally flooded in winter, but not irrigated; about 10 acres are rich, heavy land, adjoining the meadows, in which beans and wheat thrive well; all the remainder, about 106 acres, lie in an oblong form, bounded by a hedge-row, at one corner of which, nearest the river, stand the farm buildings. A road or path, six feet wide, runs through the middle of the field, and the road or path that leads to the farm yard skirts one end of it. The soil of this large field is a rich, light loam, which lies over a substratum of clay, but at such a depth as to be perfectly sound and dry. It is not very fertile in its own nature, but has been rendered so by many years of an improving husbandry. Every part of the land has been repeatedly trenched and stirred two or three feet deep; and the immense quantity of manure, chiefly liquid, put on year after year, has converted the whole into a rich mold. The strength and vigor of the crops bear witness to the goodness of the husbandry. As we walked along the middle path, which is just wide enough to admit the wheels of a cart, the whole produce might be seen at once. The flax had been pulled, and remained stacked on the ground. The colza [cole or rape seed,] had been beat out, but the stems remained where they had been cut. There were fifteen acres of most beautiful flax, of a bright straw color, and the stems a yard long. This, besides the seed, was worth in the stack from 25 to £30 per acre; 12 acres of colza had produced about 50 quarters of seed; eighteen acres of oats looked so promising that they could not be set at less than nine quarters per acre; eighteen acres of wheat, which stood well, with short, plump ears, are valued at five quarters per acre; eighteen acres of rye, partly cut, with the straw above six feet high, would probably produce rather more than the wheat. There were six acres of white poppy, of which every plant was strong and upright, and the produce of which was estimated at from twenty to twenty-three bushels per acre; six acres were in potatoes, expected to produce at least twenty-two hundred bushels. About an acre was in carrots, which looked fine and large; twelve acres were in clover, nearly the whole of which was cut green to give the horses and cows; it produces three good cuts in a year, when it is not allowed to go to seed. The 10 acres of heavy land were partly in beans and partly in wheat. The stock kept on this farm consists of twenty-seven cows in milk, five or six heifers, nine horses, and three colts.”

It cannot fail to strike the most inattentive reader, that the crop of this 120 acres greatly exceeds, perhaps doubles, that of our ordinary farms of the same size, while on many of what are called our dairy farms of about the same size, not more stock is kept than on this grain farm. Manuring and deep tillage has done this for the Brabant farm, and it will do the same for any, or almost any farm on which it is adopted. We are convinced that money expended in converting land into rich old garden ground, is well applied, although for the moment it may seem to be thrown away, particularly on lands, the owners of which are expecting to get to the far west by “year after next at farthest.” We add a description of the tillage culture of another farm of some 400 acres, of naturally first rate land, but which, by being treated as described, is so much deteriorated, that the crops rarely more than half equal those on the same number of acres on the one just noticed.

“The rotations on this crop are as follows:—1, fallow; 2, winter barley; 3, beans; 4, barley or wheat; 5, beans, clover, potatoes; 6, wheat; 7, oats. Thirty cart loads of long manure, the straw not much decomposed, are put on the fallows before the last plowing, and the winter barley is sown in October; the produce is eight quarters per acre. Wheat on the same preparation produces from four to five quarters, so that the barley gives the best crop, and with the least exhaustion to the soil; every year a small portion of the pasture is broken up and sowed with colza. The natural fertility of the soil is shown by the succession of crops produced on the newly broken up land, without manure, viz: colza, wheat, beans, barley, beans, wheat, clover, wheat, beans, oats. After this scourging it is no wonder that the land wants rest; and this is given without much care, by merely allowing the natural grasses to spring up without the trouble of sowing the seeds. It takes three years before there is any tolerable pasture; but as it remains nearly twenty years before it is broken up again, the deterioration is not so apparent. Under a regular and judicious course of convertible husbandry, this land might be kept up to the highest state of fertility, and the ultimate profit would be much greater.”

This is a picture of the farming so prevalent in this country, and which is fast lessening our products, and ruining our lands. It may fairly be called the exhausting process, as the whole object seems to be to get as much from the earth, and return to it as little as possible. By the first mode of farming, the land improves constantly, growing more productive, and of course more valuable. A farm cultivated in this way, by deep tillage, thorough manuring, and a well conducted rotation, becomes in time, a rich mold to the depth to which the soil is stirred, and the roots of plants having thus ample room for range and pasturage, the crops are invariably good. Thus the extra labor and expense is soon repaid, and a soil is formed far superior to the richest native earths, and which can easily be kept in condition to give the most ample crops.

Planting Trees on Clayey Soil.

“Messrs. Editors—Will you be so good as to inform me of the best method of planting out fruit trees on a clayey soil? C. F. C.”

A clayey soil is unsuitable for fruit trees, but by draining, deep digging and manuring may be made tolerable. Thorough and deep draining is, however, essential, and without this, all attempts to cultivate fruit on such a soil will prove more or less a failure. On such soils, also, the holes for the reception of the roots must be made broad, and filled with rich surface soil, or such as will be permeable to the roots. The holes should be at least from six to eight feet across, that there may be ample space for the young roots to spread before the poorer soil is encountered. In planting trees, imitate nature, and do not plant too deep, certainly on tenacious soils. The roots of all plants shun stagnant water, with the exception of a small class; and it is particularly fatal to fruit. In some parts of Belgium, where a clay soil prevails, a trench seven or eight feet in width, and two or three feet in depth is made across the field or fruit garden, filled in with permeable richer soil, and in this the rows of trees are planted, the continued trench carrying off the surplus waters.

LONDON FARMER'S MAGAZINE.

There are several valuable agricultural periodicals published in Great Britain, such as the *Farmers' Magazine*, *Edinburgh Quarterly Journal of Agriculture*, *British Farmer's Magazine*, and the *Journal of the English Agricultural Society.* Of these, the most important to the farmer, as embracing the practice as well as the theory of agriculture, is the Farmer's Magazine. This is published monthly, 80 pages each number, with beautifully executed engravings on steel, of the finest cattle and sheep of the different breeds in England; the winning horses of the principal race courses of that country; and those that are particularly distinguished for their excellence for the farm or the road. The reading matter is made up of communications from the leading agriculturists of the kingdom, with occasional remarks by the editor, Mr. Shaw. Although the difference between the climate of Great Britain and this country is such as to render some variations of crops and culture indispensable, still, in most respects, the agriculture which is best in one case would be advisable in the other, and as the science as well as the practice of farming is much more advanced in that country than in this, the methods practiced there may be studied with the greatest profit here. The advance made there in the breeding and management of farm stock, such as cattle, sheep and swine, in particular, is such that those engaged in the business of improving the same races of animals here, would find the Magazine a most useful guide, in the selection of stock, and in ascertaining the estimation in which the respective breeds are held, where they originated and are best known.

We have had frequent applications from gentlemen in this country, with regard to the practicability of obtaining the Magazine, and other agricultural publications here, which has been hitherto attended with much difficulty and expense; and we have the pleasure of informing such, and others, that we are making arrangements by which such difficulties will, in a great measure, it is expected, be obviated. Of their completion, we hope to be able to inform the readers of the Cultivator at an early period; when we will receive subscriptions to such of these works as may be desired.

GERMINATION.

The process of germination, or the first appearance and development of vegetating power in the seed, is one of the most interesting subjects connected with the production of plants. Decandolle mentions as essential to this first step in organization, moisture, heat and light. There can be no question as to the necessity of the presence of the two first, but the last we are inclined to think prejudicial to perfect germination. Loudon says that seeds, to germinate well, should be defended from light, and the experience of every farmer and gardener, is in agreement with this opinion. If moisture and heat are supplied, seeds will, however, germinate in the light, though not as quickly or as vigorously as when light is secluded from them. The presence of the earths is also usually considered essential to germination, but where the other conditions are present without the earths, there is no difficulty in producing plants from seeds. A curious illustration of this fact is found in a custom prevalent in the cathedrals of Mexico and in some of the private dwellings, of sprinkling the seeds of some fine and rich growing vegetation on a matting, or thick cloth made for the purpose, and this is kept moistened with water until the germination is complete. In some cases a beautiful carpet of the richest verdure and smoothness is produced from the fine and scented grasses, and wheat has been sometimes used for the same purpose. But although light is not essential to germination, it is indispensable to the farther growth of the plant. Light favors in them the assimilation of carbonic gas, deepens their verdure, and facilitates the secretion of their volatile and aromatic principles; it is essential to florification, and fructification; and ripe seeds cannot be obtained from plants raised in darkness.

There is no substance, the presence of which appears useful in germination, any farther than they serve to exclude light, and retain, as well as facilitate, the action of heat and moisture. The cress at the present day is very frequently grown in grooves around a pyramid of porous stone, in the top of which is a basin for the reception of water. This apparatus is placed on the table, and the cresses are gathered at pleasure, while as one crop is taken off, the seeds of another are deposited in the grooves. By making this germinating apparatus, or any similar one, part of a galvanic or voltaic circuit, germination and vegetation is brought forward with a rapidity truly astonishing, and demonstrating that this electric or magnetic agent, is the most efficient, if not the only active one in the process.

The germination of seeds is subject in a very great degree to temperature; and the degree required for this purpose varies much, according to the nature and habits of the plant. Thus the seeds of most of the hardy or half hardy plants will germinate at a temperature much lower than is required for the tender and delicate classes. Lettuces, onions, wheat, &c., will germinate at temperatures in which corn, beans, peppers, &c., would certainly rot. It is found by experience that roots may be kept for an indefinite period of time, if secluded from air by being buried in earth, and placed in a position above freezing, yet below the germinating point. Potatoes have been preserved in this way for years, fresh and perfect as when first grown, and no good reason can be given why, if supplied with the necessary moisture, and yet kept below the point at which vegetation can commence, the germinating power may not remain good for ages, and the root preserve its first vigor and freshness. The principle of vitality, or life, is active in seeds as well as in plants, and the processes of organization going on, counterbalance the inherent tendencies to decay, when these principles are permitted to act.

The facility with which seeds germinate is in a great measure depending on their age, when preserved as seeds usually are, exposed to atmospheric changes, and the action of causes that always more or less influence their vitality, or their substance. This fact should always be remembered in making choice of seeds, as in most cases the fresher they are, the better, and some are wholly worthless after being kept beyond a certain term. Bridgman, in his Gardener, remarks on this subject, that parsnip, rhubarb, and other light scale-like seeds cannot be safely trusted after they are a year old; that peas, beans, carrot, onion, and small herb seeds generally may be used after two years; that spinach, mustard, parsley, lettuce, asparagus, may be preserved three years; that the seeds of the radish, turnep, cauliflower, cabbage and celery, will keep four years; and that the cucumber, melon, squash, beet, and burnet seed, will sometimes grow freely when five and even seven years old.

The fact that when properly preserved, seeds will retain the power of germination for great periods of time is singularly illustrated in the growth of plants from seeds found in the materials employed in the embalming process of the mummies of Thebes, and in those discovered in the burying places of the ancient Peruvians. Of those found in the first instance, a species of wheat, and also one of the raspberry, resembling well known varieties, have been produced from such seeds; and in the latter, of the maize or Indian corn so found, healthy and vigorous plants of corn have been grown. The first seeds were of the date of the Pharaohs, or more than 3,000 years old; the latter, or corn, were placed where they were found before the conquest of Peru by Cortes and his followers.

The action exerted by the radicle or root, and the plumule, or leaf, of a seed during the germinating process, is one of the most singular parts of the vegetative powers of seeds. John Hunter placed a number of seeds in a vessel so contrived that during growth it might be made to revolve very slowly; the result was that in the effort to grow downward during the revolution, the roots formed themselves into a circle within the earth of the vessel, while the top, in its efforts to an erect growth, performed a circle on the outside of the vessel, but of course in an opposite direction. Poiteau inferred from these and similar facts, that a polarization of each seed took place during the germinating process, the result of which was an electro-magnetic current, followed in one direction by the atoms of matter that go to constitute the radicle, and in the other by those that form the stem and leaf of the plant. So strong is this downward tendency of the radicle, that some seeds placed in water, or kept moistened on the top of mercury, forced their radicles into this substance, one so unsuitable for the ordinary purposes of vegetation.

The germination of seeds is greatly influenced by the depth at which they are placed in the earth, and the fineness of the soil placed around them. The earths serve to retain the moisture required to cause vegetation; and if the more modern theory of the primary agent in all growth, from the first incipient germination to the ripened seed, is true, they also act the same part that the plates of the voltaic battery perform in producing the currents and the polarization of the atoms, the arrangement and accumulation of which constitute growth. To produce the desired effect, the earths must be fine, abounding in animal and vegetable matter, and brought by pressure in immediate contact with the seeds. Many seeds are injured, and the germination of some wholly prevented, by being covered too deep, or planted in earth containing too much moisture. It is rare the earth is too dry for the germination of seeds, when the temperature is right; but the dilution of their food by excessive moisture is fatal.

DISEASE IN COWS.

A correspondent at Oberlin, Ohio, says—

"I wish to make an inquiry concerning cows when they first come in, or calve. Our cows often sicken and die, in spite of medicines, and we are at a loss in accounting for the cause. * * I had a cow not long ago, which appeared to be doing well before she calved; was soon afterwards in great pain, and seemed to be weak, and soon began to stagger as she walked; soon after, she sunk down and was unable to get up. Medicine did no good, and in eighteen hours she died. It seemed to be a plain case of fever, and is but a sample of many instances that have occurred in this region."

Our correspondent is right in regard to his supposition; such cases belong to what veterinary surgeons call "Dropping after calving," or puerperal or milk fever. It is more apt to occur to cows that are fat or in good condition; and particularly such as come in late in the season. It has been remarked that cows attacked in the winter, oftener recover, than those that are sick in the summer, in equal condition. The disease is inflammatory, and if taken in season and treated as such, it is generally subdued without difficulty. The animal must be bled, and the quantity must depend on the impression produced on the circulation. From six to ten quarts is usually sufficient. The bowels must be opened with epsom salts; and a failure in this respect will indicate a fatal result. From one pound to one and a half of salts, according to the size of the beast, with aromatic ingredients, such as ginger, &c. is usually sufficient; and half the dose every six hours after, with a further supply of aromatics, until the desired effect is produced. The directions of Mr. Bainbridge, veterinarian, in the British work on "Cattle," are as follows:

"The months of February and March, have always afforded me more or less cases of dropping after calving. I immediately bleed to the amount of two gallons, and sometimes more, and give a draft composed of epsom salts 1 lb., spirits of nitre 1-2 oz., and linseed oil 1 lb., in plenty of thin gruel. I also order from four to six ounces of salts to be given in gruel every six hours afterwards, some ginger being always boiled with the gruel. If the animal is not relieved in 24 hours, and her state permits it, I bleed again, and repeat the salts, oil, &c. Out of six cases in the last two months, five perfectly recovered."

The puerperal fever among animals, as among the human race, sometimes appears as an epidemic, and is attended with disastrous consequences. It is in all cases a disease to be dreaded, and few diseases require more prompt and energetic treatment. As it usually occurs to cows within a few days after calving, they should be frequently noticed, and if the symptoms that precede the disease, such as restlessness, lowing, nose dry and hot, tongue frequently protruded, eyes wild and staring, and the udder swelled, inflamed, and the secretion of milk suspended, there is reason for apprehension, and if weakness or staggering occurs in the least, the case may be considered clear, and treated accordingly.

Late Sown Wheat—Information Wanted.

The opinion, it appears, from the English and Scotch agricultural works, is becoming general in Great Britain, that the later wheat can there be sown, the better. The practice has been partly forced upon them, or rendered necessary by the sowing of wheat after turneps, and experience shows that the system possesses several advantages. An eminent agriculturist states, that since he has adopted the practice of late sowing, he has never lost a crop from the fly, or what is of still more consequence, from freezing out, or winter killing. What would be the result of such a course of sowing here? Wheat sown so late in the fall that vegetation does not take place to any extent before freezing, could not be destroyed in the spring by the lifting of the roots that ensues from the spring freezing of heaving lands, and although later in ripening than wheat sown early in autumn, it would doubtless come to maturity as early as spring wheat. There are large sections of our country where the danger or liability to freeze out, constitutes the most serious obstacle to the culture of wheat; and as spring wheat may be said to succeed well on such sections, a very important point would be gained, if by fall sowing as late as possible to get wheat into the ground, winter wheat, which is a more valuable crop, could be raised. *We wish to obtain information on this point;* and any farmer who has made experiments in late fall or winter sowing, and will communicate to us the result, with the time of sowing, kind of soil, &c., will very much oblige us, and perhaps confer on the public a benefit and a favor.

Disease among Horned Cattle.

For several years past an epidemic of a singular nature has prevailed to a greater or less extent on the continent of Europe, and has been gradually progressing westward; until at the present time its ravages are most extensive and alarming in England. Whether it will cross the Atlantic remains to be seen; but the experience we have had in other epidemics, both in man and brute, would seem to indicate that we shall not be exempt. It seems to be as true of diseases as of empire, that westward they "bend their way;" witness the cholera, which from the jungle at the mouth of the Ganges, has spread westwardly till it has made the circuit of the globe.

Mr. Hill, veterinary surgeon, who has charge of Mr. Rhodes' London Dairy of about 700 cows, has given, in the Veterinarian, some account of the disease as it appeared among those animals. In the first attack—

"The membrane of the whole of the mouth was in a state of inflammation and vesication. The tongue was involved, but the most extensive and annoying vesication was between the under lip and the gums. In some cases it extended over the whole muzzle to the nostrils. In the worst cases, the membrane of the tongue completely peeled off. Some of the animals suffered so much, that they became furious."

In the progress of the epidemic, the feet were attacked in a manner much like that of the hoof ail, at times so prevalent in some parts of this country. Mr. Hill says:—

"The grievance now lay in the foot, and particularly in the cartilago-ligamentous substance that forms the heel. An enlargement appeared in that division of the foot, and at the separation between the heels; it was hot and tender; a vesicle followed filled with serum, and if not lanced it burst, and a serous fluid exuded. The after state of the case, and the other treatment depended on the opening of this vesicle; if the vesicle was opened in time, one dressing with the caustic, that will presently be named, was sufficient; but if that had been neglected, the fluid insinuated itself between the hoof and sensible laminæ, and burst out at other parts of the coronet, or the hoof dropped off." * * * "The dressing which was most useful,—which in fact never failed ultimately, and applied in time, arrested the disease at once,—consisted of equal parts of muriatic acid and tincture of myrrh, applied by means of a brush or feather, the animal being kept in a dry yard or stable, and the foot kept from accidental moisture by a piece of cloth secured by strips of list."

Out of more than 500 attacked, not an animal was lost; and what still more likens the disease to our hoof ail, out of the whole number, six only had the disease in the fore feet. Mr. Hill remarks, that the commencement of the disease is hardly to be mistaken; the pain the animal suffers is manifested by holding up and shaking the foot attacked. The digestive organs did not appear to be affected, and the appetite remained good in most cases. Where the aid was not prompt, the hoofs and feet bones came off and the animals perished miserably. In many of the cows garget showed itself in the udders, accompanied with swelling, inflammation, and a great reduction in the quantity of the milk. The last Nos. of the Farmer's Magazine announce the spread of the epidemic, over nearly the whole kingdom.

The Horse—"Spirit of the Times."

We thank our friend of the Times for his suggestions, and will endeavor to profit by them. They are in accordance with our opinions and our intentions. The improvement of the Horse is an object of interest to all, particularly for the farm or the road; and we are glad to perceive in various quarters, proof that the importance of substituting better blooded, and of course better animals, for the miserable caricatures of horses that disgrace too many of our farms and roads, is beginning to be understood and acted upon. In the mean time we advise all who are engaged in efforts to improve this noble animal, as well as the lovers of field sports, to subscribe at once for the "*Spirit of the Times*," and the "*American Turf Register.*" As a "Chronicle of the Turf, Field Sports, Literature, and the Stage," the "Spirit" is without a rival in the United States or elsewhere. The Editor, W. T. Porter, Esq., is an indefatigable caterer in the fields of literature and the drama, and the ample pages of his extended sheet, enable him to gratify the taste of his readers in this respect abundantly. For fineness of paper, beauty of mechanical execution, general arrangement, and expensive embellishments, the Spirit is unequaled by any publication in this country. The large and splendid steel engravings which occasionally accompany it, are worth the subscription price. It is issued weekly, 12 large pages, quarto, at No. 1 Barclay-street, New-York, at $10 a year.

The American Turf Register and Sporting Magazine, so long published by the able editor of the American Farmer, Baltimore, J. S. Skinner, Esq., is now issued from the office of the Spirit of the Times, by Mr. Porter. It is published monthly, 64 pages octavo, each number embellished with one or more elegant steel engravings, at $5 per annum.

Implements for Analysing Soils.

"A Subscriber," who has asked "where the implements required for the purpose of analysing the soil can be found?" is informed that such as are necessary for ordinary analysis, or determining the quantity of the several earths and vegetable matter existing, may be found almost anywhere, comprising only a crucible, scales, acids, glasses for washing and separation, &c. If a perfectly accurate analysis is required, the chemist's laboratory and the chemist's knowledge will be requisite. Every farmer might easily analyse his soils, and should be provided with the means of so doing. Such a course of experiments would be useful in the cultivation of the soil, and a source of pleasure to the operator. See "*Analysis*," page 25.

SPECIMENS OF SILK.

The specimens of colored and white sewing silk, sent us by Mr. Wm. Prine, of Stillwater, made from the white mulberry, show, as have multitudes of other experiments, that there is no mystery about silk making, and nothing to prevent our farmers from growing it. The time we trust is not far distant, when the cultivation of silk will become a part of the rural economy of every good farmer. The inquiries of Mr. P. shall be attended to in due time.

We have also a beautiful specimen of silk from the cocoonery of R. S. Hardwick, Esq. of Sparta, Ga. Mr. H. says—"This is our first effort. Our first crop, say 120,000, has all wound up—our second crop of about 500,000, is now half advanced, and we expect to raise a third crop. We have suceeded so far with our worms admirably well. All that we lack, is the necessary machinery to prepare the silk for market, to make the business profitable."

Transplanting Evergreens.

"A Young Farmer" is informed that evergreens may be transplanted with safety at any time when "the plant is in a state of actual growth." The last of May and the middle of September are probably the best times. Judge Buel was successful in transplanting pines in July. The plants should be taken up with as much earth attached to the roots as possible.

GREAT CALVES.

We have collected from various sources the following notices, which, more conclusively than any thing else, will show the size of the Short Horns. This great size of the progeny, however, renders the crossing with the "scrubs" or common breed of cows, somewhat dangerous; as in a single neighborhood we have known two instances in which cows crossed with a Durham, died during parturition.

Good.—Mr. G. V. Sacket of Seneca-Falls, is the owner of a Durham calf, which when four hours old, was carefully weighed by a number of gentlemen, and found to weigh 110 pounds.

Very Good.—Mr. B. Simmons, of Madison, has a calf which weighed when two days old 122 pounds.

Still Better.—(We do not say the *best*, because we might be obliged to recall it.) Dr. J. Miller, of Truxton, has a calf of the Short Horn Durham, which, when one day old, weighed 132½ pounds, and on the second day 136 pounds.

Yearling Durham Bull.—Mr. George Geddes, of Camillus, has a Short Horn bull, which in April last, at the age of one year, weighed 900 pounds.

DICTIONARY OF TERMS
USED IN
Agriculture and its Kindred Sciences.

CALVES. The young of the cow, *Bos* of Lin. The value of the future ox or cow is greatly depending on the treatment the calf receives; and hence much attention has been paid to the rearing of the young animal, in districts where the breeding of cattle forms an important object to the farmer. Where circumstances will permit, allowing the calf to run with the cow and draw his food directly from her, is probably the best method, since it is that of nature; but as the milk for dairy purposes is valuable, breeders have substituted many modes of feeding the calf, in which milk is partly dispensed with, some other nutritive substance taking its place. As a general rule, the calf should be allowed to suck the cow till the milk is good. Some allow them to suck a week or fortnight, according to their strength; but we have found that where calves were to be taken off, the earlier it was done, the better for both cow and calf it was, both making less ado at the separation. According to Marshall, a celebrated English breeder, the best method after the calf is taken from the cow is this:—"new milk in the pail a few meals; next, new milk and skim milk mixed, a few meals more; then, skim milk alone, or porridge made of milk, water, oatmeal, and sometimes oil cake, till cheese making commences; after which, whey porridge, or sweet whey in the field." When fed from the pail, calves require about two gallons daily; but care must be taken not to give it them too cold, as it will cause the calf to purge. When this is the case, one or two spoonfuls of rennet in the milk will be a good remedy. Great regularity should be used in feeding calves; and they should always have sweet grass, or good clover hay to nibble upon in the intervals of feeding with milk. Calves should always be housed in the winter, have good hay, water, and occasionally salt. They are easily taught to eat carrots or turneps, and we never knew a lot of calves that had each a good "nubbin" of corn daily from the hand of the master, and plenty of good hay, that did not go through the first winter well.

CAMBIUM. When the sap from the roots of trees has ascended to the branches, and undergone that peculiar elaboration which fits it for the formation of the various parts of the plant, fruit, wood, bark, &c., it descends towards the roots, depositing in its progress the materials destined to the several parts. Of these, the principal is the substance of the future alburnum and liber. These materials are first deposited in the form of a layer of glutinous or gummy substance, termed the *Cambium;* which appears to consist of the solid portion of the sap, deprived of the greater part of the water. This becomes more and more consolidated, and becomes an integrant part of the plant, constituting two layers; the first, the outer circle of wood, called the alburnum; and the other, the inner layer of the bark, being the liber.

CARBON. The base of coal. It is found pure only in the diamond. Though this fact was suspected by Newton, it was not established till Lavoiser effected the combustion of the diamond enclosed in iron. As the diamond disappeared, and the iron was converted into steel, (a well known result of the combination of carbon and iron,) the inference was clear that the precious stone was pure carbon, and further experiments have demonstrated its truth. Carbon forms the base of all wood, and consequently of all trees and plants; and is, therefore, one of the most important principles in nature. Plants, however, never take up the minutest quantity of carbon while in that state, however fine it may be reduced. By a wise provision of Providence, an inexhaustible reservoir of carbonic gas (carbon converted into air) is found in the atmosphere, which readily combines with water, and in that state is taken up by the roots for the support of the plant. The leaves of trees also perform a species of respiration by which carbonic gas is taken into the plant during one-half of the day, to be decomposed by the solar rays, and while the carbon is retained. The oxygen is set free and thrown off by the plant to renovate and purify the air. *Carbonic gas* is composed of 27.4 parts of carbon, and 72.6 parts of oxygen. Carbonic gas is fatal to animal life, and to this gas, the deleterious effects of the Grotto del Cano, the Valley of the Upas, the craters of volcanoes in some cases, what is called the choke damp in mines and wells, &c., are owing. No part of a plant has the power of decomposing this gas, except those that are green; hence plants prematurely stripped of their leaves, are at once deprived of their greatest means of procuring carbon, and must suffer accordingly.

CARROT. (*Daucus carota.*) Few plants exhibit the improving effects of cultivation more strongly than the carrot. In its native state, it is small, dry, fibrous, white and strong flavored; as cultivated, it becomes large, succulent, and rich in color and nutritive properties. Carrots contain about ten per cent of nutritive matter, of which nine is sugar and the remainder starch. Many attempts have been made to make sugar from carrots, but they have failed; while by distillation large quantities of spirits are produced. Twenty tons have yielded 240 gallons. Carrots require a rich *deep* soil, and on any others their growth should not be attempted. They succeed best in rows, eighteen inches apart, and eight inches in the rows. In a shallow soil, or one rich only on the surface, the roots will be scragged, and of an inferior quality. Five hundred bushels may be considered the average yield per acre on a good soil, though instances have occurred of yields of eleven or twelve hundred bushels on that quantity of ground. Few roots are of equal value to the carrot for feeding animals. Almost all are fond of them, and their excellence cannot be disputed. They make the finest colored and best flavored butter or beef; horses thrive rapidly on them, and hogs can be fattened on them with ease. The carrot crop is not quite as certain a one as the potato or turnep crop, is rather more difficult in the choice of soils, and more care and labor in the production is required; but still it is one of great value, and where circumstances do not forbid, should always find a place among the roots grown, and rotation adopted by the farmer.

CART. Fifty years since, the use of the wagon for farming purposes was almost unknown. The reliance was on the cart and oxen, instead of the wagon and horses. As the latter increased, the former gave way; and now, the use of the cart is mostly confined to farms on which cattle alone are used, and to some particular sections of country. It is a question, however, which deserves serious consideration by farmers, whether more has not on the whole been lost, than has been gained by the change. On grain growing farms, where much plowing is to be performed, horses are indispensable, and the wagon of course may well be preferred; but there are tens of thousands of small farmers in our country, that, we think, would greatly consult their convenience and profit, by discarding their wagon and its attendant span or two of lean horses, and substituting in their place, for labor, the old fashioned and less costly cart, and a yoke or two of clean built, light traveling Devons, or other good working cattle.

CATARRH. A disease of horses known under the names of influenza, cold, horse distemper, &c., and is one of the most common and disagreeable to which this useful animal is subject. It is not usually fatal, or long continued, unless the animal is injudiciously treated, improperly worked while under the influence of the disease, or dosed with injurious remedies. It makes its attack usually in the spring or fall, commencing with fever, followed by discharges of matter from the nose, swelling of the glands of the throat, difficulty of eating or drinking, and of course much emaciation and weakness. Bleeding is admissible only during the fever stage; setons in the glands, or blisters when much swelled; promoting discharges from the nose, and keeping the bowels open, have been found the most effectual methods of arresting the disease. The distemper is clearly contagious, and infected animals should be kept from those that are sound as far as practicable.

CASTRATION. The emasculation of animals, such as calves, pigs, lambs, &c., should be performed as early as the strength of the animal, and other circumstances, will admit. Usually, the only care necessary is to prevent exposure to the cold. Where this is not attended to, serious consequences may result; and we have known flocks of lambs decimated by exposure to a cold rain, immediately after this operation.

CATTLE. A general name comprehending all the animals in the genus *Bos* of Linnæus. There are of course a number of species, such as *Bos taurus*, the common ox; *Bos caffer*, the wild ox of Africa; *Bos urus*, the wild bull of Asia; *Bos americana*, the buffalo or bison of the Missouri; and the true buffalo of India, and the musk ox of the Arctic regions. Much labor has been expended in tracing the origin of our domestic races of cattle to the Urus, but we think with little success. At the earliest mention made in history of the ox, he was, like the sheep, a domesticated animal, and such he probably descended from the ark upon the plains of Mesopotamia. Domestic cattle become wild with readiness, as the immense herds that roam the pampas of South America at the present time fully prove. Very great improvements have been made in the European breeds of cattle within a few years, principally in England, and that by a few spirited individuals, of whom Bakewell, Collings and Berry, rank among the first. Within fifty years, the average weight of English cattle, as determined at the Smithfield market, has risen one-third; and present appearances do not indicate that this increase has reached its maximum. The great improvements already effected, have been made by judicious crosses, and breeding with reference to certain desirable qualities of form, size, milk, aptitude to fatten, &c., and these objects have been attained in some of the best modern breeds of cattle to an extent that would once have been deemed impossible. It is evident that care must be taken, or there will exist a tendency to retrograde to the original standard; a tendency which will become less and less, as the type and constitution of the improved breeds recede farther from the point of their origin, and of course become more fixed and stable. The breeds of cattle at present most in repute, and beyond all competition in any other varieties, are the Short Horns, the Herefords, and the Devons. Indeed, it is scarcely possible to conceive of more perfect models of form and beauty among animals, than are to be found among these three kinds of cattle, particularly the high bred varieties of the first named. Great pains have within a few years been taken to introduce into the United States the very best breeds of Europe, and finer herds of cattle are no where to be found than now exist in Kentucky and Ohio, which states have taken the lead in this laudable enterprise. As to the general treatment of cattle, our plan does not embrace it, any further than to remark, that cattle require kind treatment, plenty of good food at all times, and protection from the severity of our winters. On these things, next to skilful breeding, the excellence of cattle is mainly depending.

CELLAR. An important appendage to every dwelling is the cellar, and great care should be taken to have this so arranged that the full benefit desired from it may be obtained. The cellar should be well walled with stone or brick, laid in cement; if inclining to be wet, it should be drained so as to present a hard, smooth surface earth, and this will be better if covered with clean gravel. Cellars should wholly exclude frost without being too warm, as fruit and vegetables kept in a warm cellar will not be as good as in one of an equally dry but lower temperature. Since the commencement of the cultivation of roots in this country to a considerable extent, and especially since the making of pork from steamed apples and potatoes has succeeded so well, cellars attached to barns or piggeries have become necessary, and are already constructed in many cases. Cellars of this kind for the reception of roots, should be made so that cart or wagon loads of fruit or roots can be thrown into them at once, without the labor of repeated handling.

CHALK. Compact limestone, or carbonate of lime, passes into chalk, when the particles that compose the mass are so loosely connected as to render it friable or capable of easy division; in its essential qualities it does not differ materially from unburnt lime. Chalk is extensively used instead of lime for agricultural purposes in many parts of England where it abounds. In the United States there is no chalk, properly so called. The immense beds of white marl, found in some parts of Western New-York, are a near approach to it, and the value of such beds as a resource for easy liming soils, will be better appreciated hereafter than it now seems to be.

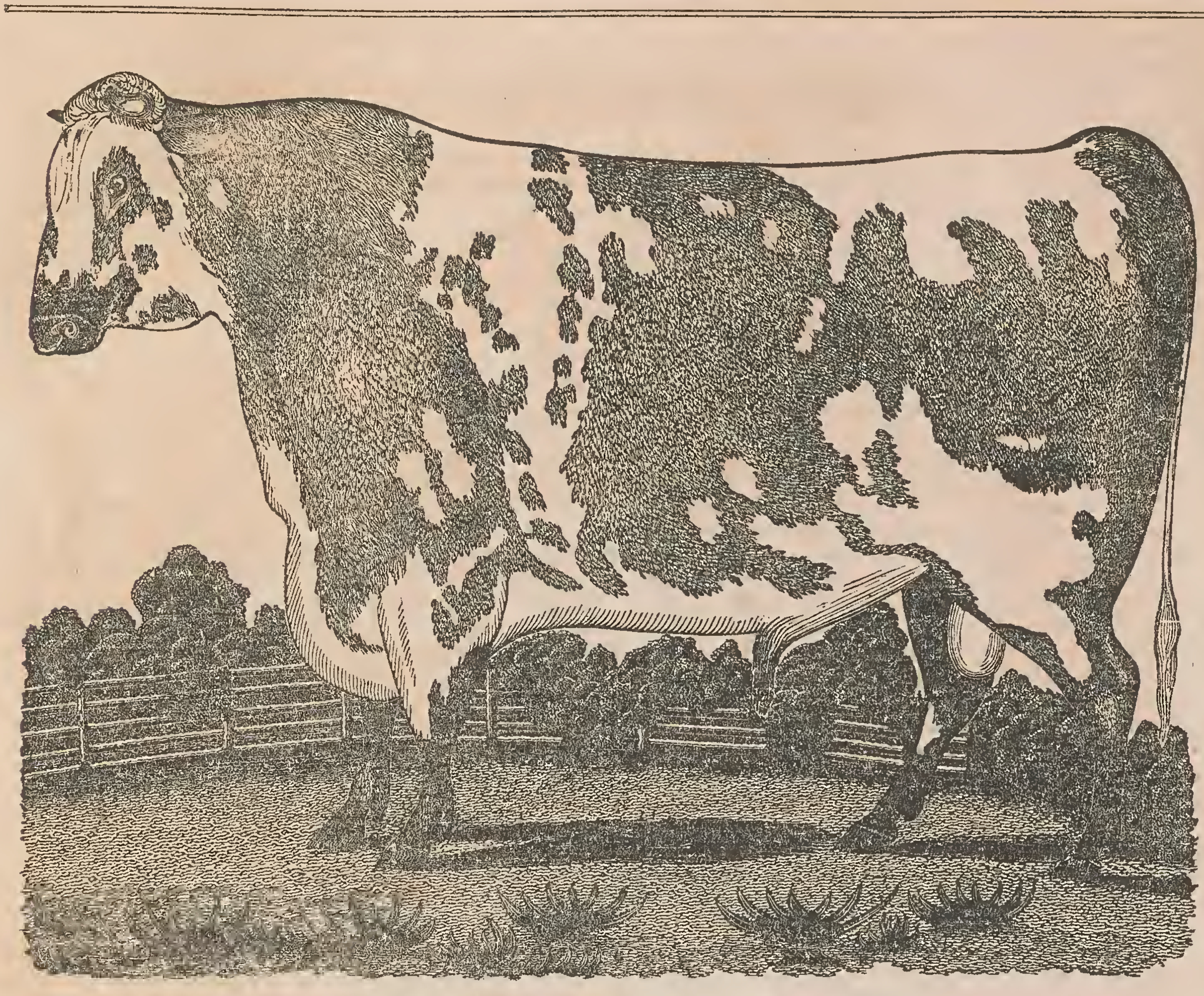
CHAFF-CUTTER. In European works on agriculture, straw or hay when cut fine for cattle or horses, and the practice is extensively followed, is called chaff, and the implements by which the cutting is effected is termed a chaff-cutter. In this country, the same implement would be a "*straw-cutter*," which see.

CHARCOAL. The woody part of trees or vegetables, when burned without flame, becomes a black substance, which has received this name. The base of this substance is carbon, which is formed from the decomposition of carbonic gas by the roots or leaves of the plant. To produce charcoal, the wood is usually burned in pits, or the wood is first closely piled, and then covered with earth, which causes the wood, when the fire is applied, to burn slowly, and expel the water and oils of the plant, without flame, which, if suffered, would reduce the pile to ashes. Charcoal is invaluable in the arts, and is of essential service to the cause of agriculture. It is found that a bed of finely powdered charcoal will ripen melons, &c., if they are placed upon it, when it would otherwise be impossible to bring them to maturity. This property is owing to its rapid absorption of heat from the sun, and the facility with which it parts with it to such substances as are in contact with it.

CHEESE. When the cream has been separated from milk, there remain two of the principles of which it is composed, the caseous and the watery parts. It is from the first of these that curd is produced, and when the watery part or whey is separated from this, and the curd is properly prepared and formed, it constitutes cheese. Heating, or the addition of acids of any kind, will convert milk into curd, but the substance used in the dairy, and which is preferred to all others, is a decoction of the stomach of the calf, called rennet. This stomach is prepared by drying with spices and aromatic herbs, and when wanted, is steeped in water or whey, until sufficiently strong to coagulate the milk with readiness. Great care is necessary in preparing and preserving the rennet, as on the quality of this, its sweetness, purity and flavor, much of the goodness of the cheese is depending. There are many varieties of cheese, some of which have obtained a great celebrity, such as the Parmesan, Stilton, Gloucester, Cheshire, &c., in Europe, and the Goshen, Orange, &c., in the United States. The different qualities of the several kinds of cheese is depending on the milk, and the different processes adopted in making the cheese, and fitting it for the market. The best cheeses always retain the cream in the curd; those made from milk deprived of the cream, are called skim milk cheese. This kind is of course less rich than the other, but may be kept longer. Cheeses made of goat's milk are richer than those made of cow's milk, but it is with difficulty they are kept for any time. They are, therefore, made small, and eaten as soon as they have attained perfection. The celebrated French cheese called Rochefort cheese, is made of a mixture of goat's milk and cow's milk, and its peculiar excellence is supposed, in part, to be owing to the temperature of the rooms in which it is prepared, which being excavated in rock, are always of the temperature of 36° to 40°. Formerly those dairies that made the rich or cream cheeses, such as the double Gloucester, Stilton, &c., were obliged to make them small, and the dairies of this country that imitated such cheese were compelled to do the same, as their rich and tender mass would fall to pieces of itself if made of large sizes. Now the richest cream, or double cheeses, are made without difficulty, and of any desirable size, as the curd is pressed and kept in bandages made of thin cotton until ripened and used. The dairy business, when well conducted, is a source of great profit, and the American dairies in some parts of the states are exceeded by few in the world for the quantity and quality of their products; a decided improvement having taken place within a few years.

LARGE YEARLING.

Mr. Winant Younghans, of Sand-Lake, Rensselaer co., informs us, that agreeably to the request of Mr. Johnston, (see current volume, page 20,) he had his improved Durham bull calf weighed on the day that he was one year old, by Mr. F. Myers. His weight was 1,026 pounds. It is believed by those who have seen this calf, that it can scarcely be equaled or surpassed by few for size and beauty. Mr. Y. requests Mr. Johnston to comply with his promise to furnish us with the weight of his calf, at one year old.



SHORT HORN BULL PRESIDENT—[Fig. 62.]

Owned by Messrs. Gaylord & Fuller, Skaneateles, Onondaga county, N. Y.

The Bull President, a good engraving of which is given above, is a pure Durham, from the celebrated herd of the late Gen. Van Rensselaer, of this city, and is owned by Messrs. Gaylord & Fuller, of Skaneateles, Onondaga county. His stock is highly spoken of, and he will doubtless effectually contribute to still further improve the cattle of that district. We are always pleased to give figures of fine American animals, as such representations, if faithfully executed, give more correct ideas respecting such stock than the best descriptions without them can do. We consider the great questions as to which of the foreign breeds is the best adapted to this country; or whether the different sections may not require different breeds, as open to discussion, and as they are of the greatest consequence to the public, we shall be happy to be able, through our columns, to throw light on the subject. We allude here particularly to the Short Horns, Devons and Herefords, as those to which the attention of the public is at this time directed.

GEOLOGICAL SURVEY OF NEW-YORK.

The report of this survey for the year 1839, being the fourth annual report, is now before us, and is a most valuable document, embracing some 480 pages, and including reports from all the gentlemen engaged in the survey. The reports from Dr. De Kay on the Zoology and Entomology, and of Dr. Torrey on the Botany, are very full and ample; as is also that of Mr. Conrad on the Palæontology or fossils of the state; and must be considered as valuable contributions to science, as well as necessary illustrations of the natural history of New-York.

When it is remembered that the grand object of the survey, as undertaken by the state, was the development of its agricultural and mineral resources; the making the mass familiar with topics now little understood or prized by them; the placing the history of the plants and insects of most consequence to the cultivator of the soil, whether for their beneficial or destructive properties, in the hands of all; and the necessity of paying particular attention to every object of practical interest is realized, it is pleasant to observe the direct tendency of these reports to the fulfilment of these intentions.

To render the investigations now going on beneficial in their fullest extent to all classes, it is desirable and necessary that figures and descriptions of all the most important insects and plants should be given; their changes and habits described, and all that can interest the public, divested as far as possible of its purely scientific aspect, and clothed in a dress and language familiar to all. In all cases where a plant or an insect has a popular or vulgar name, it should by all means be given as well as the scientific one, that the farmer may recognize his friends as well as his enemies. The cry which is made by some against the use of terms which constitute the language of science every where, is most ridiculous; but this labor and expense has not been undertaken for the use of the scientific alone, and in making out the final reports, this fact must not be overlooked.

Already have the annual reports embodied a vast amount of economical geology; but as was to be expected, the full illustration of the several topics embraced in the survey, and their adaptation to practical purposes, has been deferred to the final reports. For these the public will look with much interest, and with every reasonable prospect of not being disappointed. The practical skill, scientific investigation, and patient research which have been brought to this great work, afford the surest guarantee for its honorable and useful accomplishment; and of such a result, the series of annual reports may be considered as a satisfactory pledge.

We had prepared an extended notice of the report for this year, embracing a synopsis of the labors of each of the gentlemen engaged; but have deemed it proper, from the mass of interesting agricultural matter on hand, to defer its insertion. We do this with the less reluctance, as we have in a late number alluded to the subject somewhat at length; and shall doubtless hereafter have occasion to avail ourselves of the important discoveries and facts detailed in these reports.

Annual Report of the Regents of the University.

We have just received this report for 1839, and examined its pages and statements with a care proportioned to the interest we feel in the great cause of education, of the state of which in New-York, this report, and that of the Superintendent of Common Schools, may be considered as an official exhibition.

Reports were received from 109 academies, and their present condition, number of students, &c. may be seen from the recapitulation given below for the last six years.

Year of reports.	No. of academies reporting.	No. of scholars reported.	Public money distributed.	Average rate per scholar.
1835	64	5,296	$12,000	$3 21
1836	65	5,548	12,000	2 98
1837	69	6,056	12,000	2 63
1838	74	6,391	12,000	2 35
1839	106	10,111	40,000	5 66
1840	109	10,881	40,000	4 52

There are in the 1st district 2 academies; in the 2d district 17 academies; in the 3d district 15 academies; in the 4th district 23 academies; in the 5th district 17 academies; in the 6th district 8 academies; in the 7th district 16 academies; and in the 8th district 18 academies, that have reported to the Regents the past year, and there are several subject to visitation that have not reported.

It appears from the above table, that during the past six years the academies have increased in number from 64 to 109; and students reported, from 5,296, to 10,881; while the sum distributed has risen from $12,000 to $40,000.

To the general or the scientific reader, the abstract of the meteorological returns from the several academies, with the valuable papers furnished by Mr. W. C. Redfield, on the monthly mean height of the barometer for the past year, and the average mean for the last seven years; and by Mr. Coffin, on the prevailing directions of winds in this state, will prove the most interesting part of the report. The returns in general appear to be made with a considerable degree of accuracy, and the further introduction of approved instruments will annually tend to ensure such a result. By such annual reports, a vast amount of information will be collected, always available in attempts to explain some of the most important phenomena of the universe.

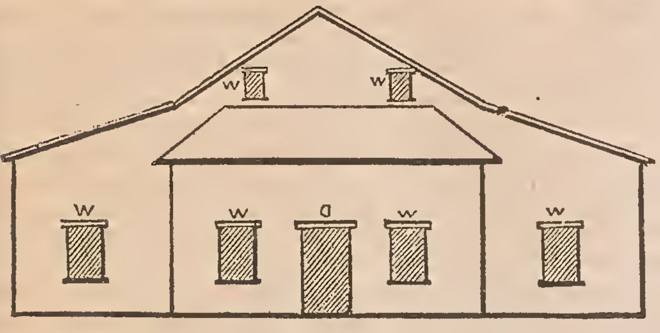
New-York, with a liberality most honorable to the enlightened policy of the statesmen that devised the system, has laid the foundation of the universal education of her citizens, broad and deep; and the carrying out of the principles involved, and the proper management of the vast interests concerned, constitute one of the most important subjects of state legislation, or philosophic or philanthropic inquiry. That all men should be educated, is a proposition that seems to meet with universal assent: the best manner of effecting this result, may be considered a question open for discussion.

Our system of state education recognizes three classes of schools; primary or district schools, academies, and colleges; and these are intended to embrace all that is required to qualify a man for any situation or business of life. The gradation appears a very good one, and no serious practical evils seem yet to have resulted from the working of the system; still we question whether essential modifications will not be hereafter required to meet the just hopes and expectations of the community on the subject. We think the primary or the district schools should be the grand point of interest with those who have the care of education in this state; and every movement or tendency which looks to the elevation of other departments at the expense of this, should be looked upon with distrust. It may well be questioned, whether the too great multiplication of academies, or what is in courtesy called select schools, may not have a tendency to produce undue distinctions, and a state of things not contemplated by the founders of our school system. One of the most unequivocal benefits of our academies, is the opportunity they offer to young men and women for qualifying themselves as teachers of district schools, a privilege extensively embraced, as is evident from the several reports of trustees of these institutions, included in the above report. So far the influence they exert is good; but if, by their multiplication, they are to be brought in direct contact and contrast with the district schools; if, in the academy, the children of the wealthy and respectable are to be educated, while the less fortunate are to be content with such instruction as the district school can give; if the feeling is to become general that it is more respectable to go to school at the academy or select school than at home, (and children readily embrace such notions;) and if the influence which should elevate the district school is to be withdrawn, and concentrated in the higher schools, the result would be most disastrous to the hopes of the real friends of education. That there is such a tendency at the present time is obvious, and it must be counteracted in time, not by depressing the standard of learning in the academies, but by elevating that of the district school; by checking in the bud that aristocratic feeling which leads the child or youth whose school is the academy, to look with contempt on the one who remains where both should have done, in the district school.

It was doubtless the intention of the projectors of our school system, that in the district school should be taught every branch of learning necessary to the active business of life; that the academy should be considered as a preparatory step to the college, or a place where those intending to teach, could be qualified for the occupation; and that in the colleges, that education was to be found, more strictly belonging to the class named in courtesy, professional men. We do not regret that good advantages are enjoyed in our academies; we would only insist, that as far as possible, the same should be had in the district school; we would not depress or destroy the academies of our state, but we would have the district schools so organized and the course of studies so complete, that academies, as such, would no longer be necessary; we would not pull down the few, but we would elevate the many, and take effectual measures to check tendencies to castes and distinctions incompatible with the nature of our social and political institutions.

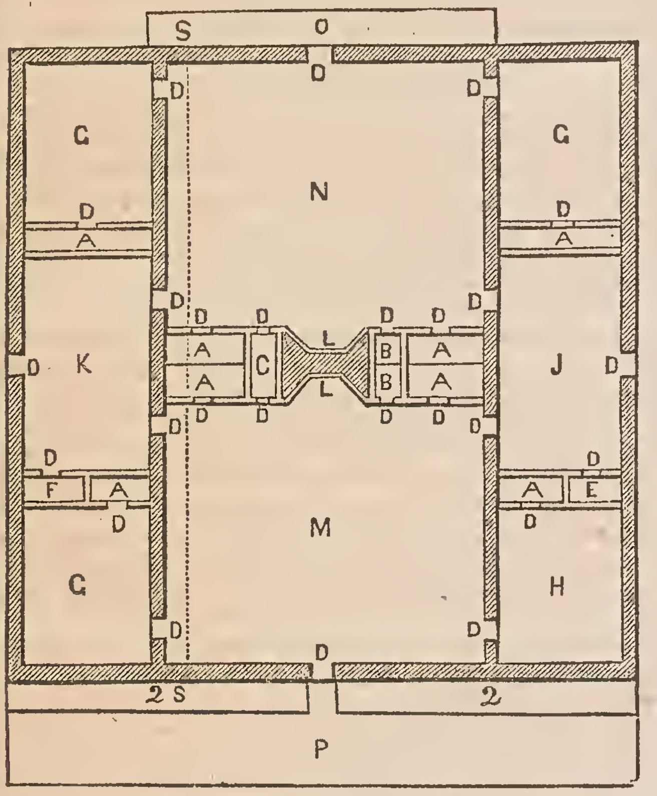
After all, perhaps the most serious defect in our system is the one that allows of no provision, or takes any measures for teaching a science that lies at the base of state and national prosperity, and has and will continue to have more influence on the public happiness and welfare than all other sciences and arts united—the Science of Agriculture. There is not in the rich and powerful state of New-York, a single institution where the principles of agriculture are systematically taught, or where the practice can be illustrated or exhibited. The state has made ample provision for every branch of learning; from the spelling book of the beginner to the languages of Greece or Rome; from the simplest and most important principles of knowledge, to the most abstract, and what some are pleased to call useless; with the single exception of that one which relates to the earliest, and by far the most important, of the avocations of the human race. The cultivator of the soil has been left to instruct himself as he may; and while the farmer's son is invited and urged to the pursuit of sciences useless to him, and the acquisition of knowledge which is of doubtful utility, that which interests him the most, and most nearly concerns his usefulness, is to him a sealed book. While years are required to master subjects embracing much less extensive fields than agriculture, he is expected to understand this science by intuition, and become a successful farmer by instinct. Unless we have wholly misapprehended the bearings and importance of this matter, there is here a defect in our system that requires removal; and to this conclusion we believe every unprejudiced mind in the country will at last arrive.

Communications.



PLAN OF A COTTAGE.—[Fig. 63.]

Messrs. Gaylord & Tucker—As old Neptune and myself have long since fell out, I have concluded that I would let the old shark shift for himself, and that I would not plow the briny deep for him any more, nor yet go aloft to reef and furl top-sails in the cold winter nights, when I could lie safely moored in a good warm built house, on terra firma. Excuse me for my sentimentality, which is so much the characteristic of old salts, whether on sea or on shore. I lay before you the plan of a farm cottage, which, were I able, I would knock together with all possible despatch, and show the farmers of old Onondaga that there is no use of shivering and shaking in cold winter nights like a ship three sheets in the wind, when there is so much spare timber in the land, and so many noble fellows to splice it together; but for fear I should stern-all a little too fast, I will make a short splice of it, while I am about the business. So, gentlemen, if you think the enclosed worthy of a place in your Cultivator, you are welcome to it, and accept of it as coming from an old sailor and a young farmer. You will please excuse the draught, as I am no architect. The front view (fig. 63,) is the outline of the most convenient cottage on the banks of Lake Skaneateles, but as I have drawn it, it is not in proportion, as the roof is too peaked. Were I able to build, it should be a frame house on this plan, filled in with brick. The lower floor of the house to be six or eight feet above ground; a wood-house in the rear, ten or twelve feet from the cottage, with plates let into the plates of the wood-house and into the sills of the cottage, which, when floored over, would constitute a back stoop.



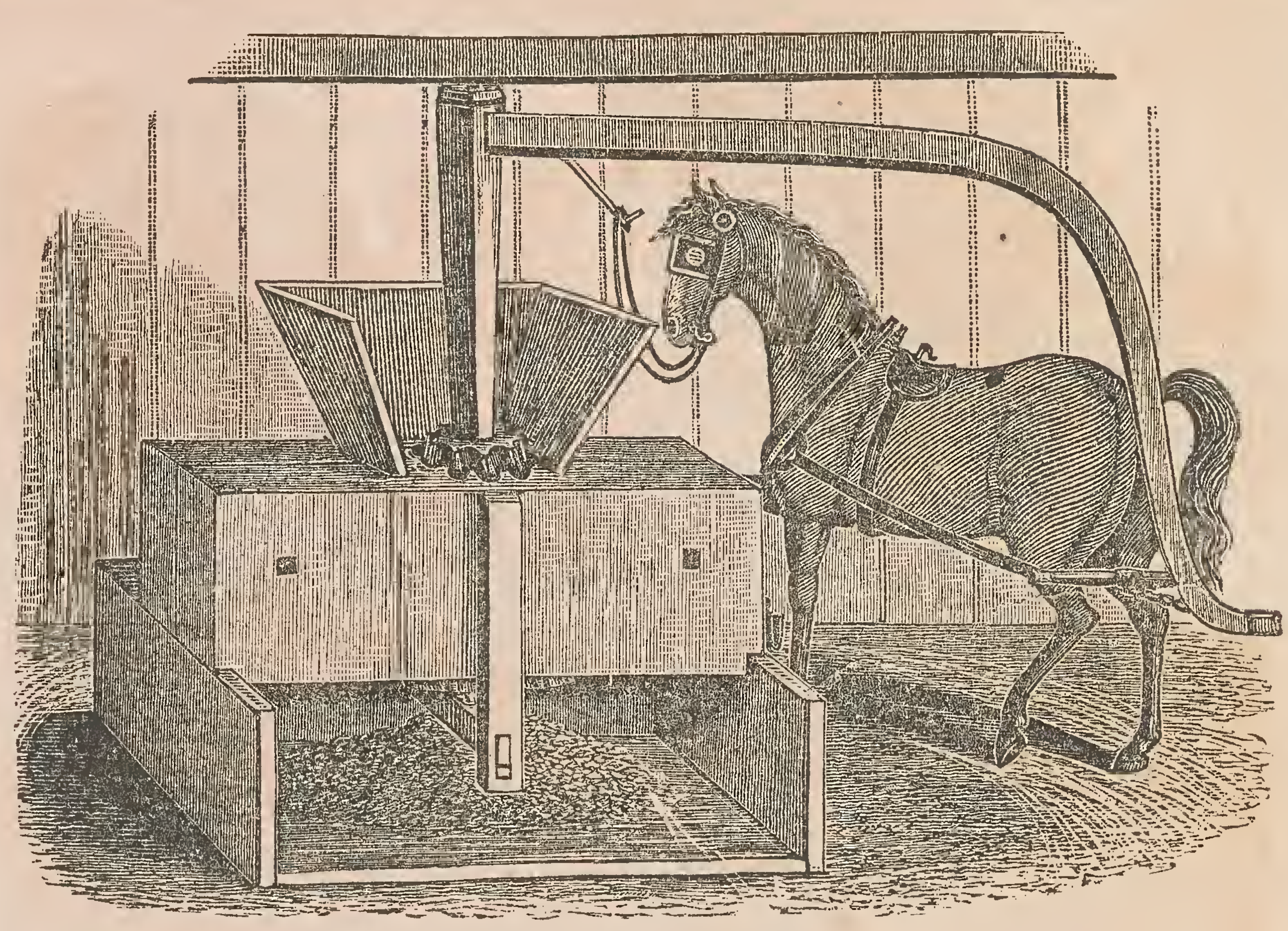
Plan of the lower poor of farm-house, (fig. 64.)

A, pantries—B, cupboards—C, an oven with an ash hole underneath in the cellar—D, doors—E, cellar stairs—F, chamber stairs—G, bed rooms—H, wash room—J, store-room—K, clothes room—L, fire places—M, kitchen—N, parlor—O, piazza in front—P, wood-house—2, 2, platform or back piazza from the dwelling-house to the wood-house, and could, if closed up at the ends, be used as a very cool and airy milk-house for summer, a work shop, or any other purpose a farmer thought fit.

You will see by the plan of the lower floor, that not one inch of room is lost. I am well aware, that there will be some who will dislike it because there is no entry to the house, consequently I have left off two small wings on the sides, and have entrances at the sides. If that would not suit, shift the front door and the back one, and have an entry all through the house from S. to S.

This is a story and a half house, which, should a person wish an entry through, he could very easily have two convenient wings added to it, if he had the means. As I don't approve of cellar kitchens, I will dispense with one, and have the cellar under the whole body of the house; and have the well and cistern enclosed within the walls of it, with pumps to lead up through the floor of the wash room. The ash hole to be under the oven, through which the ashes can be emptied into the ash-house, which is fire proof, in the cellar. The house is intended to be forty feet square. The one I live in, on which I have improved, is thirty-six feet square, and were it filled in with brick, I would not exchange for comfort and convenience, for that costly brick mansion near by, which cost twenty thousand dollars or more.

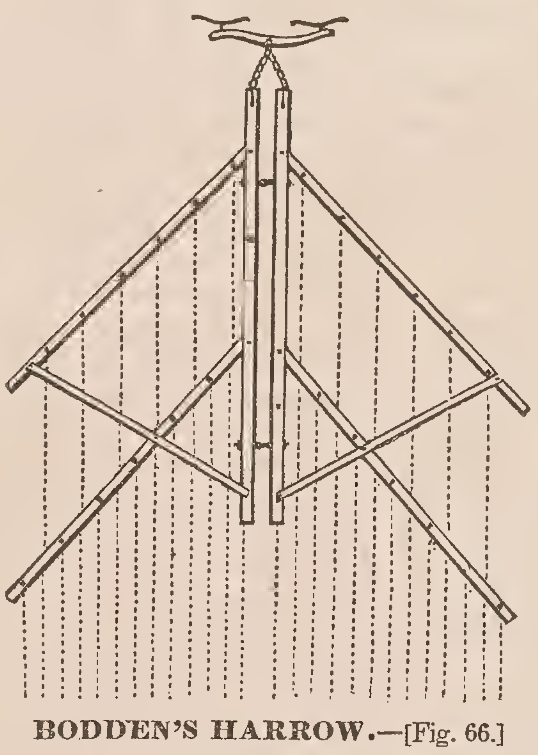
Skaneateles, Jan. 22, 1840. A. H. N.



BOOTH'S CIDER MILL.—[Fig. 65.]

Messrs. Gaylord & Tucker—Knowing your desire to communicate to the readers of the Cultivator, all useful inventions, I take the liberty of informing you of an invention by Mr. Nathan Booth, of this town. It is a mill for grinding apples for cider, and all roots for cattle, sheep and swine. I send you a plan of this mill, which is in general use in this section, but I believe is not generally known through the country. The plan, or engraving of it, is so plain as to need no particular description. It is constructed on the principle of the old and well known box coffee mill. It is built of wood, and secured from ordinary wear, by strong iron bars. On the plan, you can see one end of the hopper, and the trough left out to show the operation of the mill. I own one of them, and have used it for some years. It is the cheapest and most durable mill I have ever seen; and I believe I have seen most of the different cider mills in the United States. The expense will not exceed forty dollars. One horse will grind forty bushels of apples in an hour, with ease. It has the preference of all other mills, where it has been introduced. Numerous recommendations could be furnished, but the unprecedented success of the mill, wherever it has been used, is sufficient. Twenty-one of them are in use in this town, and about one hundred and fifty in other places in this state, all in successful operation. Apples will be in abundance this season, and farmers should soon prepare to take advantage of this great improvement. Mr. Booth, the patentee, is now erecting many mills, and has several agents in his employment. He will erect mills in any of the adjoining states, should early application be made. He will superintend the construction himself, or by some experienced agent. Receipts for rectifying cider, and preserving it sweet through the summer season, without the use of spirits, will be given with the patent right for each mill.

Cheshire, Ct. June, 1840. CLAUDIUS ALLEN.



BODDEN'S HARROW.—[Fig. 66.]

Messrs. Editors—In your March number of the Cultivator, I saw a draft of a harrow something resembling my harrows, which I have used for the last five years, but as far as I am capable of judging of their structure, I think mine has some advantages over Mr. E. Wells' harrow, inasmuch as mine covers a space of 8 feet 4 inches between the two outside teeth, which space is just right for a man to sow grass seed after the harrow; and as Mr. Wells' is only from five to six feet, it is too small for that purpose. The hinges go through the timbers, and are secured with screw nuts; the two center timbers are $2\frac{1}{2}$ inches by 4 inches and $6\frac{1}{2}$ feet long, with the inside corners planed off to allow the harrow to open freely; the 4 side arms are $2\frac{1}{2}$ inches by 3 inches and $5\frac{1}{2}$ feet long; the two braces are $1\frac{1}{2}$ by $2\frac{1}{2}$ inches, notched out half an inch deep where they cross the arms, and bolted on with half inch screw bolts; the timber is all of the best white oak. This harrow has 26 teeth, the track of the teeth is $3\frac{1}{2}$ inches from center to center, and it makes very good work at that distance. If you deem this worthy of notice in your excellent publication, it is at your disposal.

Yours respectfully,

JOHN BODDEN.

Springfield, Poughkeepsie, March 25, 1840.

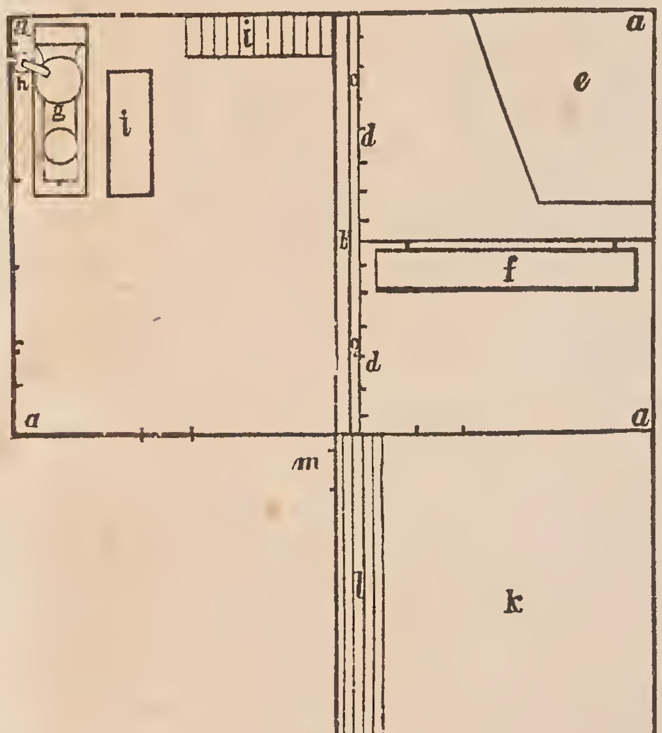
PLAN OF A PIGGERY.

Messrs. Editors—I send you a plan of a piggery which I had constructed last summer, which I prefer to any I have seen or heard of, Mr. Allen's not excepted. Mr. Allen's piggery is perhaps as near right as may be, for one on so large a scale, but it is rather too extensive and expensive for the generality of farmers. The cost of his piggery is stated at \$365, allowing 10 per cent for wear and interest, makes \$36.50 per annum, to be deducted from the profits on your pork. I see no dry place for his pigs to sleep in—his yards must be very narrow, and when he cleans his pens, he must empty them into the yard where his pigs run, which is not well—his piggery lacks a place to keep cooked food in winter, from the frost. In Mr. Allen's plan, the food has to be carried by hand—I would suggest as an improvement, a rail road, on which the food might be conveyed and fed out by means of a scoop shovel.

I am not prepared to decide in favor of steaming food for hogs, to the exclusion of kettles, but were I to use a steamer, I should prefer one on the plan recommended in the Cultivator for this month. They are in use in this quarter, and answer a good purpose. In my piggery, I have two cauldron kettles set in an arch, which I use for cooking the food for my hogs, for butchering, for making soap, sometimes for washing; and I am now boiling maple sap in them. Instead of steaming a large quantity of food, and feeding it dry, I boil potatoes, pumpkins, and apples, pound them up fine, with meal; let stand one day and two nights, when it will have fermented. In feeding, I mix it with milk. I kept 24 shoats last winter, at an expense of 20 cents per day, in the following manner: I put them in four pens (too many in a pen will not do well,) and fed them ten pounds of hay, half a bushel of potatoes, and four quarts of corn meal, daily, and never had hogs winter better. I cut my hay fine, boiled it with plenty of water, in one kettle; my potatoes I boiled in the other kettle, pounded them fine, mixed them with the hay and meal in a tub which I kept in the vat *i*, (fig. 67) let stand over night, when it will have fermented. I throw out *all* their bedding every 4 or 5 days, and put in new. But to the piggery. Let me say, that the farmer who has never had a *good* one, can have no idea of the comfort, convenience and profit of one. While the person who has tried one, I venture to say, will never consent to shut up his fatting hogs in a pen made of the length of rails joined to the highway fence, without floor or roof; and feed them nothing but corn in the ear, (and in the mud) washing it down with cold water from the hog trough.

The frame of my piggery is 18 by 28 feet, and makes a cooking room 14 by 18, which answers for an alley to the pens. The floor is laid with sufficient slope to carry water off from all parts of it, through an opening under the stairs, made for that purpose. In butchering, I drive my hogs into the upper pen, take out one of the studs which are back of the trough, and is let into a groove above, for the convenience of being taken out when necessary; raise the door that shuts over the trough, and draw out the hogs for dressing. Over this room there is a store room 14 by 18 feet, for ground feed, &c., and is convenient for a loom, &c. Corn can be shoveled directly from the wagon into this room, through the upper door, for sorting, &c. In the north part, are two pens, the lower one 14 by 18, and the upper one 13 by 18 feet; above the pens I have a corn granary with a door communicating with the store-room—the posts of the south part are 13 feet, north part 11 feet, each part has a double roof. The pens are parted in the middle by a swing partition, hung with hinges at the top, and when required, can be swung up and fastened by a hook to the timbers above. My ground descends from the dwelling-house and well, north to the piggery, and I have a conductor from the well through the window of the piggery. I contemplate making a conductor from my kitchen to the piggery, under ground, for the passage of milk, &c., and a cellar could be constructed under the south part of the piggery, for storing roots, &c., also yards on the west side, with a bridge to correspond with the yard on the east side. The studs back of the trough, are 12 inches apart in the clear, which gives room for 30 hogs to feed at once. From what experience I have had in feeding swine, I conceive this to be about such a piggery as all farmers ought to have, being large enough to accommodate most, without being too large for the general class of farmers. I took from my piggery in February last, nine loads of manure, which I estimate at half the yearly interest on the cost of the buildings. Another fall, I intend to put all my manure in a pile at the north end of my piggery, and add to the quantity, by mixing in straw with it. The building, sided and painted, cost, say $110.

a, *a*, *a*, *a*, (fig. 67,) ground plan. *b*, open space 8 inches wide, to feed hogs in lower pen. *c*, trough in upper pen. *d*, *d*, studs 2 by 4 inches edgeways to the trough, to separate the hogs when feeding—same in lower pen. *e*, sleeping room—same in lower pen. *f*, partition swung up and hooked to timbers above—same in lower pen. *g*, furnace or arch with two cauldron kettles, with a box (large enough to cover the top of the kettles) in the form of half of an eighth square—the end next the stem of the chimney to be raised two feet above the kettles, and fastened by two hinges—the other end rests on the stone work, and has a cord attached, passing through a pulley above, to raise the box when required. This box conducts the steam to an opening 3 by 6 inches made for the purpose in the chimney, when the draught of the chimney carries it off. *h*, tub, size of a half hogshead, serves as a reservoir from the well, the bottom of the tub higher than top of kettles, with a spout leading to them. *i*, vat 4 by 6 feet by 3½ feet deep, made of plank, the top even with the floor, with a trap door to shut tight for keeping food in winter—the underground conductor before spoken of, can open into this vat. *j*, stairs. *k*, *k*, two open yards 14 by 15 feet. *l*, bridge with rails on each side, to lead from the east yard to the upper pen. *m*, *m*, *m*, *m*, doors communicating with the yards.



Ground Plan—(*Fig.* 67.)

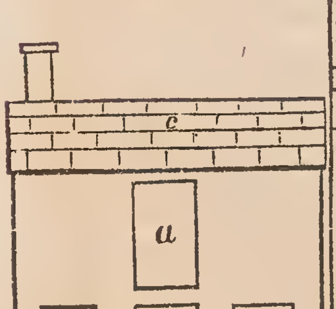


Fig. 68—*South end.*—*a*, *a*, two doors—*b*, *b*, two windows, 12 lights 7 by 9—*c*, south half of roof.

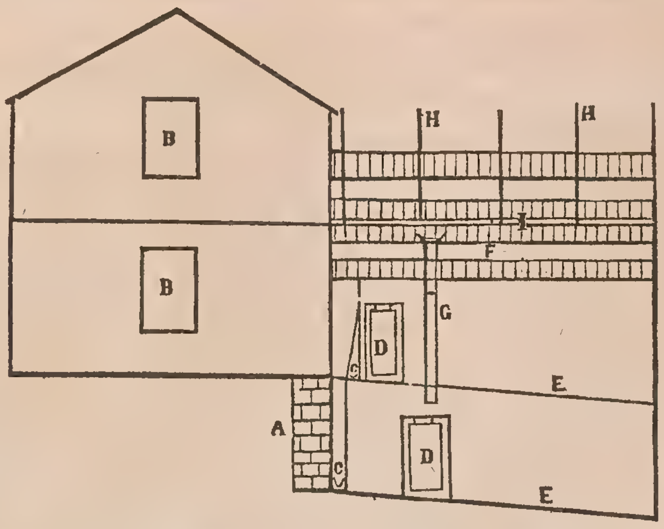


Fig. 69—East side with the siding off the north part, and view of the ground plan of the corn floors. A, stone wall 4 feet high, 18 inches thick, running across the building. B, B, two 12 light windows, 7 by 9. C, C, end view of two feeding troughs, one in the upper, and one in the lower pen, the upper one having doors hung over it, with hinges at top to swing back when putting in food. D, D, two doors 2 by 3 feet, for passage of pigs to and from yards, hung with hinges at top to keep out fowls, &c. E, E, floors of each pen of 2 inch plank, perfectly tight, with slope of 4 inches from the trough—the upper floor projects 2 inches beyond the building on the north end, with an opening 4 inches wide the whole length of each floor, for cleaning pens and draining off water. F, floor for corn, with an alley through the middle 4 feet wide, floor laid tight with a board on each side one foot wide, for shelling corn—on each side of the alley, loose floor with slats—2½ feet above this, and even with the plates, another floor of slats for corn. G, conductor running from the alley F, through the upper pen into the lower one, having a valve near the top by turning which, food can be conveyed to either pen. H, H, rafters. I, plate. Yours respectfully,

ELI C. FROST.

Catharine, Chemung Co. March 30, 1840.

Meetings of the State Agricultural Society.

Messrs. Editors—I wish through the columns of the Cultivator, to suggest to the State Agricultural Society, the propriety of changing the time of its meeting, from the first Tuesday in February, to the first Tuesday of September, and let the present one be held in Albany, that of '41 in Buffalo, of '42 in Utica, of '43 in Rochester, and then again commence in Albany. The great benefit of these proposed changes, cannot but be obvious. As now held, in the most inclement season of the year, and always at a place far from central, but few only attend, and it has ever been characterized, as a cold, dull, uninteresting meeting, and it has become the pretty general opinion, I believe, among the members, unless something can be done to arouse public attention toward it, the Society must soon cease to exist. I am perfectly satisfied for one, that this cannot be done as at present assembled, for nobody travels for pleasure in the winter season, and all with whom I have ever conversed upon the subject, are just of my opinion, that they had much rather read the able reports and proceedings from the pages of the Cultivator, at their own warm firesides, than travel 50 to 300 miles, as the case may be, to hear them read by their authors.

The beginning of September, is the most delightful part of the year, the season of both fruits and flowers, and when all traveling communications are open, the roads most perfect, and the country most beautiful, and being at the close of the summer, and ere the fall harvest has commenced, is perhaps upon the whole, the most convenient time for the farmer to leave home, and is that period he most generally selects to make his pleasure journeys. He could then take his wife and daughters along with him, and how much these would contribute to the interest of the meetings, would be very needless for me to add. Bright eyes and blooming faces, would be a stimulus for speakers to acquit themselves with the more grace and spirit. Then beneath some shady grove, what a glorious dinner could be got up it might be made a real *fète champètre*, or in plainer English, a regular pic-nic, or if you please, a Kentucky barbecue.

There would be the ladies, with fresh fruits and flowers, (themselves the fairest,) and cakes, pastries, butter and cream—the gentlemen with Durham, Devon, and Hereford beef; Lincoln, Leicester, Cotswold, and South Down mutton; Chinese, Berkshire, and Neapolitan hams—curious potatoes, parsnips, beets, ruta baga, cabbage, and carrots, wheat, Indian, rye, and barley bread, a few barrels of hard cider, and more of home brewed beer, besprinkled with a fair bottling of raspberry and currant wine. What a delightful union would this not be, and what an opportunity for interchange and correction of opinions, and promoting the cause of Agriculture. The advocates of improved meats, grains, and vegetables, would not be obliged to confine themselves as now, to long written arguments elucidating the superiority of their several productions, but could address them directly to the tastes and eye—*seeing*, and above all, *eating*, is believing. I am sure that such meetings as these would soon interest the whole state, and be looked forward to with more pleasure and interest, than any thing that could be got up, and no one, whatever might be his profession, but could attend it with satisfaction and profit. This might be succeeded the next day with a show of animals, vegetable productions, and domestic manufactures, and lastly perhaps, by extensive sales of stock and fabrics. Indeed, there is no counting the good that might be done, and the aid and stimulus that might be given to agriculture, by such an annual assemblage.

The reason why I would prefer alternating the meetings at different places, would be, to thereby engage a greater number to come to them, and give a more general diffusion of knowledge and interest throughout the state. Many would attend at Buffalo, that never would at Albany, and so vice versa, besides each place presents different natural attractions, that many of us journey annually expressly to see. At and near Albany is the glorious Hudson, the Cohoes and Saratoga Springs. At Utica, are the Trenton Falls, which for wild variety and picturesque beauty, are inferior to none others in the world. At Rochester, is the Genesee, and at Buffalo expansive lakes, and that wonder of the world, Niagara. Who will then not vote for a change in the time of the meetings of the New-York State Agricultural Society? It seems to me, really the only way to give a general interest to its proceedings, and call out the attendance that our transatlantic brethren have been so successful in obtaining, when forming similar societies.

I have never heard any other argument for the meeting of the Society at the time it now does, than a hope that its proceedings might have some influence over the Legislature. But here it has gone on year after year, and what has been done? Just nothing. The Legislature will be what the people please to make it, and the farmers themselves must be interested, nay *demand* aid before it will ever be granted them by any Legislature whatever. New-York might take precedence in agriculture, as she has in commerce, and in so doing add largely to the latter, it being but the attending handmaid of the former, and with all this, greatly extend her domestic manufactures, thus increasing vastly, her wealth, population, and general resources.

I hope to see this subject discussed, and if the President has not already the power of calling such a meeting, let the members assemble forthwith, and give it to him. It is needless to say, that we already have an annual fair at New-York: this is more a national, than a state assemblage, and is too far off for the great mass of farmers to attend, especially with their families.

AGRICOLA PUBLICOLA.

Buffalo, June 9, 1840.

BERKSHIRE PIGS.

I have just read Mr. Lossing's article upon Berkshire pigs, and would object to the description given of Mr. Hawes' and his own importation of them. He quotes Mr. Hawes, as saying, "that he never knew a full blood to have less than three white feet, some white in the face or end of the nose, and occasionally some white hairs interspersed over the whole surface, the end of the tail invariably white." First, I object to the description as being *too particular* about white feet and white tail, and next, I object to it on account of pigs sold by Mr. Lossing, and his friends about Albany, not answering to his description. I purchased eight pigs in and near Albany, last spring, and three of them have no white on the ends of their tails. The pigs without white tails I believe to be as good and as genuine as those with it. All the above pigs were recommended to me by Mr. Lossing, and one lacking white on its tail, out of his Teal sow by one of his imported boars, was sold to me by Mr. Lossing himself.

I will now prove that the Berkshire hog, was a red or tawny hog, with brown or black spots.

In the 6th edition of the Complete Grazier, published in London, in 1833, page 294, speaking of the Berkshire breed, it says, "the specific characters of which are a reddish color with brown or black spots; sides very broad; body thick, close, and well formed; short legs; the head well placed, and the ears large, and generally standing forward; but sometimes pendant over the eyes. Another distinctive mark of this breed is, that the best are without bristles; their hair long and curly." The British Husbandry, (a standard English work,) agrees with the Complete Grazier, in assigning the same color, so does Loudon's Encyclopedia of 1831.

I hope the above is *sufficient proof* that the Berkshire was a red hog with brown or black spots. Now as the original Berkshire (*the genuine article*,) was red and black, I shall endeavor to show how they came by their present colors. But before going any farther, I would state, that the eastern hog was resorted to to change a coarse, heavy eared, curly haired, great consumer, into a fine boned, thin haired, thrifty animal. With this explanation, I shall proceed to the China hog. "Of these there are two nearly distinct kinds; the *white* and the *black*." "The Chinese hog is of the widely extended Siamese breed of the east, a race which extends from the continent to the island of Sumatra, New-Guinea and others, and to all the islands of the South Seas."

We are told in Low's Elements of Agriculture (an English work,) that "*The Berkshire* was the earliest of the improved breeds of England, and is now the most generally diffused of all others. It was undoubtedly formed by a mixture of the eastern hog with the ancient swine of the country." "*The modern* Berkshire, however, is of a less size than the older breed; but still the animals are of the larger class of swine. *Their common color is a reddish brown with dark spots.* Many of the breed are nearly black, manifesting their near approach to the Siamese character, and sometimes they are black broken with white, indicating the effect of the cross of the white Chinese."

Mr. Letton, a gentleman justly celebrated for his knowledge and experience in breeding fine hogs, after traveling extensively over England, in search of hogs, selected a *white Berkshire boar of the improved breed* for a breeder. Mr. Letton had imbibed Mr. Lossing's prejudice in relation to color, before he visited England. And Mr. Williams says in his certificate to Mr. Letton, (Franklin Farmer, vol. 3, page 10,) "The origin of the *late improved Berkshire* is a cross on the *black Berkshire sow,* with the large *white* China boar which gives the color white."

An improved Berkshire boar that I imported from England, last fall, is *entirely white* in hair, with a spotted (black and white) skin; he has all the fine points of the *best* of the Berkshires, and is one-third larger than those of his age purchased near Albany. I have no disposition to deny the general characteristics given to Mr. Hawes' and Lossing's importations, if not extended so far as to exclude those that are acknowledged to be of the best blood. But I do object to his denying purity of blood to all other importations of different colors, when his own lacks the original color. We are told in English standard works, "that every county has its peculiar kind, the superiority of which is maintained in its own district and denied in every other, and some of the best are bred in Staffordshire."

I have many hogs, descendants of Mr. Hawes' and Lossing's importations, and have but one of the white Berkshires, and this one is acknowledged by me to have eastern blood in him, for which I prize him much more than I should if he was without it. For I consider eastern blood just as important to the hog as to the race horse, and as no good turf horse can be found that is without it, neither is there any good hog that lacks it. I think that considerable injury has been done by representing the Berkshires as possessing superior size, and competent judges guessing them greatly above what they will ever weigh. The purchasers are led to expect hogs of much greater size than their own will ever be; they feel disappointed and are led to condemn the Berkshires. I have no doubt much injury has also been done them by unprincipled men, representing as Berkshires, hogs that were not. But Mr. Lossing's article will afford no security. I have three quarter blooded pigs that possess all Mr. Lossing's marks, and two of the full blooded ones purchased of the Shakers, and one purchased of Mr. Lossing, lack the white tail, and another purchased also of the Shakers, near Albany, has but two white hairs in her tail.

Mr. Lossing's information is not correct in respect to the Berkshires taking premiums in every county in the state of Kentucky, last fall. The Berkshires have never taken a premium in this (Clarke) county. The premiums have been divided between the Woburns and Irish Grazier hogs. The Berkshires were beaten in more than half the counties from which I had heard any particular account. I know nothing about the premiums given in Ohio. SAML. D. MARTIN.

Colbyville, Ky. May 26, 1840.

Chou Billardeau—Billardeau Cabbage.

To the Editors of the Cultivator.

Gentlemen—I have recently received from the hands of a kind relative in Paris, a small parcel of the seed of a cabbage, which if it answers the description given of it by the individual who introduced its culture in France, is destined to hold a high rank not only in the horticultural but agricultural department, and should it be adapted to our climate, will no doubt in time, become most extensively cultivated, more especially for stock, sheep, &c.; it is called the *Chou Billardeau,* and takes its name from the individual to whom we are indebted for its origin. Accompanying the package forwarded, was a letter from Monsieur H. Billardeau, which I have now before me, who states that he sowed the seed in October, 1837, but gives no account of its origin. He thinks the spring, say the months of April and May in this country, a preferable time for sowing, describes the mode of culture, &c. similar to that of other cabbages, states the leaves to be five or six *French* feet long, and the product in leaves in the two years of its vegetation (it being biennial,) to be from 1,000 to 1,200 pounds to each plant. They are represented by him, to stand the winters of that climate, and to furnish leaves in the coldest and most rigorous seasons. He draws a comparison between them and the *Chou Cavaliere* or *Chou Verte,* presumed to be the cow cabbage, a species of cabbage which he says, is so extensively cultivated in Britanny and Normandy, (famed for the superior quality of its milk and butter,) and concludes by affirming, that this new species possesses all the qualities appertaining to the former, and its product to be a hundred fold. Under the influence of feelings arising from the impositions so frequently attempted to be palmed on the deserving but too credulous class of agriculturists, I could not at first but look upon it as a humbug, and felt tempted to exclaim with the Roman bard, "*Credat Judeas apella,*" &c.; but from the respectability of the source whence the package was received, shall for the present suspend my opinion, and having now about one hundred thriving plants up, look forward with intense interest to the result, which may tend to remove or confirm my previous incredulity. By a hasty calculation made by me, supposing the plants to be put out at the distance of fourteen feet each way, if correct in his statement, (taking Monsieur Billardeau's lowest estimate of the weight of the leaves of a single plant,) an acre will yield about one hundred tons in weight in two years, or fifty tons per year.

The Galactometer.

I fear that I have become already too prolix, and occupied too much space in your valuable columns, to the exclusion of matter that may be deemed of more importance to many of your readers; but I feel irresistibly impelled, before concluding, to notice a simple instrument lately invented in France, for the purpose of testing the quality of milk, called *Galactometer,* differing entirely from another instrument I have seen an account of, in Fessenden's Complete Farmer, called the *Lactometer.* The latter is intended to test the quality of the milk, by the thickness of the cream. The former consists of a glass tube, the bottom of which is somewhat globular, enclosing a small portion of mercury, which, being immersed into a vase of milk, sinks or rises according to the relative quality of the same, showing at the surface, by the lineal indices as well as numerical, the different grades from one half milk and water to pure milk. It will be found not only useful to the dairyman in the selection of cows to breed from, but to inhabitants of our cities, who are subjected to so many impositions in the purchase of this, to them, so great a luxury. For fear I may not be understood in the above description, a drawing of this instrument taken by my son accompanies this,[*] and will be found correct in every respect, both in the dimensions and form. They are quite new here, and I know of but three in this section of country, two in the possession of Gen. John Mason, of Clermont, Va., and the one in my hands, to which we are indebted to the kindness of a relative of mine, and an old friend of the General, now holding an official station in Paris, sent to us last fall from France.

Montgomery co. Md. May 11, 1840. B.

NOTES OF A TOUR.

Gentlemen—In a recent tour of considerable extent and variety, in the eastern section of our country, I have met with many things to gratify the friends of agricultural improvement. Through the whole length and breadth of this favored land, the constant operations of industry, under the guidance of intelligence and taste, are clearly discernible. The rugged forests are every where disappearing, and their places supplied with green pastures, luxuriant meadows, or abundant crops; or if wood-lands are still retained, the new growth of selected trees shoot up with a grace and beauty seldom found in the dense and matted masses of our native wilds. The log cabin gives place to the handsome cottage, and the slight, frail tenement of the pioneer, to the substantial farm-house, or more elegant mansion of the wealthy husbandman. Nor does the career of improvement stop with the more convenient and accessible portions of the soil; everywhere nature is pursued in her remotest haunts, and everywhere subdued; and from the self-sustained luxuriant bottoms, to the verdure-clad summits of the loftiest hills, the untiring energy of our Anglo-Saxon race is throughout conspicuous. The highways are made better and more direct, and the *lightning paths,* with their fierce engines glaring like meteors through the sky, convey the traveler from point to point with such rapidity, as to leave him all his time for his favorite pursuits or observations, requiring scarcely an appreciable portion of it for locomotion.

Draining.

One feature of recent improvement was peculiarly gratifying, and in it I thought I perceived the influence of what is too often sneeringly called *book farming;* a term, I venture to say, was never sincerely used, but where stupidity or stubbornness reigned supreme. To a considerable extent, ditching and draining low lands has been practiced, and in every case with entire success. Land that before yielded scarcely a handful of coarse herbage during the season, by the expenditure of a few dollars in ditching and putting into a state of cultivation, has been made worth 50 to $150 per acre; for almost invariably, the low swamp lands, when freed from water, are vastly the most productive. Much controversy exists as to the *mode* of draining best suited to our country, and the question yet remains unsettled. It is undoubtedly proper that the plan should vary with the situation of the land.

It would seem, on a hasty view of the subject, that the labored efforts of some well disposed persons to introduce the expensive modes adopted in Europe into our own country, are as inappropriate as if the attempt were made to introduce the paraphernalia of royalty, or a church establishment into our republican institutions. Their system is *thorough underdraining,* principally with tiles or loose stones, placed at a sufficient depth to allow a coating of soil deep enough for all the operations of husbandry to be carried on as if no drains existed; and this is undoubtedly the *perfection* of draining; but the expense of this in our country, would be from 50 to $150 per acre; an outlay so excessive that we apprehend for half a century to come, it cannot be practiced here unless in the neighborhood of large cities, where land is worth from 300 to $600 per acre for cultivation, the price of good farming lands in Europe. The system *may* be applicable and advantageous to this country, and it is much to be wished that some wealthy and patriotic individual would institute a series of scientific and practical experiments on this subject, and communicate the result, and it is possible it might be found, after all the expense, the capital would be more judiciously invested than if expended in additional land, to be cultivated in our hurried and imperfect manner. If once, however, but generally adopted, our whole career of border extension and colonization must be abandoned, and the constantly expanding wave of emigration must contract and speed its refluent force centerward again, for we have *run around* land enough on this contient already, to sustain, with proper cultivation, a nation of untold millions. Can our national taste for adventure and western emigration be checked and turned into the more sober and perhaps rational pursuits of a highly cultivated husbandry? We think not—a truce then to underdraining with us, for without the countless hordes that are yearly migrating westward, like the locusts of Egypt, we cannot pursue it to any extent.

There is much, however, we can do, in this matter, and at a trifling expenditure of manual labor. And here I will mention one mode of underdraining, probably of Yankee invention, as I have never seen a description of it. It is performed in heavy clay lands, where ditches are most required, by excavating a trench, say of 12 inches wide, with perpendicular and parallel sides, to the depth of 12 inches; or if it is contemplated using a subsoil plow, to the depth of 16 inches, then from the center of the bottom a sub-ditch is excavated, of 5 to 6 inches square. The sod taken off the entire width from the top is then inverted and placed at the bottom of the upper ditch, and becomes a durable cover when filled to the top, thus doing away with the large expense of tiles or stones.

Our system must essentially combine economy with utility, and this can be effected to a very great extent in *surface drains.* These should exist wherever water remains on the ground after rains, or when it is too much saturated with springs in the vicinity. No stagnant water should ever be allowed in a civilized country, for besides its effectual hostility to all useful vegetation, it poisons the atmosphere and becomes the prolific source of half our diseases and deaths. If a systematic course be pursued in all the operations of the farm, much draining may be effected with scarcely any additional trouble and expense. For instance, all clay and flat lands should be plowed into narrow ridges, and every successive plowing should be directed to make the more elevated portions higher, and the depressed one still lower, always preserving an outlet, that the water accumulated in the last shall be carried off freely, and by this means the whole surface becomes a succession of surface drains without the expenditure of a day's labor to an acre. In many instances, however, main ditches will require to be cut for a considerable distance, to get sufficient depth and slope to carry off the water rapidly, and when the principal drain is made, the tributaries can be completed at a trifling expense, either with the plow and hoe or the spade. To illustrate my meaning, I will describe the manner of draining a piece of land I recently adopted. The lot consists of a stiff clay, running back from the Niagara river, with a gradual ascent of not more than five or six feet for a mile. It is traversed through the whole distance with irregular undulations, but the ridges almost universally running parallel with the river. At right angles with the river, and across these, I run a ditch four feet wide at the top, two feet at the bottom, and from one to three and a half feet deep, so as to preserve a uniform descent on the bottom, thus cutting transversely all these longitudinal ponds, for they were nothing else in ordinary wet seasons, and a little additional work with the spade or plow, effectually carries off all the surface water. The whole expense of this does not exceed one dollar per acre. Now let us see the profits of this operation. If this land be worth $60 per acre, to cultivate in its original condition, and much of it has been sold at higher prices, and one-fourth of it was covered with water, which was generally the case to a sufficient extent to prevent the growth of nutritious vegetation—by expending one dollar I increase the productive land by the addition of another third to the original amount, which is equivalent to increasing the value of the investment one-third of $60, which gives me $20 gain for one expended.

I have seen an acre of marsh grown up with rushes and cat tails, that could be drained by one man's labor in two hours, and when done, it would be worth any two acres on the farm, and yet to this moment it has not got into the brain of the owner or a dozen of his intellectual predecessors, that this could or ought to be done; and it may have been the cause of half the diseases in the neighborhood for two centuries! These men have never been troubled with *book farming*—nor did they ever take the Cultivator; from such noddles, and such only, are we ever to look for hostility to either.

Cattle, Sheep and Swine.

In stock, I was glad to notice considerable improvement. Through New-England there seems to be little difference in their herds for the last twenty years, except in the gradual improvement of their native cattle. And it is possible, after all, that our Yankee kindred may be mainly right as to *breed.* The accidental circumstance of the port for the embarkation of our pilgrim forefathers to their future varied and picturesque abode, happily afforded them a convenient source of supply from the herds of fine Devons that abound in the neighborhood of Plymouth, and from them, with more or less admixture, have descended the present extensive herds of the eastern states. These animals, though habituated to a warm climate. which was but a temporary inconvenience, are entirely suited to the character of the country they were destined to inhabit; their smaller body, longer and sinewy legs, and especially their great susceptibility of taking on flesh, rendered them easy and profitable feeders, and their extreme richness of milk, superior working and excellence of beef, has justly made them a favorite breed to the present day. They do not give the extent of product on the same number of legs as the Short Horn, the Herefords, and some others; but if they yield as much or more for the quantity of attention and feed consumed, they answer all the ends required by the intelligent herdsman. The native cattle have, to a slight extent, been crossed with new importations of Devons, improved Short Horns and Ayrshires, but this has only been done to a limited degree, and with great carelessness; for on personal inquiry, I have found that some of the most intelligent and liberal minded citizens, hitherto instrumental in procuring these animals from abroad, have not now a single pure blooded animal in their herds. There is the grand fault with our Yankee breeders, the total neglect of pedigree and purity of blood, for unfortunately their ancestors, in abjuring a hereditary nobility and the rights of primogeniture, carried their reform from the biped to the quadruped, and made genuine democrats of the whole race.

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[*] The drawing alluded to did not reach us.—Eds.

The principle of placing every man on his own merits, is undoubtedly a good one, though it may be controverting the authority of an omniscient providence to deny that the son of wise and virtuous parentage, is not more to be relied on, other things being equal, than the child of ignorance and sin; but in the animal economy there is none of that human dependence on ancestry, for no truth has been more fully established as a general rule than that "*like produces like.*" We must, then, in accordance with this principle, look for capacity in producing good animals, not only to what the individual under consideration is in itself, but also to what its ancestry has been on both sides for generations, as characters they faintly exhibited, or scarcely discernible in an individual, may, from its long inheritance be so grafted with the constitution, as to be reproduced in successive generations to a great degree.

There seems to be a field open east of the Hudson, to the enterprise of persons of capital and taste, not to any considerable extent hitherto occupied or maintained. The fact as to the scarcity of pure bred cattle, of any description there, is, I believe, incontrovertible, (and if incorrect, I shall be most happy to be set right in the matter,) and this want is the more conspicuous, from the general intelligence and thrift that pervades that region. Liberal gentlemen have, from time to time, imported some of the choicest stock from Europe, but these have soon become mixed with the general mass, and after a few years not an unadulterated animal could be found. They have been the means of conferring some benefits, but not all that ought to result to the community. The great desideratum is the possession of pure bred animals of whatever description they may he, whose *peculiar* excellencies shall be constantly augmented and sustained by judicious crossings with domestic and foreign stocks of similar breeds. In the selection of species best suited to the country, a diversity of opinion, resulting in the introduction of several different kinds, would be beneficial rather than otherwise, for a competition would be produced, highly favorable to successful results, and the advocates of the Short Horns, the Herefords, the Devons, the Aryshires, and the *native breed*, could test the relative merits of their respective herds, by direct comparison. In this essential feature of agriculture, England is far before us, and must forever remain so, unless we adopt this system, which, as it has to some extent been already commenced, we hope may, with the usual ardor and zeal of our countrymen, soon be fully carried out.

The best specimens I have seen, are the Herefords recently imported by Mr. Sotham, and now in the neighborhood of Albany; but as he promises a description in your journal, we may all hope to know more about a breed that has, for a long time assuredly, been held in high estimation abroad.

There seems to be considerable progress making in adding to the carcass and fleece of their sheep. In Merinos and Saxons they have long held the preëminence; but the excellence of the woolly tribe has been, to no inconsiderable extent, varied and multipled by the addition of the South Down, the Bakewell, the Leicester, the Lincolnshire and the Cotswold; of these last there were some very superior imported by Mr. Sotham, at the same time with his Herefords; and at the residence of Messrs. Bagg and Hart, of Montgomery, Orange county, who are also importers of stock, I saw a considerable flock both of Cotswold and South Downs, hardly I should judge, to be surpassed. With such choice stock before them, our intelligent countrymen can scarcely fail to come to a correct conclusion as to the comparative value and profit of the different breeds. It is much to be wished, however, that those who have kept them for some years in the vicinity of other flocks, should give us the results of their experience as guides to future experiments. They have all, to a greater or less extent, been highly estimated abroad; are they equaly valuable at home? We want experience in this matter, which is the only true test for the farmer.

In swine a considerable improvement has taken place, so far as a cursory view would enable me to judge; their legs and snouts have been shortened; their ears set up and trimmed off; their backs become broader, and a portion of their bristles put on the *other side* of their skin and converted into good pork, and the *toute ensemble* of the grunting tribe, has been very perceptibly bettered. And this improvement, so far as my observation extended, has invariably been the result of the infusion of a large portion of the Berkshire or China blood. This origin was generally sufficiently obvious at the first glance, but in one instance where very fine pigs were shown me, with a long body, broad back, and sustained through the whole length, and terminating in a finely rounded ham; thin hair and no bristles; large of their age, and kind feeders, yet entirely white, I was struck with the perfection of their form, and thought if rivals were to be found for the Berkshires, they were then before me; but looking a little farther on the same premises, I saw a fine, pure Berkshire sow, which on inquiry, proved to be the dam of the *perfect pigs;* the mystery was at once solved; they had embodied all their superiority from the female ancestry. There was another superior lot of pigs I saw at the Worcester hospital, produced from successive crosses of the China on the Bedford, which the intelligent head of that well conducted and magnificent establishment informed me, with ordinary keep, usually gained one pound per day for the first twelve months, at which age they are slaughtered. Their great size they get from the Bedford, and their great thrift from the China. The truth is, that the Berkshire and the China *are the perfection* of the hog kind; and these perfections have been so thoroughly bred into them for successive generations, that they impart a much larger share of improvement in a cross than any other, and perpetuate it through a remote posterity.

But on the subject of stock, as that of drains, it is too generally the case that our farmers are "penny wise and pound foolish;" they object to the first cost, when in both instances they would frequently be *repaid the first year,* and have their investment left as capital, yielding a large income annually thereafter. It is to be hoped the prevailing spirit of the age, whose every aspiration is onward, onward, will not fail to inspire them with a just appreciation of their true interests.

Very respectfully yours, R. L. ALLEN.
Buffalo, June 12, 1840.

Bloody Murrain caused by Leeches.

MESSRS. EDITORS—Having lately lost a valuable ox by what is called in this part of the country, bloody murrain, which, however, differs from that disease as designated by writers of the old countries, I have been led to investigate this disease of our cattle, and therefore examined the body of the animal, which I conceive to be the true way of investigating disease, both in its nature and cause, either in the human or other animals. But I will proceed regularly, and first designate the symptoms. The first I observed was the loss of appetite, with trembling of the limbs and twitching, and unwillingness to move; then discharge of blood from the bowels after dunging once; also from the bladder; no apparent pain until just before death, which happened on the second day of the disease. Is it not a singular circumstance, that other cattle are disposed to worry and goad a fellow sufferer on the verge of death? On examining the body, all parts were in a healthy state, with the following exceptions:—The bowels were filled throughout with pure blood, the parts in the neighborhood of the liver, and which were placed against its under side, were discolored with blood, which appeared transfused through the coats of the stomachs on that side. The stomachs were all in a healthy state, and more or less filled with hay in a partly digested state. One singular circumstance presented, which, however, was in no way connected with the disease, and probably would have occasioned nothing unfavorable to the animal, had he have lived; it was a shingle nail run through one of the ridges of a lozenge of the paunch. The liver was to all appearance healthy, except the transfusion of blood through the center of it. From the center of the liver I extracted several water leeches or blood suckers. Two writers in the last volume of the Cultivator notice this complaint, pages 90 and 120—one of them considers regular feeding as a preventive; the other (Mr. Warner) says—"The bloody murrain is occasioned by an extended and overflowing gall, affecting the liver, causing the leeches or blood suckers therein, and the flow of blood outward or inward,"—"that the wood herbage induces the extended galls"—that all have extended galls. For want of a knowledge of the anatomy and physiology of the animal system, many mistakes occur, and ignorance necessarily follows with regard to disease, both of the human and all animals. Now I think it would puzzle this writer to explain how overflowing gall can affect the liver, cause those small animals called leeches, and the flow of blood outward or inward. The gall or bile has always been a terrible bugbear among mankind, from a want of a correct knowledge of anatomy and physiology. The gall or bile is a natural, necessary and constant secretion from the liver. It is a natural, necessary and constant purgative and corrective of the bowels, a want of which produces costiveness, and a superabundance of which produces purgations, diarrhœa and dysentery. In the animal I lost, there was not the slightest mark of extension or overflowing thereof. It was as usual. Now, some questions occur with regard to the phenomena presented in this complaint. How came the bowels filled with blood? How came blood discharged from the bladder? How came the blood transfused throughout the liver, and the coats of the stomach facing it? How came the leeches in the liver? I will commence my explanation of the last, first: which is, that the eggs of the leech had been imbibed with water during the preceding fall, by the animal drinking from some puddle on my farm, as the leech is common here; the eggs, transmitted through the circulating medium, were deposited in the liver and perhaps kidney, there remaining until they grew to their full size, when, fixing upon the blood vessels, they cut and pierced them, by which means the blood flowed through the gall duct or tube to the bowels; and as some of the vessels of the liver are large, the animal thus in fact bled to death. Sometimes, probably, the animal does not die so suddenly, and the blood is not discharged externally, which may arise from the leech cutting the smaller vessels only, which causes the blood to be transfused more internally through the coats and membranes of the different organs, giving them a dark and bruised appearance. The same thing I think must have occurred in the kidneys, although I did not detect any leeches therein. So that, in fact, gentlemen, this disease is no disease at all, but simply the opening of a blood vessel, producing death by hemorrhage. Below I give some extracts from the Comparative Anatomy and Regne Animal (animal kingdom) of Cuvier, who may be considered as having been the first and greatest writer on this branch of science the world has yet produced, and a branch which by no means ought to be omitted to be taught in any agricultural school, many of which I hope to see established in our country. From my view of this complaint, no cure is to be expected, although, probably, the preventive of salt and ashes pointed out by Mr. Warner, may act favorably, by destroying the leech or the egg. J. BAXTER, M. D.
Miller, Knox Co. Ohio.

"We have now come to nearly the most complicated stomachs with which we are acquainted, that is to say, those of ruminants, (animals that chew the cud.) They are similar, with small differences, in horned ruminants, which have four stomachs very distinct. The first of these stomachs, called the paunch, rumen or fold, is very large; it occupies a large part of the abdomen, particularly on the left side. To the right of the œsophagus, (gullet,) and on the part of the paunch, is found the second stomach, or the cap, the smallest of the four, and which appears only at first sight, but an appendage to the first; it touches in front the tendinous center of the diaphragm midrif. Then comes the mainfold or leaf, which is the third for situation and size; it is placed on the right side of the paunch, behind the liver. The œsophagus is inserted into the part of the paunch which is most to the right, and communicates, at the same time, by means of a gutter, which we shall describe presently, with the cap and manifold. The third stomach is distinct from the second and fourth, by very sensible contractions; it is globular, while the last is long. This, named the fourth ventricle, is the second for size; its situation is likewise to the right of the paunch, and a small portion under the manifold. It communicates with the latter by a very straight opening, and opens into the gut by a second orifice, which corresponds to the pylorus of simple stomachs. The membranes of these four stomachs present remarkable differences, particularly internally. In the paunch of the ox, it has its internal surface covered, for the most part, with large and flat papilla, the size of which is very different. Larger at the bottom of the sacks, they diminish in approaching the edges, and disappear on the folds which separate them, and on all the opposite surface which is split in fine creases, presenting a species of lozenges. This surface throughout, without excepting the papilla, is covered with a fine skin, epiderm, which is raised easily in large portions, preserving the molds of the papilla, and is distinguished by its yellow color from the internal membrane, which is white, confounded with the cellular, and adherent to the muscular. This is very thick, particularly in the folds which divide the paunch into sacks.

"In the cap the internal membrane has folds indented on their sides, notched on their edges, forming polygonal meshes, the areas of which are stuck over with papilla, finer, but analagous to those of the paunch. This membrane is whitish, as in the first stomach, covered with a similar epiderm, confounded with the cellular, adherent to the muscular, and without mucous on the internal surface. The muscular membrane is generally thicker in the cap than in the paunch; its thickness is, however, greater in some places of the latter.

"The manifold, has, as its name indicates, its cavity divided by large folds, (or leaves,) formed by the internal membrane, the surface of which is stuck over with small papilla, like grains of millet, and covered with a very small epiderm, and which is raised in large parcels, as in the two first stomachs. The walls of this stomach are much thinner than those of the two first.

"It is only in the fourth stomach that the internal membrane appears of a mucous nature, and lubricated with abundant mucosities. It had large folds, at first longitudinal, then irregular, after a previous contraction, separating the first part from a sort of gut, which terminates this fourth stomach, and in which this membrane augments in thickness, as well as the muscular. This last is besides still thinner in the fourth stomach than in the manifold. The orifice which communicates from the manifold to the fourth stomach has a valvular edge; the lower orifice none.

"The name of ruminants indicates the singular property of these animals to chew a second time the aliments which they return to the mouth after the first swallowing, a property which arises from the form of their stomachs. They have always four, the three first of which are disposed so that the food may enter at will into one of the three, because the gullet terminates at the point of communication. The first and largest, the paunch, receives in mass the fodder coarsely bruised by a first mastication or chewing; it is passed into the second, called the cap, the walls of which have coats similar to the comb of bees. This stomach, very small and globular, takes the fodder, soaks it and compresses it into small balls, (cuds) which successively ascend to the mouth to be there chewed. The animal remains at rest for this operation, which is continued until all the fodder at first swallowed to the paunch, undergoes it. The food thus chewed, descends directly into the third stomach called the manifold, because its coats have longitudinal folds like the leaves of a book, and from there into the fourth stomach, the coats of which have only wrinkles, and which is the true organ of digestion, similar to the simple stomach of ordinary animals. While ruminants suck and only live on milk, the fourth is the largest of the stomachs, (the rennet.) The paunch is not developed, nor takes its enormous volume but in proportion as it receives fodder."

PEACH TREES.

Some ten years past I came in possession of a number of peach trees that had been good bearers, and arrived at the age of twenty years. In the course of each winter previous, a layer of straw or chip dung was strewed around each tree, upon a body of snow or while the ground was frozen. The object was to retain the frost as long as possible, to prevent the flow of sap; a slight freeze after the buds begin to swell will kill the twigs, and frequently the tree.

Cleaning Window Blinds.

Soap or strong soap suds will destroy green paint more readily than other colors; the lie has the same effect on oil paints that it has with grease. I have seen many painted rooms soiled by the carelessness or ignorance of wash-women, in the application of soap or strong soap water; when it does not destroy the paint, it may affect the luster.

Painting.

Spirits of turpentine is in most cases used in mixture with paints, because it facilitates the drying rapidly. It decomposes and destroys the vitality of the oil; it should never be used when durability and luster is required. I have been in the practice of painting my out buildings with pure oil, mixed without boiling, and am satisfied that it is more durable; the drying process is not so rapid, but the coat is harder and more adhesive, and less expensive. S. W. JEWETT.

Weybridge, Vt. May 16, 1840.

Experiment in Feeding the Sugar Beet.

Messrs. Gaylord & Tucker—I have now finished the feeding of some fifty tons of French Sugar Beet, and as a knowledge of the result of my experience may be interesting to others, I am induced to communicate it, should you think proper to give it a place, through the medium of your most interesting and instructive periodical.

From the decided fondness for this root by hogs, I was induced to believe it would make a very good article on which to feed and winter them. So I early procured 22 hogs and pigs; five of them I put up the 17th of September, intending to fatten them, as far as practicable, with beets exclusively. I washed and boiled the beets, and fed them profusely for two weeks. The hogs devoured them most ravenously, but on making a careful examination at the end of this time, to ascertain the progress I had made in fattening them, I learned to my surprise, that they evidently had gained nothing—one large sow put on an appearance so wo-begone, that I induced a charitable friend to take her off my hands free gratis. I then added a peck of potatoes to a bushel of beets, boiled and fed them another two weeks, during which time an improvement had been made, but it was barely perceptible. I now boiled my beets and potatoes in equal quantities, and fed one month, during which time they had improved, probably about as much as the potatoes would have improved them alone. I had now satisfied myself that the French Sugar Beet was not adapted to the purpose of making pork, so I stopped the use of it, and by substituting corn, I was induced at the end of the year, to slaughter some of the poorest hogs I ever killed. This condition of my hogs, was readily explained, for I had lost two of the best months for fattening them. I had now 17 hogs left, including two beautiful Berkshires, of full blood, had from my friend of the Three Hills Farm. As I had provided little else than beets for their sustenance, and as I had determined to give the root a full trial, I continued to feed them, adding corn and bran as seemed indispensable, through the winter. This spring I have 14 left, having lost three during the winter, all of which, except the two Berkshires, miserably poor. These Berkshires, without, to my knowledge, having fared better than the rest, have not apparently suffered at all, but are in fine condition. I attribute this in some measure to their domineering spirit, and to their greater industry, for they are intolerable monopolists, and in perpetual action.

My cattle, including three milch cows, at the commencement of winter, were in very fine condition, and I concluded to give them a profusion of beets, and restrict them otherwise to the use of corn fodder and straw. Up to the first of February, we had a flood of very rich and finely flavored milk, but the condition of my whole stock, was evidently a bad one; and this spring I have a miserably lean stock of cattle. I calculated to give each animal three pecks of beets per day, which was not often, if at all, neglected. To one cow, designed for slaughter, I fed some forty bushels of beets, in thirty days, and this, without making any perceptible improvement in the condition of the animal.

As I was much disappointed in my results, I was led to inquire into the cause; and a little consideration I think, seems to explain it. Starch, in some combination or other, with other matter, seems to constitute the most abundant source from which animals derive their flesh; those substances which yield it most abundantly, being best adapted to fattening them. Rice, one of the most nutritious substances of the vegetable world, yields 85 per cent of starch; corn, which is scarcely inferior to it in fattening qualities, gives 70 per cent, whilst potatoes, so well known and so highly appreciated, yield 16 per cent, and when divested of their skin and moisture, give the surprising quantity of 51 per cent. As these substances give very little else than woody matter, it may be safely inferred that starch constitutes almost exclusively the basis of their nutritive properties. The French Sugar Beet gives 85 per cent of water, 10 per cent of sugar, and 5 per cent of woody matter and mucillage, and *no starch.* I will not pretend that sugar is destitute of nutritive powers, but that substances abounding in starch will be found far superior to those containing sugar only. The beet may have a salutary effect on the health of animals, and when a plenty of substantial food is fed with it, it may be productive of good effects. Its use, however, as an article of food for feeding animals, must be restricted mostly to that of promoting a full flow of rich milk in cows, otherways in good order, and well fed.

If the sugar beet should be much cultivated in this country, I suspect it will be for the purposes of distillation. From many experiments, I am satisfied that with no other vegetable can an acre be cultivated, that will yield so much spirits.

Much has been said about cultivating beets in this country, for the purpose of making sugar, particularly cultivating them in the western prairies. To any person contemplating an operation of this kind, I would suggest to him the probable, and perhaps the insuperable difficulty of obtaining, only in the immediate vicinity of large towns, such quantities of animal carbon, as would be absolutely necessary for its clarification.

I wish to add a few remarks on one or two other subjects, and you will use them as you please.

Transplanting Grafted Fruit Trees.

Which is the best season, spring or fall, in which to transplant grafted fruit trees? In the fall of 1838, I bought of Judge Buel, at Albany, one hundred grafted fruit trees, apple, pear, and cherry. These were received in good time, and duly transplanted, about the last of October, in good soil. Nearly every tree lived from the place where the scions had been inserted, downwards; but ninety-three of the grafts died, giving a very discouraging result. Had the trees been allowed to stand until spring, probably not one of the grafts would have died, and they might have been removed successfully. The trees were small, and the connection between the scion and stock had not been sufficiently matured to enable the graft to sustain the double shock of removal and exposure to a hard winter. May not a useful rule be deduced from this example—that is, so long as good reason exists to believe, time enough has not been given to establish a well knit connection between the graft and stock, that grafted trees should not be transplanted in the fall? An adherence to such a rule would have saved me the loss of some money, much trouble, and a galling disappointment.

China Tree Corn.

I planted, last spring in Sackett's Harbor, north lat. 44, eighteen square rods of China Tree Corn, in an open exposure, on sandy loam—the green sward well manured with long manure; and well torn to pieces. The growth was enormous, and when the first frost came, 5th of October, I estimated the product, and made it equal to 106 bushels per acre; one half of which, is good seed corn, the residue was excellent corn for boiling, and for early hog feed. I believe I am alone in this neighborhood, in my success, for I do not know of any one else who succeeded in ripening it. So great was the growth of stalk, and so abundant the product, that I am determined to plant at least one acre this year, believing that the value of the fodder and the value of the ears *in milk* alone, will give me a handsome profit. I think that hogs may be fed with the corn in the milk, and be made by it to thrive beyond what can be done with any other substance. Probably one month may be had for this purpose, before frost, and I will stand a chance of getting more good sound corn, than from any other varieties.

Mr. Thorburn has my thanks for introducing this excellent article, and when its merits and its demerits are well understood, I believe he will have the thanks of thousands of others, as a public benefactor.

Most respectfully yours,
SAMUEL GUTHRIE.
Sacketts Harbor. N. Y. May 2, 1840.

SOUTH DOWN SHEEP.

Messrs. Editors—In perusing the useful and widely circulated paper, the Cultivator, I observed a letter to J. Buel, in the March number of 1839, wherein Mr. Wm. Ellman states, he doubts whether the sheep imported into this country are pure blooded South Downs. For the last five years I have been an importer of pure blooded South Downs, and have visited England every year, and selected from some of the most celebrated flocks in Sussex, and it is well known to men in Sussex, and others who visit that part of the country, who are judges of South Down sheep, that there are many gentlemen who have as pure and as good sheep as the Mr. Ellmans. Mr. Ellman says, his brothers defy all Europe to show South Down sheep equal to them. If you will refer to the accounts of the great stock show at Oxford, last July, you will perceive that Mr. Ellman's South Down sheep did not stand even first or second there; the show of South Downs there was very fine from the flocks of Mr. Ellman, and others, and the premiums given for the best to some of Mr. Ellmans neighbors, not only proving their sheep to be equal but superior, and I defy either of the Mr. Ellmans to produce purer or better South Down sheep than those I have imported.

You will perceive by a letter of Mr. Thomas Ellman, which I send you, that he has been often sending out South Down sheep to this country; I cannot think he would send impure sheep.

In October last, I saw Mr. Wm. Ellman, in London, England; I questioned him respecting the letter to J. Buel, which appeared in the Cultivator, respecting South Down sheep; he owned it to be his, with this remark, "he must puff a little."

Gentleman, I am sorry that any puffing should appear in your useful work, to prejudice the minds of those who are not judges of those valuable sheep. I am fully convinced, that there is no sheep so well adapted for the American climate; as they are of a hardy constitution, they can endure the heat and cold better than any sheep I have ever seen; I have kept a flock of them for some years. In England the South Downs stand preëminent, and I have no doubt but they will here, when better known.

I should have noticed Mr. E's. letter before, but I was traveling through England, selecting stock for the western states, at the time it appeared in the Cultivator, and I am much pleased to say, that I sent a number of imported pure South Downs into the states of Tennessee, Kentucky, Ohio and Illinois.

Yours respectfully, JAMES BAGG.
Montgomery, Orange co. May, 1840.

IMPORTATION OF STOCK.

Messrs. Gaylord & Tucker—Having the subject of agriculture very much at heart, induces me to notice any particular that will tend to promote its improvement, which was my object in going to England to select some of the best stock I could find, and my judgment capable. Whether I have succeeded in my undertaking, is a matter to be decided by good judges, to whom I will cheerfully submit my choice, for inspection and criticism; though I very much regret having lost my best ewe on the voyage; fatness was the cause of her death. When opened, we found two fine ram lambs, within a few days of birth, and I may safely say her caul weighed twenty-five pounds. This ewe was shown at the Royal Agricultural Society, with her lamb, in July last, when most of the breeders exhibited, and all England entitled to do so by becoming members; she won the first prize. We have some of her descendants, with twenty-one ewes and three rams from the same flock. The breeder, Mr. Hewer, of Northleach, Gloucestershire, had a wether teg, killed at fifteen months old, that weighed 43½ lbs. per quarter. It is as well to remark, that this sheep was weighed without the caul, which would have added full 25 lbs. more to the whole carcass; according to American custom, would have weighed 199 lbs. This teg was fed on nothing else but hay and turnips, and it is my opinion they are more easily kept than any other breed, according to the weight they produce.

The Messrs. Wm. & Joseph Hewer's annual sale of 60 shearhog rams, has averaged for the past ten years, from £15 15*s.* to £17 17*s.* 6*d.* ($75 to $80,) each. One sheep sold last year, for £94 10*s.*, and the purchaser refused 100 guineas ($500,) the same day. This is proof positive of the value of this flock.

It is my intention to go to England again in the Great Western, on the 1st of July, to be at Messrs. Hewer's ram sale; and whoever wishes to procure one of these valuable animals, may be accommodated, by stating the kind they wish, and the highest price they will give in New-York, to Erastus Corning, Esq. of Albany, or writing to me at Mr. Wm. Hewer's, Northleach, Gloucestershire, England, who has promised to sell me all his extra ewes yearly.

Of our cattle, I shall not say more than that they are of the Hereford breed, and from the same breeder, who agrees with me, that Herefords are decidedly the best and most profitable, when taken in the aggregate. The Smithfield show will acknowledge this, as the Herefords took the top prize against all others.

Other instances are in their favor; the oxen are excellent workers, the best feeders, and when in market, fetch one half-penny per pound more than the Durhams, the fat and lean is so well interlarded. This assertion is backed by most of the London butchers, of whom I made inquiry, and I send you a letter for insertion, from Mr. Gurrier to me, one of the first salesmen in London, who presented me with an engraving of the prize ox in 1837, the property of Mr. John Thomas Smith, Portland, Lincolnshire. This ox obtained the first prize of 15 sovereigns, at the Rutland Agricultural Society's show, at Oakham. Also, at Smithfield Club show, the first prize of 20 sovereigns, in class first. Age of this ox, four years and two months—weight 122 stone, 14 lbs. to the stone—bred by Mr. John Hewer of Hereford. It is my opinion that Herefords are better milkers than generally represented. It is not clear to me that they are inferior to the Short Horn or Durham. When our cows come to grass, I will endeavor to give the quantity; appearances on the vessel are much in their favor. I will not say more on this subject until we have some for sale; these are intended for our own use.

Should it meet the views of improving, intelligent, enterprising farmers, such as know how to lay out their money *judgmatically,* we have no objection to enter into a trade with Mr. Hewer, to take the whole of his extra stock yearly, who says no other person shall have them for exportation. Any other breed of the first order, or any kind of animal England can produce, I will endeavor to procure, by the purchaser representing it to me, and the highest price he will give in New-York, or any kind of field or garden seeds. But I must admonish the purchasers, to show a little spirit, not to be afraid of their shadow in a good cause; the best things in the world cannot be bought at low prices; the expense and risk of shipping is very heavy, and not a very pleasant business for a "*sea-sick sailor.*"

I have bought all kinds of seed grain of the best sorts, and shall be much gratified to share them with our friends. The Whitington wheat is not much liked there; the best farmers say the straw is very rotten, the ears uneven, and the flour of a weak nature; I have brought a little for trial, thinking climate might change it. Brown's Prolific is a new sort lately introduced and much approved. The Talavera is an excellent quality. The white Bullstroud is very fine; but the old red Lammas, *of long standing*, is more generally liked, the most certain, and considered the most productive. I have all these kinds, with a little of many others. The Potato oats, the Caspian, the Waterloo, the Dutch, the Poland and the Tartar; the Chevalier barley, the Moldavia, and the different kinds of early; all kinds of grass and garden seeds, most kinds of turnep, ruta baga and potato, as good as England can produce. We shall have much pleasure in distributing them, when we know their results in a different climate, so that the enterprising may have no excuse to stray from the improvement of their country, that requires nothing else but good husbandry.

I am further of opinion, that the substantial English cart horse would be a very great benefit to this country. A good, strong, steady team, with a heavy plow behind it, would do its work effectually, while a *trotting*, *flirting*, *jumping*, *baulky* one, with a light plow, will skip over much soil, and leave the weeds growing. The observing traveler proves this daily, by "ocular demonstration;" the pernicious weeds skipped by bad plowing, shoot forth without a check, and, like the thorns, "spring up and choke the grain," impoverishing the soil much more. Another thing the same traveler notices: the manure lying in the yard of the thoughtless farmers, while their sons are *gadding* about the country with their trotting horses. If they owned the steady steed, he would always have a load behind him; he is a business horse, and cannot be put out of his place by folly, and their sons would be engaged in usefulness, drawing out their most profitable article.

Farmers, look at this and meditate; and if your views meet mine, I will endeavor to procure the animals.

Another idea strikes me, that farmers have a very anxious desire to put out money on interest, at six or seven per cent, while, if judiciously applied on their own soil and stock, it would pay full *double* the amount in better security and substantial credit; if the former will produce a double quantity, with proper management, it is enhanced in value accordingly. If the latter are supported with less provender, and sold at 200 per cent higher prices, to the satisfaction of the purchasers, it is clear proof of the advantage derived, without reference to the supposed extravagance of the original cost of approved sires and dams. Nothing but the most rigid judgment will sanction an extraordinary price. This I consider a subject that will bear the close investigation of enlightened farmers.

I cannot finish this letter without referring you to the worthy sire of the Hewer family, Mr. Wm. Hewer, sen'r, Northleach, who I consider one of the best farmers England contains, and one of the best of men. He has never been led astray by fashion, or the foibles and follies of the gay and the great, but kept the standard of mediocrity, and pursued and maintained its usefulness. I may say with confidence that no man has done more real good for his country, or brought up a family with more credit; his honor has never been tarnished, and I think I may say without fear of contradiction, that his character is without a stain. He has excelled in good judgment in stock, to great perfection, selected his sires and dams with the most considered care and attention, without reference to price, when the animal suited; he well knew the deficient points and quality he wanted to improve, and made his crosses with true science; by this principle he has established himself at the head of breeders, and has kept them longer than any other man in the country. To improve a bad flock is not difficult, but when bordering on purity, it requires the most accurate examination, and is one of the most difficult situations in the world, to avoid degeneration. Mr. Hewer has maintained this standard sufficiently long to be a pattern to farmers, an example to all, and deserves as high a station in society as a nation can offer. When a tenant, his system of farming was pursued with the nicest accuracy; his soil was never impoverished, but every thing turned to the best advantage. He hired good laborers, and paid them well for their services; although he employed a great number, they were all placed in a situation where their toil would refund the outlay. Penurious farmers thought him extravagant, but he pursued his course with true economy; his judgment paid him ample interest. He was a mark of the highest respect in his parish, and universally beloved by all who knew him. He is now landlord of his own soil—400 acres—which he purchased seven years since, in the most slovenly and impoverished condition, in the 60th year of his age. He has three sons in business near him—the eldest under Lord Sherborne, &c. 500 acres; the second, under the same landlord, had 400 acres—the third, under himself, 150 acres, with a mill. I think I may safely challenge the world to show four farms in one family, under a better state of cultivation; or even one to compare in stock with either of the three former. Give America such farmers as these, and no nation in the world can compare with it.

I send you a paper with an advertisement, showing the Queen at the head of an agricultural society, with an anxious wish that the heads of America will follow the good and noble example she has patronized. It is my opinion that Agricultural Societies are the first props for improvement. Could we be able to establish one in each county, with a right spirit and a firm principle, it would have the desired effect on all.

I send you a short treatise on the epidemic among cattle, &c. presented to me by one of the members of the Royal Agricultural Society; if you are disposed to publish it, it is at your option.

These ideas are from my own observation and practice, and I hope they will be received with the same *good feeling* as they are issued. My former ideas on the Cotswold sheep, were known in the September number of the Cultivator, 1836, on sheep husbandry, signed "A Subscriber." I then gave my ideas on the different breeds, and am sorry to say, it did not meet with the views of the Merino and Saxony breeders; it was not my intention to deter those from breeding, but to prove the benefit of their breeds. I did not then answer "The Wool Grower," or Mr. Grove, but met the latter at the State Society in Albany, where we talked the matter over amicably, and I believe him to be, from his conversation, a scientific breeder, and hope his breed will answer his expectations fully, as fine wool is wanted, and in some instances, may be profitable.

Let us all endeavor to get the best breeds of all kinds, and we shall not want to advocate a forced market, or strive for good reputation, without deserving it. We must not sanction the idea, that gold and silver alone constitutes wealth, but good stock and good land, well cultivated, with industrious undertakings, well understood and relished; and banish from the mind all sluggish inactivity; by this we shall be able to establish our object, distinguish the name of farmers as we ought to do, and let it be practically realized; it is the only true way to happiness, prosperity, and distinction; and allow me to make a remark which is as certain as death, that no land can be kept in a good state of cultivation, without a sufficient quantity of sheep and cattle. The former is a remarkable rich manure, and I think folding sheep in this country, in the autumn, is too useful a branch of husbandry to neglect.

Yours, most sincerely,
WM. H'Y. SOTHAM.

N. B. It is useless for any person to apply for any kind of animal but those of the first quality. I have *firmly* resolved to import nothing less. The only way to arrive at superiority, is to begin right and continue so.

Perch Lake, Jefferson Co. N. Y. June 1, 1840

The following are the pedigrees of the beasts and sheep sold by me this day, April 10th, 1840, to Wm. H. Sotham, Perch Lake Farm, Jefferson County, New-York, North America:

1. An 8 year old cow, Lumpy, was sired by Nelson, dam by Panic, grand dam by Alpha. Nelson's sire was by Trogan, dam, Bloomy, grand dam, old Bloomy.
2. A five year old cow, Gay, and bull calf, Sir George. Gay sired by Noble, which was sired by Sovereign, that sired Cotmore, which won the prize at Oxford Royal Agricultural Society, 1839, and is admitted by all breeders to have sired more prize beasts than any other in the county of Hereford. Dam by Conqueror, grand dam Spot, by Alpha; Alpha by Trojan, the owner of which offered to show against any bull in England, for a thousand pounds, and was not accepted.
3. Young Sir George, by a son of Sir George that won the prize at Hereford, for the best aged bull.
4. Four year old cow, Maria and calf, by Young Favorite by a son of Alpha, dam by Noble.
5. Calf Matilda by Major, which won the prize at Hereford, with his dam and sire, for the best bull, cow and offspring, Oct. 1837, and the prize for the best yearling, 1838.
6. Yearling Victoria, by Major, dam by Favorite, Favorite, by a son of Alpha.
7. Bull calf Young Major by Major, dam by Young Favorite.
8. Two year old Aston Beauty, by a son of Old Sovereign; dam by Fitz Favorite, which won the prize at Cirencester show.
9. Two year old Spot, by Sir George, dam Gay.
10. Two year old Nancy, by Sir George.
11. One year old Cherry, by a son of Sir George, dam Lumpy.
12. One year old Flora, by son of Sir George, dam by Noble, grand dam, Mr. Hewer's old bull, son of Alpha.

Three ram sheep, eleven ewes and lambs, and one ewe teg, all descended from the well known rams, old Grey and Rumpey. The former was allowed by the most competent judges, to be the best sheep they had ever seen. The five ewes with their lambs, shown at the Royal English Agricultural Society, Oxford, were the only sheep ever shown by Mr. Hewer, and won the prize. The one of the five Mr H. Sotham has purchased, is the largest, but not the fattest; if any man in England could have beaten these sheep, they would have shown against them.

We hereby certify that the above statement is correct.
W. & JOS. HEWER.

Northleach, Gloucestershire.

Mr. Guerrier's Letter.

London and West Smithfield, 17th April, 1840.

Dear Sir—As I could not conveniently, during the busy engagements of our market, reply to your inquiry respecting the breeds of Durham and Hereford cattle, I take this opportunity to state, that during 20 years experience as a salesmen of cattle of all breeds, in this market, (Smithfield,) although I have time without number, when I have had some of the best descriptions of Durhams to sell, could I succeed in persuading my best customers at the west end of London, to purchase Durhams when I had any well bred Herefords to part with; they one and all stated, in cutting up the beef, they find so much more roasting beef, to that of boiling. To satisfy your mind still farther, just cast your eye over the particulars (which I send for your perusal) of our last Christmas Show of cattle. There you will perceive the Hereford takes the top prize. Attend our Smithfield Show, and you would be more than ever assured of the importance of the best breed of Herefords, before that of Durhams. Last Christmas, I had Durhams 15 stone per ox heavier than Herefords, but could not realize so much by 4*d*. per stone of 8 lbs. as I could for the Herefords.

I am glad to find you are about to take some Cotswold sheep out with you. I think if I mistake not, they are some of Mr. Hewer's breed, of Northleach. My father, 16 or 17 years past, grazed 3 of Mr. H's. two shear sheep, which I sold to a butcher to slaughter, at £10 per sheep. I think you will find, speaking as a breeder and grazer of cattle, the Hereford are much less trouble, and particularly quick feeding stock.

Wishing you success in your undertaking,
I am sir, yours respectfully,
WILLIAM GUERRIER.

W. H. Sotham.

N. B. I need not observe to you, the remarks I have made regarding Herefords, are not because I am at all prejudiced against Durhams, Scotts or other breeds, but having with my father grazed all breeds, for many years, and as a salesman, having for 20 years past, during which time I have annually sold from 5 to 10 thousand cattle, consisting of all breeds, from Ireland, Scotland, as also in this Kingdom, I never found any breed of cattle more profitable than the said Herefords, if well bred.

MANAGEMENT OF PIGS.

Messrs. Gaylord & Tucker—The management of fine bred pigs is eliciting more attention at this day throughout this country and England, than at any former period. All the essays I have noticed on the subject have passed very indefinitely over what I conceive to be the most difficult period of the animal's existence, and one through which he seldom or never carries all his good points—which is that of leaving the sow.

The cause appears to me to be this: sows' milk is much more rich and nutritious than cows', consequently little action or concoction of the stomach previous to being carried into the circulation is required; for indeed swine being carniverous by nature, possess at all times very weak digestive powers; the pig being taken from the sow or weaned by her, large quantities of cows' milk is almost invariably given as a substitute, perhaps three times per day. The large quantity nearly paralyzes the little digestive powers the pig previously possessed; consequently his belly becomes distended far beyond its wonted size, assuming a disgusting bladowy or bellows-like appearance; he grows poor, his shoulders contract, his rump becomes peaked, his back settles down back of his shoulder blades, and then rounds up something like a hedge hog's, and to finish the picture, his hair is no longer brilliant and glossy, but dry, crumbling and dead, and often turning the other way; not a vestage of that clean cylindrical form, which never fails to elicit admiration, where beauty has any attraction, remains, nor does he ever effectually recover. Blood and pedigree are no guards against this. I would hazard a few suggestions as a remedy, not that I conceive them to be unexceptionable, but that they may be the means of drawing forth some that are, from Messrs. Lossing, Bement or Allen, or any other talented gentlemen engaged in the cultivation of "the noble animal."

I would have the pig *well* accustomed to the *trough* before weaning, in a place shut off from the interference of his mother; I would feed him four or five times per day with boiled rice, and boiled potatoes mashed, alternately, adding a little milk from a new milch cow, all to be given in very small quantities, with trough kept clean; small quantities of beeve's liver, have a fine effect in yielding nourishment profusely, is easy of digestion, without distending the belly unusually; sheep's plucks are good, but should be boiled.

No pig should be taken from its mother while she gives any milk at all; but in cases where it is unavoidable, it should be done by degrees, the pig left to suck perhaps once a day for some days with the above mentioned feeding.

Much blame has been attributed to the breed or blood, where the management has alone been at fault; I have witnessed so many disastrous effects from taking pigs abruptly from the sow and sending them on a long fatiguing voyage, that I have resolved that no pig shall go from me until it has passed the ordeal of weaning. No valuable pigs should be sent any distance without some interested person to attend them, who has had some experience in their management.

There is another source which has often proved fatal to whole litters of pigs, which is that of interfering with the sows at the time of their littering; the sow should have her litter at the place of her own choosing; it is the only place at which she will be at *home;* it is idle to suppose that dictation or interference of any kind can be of service to her; she is governed by an instinct infinitely surpassing human calculation on this point. I never interfere farther than to prevent all interference, and scarcely ever lost a pig.

Z. STANDISH.

Albany, June 25, 1840.

ADDRESS,

Delivered before the Horticultural Association of the Valley of the Hudson, at Niblo's Garden, in the City of New-York, September 13th, 1839, by William Emerson, Esq.

Mr. President and Gentlemen—Did I regard only my own want of acquaintance with the subject which has united you together, I should have declined the honor of addressing you this evening; but having twice been called upon by you to perform this duty, on the second call I could not hesitate to forget all personal considerations, and to cast myself upon your indulgence, while I offer you some remarks on Horticulture, the object of our common regard.

Horticulture, or the business of gardening, is no trivial or visionary pursuit, but one which commends itself to the calm and respectful attention of every intelligent man. As an art, it is coëxtensive and coëval with human civilization. So long as men roam at large, pitching their tents now here, now there, as some green spot may invite their stay, they are mere barbarians; but when the rude Arab or fierce Tartar first plants a palm, or scatters a few grains of wheat, and is content to abide in the chosen spot till his family gather the dates, and grind the corn, then has the civilization of his tribe begun. In the beautiful picture which the pencil of the sacred historian has drawn, of the earliest scene in the education which Providence vouchsafed to man, the human pair are represented in a garden, filled with rich and tempting fruit, and watered by pleasant streams; and when they transgressed the command that was laid upon them, the severest part of their punishment was, that they were banished from Eden, expressed with how much force and beauty by the English poet, in words uttered by the mouth of Eve:

> "O, unexpected stroke! worse than of death,
> Must I thus leave thee, Paradise? thus leave
> Thee, native soil; these happy walks and shades,
> Fit haunt of gods! Where I had hoped to spend,
> Quiet, though sad, the respite of that day
> That must be mortal to us both! O, flowers,
> That never will in other climate grow,
> My early visitation, and my last
> At even, which I bred up with tender hand
> From the first opening bud, and gave ye names,
> Who now shall rear ye to the sun, or rank
> Your tribes, and water from the ambrosial fount?
> How shall we breathe in other air,
> Less pure, accustomed to immortal fruits!"

I direct your attention to this ancient picture of the delights and loveliness of Paradise, so splendidly retouched and adorned by the genius of Milton, only as furnishing a striking illustration of the strong natural bias there is in mankind, toward horticulture; I say, in mankind, for it is not in one or a few nations only, that this inclination is observable; the earliest fables in all literature, are full of gay and gorgeous stories of pleasant gardens. The Greeks told of the garden of the Hesperides; these were young virgins, living on a distant island of the western ocean, guarding trees loaded with golden apples, and so valuable was this precious fruit, that the damsels were aided in their charge by a hundred headed dragon. It was one of the labors of the mighty Hercules to bring away this costly fruit; he killed the dragon, and the fair gardeners fled, on which the hero seized the apples, and brought them to his task-master. Other stories record, that these tempting apples were presented by the Earth to Juno, the mother of the gods, on her nuptials with Jupiter, and afterwards adorned her gardens. Another story tells that three of these very apples were dropped by Hippomenes, on finding that the beautiful and fleet-footed Atalanta was gaining on him in the race, and while the fair one stooped to secure the tempting fruit, Hippomenes reached the goal.

Ancient historians dwell with enthusiasm on the marvels of the hanging gardens of Babylon, which are said to have been massive piles of architecture, adorned with the rarest and most beautiful plants, and which presented to the eye of a distant observer, the appearance of lofty pyramids of trees. They were counted among the wonders of the world.

The Romans, when they became the masters of the world, indulged their taste in the most beautiful and sumptuous gardens, where nature and art vied with each other in delighting the beholder.

In those fanciful narratives, the Arabian Nights' Entertainments, we have the most lively descriptions of gardens filled with trees, whose branches were loaded, not with common apples and figs, but with precious stones, of the size of the finest fruits, glittering with all the hues of the rainbow. Besides the fables of these costly fruits, which even the most craving would not wish to grow on every tree, other stories occur, of all that is attractive and pleasing in a well planned garden, in those soft climates where the orange, the myrtle, and the olive abound. Indeed all poetry and all literature are full of the beauties and delights of the garden. Boceacio, Chaucer, Ariosto, Tasso and Milton, no less than Homer and Virgil, dilate in eloquent prose or verse, on the charms of the garden, and confirm the truth of the remark, that a taste for horticulture, is universal among civilized men. For the greatest poets and philosophers are but voices which utter the common sentiments of mankind; and when the ancient poets describe the calm enjoyments of departed spirits in the fields and groves of Elysium; or when Mahomet tells of the pleasures in store for the faithful among the cool shades and sparkling fountains of Paradise, what do they but speak to the universal taste? And why is the love of a garden common to all men? Because, first, gardening is a useful pursuit; it ministers to the daily necessities of life; it supplies, and that bountifully, those comforts and luxuries which the savage does without, but which are now commonly enjoyed by every civilized nation. It gathers from every clime whatever vegetable substance is or may by cultivation become nutritious or palatable to man or beast; it acclimates them in almost every region, from Petersburgh to the Cape of Good Hope, and so supplies wholesome food, suited, each in its kind, to old and young, to the hearty and the delicate, the well and the sick, and to each domestic animal that depends on man for nourishment. For these ends, the apple and the pear, the currant and the gooseberry, have been brought out from the European forests, and softened and multiplied, and varied into the thousand different species we possess; the Roman generals are believed, in their triumphal march from conquered Asia, to have introduced the cherry from Pontus; the plum from Syria; the peach and the grape from Persia; the quince came from the woody island of Crete; and melons are supposed to have come originally from eastern Asia. Of the vegetables which require some preparation before they are fit for food, the pea is thought to be a native of southern Europe, and the bean of Egypt; the turnep and the cabbage tribes are supposed to have originated in northern Europe; the carrot and parsnip are indigenous in Great Britain, while the beet was first found on the shores of the Mediterranean; asparagus is a native of the damp soil of northern Poland and Russia; the onion is commonly supposed to be the growth of Spain; squashes and pumpkins, or (as English writers generally class them,) gourds and pompions, and cucumbers also, were brought from the far east; Africa has furnished us with the egg-plant; and our own continent claims two vegetables among those in daily use, which will probably yield to no other two in value, the potato and the tomato.

From these few articles which have been mentioned, out of the long list of garden productions, it may be seen how untiring have been the perseverance and the research devoted to find out, and to appropriate, whatever in the botanical kingdom could be made subservient to animal life. This is the gardener's peculiar province, and as it is his object to increase the number, variety and excellence of edible plants, and so to promote the health and lengthen the life of man, and of his brute servants, his occupation may rightly claim to be classed among the most useful of human pursuits.

Another cause of the universal love of gardens is, that horticulture is an innocent and rational pursuit. In some of the occupations that men engage in, how many bad passions break forth! How much strife and selfish ambition are continually exhibited! The occupations of the garden, on the other hand, are peculiarly quiet and peaceful. I do not mean to say that those who devote themselves to horticulture, are exempt from human faults and passions. What I would say is, that this pursuit is one eminently gentle in its character, and is usually observed to have an ameliorating effect on those who follow it. They are aloof from the rancor of party politics, the bitterness of sectarians in theology or human science; from

> ———————— "the vain low strife
> That makes men mad; the tug for wealth and power;
> The passions and the cares that wither life,
> And waste its little hour."

If they have any war of extermination to wage, it is not against their fellow men, but against some pestilent insect tribe; and the timely use of preventive means, will generally obviate a cruel destruction even of insect life. For the most part, he who occupies himself with horticulture, pursues, in quiet industry, the even tenor of an innocent and happy course, engaged in adding to the sum of the world's comforts and luxuries, while at the same time, all the genial influences of nature are dispensed upon him. The dome of the heavens is above him, and around are the woods and fields and waters, breathing their gentle fragrance upon him, and wafting the sweet music of singing birds into his senses. The work before him is suited to every capacity. To one who is contented to go on in the old paths, the daily care of the common fruits and flowers, is a pleasing and sufficient employment, while the most capacious memory may task itself without exhausting the stores of botanical and physiological science; and the utmost stretch of the inventive faculty may be usefully employed in discovering the habits of plants, the qualities of soils, the adaptation of each to the other, and the operation of the countless causes of fertility and barrenness, on the vegetable kingdom. Nay, by the process of hybridising, the horticulturist seems more nearly to approach to an exertion of creative power, than man achieves by any other employment of physical agents, of which I have any knowledge.

I need hardly say, that gardening is a healthful pursuit. While the operatives in manufacturing towns are confined for their whole lives to a monotonous occupation in crowded, stove-heated rooms, and very many among those who follow the mechanic trades, are shut up, with little respite, in narrow and ill ventilated shops, the horticulturist breathes the sweet pure air of heaven; if he is wise, the earliest blush of the morning glows on his cheek, and a course of constant labor, which is no task, but as it proceeds, is continually bestowing its reward, is ever encouraging his efforts, and diffusing a cheerful calm over his system. His frame invigorated by daily exercise in the open air; his mind animated by a generous emulation to excel in bringing out from nature's bosom her good gifts, and disciplined by inquiries and experiments eminently scientific, yet neither dry nor abstruse, the horticulturist, enjoying and diffusing enjoyment, lives on to a green old age, neither broken in spirits by the fluctuations of business, nor enervated or diseased by the sedentary habits of city life. I confess, when I pass through the streets of this great city, where the senses are continually assailed by noisome vapors, I am filled with wonder that thousands, who are not necessarily and exclusively confined to the city, do not habitually escape from its crowded streets and stifling air as soon as the business of the day is done, and place themselves and their families in some pleasant cottage or statelier mansion, as their taste or means shall dictate, where they might breathe the perfume of flowers, and the new mown hay, and look forth upon the beauty and majesty of nature. Happy will it be, not only for the health, but also for the morals and intellectual character of our fellow-citizens, when this practice shall become much more general than it is. Independently of the benefits resulting from the healthful labors of the garden, there is a sublimity and purity of thought, produced by the daily contemplation of natural scenery, which is highly favorable to the development of the best qualities of mind. He who habitually looks upon the starry, silent sky, on the dark waving woods, the silver line of the river, or the boundless expanse of the ocean, can hardly fail to be a wiser and better man than he who fritters away his golden moments among the frivolities of the promenade and the ball room.

The business of gardening, again, is a worthy and honorable pursuit. Many are there, high in the world's esteem, its princes and kings, who have devoted themselves, of their own accord, to the cultivation of a garden. The Roman Lucullus, after carrying the arms of the republic into the distant east, returned laden with spoil to Italy, and devoted his immense wealth to the formation of delightful and extensive gardens, on the promontory of Misernin, and there imitated, for the first time in Europe, the luxurious magnificence which eastern princes often lavish on their pleasure grounds. The ambition of the emperor Charles V. of Spain, for many years disturbed the peace of Europe; to the amazement of all the politicians, in the 56th year of his age, this powerful and energetic prince voluntarily resigned the sceptre of his vast dominions into the hands of his son, and retired on the income of a private gentleman, to a little valley in Estremadura, where his chief amusement was the cultivating of his garden with his own hands. We are so apt to be led away with the *prestige* of what is called a great example, that we might hastily imagine our favorite art was raised to higher consideration for being practiced by the self-same hands that had swayed the sceptre of both the Indies. But horticulture gains no importance from such examples. It is an honorable employment, not because the magnificent Lucullus lavished his eastern treasures on the elegant gardens of Baiœ, or because the historian Sallust devoted his Numidian wealth to forming the most voluptuous pleasure grounds for the future emperors of Rome; not even because the eloquent Tully and the tasteful Pliny passed their elegant leisure in the gardens of their classic villas, or that the philosophic Bacon composed essays on the subject of gardening; still less do I call the gardener's an honorable employment, because the self-styled grandees of the earth, the princes and lords of all christendom, and well nigh all heathendom, too, combine, with a remarkable unanimity, in the encouragement of this beautiful art; not for these things, but because it is an industrious and honest calling; because it tends to strengthen the body and ennoble the mind; because it enlarges the boundaries of science, and ministers to the life, health and comfort of man and beast; because it turns the desert into a scene of verdure, and beauty, and abundance. These things constitute the true importance of the gardener's art, and, in my humble judgment, the imperial Charles was more honorably, more respectably, employed in cultivating the little garden of the monks of St. Justus, than when he sat on the throne of Spain and Germany, and thousands of his fellow mortals were the annual victims of his ambition.

Thus, gentlemen, I have called your attention to the universal taste among civilized men for the art of gardening; and I have sought to account for this taste, by the usefulness of the art; by the innocent and rational nature of the employment; by its tendency to promote the health of the body and mind, and by the real dignity of the occupation. In conclusion, I beg leave to congratulate you, that you have united yourselves in pursuit of an object so worthy. The exhibition we have this day witnessed, is in the highest degree encouraging. It may be that New-York has been heretofore out-done in this department, by the zeal and science of Boston and Philadelphia; but I trust you will be efficient laborers in wiping away this reproach. The beautiful Valley of the Hudson, the theme of admiration abroad and at home, for the charming variety and beauty of its natural scenery—now swelling in graceful undulations—now rising in lofty sublimity to overlook our majestic river—the various, but for the most part genial, climate and fertile soil that we possess—ought surely to yield to no portion of our country, in the excellence of horticultural productions, or in the application of horticultural skill. He who causes two blades of grass to grow where but one grew before, and he, likewise, who produces a delicious peach or pear where neither grew before, may well be said to be a greater benefactor to his species, than all the conquerors whose names have sounded through the world. We may not expect that the fall of an apple will suggest to every man, as to the immortal Newton, a new theory of gravitation; but we may reasonably hope, by a careful observation of the natural phenomena around us, and a diligent application of natural powers to useful ends, to contribute our humble mite to the improvement and happiness of mankind.

GAPES IN CHICKENS, &c.

We have four communications on the management of chickens, relating principally to the cause, preventive and cure of the gapes. As we have not room for them all, we extract from each of them the most essential parts. "*A Poulterer*" inquires the cause, and asks for preventive and cure. He describes the disease as follows:—

"So far as my observation has extended, and from the information of others, I gather the following facts relative to the disease. Upon dissection there are found in the windpipe, several small red worms, varying in size and length—some half an inch and more in length. The heart, also, is much enlarged, quite soft and suffused with blood. It is supposed that these worms continue to increase in size, until the windpipe becomes completely filled up, and the chicken suffocates. The disease first shows itself when the chicken is between three and four weeks old, and not generally after, by causing a sneezing or snuffing through the nostrils, and a frequent scratching of itself at the roots of the bill. In two or three days it commences to droop and grow stupid, and at every breath raises its head and gapes, apparently for the want of breath. It thus continues for a week or ten days, when it dies, perfectly emaciated. The appetite continues good, and it will eat greedily so long as it lives. The disease is attended with much fever, so much so, that the end of the tongue becomes white, and so dry that it curls up."

From the communication of "*N. S.*" of New-Windsor:—

"Can you give your readers any information as to the best methods for rearing chickens? I have taken a great deal of pains, but have invariably been but poorly paid for my trouble. In the first place, my hen-house, in the warm season of the year, is so infested with hen lice, as they are called here, that it is almost impossible to make the hens stay on their nests until the eggs are hatched. The moment a person enters the door, they appear to come from every direction right down upon him; and if by any chance, there happens a few eggs to get hatched out, the chickens are soon taken with a disease called the gapes, and very few if any survive. The best thing I have ever yet found for this disease, is ground black pepper and butter, mixed well together, put down their throats; this, if applied soon enough, I think is a pretty certain cure. Any information upon either of those evils would be thankfully received; also the best method for building hen-houses, so that they may be the easiest cleaned, accommodate the most hens, and keep them the warmest in winter."

Mr. Eli Westfall, of Rhinebeck, gives the following remedy:—

"Remove the worms out of the windpipe and they will get well. This can be done with safety and facility after a little practice, in the following manner. Let some one take the chicken, holding itg legs in one hand and placing the other over its back, so as to hold it firm; then let the operator take a small hen's feather or a large pigeon's feather, and strip off the feather from the stem excepting about an inch or inch and a half from the tip end, according to the size of the chicken. Wet it a little, and strip that part back so that what remains on the stem, will stand back like the barbs on an arrow, excepting the extreme point, which roll a little so as to make a point; then let the operator take the head of the chicken in his left hand, placing his thumb and forefinger on each side of the bill, in such a manner as to hold the mouth open, the neck gently but firmly drawn out in a straight line; then observe the opening back in the tongue, place the feather as near to it as possible, and when the chicken breathes, the windpipe will be open, enter the point quick, and fear not after the point is entered; push down gently from two to three inches, (don't be in too much of a hurry;) then draw out, and turn the feather as it is drawn, and the worms will adhere to the feather, and others will be loosened, and the chicken will sneeze them up frequently, so that they will fly out of their mouths. It is not advisable to enter the feather more than twice at one time; let the chicken go, and if it gapes the day after, you have not got them all; try again. This is a sure cure if attended to; generally you need not perform the operation more than once, but sometimes oftener. My chickens, over 100 in number, never had it worse; the greater part have had it, and I have lost but one, and that was doubtlessly neglected too long; and I never saw a lot of chickens thrive better in my life. I have taken out as many as eleven worms at one haul. One of my goslins, not long since, appeared to have the gapes. It was something new to me, I never had heard of goslins being subject to it; I thought the goslin would soon die; it occurred to my mind that it was not an impossibility. I tried the remedy, and the goslin is now well and thriving."

"*J. R. S.*" of Fultonville, says:—

"Hens having chickens are usually kept confined while the chickens are small, and too often so that they cannot get to the ground. When thus confined, it should always be on the ground, and in a good sized moveable coop, which should be moved so as to occupy a new position on the ground, as often as once in ten days. Such a course will have a tendency to prevent the young brood from becoming lousy; for it is well known chickens cannot thrive if covered with vermin. I not only feed and water such broods several times in a day, but I cut grass and clover into short pieces and place it in the coop, and have the satisfaction of seeing it greedily devoured. In addition to this course of treatment, I almost daily, dig earth worms for them. I hear my neighbors often complain that their chickens are lousy, or have 'the gapes,' either of which will destroy them. I seldom lose chickens from either, and attribute my success to the course of treatment as above recommended. Thousands upon thousands of chickens would probably be saved annually, by a little attention to the course I pursue. Lice may be destroyed by placing lard beneath the wings and on the back of the chicken. A sure remedy for the gapes I have not yet discovered; but have heard a very simple one given, which I have had no opportunity to test. It was to extract a few of the end feathers from the wings, the barrel of which it is said will be found to be black. Fowls, while laying, should be well fed, and the size of the eggs will generally determine their keeping; as the eggs are largest when the fowls are best fed."

AGRICULTURAL SOCIETIES.

Dutchess Co.—We have inadvertently omitted to notice the formation of an agricultural society in Dutchess county in March last, on which occasion an excellent address was delivered by H. Wheaton, Esq. which has been published in the papers of that county. We had intended to have made room for at least a part of this address before this, but the press of original papers has prevented. The following persons were appointed officers:

President, Abraham Bockee; *Vice Presidents*, James F. Sheafe, Morgan Carpenter, Henry Staats, Theodore Allen; *Corresponding Secretary*, John B. James; *Recording Secretary*, John Bodden; *Treasurer*, George M. Hatch; *Executive Committee*, Edward K. James, Poughkeepsie; Henry Mesier, Fishkill; Philip N. Bonesteel, Red Hook; John Wilson, Milan; Freeborn Garretson, Rhinebeck; Abraham Suydam, Hyde-Park; Dr. Wheeler Gilbert, Beekman; Gilbert V. Wilkinson, Union Vale; John Thompson, Stanford; Moses Clark, North East; Obadiah Titus, Washington; Allen Thompson, Pine Plains; Alexander H. Grant, Dover; Thomas Swift, Amenia; Martin W. Collins, Pleasant Valley; Dr. John Dodge, Clinton; Peter R. Sleight, La Grange; Albert T. Akin, Pawlings.

On the 3d of June, a meeting was held at Pawlings, at which "The Young Men's Agricultural Society of Eastern Dutchess," was organized. Edward Merritt was appointed President; Isaac Aiken, Vice President; Geo. H. Tabor, Secretary; and D. J. Wing, Wm. H. Aiken, R. T. Osborn, Wm. A. Seely, Wm. Pearce, and Aaron Burr, Executive Committee. We wish them every success in their laudable enterprise, and hope they will by their energy and efficiency set an example worthy to be followed by their seniors.

Genesee Agricultural Society.—At a meeting held at Rochester, on the 28th of May, a society was organized under this name. Its officers are Lyman B. Langworthy of Greece, President; Micah Brooks of Mount Morris, Isaac W. Smith of Lockport, and Wm. Garbutt of Wheatland, Vice Presidents; H. M. Ward, Rochester, Recording Secretary; M. B. Bateham, do. Cor. Sec'y; Henry E. Rochester, Gates, Treasurer; Oliver Culver, of Brighton, Rawson Harmon, Jr. of Wheatland, Enoch Strong, of Perinton, John J. Thomas, of Macedon, John B. Smith, of Ogden, Thomas Weddle, of Greece, John H. Robinson, of Henrietta, Managers.

NOTICE TO AGENTS.

We have a large amount charged on our books to agents, for the current vol. of the Cultivator, which it would greatly oblige the proprietors to have liquidated with as little delay as possible. Those who have not paid their subscriptions, would materially aid us by making immediate payment to the agents to whom they subscribed, so as to enable them to settle their accounts.

Notice to Correspondents, &c.

Postage of the Cultivator.—We have complaints from several post-offices, in relation to the charge of postage on the Cultivator, some postmasters charging as high as five cents per No. The Postmaster-General has decided, that it is subject to *newspaper postage only*, viz:—one cent if within this state, or within 100 miles of Albany out of the state, and one and a half cents if more than 100 miles from Albany out of the state.

Parker's Butter Table.—We sent the inquiries of "W. T. L," to Mr. Parker, and shall publish his reply when received.

The Barberry.—An answer to the inquiries from Skaneateles, on the subject of the Barberry, illustrated by engravings, will be given next month.

Gypsum.—A letter from Mr. H. Hawley says, "I would solicit information with regard to the chemical agency of gypsum. The necessity of this will be seen, if Mr. Doubleday's theory (current vol. Cult. p. 50,) be correct. I hope that gentleman will write again. I should also be happy to see any interesting account of facts and experiments, with all the details, on this subject."

Corrections.—In the last sentence of the article headed "mortality among swine," page 90, for "consumption," read constipation.

☞ Mr. Lossing desires us to say, that an error occured in transcribing the description of the Berkshire pig, in his communication published in the May No. page 70. Instead of "the tail invariably white," it should read "occasionally white."

☞ We trust our old friend, J. F——, of Springfield, Ill., will excuse us for the omission of his rebuke. It is our aim to avoid every thing that savors of personality. All who are engaged in promoting the interests of agriculture, are enlisted in a good cause, and their errors or foibles should be treated with lenity and corrected in kindness. We thank him for the information he has given us, as it may be useful hereafter.

☞ Several communications now in type, are necessarily deferred till next month.

THE MARKETS.

New-York, June 27.—Pot Ashes are in request at $4.50, and Pearls dull at $5.50. The sales of cotton for the week foot up 6000 bales.—Uplands and Florida 6¾a9½ cts; N. Orleans and Mobile 7a11cts. *Flour.*—The sales of Genesee are at $4.56a62, and sometimes at $4.50; Ohio, &c, $4.25a37. Sales of Ind. Wheat, via New-Orleans at 95a98 cts. Northern Rye at 52; Oats, 24a25 cts. for Southern, and 34a35 cts. for Northern. A cargo of prime White Virginia Corn sold at 52 cts. per bu. cash, 56 lbs; Northern White 53 cts. and Yellow 55 cts. Nothing new in Hemp. *Beef.*—Mess, 14a14.25. *Pork*, mess, 14.75a15.25, prime 9.75a10, cargo 6,a6.50.—*Lard* 10a10½.—*Butter*, Goshen, 15.—*Cheese*, 5a6.—*Hams*, smoked, 10a11.—*Wool*, Sax. fleece, 32a35—full blood Merino, 30a33½ and ¾ blood, 25a30—native, 20a23.

Boston, June 27.—*Wool*—All kinds are uncommonly dull. Some small parcels American, of the new clip, have sold this week, but at low prices, below our present quotations, which are nominal.

Grain—The sales of yellow corn have been at 54 cts. and white, of good quality, at 51 cts. A few cargoes of rather ordinary, have sold at 50 cts. Sales of Southern Oats at 32a32½ per bushel. Rye is dull, and no sales making. Sales by auction of foreign white Beans at $1.50a$2 per bushel, cash.

Hops—Sales of 40 or 50 bales, growth of 1838, at 20 cts. per lb. cash. There are none of last year's growth in market.

Philadelphia, June 26.—*Flour and Meal*—The stock is small, receipts light, and prices fully maintained. Fresh ground has been sold at an advance of 12½ cts. per bbl. The supplies will probably be moderate till after the harvest. We quote Ohio $4⅜a$4.50; Pennsylvania old, $4.62½; fresh ground, $4.75; Brandywine $5 per barrel. Sales of 100 hhds. Corn Meal at $13 50. Rye and Corn Meal in bbls. $2.75. Cleared this week, 3296 bbls. superfine Flour, 56 hhds. and 1313 bbls. Corn Meal, and 875 bbls. Rye Flour.

Grain—Wheat is steady, with small receipts, sales at 98a100 cts per bushel; Yellow Corn afloat, quick at 50 cts; White do. 46 cts.—an English order at that rate in market for 10 or 12,000 bushels. Oats, afloat by the cargo at 28 cts. per bushel. Exported, foreign, 700 bushels.

Hemp—18 tons clean Kentucky to close sales at $150 per ton.

Provisions—Sales of Beef and Pork at former prices for ship stores. Bacon finds ready sale at 7, 8, and 9½a10 cents for Shoulders, Sides and Hams; but little more expected this season from the West. Lard is scarce; a lot of 110 kegs uninspected, sold at 10 cts.

Wool—The new clip is just coming in, but the depressed state of Woolen manufactures keeps the article dull and without any fixed price.

Richmond, June 25.—The effect of the late foreign news has not been manifested in any very great change in prices, but operations in all the staples of our markets have certainly lessened to a considerable extent. The article of flour seems to have felt some shock, and sales cannot now be made at former rates. Holders offer it, at $4.50, at which price any quantity might be purchased, but no buyers can be found in the market. Should the fears of some be realized, and from the late northern accounts it would seem likely they should, the article will fall even as low as $4. The recent commercial reports from New-York, hold out the idea that flour cannot be shipped from that port at a price over $4, to realize a profit to the exporter. Should this be true, the article must fall much lower than it has been for years. The crops in Europe being two months later than ours, are by no means made yet, and much still depends upon the favorable or unfavorable state of the weather there.

Flour—No sales. Holders offering at $4½. We can report nothing decisive about wheat. Millers exceedingly shy, and offers have not been made, or if they have, they are not public. Some rumors are afloat that the opening price has been fixed at 90 cts. but we have no authority for saying so.

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THE CULTIVATOR:

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, Editors.

THE SEASON AND THE CROPS.

Below we give a table showing the comparative temperature of the first seven months of 1838, 1839, and 1840, that our readers may estimate for themselves, the influence of atmospheric agencies on the amount and quality of the crops.

	TEMPERATURE.							WEATHER, cl'r days.						
	Jan.	Feb.	March	April.	May.	June.	July.	Jan.	Feb.	March	April.	May.	June.	July.
1838........	32	14	40	39	57	77	81	13	5	20	11	9	18	20
1839........	25	32	35	54	61	71	76	7	6	14	18	15	12	16
1840........	19	35	37	49	64	71	..	6	4	9	17	18	16	

The given temperature of any month or season, may be inferred in a great measure, from the number of clear days it contains. Thus, April 1838, had 11 clear days; and the average temperature was 39°. April 1840, had 17 clear days, and the average was 49°. April 1839, had 18 clear days, and the average was 54°.

The first six months of the year have been remarkable for their sudden and extreme changes of temperature. Thrice has the change exceeded 50° in less than 48 hours; and in one instance, reached 55° in that time. Such changes are unfavorable to vegetation, and to health; but on the whole, the season, up to the 20th of July, the time of penning these remarks, must be considered favorable to the husbandman. While few districts have suffered from drouth, the northern and middle states have been mostly exempt from those heavy rains and severe storms that have inflicted so much damage in the southern sections of our country. By the sudden reduction of temperature of which we have spoken, frosts have occurred at later periods than usual, in several sections of our country. We learn from Gov. Hill's Monthly Visiter, that several frosts had occurred in that state, up to the 3d Monday in June, not of a nature, however, to excite any fears for the corn crop; and we learn from a gentleman who was in that section at the time, that a severe frost occurred in some parts of our southwestern counties on the 4th of July.

Before this sheet goes to press, the great staple crop of the north, *Wheat*, will, in most cases, have been cut and secured. At this time, it may be said to have escaped; and except in a few instances, to be beyond the reach of the three great enemies of the wheat crop, the fly, the worm, and blight. The quality of the wheat is admitted on all hands, to be excellent; the berry fine, plump, and bright, and such as will make the best of flour. As to the quantity, there is evidently some difference of opinion; some supposing it to be an enormous one, while others rate it as not middling. The truth probably lies between these estimates, and from the best information we receive from all parts of the country, the crop must be considered a good one. In some districts, the fly did damage; in others, the worm has shown itself, but to a comparatively limited extent; while the most serious drawback is to be found in the freezing nights and thawing days that succeeded the disappearance of the snow, and on heavy clays, or those of shallow tilth, caused the roots of the wheat plant to be lifted from the ground, and in consequence, many perished. The moderate weather, and light but frequent rains of the spring months, had a tendency to counteract this evil, and many pieces of wheat have so far recovered, as to promise a medium crop, that would have failed entirely, had the freezing out been followed with drying winds and a clear sky. There was doubtless more land sown with wheat in the fall of 1839, than in any previous year, including the extensive additions made in the western states, and the quantity of spring wheat sown has probably not diminished. That there will be an abundant supply of wheat therefore for domestic consumption, or exportation, should this product be demanded abroad, cannot reasonably be questioned. As wheat is the only grain crop of the western states that can be grown with any prospect of its paying transportation, and as that section of our great country seems peculiarly adapted to the production of this crop, it is reasonable to conclude that a large part of our wheat will hereafter be furnished by that rapidly populating and fertile region. Shall the wheat grower of the Atlantic states then cease to cultivate wheat? By no means; but to compete in his own home market, with the western wheat grower, he must cultivate his land more skilfully, and thus grow greater crops on less land. If the same amount of grain should be raised on fifty acres, that is now raised on one hundred, it is clear the profits of farming would be greatly enhanced, by a reduction of the capital employed to produce that amount of grain.

Barley appears heavy and good. The ears are well set, and the grain fine and plump; and as a fair breadth of this grain has been sown, the crop will be o course, a good one. The demand for barley for malting, is increasing annually, and large quantities are floured, or used for making pork, feeding animals, and the other purposes to which coarse grains are applied.

Oats rarely fail of giving good crops, when receiving what may be called decent culture, and the present season they are remarkably fine. Perhaps there was not as much land sown with this grain, as in some former years; but the crop will be abundant, so far as present appearances may serve as a guide. Of all the grains, there is none that so near combines the quantity of nutriment the horse should receive, with the coarser matter necessary to distend the stomach and promote digestion, as the oat; and consequently, it proves better adapted to that animal than any other. It is possible that corn ground with the cob, would unite these properties as well, as it is known that horses fed with corn meal and cut straw, do their work admirably, the straw in this, furnishing the same bulky matter that would be given by the cob in the other. Where corn is ground for feeding pigs, as it always should be, mixing one-third oats before grinding, has been found an improvement of the feed, as well as a saving in expenses of fattening We think the agricultural census now in progress, will show in some of our counties, a great produce of this crop in proportion to the other grains, or to the population.

Every thing now indicates that the *Corn* crop throughout our country, will be a good one. Of all the coarse grains, this is the most valuable; and perhaps there is none, the success or failure of which in the whole country, would exert so much influence. There are some who apprehend that early frosts are to be expected, from tendency shown in the sudden changes to sink the temperature to a low point. But within a few years, much attention in the most exposed parts of our country, to the selection and cultivation of early varieties of corn has been paid, and unless frosts more early, and of greater severity than usual occur, we may expect a good crop.

It is too early to speak with certainty of the *Root Crops.* We have seen some fine pieces of the turnep, sugar beet, carrot, &c., but the yield and value of these roots is in a great measure depending on a later period of their growth. We have observed that land planted with the beet this season, appears to show a greater failure of plants than the turnep or the carrot. This may, in part, arise from bad seed; but the beet is a somewhat difficult seed to vegetate, unless in favorable circumstances, and the weather last spring about the time of planting such seeds, was in general so wet and low in temperature, that many of the seeds may have rotted before germinating. It has been in some cases found useful to mix beet and carrot seeds, before the time of sowing with some rich fine earth, kept sufficiently moist and warm to secure germination, and when this commences, to plant the seeds at once. In this way, few are said to fail, and the plants spring quicker and more vigorously.

The crop of *Grass* will not be a heavy one, but a fair medium one at least. Plaster has not shown as much power this year, on grass, as in some other years, which may be attributed to the occurrence of frequent rains and a low temperature during much of the spring season, or about the time of sowing this article.

On the whole, notwithstanding partial failures, the present appearances warrant the belief that in few, if any former years, will the barns and granaries of the farmer, have been more abundantly filled, than in 1840.

CLEAN GROUNDS.

The great secret of successful farming is to *never allow any thing to grow that is not sown.* It is idle to expect good crops, while from one-half to two-thirds of the nutritive properties contained in the soil, and at least that portion of its power of vegetation is consumed by plants not cultivated, or in other words by weeds. Our meadows have light crops of grass, but is there not an ample one of moss, johnswort, crowfoot, or daisy; we get fifteen bushels an acre of wheat, but has not vegetative power enough been expended on the charlock, stein krout, or thistle, to have made the fifteen bushels thirty? Look at our potato or corn fields, in which the planted crops are maintaining a doubtful struggle for existence with a vigorous growth of vile interlopers, too numerous to be named. Is it not a truth, that we allow one half of the actual value of our lands to be thus filched from us, and lose one-half our labor? Is it not true that we do not cultivate our lands as well as we ought, to get the greatest returns for the capital employed in agriculture? Better to till 50 acres as it should be, keeping the soil rich, clean and constantly improving, than to perpetuate the exhausting, improvident, unprofitable methods now so common, on 200 acres.

LARGE SALE OF BERKSHIRES.

It will be seen by the communication below, that the Shakers at Watervliet, near this city, have sold out their entire breeding stock of Berkshire hogs, to A. B. Allen, Esq. of Buffalo, and that they retire from the business of breeding them for sale. On the day previous to the shipment of the stock to the west, we had the pleasure of riding out to the neat village of these people, and looking over their superior animals; and, however familiar we may have been with Berkshires, we must confess that the splendid array of these noble quadrupeds excited our astonishment and admiration. While we regret that Albany county should lose this choice stock, we are glad to find that it has fallen into the hands of so spirited and judicious a breeder as Mr. Allen; and perhaps it is upon the whole for the best, as at Buffalo it is several hundred miles nearer to the Great Western Market, and we are not without hopes that this greater proximity to purchasers, will extend the diffusion of the breed, for we are satisfied that the pork growers cannot possibly make a more profitable investment than in the improved *machines,* (if we may be allowed the expression) for the manufacture of this great staple article. No farmer would want but one sight of the beautiful store barrows that we saw in the piggery, to convince him of this. Their large fine, and delicate forms, could not fail toexcite his admiration.

Mr. Allen has also purchased a few other very large choice animals, of established reputation as breeders, belonging, we believe, to Messrs. Middleton and Meigs of this city. All these animals have been stinted to Mr. Lossing's late imported boars, and cannot fail this fall to produce a very choice offspring. We doubt whether, with this addition to Mr. Allen's stock, his herd can be beat, or rarely hardly equaled, by any herd in England, at least if we may judge from the finished engravings which occasionally appear in the British Farmer's Magazine. In the March No. of the present year, we find the portrait of a boar bred by the Hon. J. Shaw Lefevre, a wealthy landed proprietor, and speak- of the British House of Commons, and by the exhibition of which, at the Oxford meeting of the English Agricultural Society, he won the highest prize of ten guineas ($50.) Forward, this might be called a good animal, but otherwise he has narrow hams, and a high steep rump, and has nothing of the finished air and fashionable range of the Shaker stock. Mr. A. informs us that he intends still to enlarge his stock, and that he has made arrangements to receive in September next, some of the best that the piggeries of England can afford, without regard to price, and unconnected with former importations, for a fresh cross. With these additions to the previous high bred stock of Mr. A., the person who cannot be satisfied from its produce must be hard to please. We wish him every success in his laudable enterprise in the improvement of the stock of the great and fertile west. —

"*Watervliet, July,* 1840.

"Editors Cultivator—Being situated so far from navigation, and it being so troublesome for us to ship our stock, we have concluded to retire from the business of breeding Berkshire pigs, and have accordingly sold out all our *prime* stock to A. B. Allen, of Buffalo, reserving only a few sows of medium sizes for the production of our own pork. This is a very superior stock, and such as has universally taken precedence even among Berkshires, wherever sent. Most of these animals are about as large of their age, as the superb sow Maxima, purchased of us at one hundred and fifty dollars, by John Lossing, of Albany, and faithfully figured and described in the May number of the current volume of the Cultivator, and one of them we think, when fully grown, will even be superior; and we earnestly recommend this stock to the public, and have no hesitation in saying, that it will not be likely to deteriorate in the hands of A. B. Allen, and those who have heretofore addressed their orders to us, we respectfully refer hereafter to him.

"STEPHEN WELLS,
"JUSTICE HARWOOD,
"*Trustees of United Friends, commonly called Shakers.*"

THE PLOW AND ITS USE.

In no one thing has the striking advance of what may be termed the mechanics of agriculture, or the manufacture of farming implements, within the last twenty years, been more fully shown, than in that most important article of husbandry, the plow. When we compare the present beautiful, light, and yet strong, plows, in general use, with the clumsy, heavy, ill-constructed implements used twenty or thirty years since, it is impossible to deny, that in this respect at least, a great improvement in the means of good farming has been effected. Some twenty years since, a gentleman of Massachusetts, convinced of the inefficiency of the common plow, ordered from England a new plow, which was highly spoken of, but on its arrival, found it such a huge, clumsy, heavy combination of wood and iron, that, after various unsuccessful attempts at use, he was obliged to lay it by, it requiring more team and hands to manage it, than even the ordinary Bull plow of New-England, to which he had been accustomed. Wood, about this time, invented the cast iron plow, and this discovery, in the hands of skilful and scientific men and good mechanics, has effected a total revolution in the qualities and construction of that implement.

It is somewhat singular that, to the celebrated author of the Declaration of Independence, this country also owes the first theory of the plow, formed on correct philosophical and mathematical principles. In order to test the correctness of his theory, at the suggestion of Jefferson, Mr. Smith of Pennsylvania, in 1803, made the first cast iron moldboard, as a substitute for the wooden one hitherto used. It succeeded, and this had a direct tendency to do away the awkward wedge-like form of the old plow; and this formed the first step, which has led to the simple yet beautiful application of power, shown in the present improved cast iron plow. The land side, and the point, were successively added, thus securing ease of working, with great strength and durability. We well remember the first cast iron plow that fell under our notice, (and it was one of Wood's earliest invention,) and so associated with brittleness and fragility were all our ideas of cast iron, that we should not have deemed it worth an hour's purchase in any field, other than the cleanest and best. Experience, however, showed the fallacy of such impressions; patent after patent was taken out for what were deemed improvements, and each new plow received a fair share of public favor and patronage.

It would be somewhat amusing, and certainly instructive, to trace the history of this implement from the earliest notice it has received, or its earliest delineations on the coins and sculptures of antiquity, down to the present day. The plow of the ancients, and the teams used, were of the simplest kind. The top of a tree, of which one branch constituted the handle; an opposite one, shortened and sharpened, was the plow proper; and the main stem, trimmed of its superfluous branches, and cut off at the proper length, constituted the beam. Asses or heifers formed the teams, when society had so far advanced as to substitute animal for human labor. Before that, men, or more frequently, women, drew as well as held the plow; and so slow were changes on domestic matters in the east, that Pliny speaks of seeing, in Africa, fields that produced most luxuriantly, worked by an implement like the above, to which was yoked an ass and an old woman. In some parts of the eastern world, the plow still used, is not much superior to the primitive one, though a piece of iron is sometimes tied to the under branch that penetrates the ground, and bullocks are in some places used to draw it; the plow used by the Polish peasantry is of this kind, and in Africa, a sharpened stick, or a wooden paddle, constitutes the implement used for stirring the earth preparatory to a crop.

We do not intimate that the plow, even the best kind, can be considered as having reached its limits of perfection. With that implement, as with other things, one decided improvement serves only to suggest another. The changes in material pointed to changes in structure; and instead of the blunt, wedgelike form of the old plow, a tapering, lifting form has been given, which, penetrating the earth easily, and reversing it readily, dispenses with much of the force formerly required to move it, while at the same time the work is done in a manner to which the old plow could make but faint approaches. The effect of early habits is still to be seen in our plows. though not to the extent it formerly was. In the early settlement of any wooded country, knolls made by the turning up of the former forest trees, will abound, giving an unevenness to the surface, requiring several plowings to remove. On such lands, none but plows with short beams and nearly upright handles, can be used to advantage; and such is the character of the plow in all new countries. Plows of this description do not run as easy, and require more labor in the holding, than those made with larger beams, and a corresponding increase in the length of the share and point. A well constructed plow has its under surface running parallel with the surface of the soil, no matter what may be the depth plowed; but when constructed in such a way that the plow is continually on its heel, or its point, the plowman finds hard work, and the work itself must be imperfectly performed. Every one who plows, is aware that on the same soils, one plow will run so true and steady as to require scarce an effort to guide it, while another demands constant attention and effort; and he also knows that in most cases, the easiest running plow will be the one with the longest exposed surface, and handles of the greatest inclination; and the reasons for this are so evident, as not to require elucidation.

Farmers have been considerably divided in opinion on two points connected with plows, or rather with plowing; one of these regarding the manner in which the furrow slice should be turned over; and the other, the depth to which land should be plowed. Some have contended that the furrow slice should never be laid flat, but always in such an inclined position, that the edge of one slice should just rest on the next one, leaving under the edge so raised, a vacancy nearly as deep as the thickness of the furrow slice. This, it is contended, is advantageous, by hastening decomposition, and by allowing water to pass freely off without injury to young plants. Other farmers maintain as strenuously that the furrow slice should in all cases be laid perfectly flat, or reversed in such a manner that a field after plowing should be as level as before, the plow simply reversing the surface of the slice. In this, as in a majority of controverted points, our experience and observation leads us to conclude that both sides are partly right, and both partly wrong. We have found that, if on lands strong and with a tenacious or impervious subsoil, which retained for some time what water fell upon it, the furrow slice was slightly lapped, so as to leave a space below, young plants suffered less from a wet season, or an undue accumulation of water, than they would if the furrow slice was fully inverted, and the surface made smooth and even. On the contrary, we have been led to believe that on a light soil, or one inclining to be dry or porous, it was better to invert the surface completely, and by rolling, render the surface smooth, and its particles as compact as possible. A surface so treated, will retain its moisture longer than if left in a state more loose and friable, and the conducting power will be increased by the particles being brought more closely in contact. Let the farmer, then, whose subsoil is impermeable to water, lay his furrows as dipping as he pleases; the more space below, the better for him; but on a light porous soil, lay the surface flat, and make it as dense as it well can be. The benefit, which compressing sandy soils confers, is well understood in Norfolk, in England, where the treading of the sheep in feeding the turneps in the field, is considered not the least beneficial part of the culture required for the production of wheat.

Nearly the same remarks may be applied to the other controverted point, viz: that which relates to the depth of plowing. The propriety or impropriety of deep plowing must be determined by the soil itself; by its condition, in reference to a supply of vegetable matter in the soil, and the depth to which it has been formerly plowed. Where the stratum of fertile soil is thin, and the subsoil, no matter from what cause, incapable of promoting vegetation, it is bad policy to bring this infertile subsoil to the surface, as a stratum in which seeds are to germinate. And where the soil is permeable to the depth of twelve or eighteen inches, or as low as the plow can penetrate, and is filled with fertilizing materials, deposited by the processes of nature, or by manure applied to the surface in cultivation, then the plow may run deep without fear of injury to the present crop, and the certainty of benefit to the future ones. We think the true method of rendering any soil deep and fertile, is to plow no deeper, and bring up no more of the infertile earth at a time to the surface, than can be thoroughly corrected by manures, to be incorporated with it, and thus made friable and productive. At each successive plowing, if this course is followed, the soil will be gradually deepened and rendered productive to any desired depth. By pursuing this course of manuring and plowing, Judge Powell rendered his soils fertile to the depth of fourteen inches, and where the roots of plants have this depth of good earth to range in and seek their food, the farmer can hardly fail of securing first rate crops. Every part of a soil so prepared, is fit for the germination of seeds to the lowest depth to which the plow can reach; and the more thorough the plowing is given, the greater will be the surface exposed to the benefits of æration, or the ameliorating influences of the atmosphere. One of the greatest differences between the old and the new husbandry, depends on this question of plowing. In the old mode, the plow was used year after year to the same depth, and the manure applied with reference to the crop solely, while the improvement of the soil was wholly left out of sight. As a natural consequence, "there was no depth of soil," and when manure failed, the fertility of the land was gone, with scarcely a possibility of renovation under such a process. In the new husbandry, the permanent improvement of the soil, by gradual manuring and deepening, is kept steadily in view; and hence the accumulation and use of manures has received an additional importance. The garden is usually far the most fertile part of the farm, and this is brought about by the gradual incorporation of manures with the subsoil raised at each successive plowing, until the requisite depth and fertility is gained. On lands long plowed to a uniform depth, as they were under the old system, the pressure of the plow on the same surface, gradually formed an impenetrable strata, thus forming a fatal obstruction to the roots of plants, where it did not naturally exist. In England, on soils inclining to clay, and which have been under the plow occasionally, or almost perpetually for centuries, this impermeable *pan* is common, and one of the most decided advantages found to result from the subsoil plow, is the breaking up and demolition of this artificial obstruction to the spread and depth of the roots of plants. On the old cultivated fields of New-England, the same difficulty exists more or less, and can be removed, and the soil rendered fertile by the same means so successful abroad.

The too frequent plowing of land is not to be recommended in any case, and unless absolutely required to destroy foul weeds, it should receive no further moving than is requisite to fit it for a crop. The great mistake of Tull, was, that plowing or pulverization would supersede the use of manuring. But experience shows, what indeed philosophy inculcates, that beyond a certain point, plowing is injurious; and that, though essential benefits are derived to the soil from the action of atmospheric agents, manuring in some form, is indispensable to successful farming. It may be said that an application of manure should take place every time land is plowed and cropped. On land that has been brought to a high state of fertility, the decomposition of the rich sward will usualy prove a sufficient dressing for a single crop; but for a repetition or rotation of crops, manures cannot be withheld without a certain deterioration of the soil, and a probable lessening of the crop. Plowing and manuring must go together, and without this combination, each will be found defective and incapable of producing such results as are certain to ensue when both separate processes are skilfully united. We are therefore disposed to consider every decided improvement in the plow, as a sure indication of progress in agriculture; a proof that another step in the correction and dissipation of ancient error has been gained; and the way opened and the means provided for still farther and more important advances.

CEMENTS.

The use of mortars and cements, in the construction of our public works; in the erection of public and private edifices; in the making of cisterns and aqueducts, and for other purposes, has become an object of state and national importance, and deserves the attention of the chemist and the engineer in a greater degree than it has yet received. By the use of bad materials, this state has suffered already from the premature decay of its structures on the Erie and other canals, a loss we may say of millions; and there is no reason to suppose but that throughout the country the loss from the same cause has been in full proportion to ours. The state of our aqueducts, locks, and culverts, on our canals; the tumbling down of long ranges of brick buildings in our cities, while the process of erection is going on, or immediately after their completion; all prove that our mortars and cements have been miserably made, and without that knowledge of the nature of the materials used, indispensable to success. We are glad, therefore, to see our civil and military engineers turning their attention to this point, and detecting the causes that have led to such results. Among those who have furnished their quota of intelligence, we may mention H. S. Dexter, in his late Report to the Canal Commissioners on this subject; and Col. Totten of the U. S. Engineers, in several valuable reports, and statements of experiments.

The structures of the ancients were of two kinds, one in which the materials were kept in their place by their weight, as in the walls of Tyrinthus, and the ruins of Baalbec: the other in which cement was used, as in the walls of Babylon, and the greater part of the pyramids in Egypt. Two kinds of mortar or cement were used, that of the walls of Babylon being the asphaltum, now extensively used in the construction of pavements in cities, &c. and the other, mortar made of lime and other materials. It was for a long time supposed that the ancient mortar contained ingredients unknown to the moderns, and to which its superior hardness was to be attributed; but chemical analysis has shown this to be an error, and that the constituents of the Roman mortar or cement are the same we are in the habit of using, and that its conversion into stone, must be considered partly as the work of time, but more as the result of greater skill in the preparation.

Hydraulic or water limestone is the basis of all good cement; and fortunately this state is furnished with an abundant supply of the best quality, although it is evident there has not always been care enough taken in selecting the materials used in the preparation. Onondaga, Madison, and Ulster counties have inexhaustible quarries of this stone, and vast quantities are now annually prepared for market. The Chittenango works alone afford more than a hundred thousand barrels yearly, and the Ulster works furnish about 500,000 in the same time. The stone is found in layers of 4 or 5 feet in thickness, between strata of the common limestone; is burned in kilns, requiring from 60 to 90 hours for its calcination, and is then broken up and ground in mills to fit it for use, as this stone will not slake after burning, like common lime.

The great cause of the failures of cement to set, and consequently the inferior nature of the mortar, appears to lie in two things: the first arises from the age of the cement; and the other, the quantity or quality of the sand used. If cement is left for any time after being ground, it deteriorates rapidly, and soon becomes unfit to make good cement. This result, which would seem to be owing to the reabsorption of the carbonic gas, expelled by the first burning, Mr. Dexter has discovered may be obviated by calcining cement that has been injured by age, a second time, immediately before using it. This is important, and should always be attended to, when there is reason to suspect the quality of the cement. The other cause of poor mortar, the quantity or the quality of the sand used, should also be well looked to. The experiments of Pasley and Treussart of Europe, and of Col. Totten of this country, prove clearly that the strongest mortar is made of pure cement; that it is weakened in proportion to the sand used; that when sand is used, the finer and sharper it is, the better for the mortar; that earth, or what is called loam, mixed with sand, will prevent the mortar from setting or hardening; and that sand washed and reduced to a powder by pounding or grinding is superior to any other for mortar or cement. In that great work, the Thames Tunnel, M. Brunel employs cement and sand in equal parts for the foundation; two parts of cement and one of sand for the walls and piers; and pure cement for the arch or roof, that being the part where the greatest strength is required. In this state the general rule we believe is, to use two or three parts of sand to one of cement, a proportion evidently far too great for ordinary cements.

Within the last five years, thousands of cisterns have been built by farmers and others in our country; and a very large proportion of them, from the use of defective materials, have proved worthless. Cement has also been much used for aqueducts, or as a substitute for lead or wooden pipe in conveying water from one part of a farm to another, or to the dwellings, for domestic or farm purposes, and would have been still more so, had not, from the causes before assigned, many that had been laid down failed of their object.

Cements are yearly coming more extensively into use; the geological surveys have demonstrated its abundance, its superior quality, and its wide diffusion, in our state; and they promise to become an important article of manufacture for exportation to districts or countries where they do not exist. It is of consequence, therefore, that every thing relating to its quality, use, manufacture, &c. should be carefully investigated and thoroughly understood. Experience has shown that ignorance or parsimony on this point, so far as public or private structures are concerned, is the worst kind of parsimony; and that had the state employed a competent individual to superintend and inspect the cement used on the public works, hundreds of thousands of dollars would have been saved to the state in what has already been rebuilt, to say nothing of what remains to be done; and to repeat errors, whether of the public or of individuals, is what should be sedulously guarded against.

STAGNANT WATER.

Of all the causes that contribute to render soils poor and worthless, we believe there is none more active than stagnant water, on the surface or immediately below. Such soils are invariably close and tenacious, and commonly quite unproductive. Where there is a retentive subsoil, the surface generally abounds in clay, is difficult to work, and gives a less reward to labor than almost any other. This is owing to the stagnant water held by it, as none of the valuable plants can flourish in a soil so constituted. Land is liable to injury from this cause, on which water during wet weather rests on the surface for even a short period, for the roots of a plant cannot penetrate a soil freely, in which the density is such that rain water does not freely sink through it to the natural drains in the subsoil, below the ordinary range of the roots of plants. Water is essential to the growth and perfection of plants, but water that does not circulate, or which exists in too great quantities, is fatal to them; and the first thing to be done, is to free soils from this incumbrance, if we would give it productiveness, and render it easy of culture.

It is from these well known effects of stagnant water, when on the surface, or within reach of the roots of plants, that the necessity of draining arises, and which system of operating, when fully carried out, completely changes the character of lands submitted to such a course. Manures applied to soils abounding in stagnant water, can produce little effect; the salts they contain are diluted, and cannot produce that action, or circulation of atoms, which appears absolutely necessary to productiveness. In clay, or in stagnant water, where substances are not exposed to heat and atmospheric agencies, decomposition is slow. Every farmer knows that manures produce much more effect on loam, gravel, or drained clay soils, than on those so retentive as to have water on or near the surface Draining them, and æration, or the exposing the soil to atmospheric action, to the influence of the sun and air by deep ploughing, seems to be the only thing that can be relied on to correct this serious evil.

Instances indeed occur in which the wetness of land is produced by springs, which rising from the earth, spread over it; but in far the greater number of cases, the stagnant water is owing to a retentive subsoil, that prevents the escape of such water as falls upon it. In either case, however, the remedy is the same; and in the language of Morton on Soils, complete and perfect draining is the foundation of all improvement in husbandry, and it should, therefore, be the first step which we take in attempting to improve or ameliorate the soil.

A very large proportion of the lands in this country, are of that class that suffer more or less from the accumulation of water. No person can traverse it in various directions, without being sensible of this fact; and in consequence of such liability to suffer, the land in many districts is cold and poor, as land not freed from stagnant water always must be. The hard pan lands which cover so large a portion of the country, may be named as belonging to this class, though some of these contain more clay than others, and are therefore more shallow and difficult to work than others, where the subsoil, although still too retentive, lies deeper, and is therefore not so injurious as the first kind is well known to be.

Much of this hard pan, when freed from its stagnant water, drained and plowed, will become very fertile and productive; indeed there is no case in which a soil cannot by sufficient labor and expense, be made precisely what is desired. The native earths that go to constitute soils, the clay, sand, and lime, in themselves do not make a soil productive; properly mixed and proportioned they constitute a base for the action of the vegetable and animal manures, and the various salts or stimulating agents, that excite the organs of plants to vigorous action, and enable them to make these secretions from the matter furnished them, to be appropriated to the growth of the plants. Man, then, has only to do what nature in some cases has herself done; that is, so proportion the several ingredients that go to make a productive soil, that the desired result shall be attained. Chemical analysis has here come to the aid of the agriculturist, and shown him precisely the proportion of the earths, and the nature of the ingredients that are necessary to make a soil fertile, and the causes that tend to advance or retard such a consummation. Where water is too abundant, it must be removed by draining; where the soil is too compact, it must be loosened by deep or subsoil ploughing; where the proportion of clay is too great, sand must be added until it is sufficiently friable; if lime is absent, it must be added; if animal or vegetable matter be wanting, it must be supplied; and if the soil is too light and porous, clay will be found a remedy most effectual.

Whatever difference of opinion, therefore, may be entertained of the best methods of freeing land from stagnant water, there can be no reasonable doubt of its propriety or necessity. To the farmer who has lands wet, cold, and difficult to cultivate, we would say, free your soil from all stagnant waters to the depth of eighteen or twenty-four inches; loosen it to that depth, either at once or gradually, and there will be no difficulty, under a judicious course of cultivation, of producing on lands now of little value, all the most important products of agriculture.

STATISTICS OF PAUPERISM.

One of the greatest drawbacks to the prosperity of Great Britain, the load that hangs with more than millstone weight on the necks of her producing classes, is her pauper system; originating in some of the best feelings of the heart, but wrongly directed, and so frightfully abused, as to have become an almost unmitigated curse, instead of a blessing to the community. The true end of all legislation on subsistence, as connected with poverty, should be based on the fact that every one able to labor, is bound by the original law of God, and of society, to support themselves, and that every measure that tends to infringe this rule, whether by encouraging idleness, or by appropriating the labors of the industrious, must, in the end, result in unmixed evil to all concerned. Ill directed aid to the poor, tends to encourage them in their habits of improvidence, and perhaps profligacy; and depresses and discourages the efforts of the honest and industrious. It was Burke, we believe, that said, " every man was as idle or lazy as he could be," or, in other words, that nothing but the dread of want prompted men to exertion. Now, without stopping to inquire as to the extent in which this is true, it is very evident that men very readily acquire the habit of living on the labors of others; that this is soon done without any apparent feelings of reluctance or shame; and that nothing has a more direct tendency to destroy all honorable independence of feeling and conduct in the mass of a people, than to know the idle and improvident are sure of support, without care or labor on their part. This, experience in England, if not in this country, has abundantly proved.

We believe that with many, the influence and example of the foreign vagabonds who, educated and instructed as beggars at home, prowl around our streets, subsisting on charity, and imposing on the credulous, is most destructive and contagious. While we welcome to our shores the poverty-depressed, but honest laborer of Europe, we cannot avoid deeming the multitudes of paupers and profligates poured in upon us, as one of the most serious evils of the day. They not only subsist themselves on the earnings of the frugal and industrious, but by their example, they deprave the morals, and unsettle the habits of many, that had before, by the fear of public opinion, or some remaining sense of shame, been capable, or compelled, to support themselves.

Strange as it may seem to the honest, industrious laborer, whether farmer or mechanic, that the man who is able to dig, should not be ashamed to beg; it is certainly true, that the numbers of those who subsist on the public bounty in this country, has been rapidly increasing, and the tax paid by the man who works, to support the idler and the pauper, has increased in a corresponding ratio. Society is bound to take care of those unable to take care of themselves; those, who by an act of God have been rendered incapable of providing for their own wants; but neither justice or policy, requires any thing more than this. The clearest dictates of human nature, the soundest principles of philosophy and economy, no less than the voice of inspiration, proclaim that labor and bread are to go together; that if a man will not work, neither shall he eat. If you wish to make a man worthless and depraved; if you wish to destroy him in his own estimation and that of others; if you wish to root out the last spark of independence and manly feeling from his bosom, make him a voluntary pauper, and teach him to accept of charity without a blush, and the work is done.

We have been led to these remarks, by an examination of the " Report of the Secretary of State, transmitting abstracts of the returns of the Superintendents of the poor in the several counties of this State, for the year 1839." It is an interesting document, to be read and reflected upon by every friend to his country. England has found her poor rates increased to the fearful sum of forty millions of dollars, annually; and although the past year shows a slight falling off from former years, in the expenses, yet the rapid annual increase, shown in the tables given, proves that the same causes are at work here, as there; and if not timely checked by an improved system of general education, and the inculcation of a spirit of self-reliance and independence, will eventually produce the same bitter fruits. We may add that the examination of the poor-house and pauper returns, as well as those of the prisons of the State, demonstrates that nine-tenths of the pauperism, degradation, and crime of the country, is owing to intemperance, to the unrestricted use of ardent spirits.

We add a few of the general results, as shown in the report.

"The whole number of paupers relieved and supported during the year ending 1st December, 1839, was 48,713. Of these, the county paupers were 45,899; and the town paupers, 2,814."

Of these, the number supported in the city of New-York was 22,778.

Of the persons who received relief in 1839, there were,

Foreigners,	7,607
Lunatics,	880
Idiots,	265
Mutes,	48

The number of lunatics reported in 1839, was 586, thus showing an increase of nearly 300. To what shall this be attributed? In France, the first year of the revolution nearly doubled the numbers in the insane hospitals of Paris; and cannot part of this addition here be a natural result of the " state of the times."

The following table, prepared from two given in the report, will show the average annual expense of supporting each pauper; and also the whole expense for each of the years named.

1830	$37 03,	in 44 counties,	$216,535 00
1831	33 28,	" 54 "	245,233 21
1832	32 41,	" 51 "	267,767 80
1833	32 21,	"all the counties,	295,239 13
1834	30 78,		304,913 21
1835	32 72,		323,841 12
1836	32 53,		396,100 05
1837	37 06,		495,095 71
1838	34 03,		570,669 83
1839	34 73,		566,484 83

We invite attention to the annual increase of the whole state expenses for supporting paupers, and ask, how long it would take at this rate to bring up our poor rates for our population, as high as those of Great Britain for hers?

We give entire the last paragraph of the report, as deserving the attentive consideration of all. The subject comes home to the bosoms and business of all:

> "The amount of taxes raised in all the counties of the state for the support of schools, is $275,000, and by districts voluntarily, $5,875, making a total of $280,875, less than one-half the amount raised for the support of the poor. While there is no disposition to diminish in the least the force of that sympathy which would provide for the destitute and afflicted; yet such a fact as the one stated, is calculated to induce a desire for unceasing vigilance over this branch of expenditure, for the purpose of ensuring economy and fidelity in its administration."

The Subsoil Plow in the United States.

The enterprising proprietors of one of the Boston agricultural implement and seed stores, Messrs. Ellis & Bosson, have, at an expense of some 70 or 80 dollars, introduced one of Smith's subsoil plows; and an experiment to test its use in our soils, was made a few weeks since at Chelsea. The whole length of the plow, including beam and handles, is 15 feet; depth from bottom of beam, 19 inches; so that the depth of furrow can be from 16 to 18 inches. As it is only intended for loosening the soil, it has no mold board; while the small stones are lifted to the surface and thrown out by the action of the plow. In the spot selected for the experiment, the ground was not of the most favorable kind, being very stony; yet the plow worked well, going to the beam where the stones permitted; and some stones weighing several hundred pounds, that were completely buried in the earth, were raised to the surface. The power of the team we have not seen stated; but in England, from 4 to 8 horses are required; the number depending on the nature of the soil. We hail the introduction of the subsoil plow, as a means of improving our heavy, wet soils, second only to draining, and a most useful auxiliary in such operations. No one who has paid attention to the roots of plants, doubts that they would run much deeper than they usually do, were the nature of the soil such as to admit it, and it is also clear that the vigor and productiveness of plants is in a great degree depending on the extent of their pasturage, or soil from which their nourishment is drawn. We trust the effects in this case will be such as to justify their adoption in all cases where the texture of the soil requires their use.

STEAM PLOW

The steam plow is about being introduced into the sugar lands of British Guiana, and several are building in England for that purpose. The engine is placed on board a boat or scow, and five or six plows are moved backwards and forwards with the greatest rapidity and precision. The sugar lands of that country are divided by canals, for draining or irrigation, and thus the difficulty of moving the engine, which has hitherto been a serious one, is obviated. English plows and plowmen, were taken to the West Indies some years since, but both horses and men sunk under the burning heat, and the experiment was a failure. It is expected that the steam engine will supersede a great amount of severe peasant or slave labor, and bring large tracts under cultivation that have hitherto for the want of hands, lain idle or unproductive. Could not the plantations that line the Mississippi, and other southern rivers be worked in the same way, the boats with the engine moored in the stream, and moved as required? If practicable, the amount of product could doubtless be much increased.

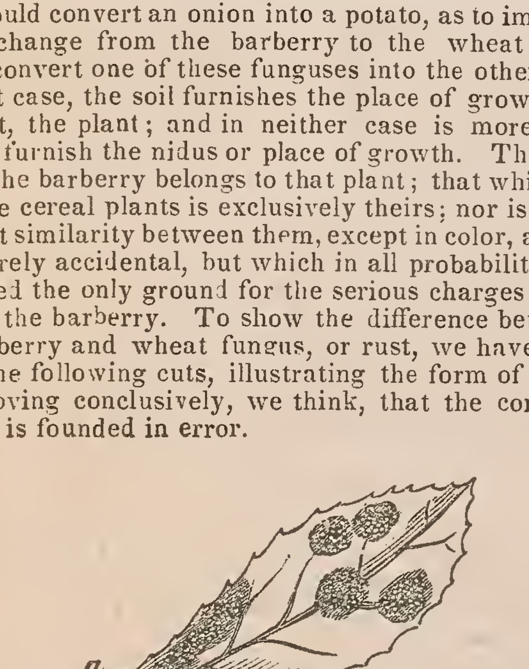
INQUIRY—BARBERRY BUSH.

A correspondent at Skaneateles requests our opinion on the subject of the injury which the barberry is supposed to produce on wheat, and whether the belief in such injury is well founded.

We are aware that on this subject, the belief is very general, that the barberry bush does produce blight in wheat, and it is also plain, that this is one of the cases in which the sense or opinion of the multitude is directly at variance with the deductions of philosophy. That wheat will rust or blight is certain; that the cause is the barberry, we do not believe. There has never yet been the least connexion pointed out between the assumed cause, and the effect produced; until this is done, we must be permitted to doubt. Wheat sometimes blasts in the vicinity of such bushes, and sometimes it does not; that the same results ensue where bushes do not exist, is also certain.

If the barberry bush injures wheat, it must do it by shading it, by preventing the circulation of air, by giving out some noxious gas, or by throwing off some substance which produces disease or blight in the grain. In shading, or in preventing the circulation of air, the barberry can be no worse than any other shrub; that it gives out a noxious gas has never been proved, but it is at times infested on its leaves with rust, and this rust or fungus, it is contended, is scattered by the winds, and becomes the parent of the wheat rust.

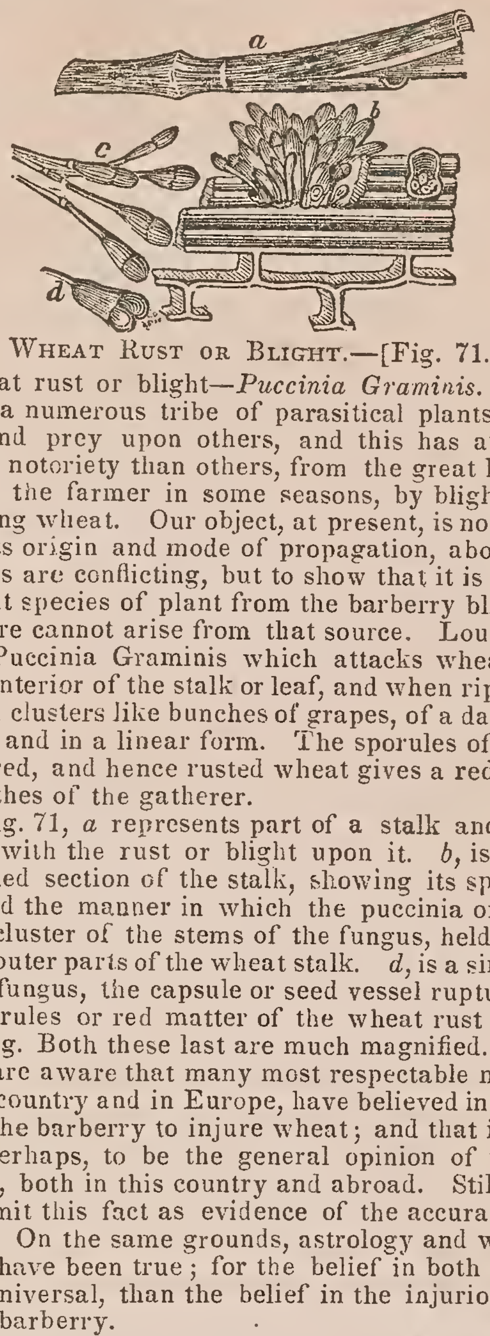
Now if the fungus which infests wheat, and causes its blight, were the same as that which appears on the barberry, there would be much plausibility in the argument that the first was caused by the last. It happens, however, that they are really distinct in their characters, as much so as any other two plants; and it would be just as absurd to suppose that a difference in the soil would convert an onion into a potato, as to imagine that a change from the barberry to the wheat plant would convert one of these funguses into the other. In the first case, the soil furnishes the place of growth; in the last, the plant; and in neither case is more done than to furnish the nidus or place of growth. The fungus of the barberry belongs to that plant; that which infests the cereal plants is exclusively theirs; nor is there the least similarity between them, except in color, a likeness purely accidental, but which in all probability has furnished the only ground for the serious charges made against the barberry. To show the difference between the barberry and wheat fungus, or rust, we have procured the following cuts, illustrating the form of each, and proving conclusively, we think, that the common opinion is founded in error.



Barberry Blight.—[Fig. 70.]

Barberry blight—*Æcidium Barberidis*, (Fig. 70.)—The bright orange powder that collects upon the leaves and flowers of the common barberry, consist of the sporules or minute seeds of this species, that are discharged from thousands of little tubular apertures that spread in patches over all the tender parts of the surface. These apertures are the open ends of the peridia in a state of maturity, and are bordered at first by a ragged toothed membrane, which finally falls away. Among all the many beautiful objects that are to be met with in the lower and more imperfect tribes of plants, there are few more deserving of attention than this, connected as it is, by popular superstition, with one of the most destructive diseases of grain.

a, (Fig. 70,) shows a leaf of the barberry with the red fungus or rust upon it, as it appears to the naked eye. It is in patches, while that on wheat is linear. *b*, is a highly magnified section of the peridia, showing the cup-like forms from which the seeds or sporules have been ejected, the margins showing the ruptured envelope or covering. *c*, exhibits a congeries of the sporules or red powder, also highly magnified.



Wheat Rust or Blight.—[Fig. 71.]

Wheat rust or blight—*Puccinia Graminis.* This is one of a numerous tribe of parasitical plants that attack and prey upon others, and this has attained a greater notoriety than others, from the great loss it occasions the farmer in some seasons, by blighting and shrinking wheat. Our object, at present, is not to enter upon its origin and mode of propagation, about which opinions are conflicting, but to show that it is an entire different species of plant from the barberry blight, and therefore cannot arise from that source. Loudon says, "The Puccinia Graminis which attacks wheat, forms in the interior of the stalk or leaf, and when ripe, bursts forth in clusters like bunches of grapes, of a dark brown color," and in a linear form. The sporules of this fungus is red, and hence rusted wheat gives a red color to the clothes of the gatherer.

In Fig. 71, *a* represents part of a stalk and leaf of wheat, with the rust or blight upon it. *b*, is a highly magnified section of the stalk, showing its spongy nature and the manner in which the puccinia originates. *c*, is a cluster of the stems of the fungus, held together by the outer parts of the wheat stalk. *d*, is a single head of the fungus, the capsule or seed vessel ruptured, and the sporules or red matter of the wheat rust or blight escaping. Both these last are much magnified.

We are aware that many most respectable men, both in this country and in Europe, have believed in the powers of the barberry to injure wheat; and that it may be said, perhaps, to be the general opinion of the uninformed, both in this country and abroad. Still we cannot admit this fact as evidence of the accuracy of the belief. On the same grounds, astrology and witchcraft would have been true; for the belief in both has been more universal, than the belief in the injurious effects of the barberry.

In presenting our opinions, we do not pretend to infallibility; and as the bush, though valuable for its fruit, can be dispensed with without any serious loss to the community, it would be hardly advisable in any such case to hazard the good feelings of a neighborhood, by persisting in growing or preserving an obnoxious plant or tree. Believing as we do, that the opinion respecting the barberry, is one of the popular errors existing among farmers and others, we shall be glad to see it superseded by a more rational and philosophical conclusion; one more in accordance with the simple, beautiful, and invariable laws of nature

Hints about Horses, to 'The Cultivator.'

"The Cultivator,—a consolidation of Buel's Cultivator and the Genesee Farmer,"—is the name of a deservedly popular monthly production in the city of Albany; devoted to the agricultural interests generally. 'The Cultivator' was projected, and up to the time of his decease, was edited by the late lamented Judge Buel; since his death its interests have been consolidated with those of the 'Genesee Farmer,' a periodical of the same general character, which for many years was conducted with signal ability by Luther Tucker, Esq. of Rochester. The Cultivator and Farmer, is now published monthly, in Albany, at one dollar per annum, and Mr. Tucker is still associated with its editorial conduct, in company with Willis Gaylord, Esq. An examination of the last half dozen numbers, has convinced us, that no publication of its class on either side of the Atlantic, is superior to it—a fact which is pretty well demonstrated, by its extensive circulation, now over 19,000. The useful character of the work, may be gathered from the contents of the last number, which may be found in our advertising columns.

As the editors have the assurance of our regard and good wishes, they will pardon the liberty we take in making the suggestion, that they devote a little more space—only a trifle—to the interests *of breeders of horses.* Those of this state, and indeed of New-Jersey and New-England, have a high reputation to sustain; and while the interests of those engaged in improving the breed of cattle, sheep and hogs, are not by any means neglected, we should like to see the *nobler* animal cared for, and those who are so honorably engaged in bringing a better stock into use. Mr. Youatt's monthly Journal of Veterinary Science, published in London, and so favorably known as the 'Veterinarian,' contains a vast amount of valuable information, which might be transferred with great advantage to the columns of the Cultivator, and to those of our agricultural publications generally. To breeders of cattle and sheep, as well as of horses, selections from the Veterinarian, would be eminently useful and interesting. We have to add that the addition now diffidently suggested, will place 'The Cultivator' quite at the head of its class. Its conductors should bear in mind, that fifteen years ago, thousands of dollars would have been wagered, that no horse in the world could trot a mile within three minutes; as many would be laid now, that it could be done in two minutes, twenty-eight seconds. Ten years ago, to drive a horse seventy miles between sun and sun, would have been deemed a great performance; but since strains of the blood of old Messenger have been introduced into our road stock, at the north, hundreds of horses can be found that can travel from eighty to ninety miles without distress. In our paper of this day is a report of the performance of a horse in Boston that, without being trained, was driven one hundred and three miles between sunrise and sunset, over a hilly road, before a carriage, which, with the rider, weighed 470 lbs.

The acknowledged superiority of northern carriage and draught stock is owing almost entirely to the fact, that thorough bred horses have found their way north and east from Long Island and N. Jersey, where great numbers are annually disposed of, that are unsuited to the course. The use of thorough, and half-bred horses, for domestic purposes, is becoming so common in England, that in a few years, no other will be used for the road. The half-bred horse is not only much handsomer, but his speed and powers of endurance are infinitely greater. His head and neck are light and graceful, his limbs fine, his coat glossy and soft as satin, while his action is spirited, and his courage and stamina sufficient to carry him through a long journey without his falling off in condition, or to undergo an extraordinary trial of speed and game, without distress. The ordinary cocktail, is in most instances, a mere brute, that in traveling, sinks daily in strength, losing his appetite, and of course, his flesh and action, so that at the termination of a ten day's journey, he is nearly knocked up; he can travel but about forty miles per day, and requires the whole day to perform this distance. An eminent southern turfman, well known the country over, *recovers* his horses on a journey; they are all from the north, and have a dash of *blood* in their veins; after driving them hard about his plantation in the spring, until they begin to look thin and rough, he starts on his annual journey, and by the time he reaches the Virginia Springs, his horses are literally as fine as silk, with fine coats, great spirit and in good condition for fast work. In traveling, he starts early and drives at the rate of eight or nine miles the hour, until 10 o'clock, when his horses are taken out, rubbed dry, watered and fed. In the cool of the day, they are again harnessed, as fresh as if they had not traveled a mile. In this way, he accomplishes a long journey, traveling between fifty and sixty miles a day, without fatigue to himself, or injury to his horses. The slow-going, no-giving sort of style in which horses are jogged along at a snail's pace all day, under a hot sun, knocks them up in a short time; they would neither tire nor lose flesh in double the time, if driven sharply a few hours in the morning and evening, allowing them to rest in the middle of the day. It is *the all day work* that knocks up horses, not the pace; and we make no doubt, that in the course of twenty years, there will be very few who will refuse to acknowledge the truth of Fanny Kemble's remark, that '*nothing but the thorough-bred does it quite well.*'

Our friends of "The Cultivator" may not be aware of the vast amount invested in thorough-bred horses at this moment in the United States, or of the prices some of fashionable blood command. We can point them to two 5 year old horses for which $20,000 each, has been refused—to brood mares that will command $5,000 each at auction—to a colt six months old, for which $4,000 has been refused. Among the popular stallions we have advertised this season, three stand at $150 each, fourteen at $100, twelve at $75, eleven at $60, and twenty-three at $50. Probably not less than *six thousand thorough-bred mares*, and as many more that are full or three quarters bred, will be stinted this season to horses that are standing at from $35 to $150. As not above 2000 out of the whole number foaled next season, will probably come upon the turf, it is clearly to be seen that a vast number of 'terribly high bred cattle,' must be used for ordinary purposes. Of these, the colts of good form, that have plenty of bone and substance, will of course, oust the common tackies and cider-suckers that infest country taverns, while the others will be used for the saddle and the road. The result will be, that in a few years, the stock now in use will be supplanted by horses of superior action, wind, and courage, whose greater beauty will not be more apparent than their better style of going, and their unequaled powers of endurance. Under these circumstances, if our friends of 'The Cultivator' will give their 19,000 subscribers, a hint now and then, with regard to the selection of stock, the best methods of rearing foals, and the treatment of mares and colts, we are confident they will add an interesting feature of great practical utility to a publication, which already commends itself to the behoof and good wishes of the community at large.—[*New-York Spirit of the Times.*

Our readers will doubtless pardon us the insertion of the few remarks of a somewhat flattering character, contained in the foregoing article from the Times, in consideration of the valuable information embraced in the same. We may here say, that we have not overlooked the horse, in our endeavors to convey useful information to our readers respecting the breeding and improving of animals, and standing as it does, at the head of domesticated animals, we hail with pleasure any improvement which promises a better race of horses than those which, too generally in our country, are a mere caricature of the noble beast. Our duty and our inclination, however, prompt us to pay more attention to those breeds and varieties adapted to agriculture and the road, than to those calculated for the turf alone. That for both these purposes, horses of a better kind may be introduced by crosses of the fine limbed, hardy constitutioned and beautiful thorough-bred, with those possessing the bone and substance necessary to give the weight and firmness required in the draft horse, whether the labor is to be performed on the road or the farm, we do not doubt. For the farm, the thorough bred horse would be comparatively worthless; he lacks weight and substance to give value and power for draft; for road work, the same objections will apply, though not perhaps to the same extent. The best English road horse is a cross of the thorough bred and the Cleveland, and a cross of the same horse with the thick, heavy Suffolk, has given a most valuable farm horse. It is not to be expected, that the proper degrees of blood, activity, power of endurance, weight and docility, so essential to the horse of the farmer, or for the road, can be obtained at once; but from what we almost daily witness, of the good effects that have resulted already from the comparatively little attention the improvement of horses for labor has received, we can have no doubt that a field is here open for effectually benefiting the community at large more extensive than can be found almost any where else. We can assure our friend of the "Times," that we shall not be indifferent or idle spectators of the efforts to facilitate and promote a consummation so much to be desired.

PEAS.

"Gentlemen—I have read with interest in your April number, an article on the culture of the pea, which was full and complete, with the exception of the omission of the usual time of harvesting the crop. As we cannot sow ruta baga in this region till the first week in July, I do not know a better preparatory crop than peas, if we can get a kind that will ripen by the last week in June. Will you please reply, and oblige yours, WM. BOWKER.

"*Shrewsbury, N. J. June* 26, 1840."

No time can be stated with precision for the harvesting of the pea, as that is depending on the position where it is grown, and the variety cultivated. The Washington, Charlton, and Warwick, are among the earliest peas in any degree suitable for field culture, but great crops cannot be reasonably expected from any of them. Still, as a preparatory crop, one to which manure may be applied directly with advantage, the pea deserves a trial, and should it succeed, a great point would be gained. The Early Washington is in most general use, and perhaps ripens as soon as any other, and Mr. Bowker can easily determine by experiment, whether in his situation, it will come to maturity early enough to be taken from the ground by the time specicified. We think it will.

CULTIVATION OF THE PINE.

"J. M. of Farmington, Illinois, wishes to know the best method of growing the white pine from the seed, and whether it will succeed on the rich prairies of the west."

The seeds of the pine should be sown as early as March or April, in a light soil, mostly composed of sandy, or silicious matter. The seed should not be taken from the cones until the time of sowing arrives, as their power of germination is diminished by such separation for any considerable time before they are put in the earth. They can be transplanted from the nursery at any time, always remembering that June, or in some cases, July, is better than an earlier month for removal.

All the fir and the pine tribes, flourish best on a sandy, gravely, and somewhat barren soil, as soils so constituted naturally are. The pine is rarely found on our rich, alluvial river bottoms; but on what are called the second banks, it is found to flourish well. We have never seen an analysis of the soil in the western prairies, but it is probable that the driest of these contains sufficient sand to grow this tree well. The pine of the Columbia river, *Pinus Douglisii*, could the seed be obtained, might succeed better on the western prairies, than the white pine; and it is a tree of most magnificent growth. We imagine, however, that the chestnut, oak, and locust, will be found the most profitable timber trees for cultivation, as their wood is perhaps of equal value, and their growth more rapid and certain.

SOWING CLOVER.

"A Subscriber," at Fort Gratiot, wishes to know if sowing clover with winter rye or wheat, will succeed as well on a sandy soil, as if sown in the spring; what quantity of seed per acre should be used, and the best mode of tillage.

Clover seeds are rarely sown with autumn crops in this country; the severity of the winter, except in favored situations, destroying the young plant. The better way is, to sow it with spring crops, such as oats, barley, or spring wheat, or on winter wheat, as early as the spring will admit. When sown in the spring on winter wheat, its germination is greatly facilitated by going over the field after the seed is sown, with a light harrow or roller. There need be no fear that the wheat will be injured from this process. Spring harrowing wheat is extensively practiced in Germany, and is found of decided benefit. Sandy soils, when to be sown with clover, should have a deep plowing, that the young roots may by penetrating to a good depth escape the danger of a drouth.

The quantity of seed sown varies much in different countries, and the purpose to which the crop is to be applied. In Belgium, the usual quantity is six lbs. to the acre, but the soil is in such fine tilth, that almost every seed germinates. In this country, from five to ten lbs. are used, but owing to our imperfect culture, it is found that the quantity of seed is too small, more frequently than it is too large. The English use more seed than most other people, allowing from ten to sixteen lbs. the average perhaps thirteen or fourteen. An annual top dressing of plaster, lime, or ashes, plaster being best, given in the spring of the year, is all that clover requires. Where lands are intended for permanent meadows, or pasture, other grass seeds, such as red top, timothy, orchard grass, meadow fox tail, white clover, &c. &c. in order to ensure a proper supply of roots and herbage, should be mixed with the clover seed. One of the best selections for sandy land, is the red and white clovers, with the tall oat and orchard grasses. It is in a course of rotation with wheat, however, that the good qualities of clover are most conspicuous. For this purpose, no other seeds than the red clover should be sown, and this, plastered and fed off upon the ground by sheep, is one of the most ameliorating crops cultivated.

Planting Chestnuts—Flowers for Bees.

"Wm. Prine asks to be informed of the best time and manner of planting chestnut for fencing timber. Also, what kinds of shrubs and flowers it will be proper to cultivate for bees."

Michaux in his North American Sylva, vol. iii. gives the following directions for the culture of the chestnut:

> "After the ground has been carefully loosened with the plow and harrow, lines are drawn six feet apart, in which holes about a foot in depth and diameter, are formed, at the distances of four feet. A chestnut is placed in each corner of the hole, and covered with about three inches of earth. As the soil has been thoroughly subdued, the nuts will spring and strike root with facility. Early in the second year, three of the young plants are removed from each hole, and only the most thriving is left. The third or fourth year, when the branches begin to interfere with each other, every second tree is suppressed. To ensure its success, the plantation should be begun in March or April, with nuts that have been kept in the cellar during the winter, in sand or vegetable mold, and that have already began to germinate."

Mr. Hopkins of Cayuga county, made some experiments in planting chestnuts. In his first attempt, he kept the nuts till the setting in of winter, or December, when he planted them four feet apart every way, and not one of them grew. The next year he procured a quantity of nuts as soon as gathered, planted them immediately, and covered them superficially with leaves and light earth, at the same distance as before. Most of them came up and grew well. There can be no doubt, where the ground is so situated as to be free from the attacks of squirrels, mice, &c., that immediate planting after the nuts are gathered is the best mode, otherwise the plan of Michaux may be preferred. The best soil is a clay loam.

As to flowers and shrubs for bees, we know of none, the cultivation of which for this purpose alone, would be an object. Few of the cultivated flowers are frequented by bees, and neither such flowers or shrubs could be cultivated to an extent sufficient to produce much effect on the apiary. Farmers sometimes find a profit in growing buckwheat for both seeds and honey; but such honey is not of the finest quality. White clover is the best plant for the bee, and the farmer whose fields are covered with this rich herbage will want nothing better for his bees or his cows.

PITTS' THRASHER AND SEPARATOR.

At our request, Mr. Pitts has furnished us with the engraving and description of his thrasher and separator, published in another part of this paper. We witnessed the operation of this machine last week, at the barn of Mr. Bennett in Watervliet, and its performance equaled our expectations. It is a great saving of labor over the ordinary thrashing machines, the operations of thrashing and cleaning being performed at the same time. The bundles are fed to the machine at one end, and the clean seed, without a kernel being scattered, taken from the other. It has, wherever it has been put in operation, been received with the highest approbation, and was considered by the late Judge Buel, as the best adapted for its purpose, of any machine he had ever seen. It was at his suggestion that Mr. Pitts removed to this city, for the purpose of manufacturing his machines, Albany being, from its water communication to every part, one of the best locations for such a branch of manufactures. We commend it to the attention and examination of our grain-growing farmers. Mr. Pitts informs us, that he intends soon to take a number of his machines into the western part of this state, where he will have an opportunity to test its merits with the numerous machines there in use, and he is confident that every examination and fair trial will increase the reputation of his machine.

THE CURCULIO.

We learn from several parts of the country, that this insect so injurious to some kinds of fruit, has proved uncommonly destructive to the morello cherries, so much so that in some districts where they are usualy produced in abundance, few or none have been grown. The best remedy for this evil we have ever known, next to the destruction of the insect by repeated jarrings of the trees, which cause it to fall upon cloths spread below, (and this is a tedious process where many are to be operated upon) is to allow hogs to range in the orchard where they are planted, which will eat the imperfect fruit as fast as it falls, or should the worm leave the fruit on the tree and fall to the earth, will most likely be trampled to death before it can penetrate the hardened soil. We have a fine Mayduke, planted in a corner of a lot in which pigs usually run, and from its position, they frequently receive their food under it, and always near it. This tree uniformly produces large fine fruit, never troubled by the curculio; while some other trees of the same variety, but not so protected, not unfrequently have their fruit much injured or wholly destroyed.

It is well known, that the common wild or black cherry is never infested with the curculio. We have some trees of this variety that bear abundantly, yet we have never known them attacked by this insect. Is it not probable there is something about the tree offensive to these depredators, and if so, would it not be good policy to plant a few of them with those trees, the fruit of which is most liable to suffer from their habits. We have seen something like this suggestion in a southern journal, and think it worthy the notice of the fruit grower. Only one serious objection occurs to its adoption, and that is the liability of the black cherry to be infested by the caterpillar. This difficulty might be obviated, however, by timely precaution, in destroying the colonies as soon as they began to spin their web, which causes them to be easily discovered.

NEW VARIETY OF BARLEY.

In 1836, a small farmer near Blandford in England, found at one corner of his garden plot, a tuft of some sort of grain, consisting of some 30 or 40 stalks, which ripened early in the summer, (June) and proved to be a very fine variety of barley, containing on an average 40 grains in each ear. The root was suffered to remain, from which, in the same year, he cut two more crops equally good; and he has continued to cultivate it with equal and uniform success. As he was ignorant of the way in which the seed came in the garden, it has been called "Providence barley," by which name it is now known. Its cultivation has spread rapidly, and two crops are usually gathered from one sowing, which should be early, (February or March.) The berry is of superior size and quality, and the yield is from 40 to 50 bushels per acre.

Such, in substance, is the account given of this grain, in the London Farmer's Magazine; and we notice it, not so much for the sake of calling attention to this barley, as to the importance of paying more attention to the introducing new and improved grains, and the ease with which it might be effected, if farmers would pay more notice to any new or fine roots or stalks of grain that may appear in their fields. The example of Le Conteur in producing many new and valuable kinds of wheat, and the late introduction of the Chevalier and Providence barley, not to mention the several new and superior varieties of corn, which American farmers have grown, proves satisfactorily the ease with which it can be accomplished, and the good results that would ensue.

English Opinion of our Present Embarrassments.

In the monthly numbers of the London Farmer's Magazine, are papers prepared with great care and skill, giving the best views to be obtained of the state of the grain crops, markets, &c. throughout the world; as well as a statement of the results which failures or excess of the same, produce on the commercial or financial interests of Europe and America. In following out the evils traceable to the short English crops of 1838–39, the writer uses the following language, the justness of which will be disputed by few:

> "In addition to these direct evils of a deficient supply of food, the lessened consumption of raw material of foreign growth, particularly cotton, has deeply embarrassed the American market; more especially at the moment when her cotton hung heavy on our market, she was borrowing British capital on a large scale, to carry on her gigantic undertakings. Failing to *realize* for her produce, and her stock becoming unsaleable from the tightness of the money markets, remittances of specie became necessary to meet short engagements, and also to cover importations from England. This could not last long without exhausting the American banks, and hence nearly all of them connected with the cotton trade stopped specie payment. Allowing, liberally, for the imprudence of the American system of banking, and especially for the *operation of the absurd attempt to prop up the price of cotton in the face of a natural dimunition of demand*, we still think the embarrassments in America are mainly attributable to the great falling off in the consumption of her produce in this country, consequent on our diminished harvests and dear food,—stopping the customary mode and amount of exchange with us, cutting off the means of borrowing capital for permanent investment, and putting a stop to the usual banking accommodations, by exposing the banks to the hazard of paying away the last ounce of gold and silver bullion to meet the unusual, extraordinary crisis of a heavy balance due to this country. * * * * We repeat the opinion previously expressed, that real and substantial amendment here, must precede similar amendment in the States, though we cannot and do not deny, that our condition will be materially alleviated by the restoration of confidence in America. We are glad, therefore, to see any symptom of improvement there, though we cannot but feel *that a trying period of no short duration, lies before the American community*."

The world is in a fair way to be driven into an appreciation of the importance of agriculture, and the great truth will yet be understood, that to the labor of the husbandman, to the production of actual wealth from the soil, more than to all the transmutations and changes such wealth may afterwards undergo, is national prosperity owing. The interests of the world are identified; it is only when these interests are disarranged by ignorance or cupidity, that general distress ensues.

Importation of Stock.—The American Farmer publishes a catalogue and the pedigrees of a list of horses, short horn cattle, sheep and hogs, imported by Messrs. H. Shepherd, of Shepherdstown, Va. and R. D. Shepherd, of New-Orleans. The horses consist of three colts, one of which cost $3,000—the other two, about $2,500 each; the cattle, of 12 heifers and one cow, all of the best Herd Book stock; the sheep, of four rams and eight ewes of the Leicester breed; the hogs, of one Berkshire boar, and five Berkshire sows, and two sows and a boar of the Suffolk breed. The cattle are said to have averaged $500 a piece in England.

WORK FOR THE MONTH.

Saving Seeds.

Every farmer should endeavor to save such seeds as he may want, selecting from the best and most productive plants. There is scarcely an article cultivated by the farmer or the gardener, that may not be improved by selection and care. Plants, the varieties of which are liable to intermix, when intended for seed, should be planted at such distances from each other, that the pollen of their flowers cannot intermix. Beets, cabbages, turneps, squashes, melons, and even corn, should be planted at a distance from other varieties of the same plant, if pure seed would be had. Seeds keep well, by simply cutting them when sufficiently ripe, hanging them up in a dry place, until thoroughly dried, or until wanted. Herbs too should be saved, as more or less of them are wanted in every family for culinary or medicinal purposes. There are many who might, were it not for their negligence, secure an abundant supply of good seeds, and pot or sweet herbs, that when such things are wanted are obliged to rely on the greater forethought and charity of their neighbors.

Plowing Heavy Land.

Land that is heavy or tenacious should never be plowed when wet, and those who are summer fallowing fields of this stamp, should be cautious in working it when there is sufficient moisture present to render it adhesive. A disadvantage in two ways results from plowing such land when too wet; it not only breaks such land into large lumps, but the pressure of moving renders it so compact that they do not crumble readily or quickly, and the roots of plants find little nutriment among such masses; and the action of the plow in passing through a soil so conditioned, presses and smooths the bottom of the furrow in such a way, that when dry, an artificial hardpan is produced, only to be removed by the action of frost, or by still deeper plowing in a dry season. We have before us a pregnant instance of the bad effects of plowing heavy land when too wet. A field of three or four acres intended for corn and potatoes, of heavy, but rich land, and which has uniformly grown fine crops, owing to peculiar circumstances, could not be seeded or planted until so late in the season that further delay was not admissible, and the last plowing, striking out, and planting, was performed when the ground was saturated with moisture, and in a very unfavorable state. Dry weather followed, and the moved earth adhered in large lumps, hard as dried brick, but many of them much larger. The corn in some instances was unable to force its way through the dried crust covering the hills; and as the masses in such cases do not crumble readily, at hoeing there was not pulverized earth enough to place around the plants, and it will readily be conceived, that the air will circulate rather more freely than is consistent with vegetation, through a hill of potatoes or corn constructed of such coarse materials. Never have we before seen, what English writers call a locking up of the nutritive powers of the soil, effected so completely as in the present instance, and it now appears clear that former friability will not be restored, until the earth is submitted to the action of frost.

Destroying Weeds.

It cannot be denied by any one, that those pests of good farming, noxious weeds, have increased, and are increasing, at a most frightful rate in nearly every section of our country. Insignificant in their appearance or results at first, the farmer treats them with contempt, but before he is aware, they have obtained a hold on the soil, which enables the intruders to set him at defiance. The only safe course with weeds is to meet them early in the field, and allow them no rest until the extirpation is complete. Where plants are propagated only by seeds, as charlock, stein krout, &c. they can be eradicated more easily, than when they are propagated both by seeds and roots, as johnswort, Canada thistle, elder, &c. If the seed of the first is not allowed to ripen, the danger is past, and consequently careful pulling will destroy weeds of this class; but where the roots retain their vitality, or in other words the plant is perennial, the labor of extirpation is much increased. In the Genesee country the stein krout has become so prevalent in the wheat fields, that comparatively little precaution is used against it, and as large quantities of wheat are annually distributed from that section of the state to others for seed, the spread of that weed is of corresponding extent. So with the Canada thistle, that prince of noxious plants; it has become so extensively spread over most of the northern states, that enormous as the evils caused by its presence on a farm are, it excites little attention, and mixed with clover, timothy, or other grass seeds, is rapidly extending itself to districts and states hitherto exempt. As a first and important step. every farmer should resolve that no consideration shall induce him, to allow any foul stuff to perfect its seeds on his farm. Were this generally or universally done. the most effective cause of increase would be arrested at once. It is nothing less then suicidal to the prospects of a farmer, and inflicting great evils on those around him, to allow such plants as the thistle, johnswort, stein krout, charlock, sweet elder, everlasting, daisy, &c. &c. to ripen their seeds, and propagate unmolested on his premises. Weeds then that cannot be pulled should be mown, cut or beat down, in such a way that no seed can possibly ripen, and it should also be remembered, that all mutilation or injury done to the leaves or stems of a plant, have an effect in retarding the vigor or spread of the roots, and not unfrequently cause their destruction.

Aftermath or Rowen.

It has been questioned by some, whether it is not better to allow the grass that springs up after mowing to remain to perish, or protect the roots in winter, than to cut it for use as hay. The latter practice it is clear would exhaust the plant less than the first; but this second cutting makes such an excellent food for calves, colts, lambs, &c. that it is probable the custom of mowing for rowen will still be continued by many farmers. Where this mowing takes place, or where the grass is feed off by cattle, experience proves it to be a good plan to manure such meadows with well rotted manures, or compost, soon after mowing, and go over it with a brush or other light harrow; or if such an implement is at hand, a spiked roller will be found very useful for loosening the earth and preventing the increase of mosses, coarse grass, &c. Meadows, in which the valuable grasses are what is called running out, may be restored by scattering the seeds of the plants wished, with the compost and dragging them in at the same time. There need be no danger apprehended from this occasional scarification of the surface of a meadow; no good roots will be injured, and the mosses that bind down the roots, and prevent strong vegetation in the grasses, are displaced and their growth checked.

Budding or Inoculating.

August is the month for this operation, and the lovers of good fruit should not let it pass without improving the time for adding to their stocks of select fruit, or extending and multiplying those already possessed. Ample directions for the different processes of budding have been given in the former volumes of the Cultivator, and where good buds can be obtained, and the bark of the tree to be inoculated starts freely, the process is so simple, and the growth so certain, as to recommend the practice to all. Where grafting has been neglected, budding comes in as a valuable substitute, and can be adopted in some cases where the first can with difficulty be performed.

Ashes for Turneps.

A great object is gained by bringing turneps forward as rapidly as possible after they come up, as the principal danger of destruction or failure is before the rough leaf is put forth. In England, bone dust is usually drilled in with the seed, to hasten the early growth; here bone dust is comparatively rare, but a mixture of soot and ashes, or ashes alone, is found to be a very good application, particularly for the common turnep, and may be sown upon them broad cast, or scattered over the rows by hand. It will hasten their growth, prove a partial protection against insects, and improve the size and goodness of the roots.

VALUABLE RECIPES.

For Scours or Dysentery in Horses.

One fourth of an ounce of gum gamboge, half an ounce of aloes; half an ounce of saltpetre; reduce all to a fine powder; add flour and water till it makes a thick dough or paste. Divide it into four pills; give one pill every night and morning. Give the horse half an ounce of ipecacuanha, dissolved in about two quarts of hot water, by adding half a pint of this solution into a pail of water for him to drink every four hours. When the fever has abated, take a quart of oak bark, pour two quarts of hot water upon it, and let it stand till cool. Give the horse a pint of this bark tea in a pail of water, and let the horse drink of it freely.

R. M. W.

Another.—Take a table spoonful of saleratus, reduce it to a powder, and give it to the horse in a pint of new milk. Repeat the dose if necessary. This remedy has proved effectual in some severe cases. C. W.

Another.—Put into a junk bottle one pint of good gin, and one ounce of indigo; shake well together, and turn it down the horse. It will usually effect a cure in a very short time. A. H. H.

Another.—Mr. Robinson of Lake C. H. Indiana, states that the bark of the sweet gum, or liquid amber tree, of the west, is a certain remedy for the dysentery, in man or beast, and that in a multitude of cases, he has never known it fail.

Horn Distemper.

Spirits of turpentine rubbed in around the base of the horns, when the disease is in its incipient stages, will usually arrest its progress, and effect a cure. If it has so far advanced as essentially to lower the temperature of the horns, or horn, (for sometimes only one is attacked,) boring with a large nail gimblet on the under side of the horn, three or four inches from the head, will be necessary. If the horn is found very hollow at this place, another opening still nearer the head, may be necessary. The horns must be kept open, that the matter may freely escape; and they should be thoroughly syringed or washed out, twice or three times a day. Salt and water, or soap suds, is good for this. Allowing the matter in the horn to escape, relieves the distress of the animal, checks the inflammation about the head, and unless delayed too long, effects a cure.

Sore Backs, or Galls in Horses.

Rub white lead in sweet oil until a good paint is made, and apply a coating of this to the injured place. Milk will do, where the oil is not to be had. It is one of the effective applications. Some for the same difficulty use a solution of vitriol in water, for a wash; but in most cases, the white lead is to be preferred.

Roup, or Gapes in Poultry.

Soap mixed with the food of chickens, or Indian meal wet up with soap suds, and fed to them, is said to be a cure for this disorder, that is so fatal to poultry.

For weak or Sore Eyes.

One of the best and easiest applications for weak eyes, is to take a small piece of copperas, (white is the best,) of the size of a pea, and dissolve it in a two ounce vial of soft water. When clear, this may be used for bathing the eyes, and with the best effects.

Bloating in Cattle.

Where other means have failed to reduce bloating or hoven in cattle, the volatile spirit of ammonia has frequently afforded almost immediate relief, owing to its chemically decomposing the gas generated in the stomach. The dose for a cow or ox, is a table spoonful; a tea spoonful for a sheep, diluted with water, or other convenient liquid.

Cure for Wounds—King of Oils.

This invaluable remedy for wounds in cattle or horses, particularly the latter, has lately been brought before the public, by Silas Gaylord, of Skaneateles, and we have known some very surprising cures performed by it, in the case of severe wounds in horses. The following are the directions given for preparing the medicine:

1 ounce of green copperas,
2 " of white vitriol,
2 " of common salt,
2 " of linseed oil,
8 " of West India molasses.

Boil over a slow fire fifteen minutes, in a pint of urine; when almost cold, add one ounce of oil of vitriol, and four ounces of spirits of turpentine. Apply it to the wound with a quil or feather, and the cure will be speedily effected.

FARMING IN MISSISSIPPI.

Extract of a letter from a subscriber at Raymond, dated 23d June, 1840:—"Until twelve months past, agricultural operations have been conducted in this state with very little judgment or providence in regard to food for man and beast. But the *pressure* has brought us to our senses; and we are now endeavoring to 'live at home' as much as possible. We are striving to raise our own meat and bread at least; and are succeeding beyond our expectations—endeavoring also to improve our stock of cattle and hogs; but find much difficulty in obtaining good stocks, except when several unite and send an agent expressly for the purpose.

"I am trying experiments this year, with millett, sugar beet, ruta baga, and mangel wurtzel. They promise well, thus far, and the first will probably suit us for rough winter food for mules, oxen, and cows—I mean the hay or straw. The three last will probably yield well—but the yam and Spanish potatoe can be raised here so readily, and our servants are so much better acquainted with their cultivation, that the culture of these is not likely to be superseded by those. This potato is probably as valuable for food for man and beast, also; and it is not difficult to raise from 3 to 500 bushels to the acre.

"I found that my cattle and hogs were much benefited last fall, by an abundant growth of peas and pumpkins, raised in the corn field. And, having an oat field this year, under the same enclosure with corn, which prevents stock from being turned in, I am now plowing in the oat stubble, and harrowing in peas, sown broadcast. In the corn ground, the peas are drilled between every row at the last plowing.

"The northern counties of this state, present a fine opening for stock growers. The counties of Marshall, Fayette, Yallabusha, &c. &c. are well watered, suitable for clover and the grasses; and the southern counties would furnish a market for all the superior stock that could be raised. It would be an excellent business for a Northern man, and he might be assured of health, comfort and profit.

"A few of us in and around this village, have paid some attention to the Morus multicaulis, and silk raising. The experiments this year, in feeding the worms, were satisfactory and encouraging; they fed well, and spun well, with very little loss; probably not three per cent. None however entertain an idea of going into the business largely or exclusively. It is thought favorably of for employing the house servants and children, and I doubt not, that the business will extend until the employment of such persons, in this way, becomes general."

MAKING BREAD.

A late French journal states that an important series of experiments is now going on in the city of Paris, by order of the government, and under the direction of a committee of bakers, to test the value of a new discovery in bread making, that promises the most important results. In the new mode of preparation, the flour that formerly made 100 lbs. of bread, now yields from 120 to 125 lbs. The discovery consists in an improved mode of fermenting it, by which a greater quantity of water combines with the gluten, and the nutritious qualities are more fully developed. A leaf of the new bread is found to be equally nutritive with the old, and decidedly improved in flavor.

DICTIONARY OF TERMS

USED IN

Agriculture and its Kindred Sciences.

CHEMISTRY. A science which teaches the relation which matter bears to other matter, and the manner in which the laws of affinity, vitality and organization, perform their several functions. Agricultural chemistry is limited to a knowledge of the substances which enter into animals and vegetables, to serve them for nourishment; and to the study of all the agents which aid them in accomplishing these functions. Agricultural chemistry first assumed a definite form under the labors of Davy and Chaptal, and though but a comparatively few years have elapsed since the attention of chemists was directed to this object, the benefits that have already resulted, are immense. It is this which has taught the analysis of soils, the nature and action of manures, and the different substances that go to make up the several parts of plants, and of course the materials that should be furnished them to forward their growth and mature their seeds. Farmers knew how to make the earth produce straw, but to fill the ears with grain, was beyond their power. Chemistry came to their aid, and taught them that manures containing phosphoric salts, and those that furnish azote and gluten, are the ones that can alone tend to such a result; in other words, that the soil must have returned to it as much of these essential ingredients as cropping was taking from it, or the production of the grains would be impossible. It has been said that chemistry has not taken the lead in any measures of decisive utility to agriculture; that it has only explained results which experience had already discovered. But it should be remembered that the results which experience had obtained, gave, under ordinary circumstances, no data by which such results could be repeated. Chemistry gave the response, which was in vain elsewhere asked. She taught why certain results were in some cases obtained, while in others, to the common eye the same, gave returns totally different from those expected; and the career of agricultural chemistry, though it has already performed much, can hardly be said to be fairly commenced.

CHERRY. (*Prunus.*) There are two kinds of the cherry tree which are of considerable importance; the first, the wild or black cherry of our forests, *Prunus virginiana.* is much valued for the excellence of its wood, which is used extensively for the manufacture of furniture. It is one of the most beautiful of our forest trees, throwing up a tall straight trunk, from six to nine feet in circumference, some seventy or eighty feet. While the use of liquors was tolerated as fashionable, the cherries of this tree were in great demand, for the making of cherry rum, cherry cordials, &c. This kind of cherry would be more extensively planted, were it not liable to be attacked by multitudes of worms, which in open lands not unfrequently divest them of their entire foliage. The other kind of cherry is the cultivated variety, (*Prunus cerasus*,) and though too little attention is paid to this tree, it is one of the most valuable of our fruit trees, easily grown, very hardy, and early in the season. Cherries are of two kinds, as cultivated in our gardens; the heart shaped and round varieties. Of the first,, the Black and White Tartarian, Black Heart and Elton, are the favorite kinds; of the latter the Early May, May Duke, Late Duke, and Waterloo, are highly esteemed. Cherries flourish best in a dry and rather light soil; and a heavy wet or elay soil is not only injurious to the tree, but the fruit on such trees is of an inferior quality.

CHRYSALIS. The life of insects is usually divided into three stages, that of *larvæ*, *chrysalis* or pupa, and *perfect insect*. Of the first of these stages, the caterpillar, grub, maggot, &c. afford examples. During this stage they are voracious eaters, and this appears to be the sole object of this period of their existence. In the second or chrysalis state, the worm usually casts off its exterior covering, and appears in a hard case or shell; in which it generally passes the winter in an immovable state. The round smooth case of the chrysalis of the melolontha or May bug, and irregular shaped envelops of the *Lepidoptera*, are examples of this state familiar to all. The perfect insects are seen in the flies, butterflies, beetles, &c. and in this state few of them pay much attention to feeding, some indeed never eat at all, the great object of all being the perpetuation of their species. Some insects spin a covering to the chrysalis; the cocoon of the silk worm being of this kind. Insect life in all its stages affords an interesting and instructive study, and from their influence on the productions of the farm, insects have not as yet received the attention they deserve.

CIDER. The expressed and fermented juice of apples. To produce good cider, it is necessary that the fruit should be ripe, that it should be sound, that it should be all of one kind, and that there should be a perfect grinding of the apples. If the apples are not ripe, the saccharine matter necessary to make a good fermented liquor is not developed; rotten apples impart an unpleasant flavor to the liquor, and different kinds of apples afford a liquor that will not ferment equally or perfectly. When the liquor is pressed from the pomace, it should be put in sweet, clean barrels, allowed to ferment, and filled up occasionally that all the feculent matter may escape. It may then be fined by isinglass, or drawn off for bottling. Where making good cider is an object with the farmer, it is usually racked off after the fermentation is closed, and time allowed for all sediment to leave the liquor, into clean new barrels fumigated with sulphur, and will then keep good for a considerable length of time. Cider was formerly used extensively for distillation into apple brandy, but is now but little used for that purpose. According to Brande's analysis of fermented liquors, wines contain from 25 to 10 per cent of alcohol, and cider from 10 to 5 per cent. Cider makes an excellent vinegar, and large quantities are consumed for that purpose. The best cider made in the United States is produced in New-Jersey, owing probably to the skill in manufacturing, more than to any peculiar excellence of fruit or singularity of the soil.

CLAY. A kind of earth very abundant in soils, and of great use in the arts. The basis of clay is alumine, which is seen very pure in some specimens of the alum of commerce. A leading feature of alumine is its strong affinity for water, it requiring a great degree of heat to effect an entire separation; hence soils in which this material abounds, or those which are clayey, are most usually wet in proportion to the quantity of this earth existing in them. Next to silica, clay is the most abundant of the earths, and is of extensive service to the agriculturist. Indeed, without its presence, vegetation would be scarcely possible, and cultivation could not exist. To the presence of clay we owe the capacity of soils to retain moisture in any degree, since the other earths would leave it so porous, that water would pass through as readily as through a sieve. Mixed with lime, clay constitutes marl, of which such use is already made in fertilizing the soil, where these ingredients appear to be wanting. On soils so sandy as to be porous, the application of manures produces only a partial good, it soon sinking beyond the reach of the roots of plants. It is on these that clay may be applied directly with excellent effect. In order to incorporate it with the soil readily, clay should be dug and exposed to the air and frosts, that it may more easily fall to pieces when applied to the soil. Plowed under in large masses, it not only does no good, but is in the way of cultivation, and fineness is indispensable to its utility. Burning clay is extensively practiced in some parts of England for the purpose of farming. This operation destroys its tenacity, and by lessening its affinity for water, renders the soil with which it is mixed more dry and friable, and consequently much better adapted to the production of grain crops. Clay usually contains more or less of the oxide of iron, and to this cause its red color when burned is owing. The more pure kinds are manufactured into ware of various degrees of fineness, pipes, delf, Liverpool, wedgewood and percelain.

CLIMATE. By this term is to be understood "the character of the weather peculiar to every country, as respects heat and cold, humidity and dryness, fertility, and the alternations of the seasons." Heat or cold do not depend altogether on geographical position; there are a multitude of causes that tend to increase or decrease these, such as oceans, mountains, plains, place on continents, local or general currents of air, and others that will at once present themselves, as influencing climate in these respects. The western side of continents is found warmer than the eastern, a fact accounted for by the general prevalence of westerly winds, which in their passage over oceans are raised in their temperature, while winds that pass over land for the same distance are usually cooled in the same degree. Thus the coast of the United States that borders on the Pacific, is altogether warmer than the eastern or Atlantic coast, the territory at the mouth of the Columbia, which is in the latitude of Mackinaw or Montreal, having the climate, and producing the same vegetables, as Carolina and Georgia. On the different sides of the Atlantic, too, it is found the same difference prevails; places having the latitude of Quebec, in Western Europe, producing the grains and plants of Pennsylvania and Maryland. The elevation of any country above the sea has also a decided effect on the climate. Thus, under the Equator, in ascending high mountains, the temperature and the climate of widely different regions may be passed in a few miles or hours. The clearing of a country has also a great effect on climate; as forests prevent speedy evaporation, and retain the water that falls on the surface. All other circumstances being equal, a cleared country is warmer than a wooded one. The Cape Verd Islands, by being deprived of their woods, have become more sultry, the springs have mostly dried up, and the health of the inhabitants seriously affected. Is it not probable that many eastern countries, once fertile and filled with inhabitants, have become wastes, if not actual deserts, in consequence of the face of the earth having for centuries been wholly denuded of wood? The great lakes of this country, containing as they do about one-half the fresh water on the globe, and from their great depth only slowly feeling the influence of the atmosphere, whether in cooling or in heating, have perhaps more influence over the climate of the countries bordering upon them, than any other single cause.

CLOUDS. Every man whose business is in the open air, is more or less a meteorologist; and none find an acquaintance with the clouds, and the power of judging of the future by their present appearances, of more essential service than the farmer. In assisting to form a correct decision with regard to the weather, a barometer is a great help; but where such an instrument is not at hand, the clouds, by their different structure, height, and density, will enable the scientific or even the ordinary observer to calculate more accurately the results of their presence. Clouds are a watery vapor, and differ from fogs only in their greater height, and in some cases, less degree of transparency. The theory of the formation of clouds, proposed by De Luc, is, that water in the form of vapor, and before it takes the form of clouds, exists in a gaseous state, which is the reason why the air in the higher regions of the atmosphere is always dry. The observations of Saussure and others on the mists or fogs occurring at considerable heights, seem to prove that clouds are collections of small vesicles, in the formation of which electricity acts a conspicuous part. Some of these vesicles or bladders seen by Saussure on the Alps, were of the size of small peas, and almost every one has observed them of the size of millet seed. Were these solid drops of water of that size, it is clear they could not float as they do, and the little water they afford, is proof they are only bubbles. Hube says, the clouds differ from fogs only in the character of the electricity they contain; that of the first being negative, while that of the latter is positive. Howard was the first who reduced clouds to a system, and by distributing them into three principal formations, has greatly aided the meteorologist. These are: 1. *Cirrus.* This cloud is the highest of all clouds, and approaches the elevation of the northern lights, if indeed the two phenomena are not intimately connected. Humboldt on the Andes, and Webb on the Himala, found this cloud as much above them, apparently, as when on the plains. It shows itself as a few fine and delicate white fibers, multiplying themselves transversely, and when it forms alone, and not in the neighborhood of other clouds, it may be considered as one of the best indications of serene weather. 2. The *Cumulus.* Masses of clouds of a conical or aggregated form, the region of which is the middle atmosphere, and which usualy increase from a horizontal basis upwards. This cloud generally moves with the current of air nearest the earth. Alone, this cloud never produces rain. It usualy forms during the warm summer days, and as it piles its towering masses in the west or the east, it furnishes much of the most splendid scenery of the heavens. 3. *Stratus.* Extended layers of clouds, connected and horizontal. This cloud is of moderate density, occupying the lower region of the atmosphere, frequently resting on hills or mountains, and touching trees, spires, &c., in its passage. Rain rarely falls from the stratus, but to this cloud we owe most of the dark, cloudy, homely days, that are experienced in this latitude. The formation of the rain cloud is more clearly seen in the summer season, than at any other time. The cumulus is usualy the first cloud that forms, and appears in irregular, isolated masses, scarcely moving with the wind. If, at this time, stratus appears at the base, and a rapid horizontal enlargement of the mass ensues, rain may be expected; if, in addition to this connection of the cumulus and stratus, the top of the cloud continues to rise until long streamers of cirri project from the summit, a thunder shower will be the result. No fact in meteorology is better ascertained than that electricity is never developed in a cloud to any extent, unless attended by these streaming cirri. Every observer of such things, must often have witnessed during our summer months the progress of the cloud from the first mass of cumulus, to the condensation of the stratus, the spreading of the towering cirri, and the bursting of the first thunder peal. Clouds exercise a vast influence on vegetation, independent of the water with which they furnish the earth. The temperature of the seasons is in a great measure depending upon their frequency and density, and not unfrequently a knowledge when rain is about to fall, is of the most essential service to the practical operations of the farm.

Period of Gestation in Cows.

One of the most satisfactory experiments relating to the subject, on record, is the one made by Earl Spencer, and the particulars of which are given in the second number of the English Agricultural Society Journal.

The table given contains the results in the case of seven hundred and sixty-four cows, and the following statements abridged from the paper, will exhibit some of the most important of the details:

First. It appears that the period of gestation varied from 220 days to 313 days; or no less than 90 days. Lord Spencer was, however, unable to rear any calves produced under 242 days. All under 260 days, and over 300, he thinks are decidedly premature, or irregular.

Second. As 314 cows calved before the 284th day, and 310 after the 285th day, the average period of gestation must be considered as between 284 and 285 days; although the time stated in the work on Cattle by the London Society states it at 270 days.

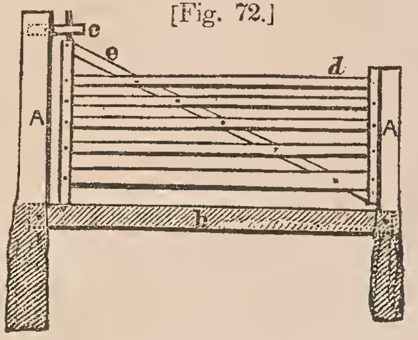
Third. It appears, that omiting those considered as premature or irregular, the cows whose period of gestation did not exceed 286 days, produced 233 cow calves, and of bull calves 234; while from those whose period exceeded 286 days, the cow calves were only 90, and the number of bull calves was 152. This certainly gives some support to the opinion so prevalent among farmers, that when a cow exceeds the usual time, the produce will be a bull calf.

Fourth. There were 7 cases of twin cow calves; 5 cases of twin bull calves; and 11 cases of twin cow and bull calves. Earl Spencer has never had a case in which the sexes were different, in which the heifer was a breeding one; they have uniformly been what are termed *free martins.* The cattle of which the above record has been kept, are the pure improved Short Horn breed, and one of the finest herds in Great Britain.

Communications.

FARM GATE.

Messrs. Gaylord & Tucker—I have seen several plans of farm gates in your paper. I send you one (fig. 72.) which experience proves to be an excellent gate, for several reasons; one is, it is made without nails or iron; another, it is durable; and another, it never *sags*.



[Fig. 72.]

EXPLANATION.

A, A, Posts, 8 and 10 feet long, hewed square above the ground.

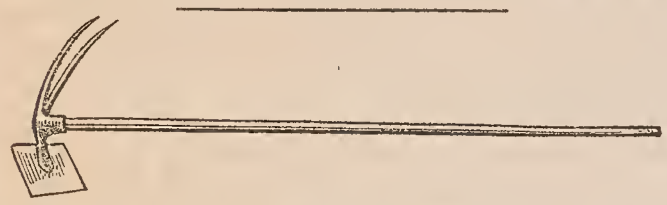
b, Bed piece, 10 feet in clear, tenanted into the posts, and pinned firm.

c, Block of wood 3 inches thick, and 6 inches wide, 1½ feet long, tenanted into post 6 inches; two inch tenant; shoulder on each side; put in firm—hole 2 inches to receive the upright shaft of gate, which is made round; rounded also at the bottom, and fitted into the bed piece.

d, Slats of gate, tenanted into uprights and pinned.

e, Two beams, one on each side Pins of wood made of seasoned timber. Uprights 3 by 5 inches.

Troy, Mich. May, 1840. A. C. H



Implement for Harvesting Ruta Baga—[Fig. 73.]

Messrs. Gaylord & Tucker—I often hear an objection made to raising ruta bagas, because of the labor of harvesting them. I have a mode, which is very expeditious, and as I have never, to my recollection, seen any thing like it published, although I have been a subscriber to the Cultivator since its commencement, I am induced to send you a description of my ruta baga hook, and if you know of no better implement for the purpose, and think it would be useful, you will please publish it.

My hook is made with a strong eye, like a common hoe, and the blade is a piece of handsaw plate, riveted on to the eye, 4 inches by 6; and the hooks on the other side are about 6 inches long, with a strong handle like a common hoe.

The man walks along the row, and with a light blow of the blade cuts the top and turns it, and with the hook pulls the bottom. Any common hand may top and pull from 6 to 8 hundred bushels in a day.

Above you have a rough draft of it. Our crops look promising for the season. Yours,

ERASTUS SKINNER.

Prattsburgh, June 12, 1840.

DRESSING FLAX BY MACHINERY.

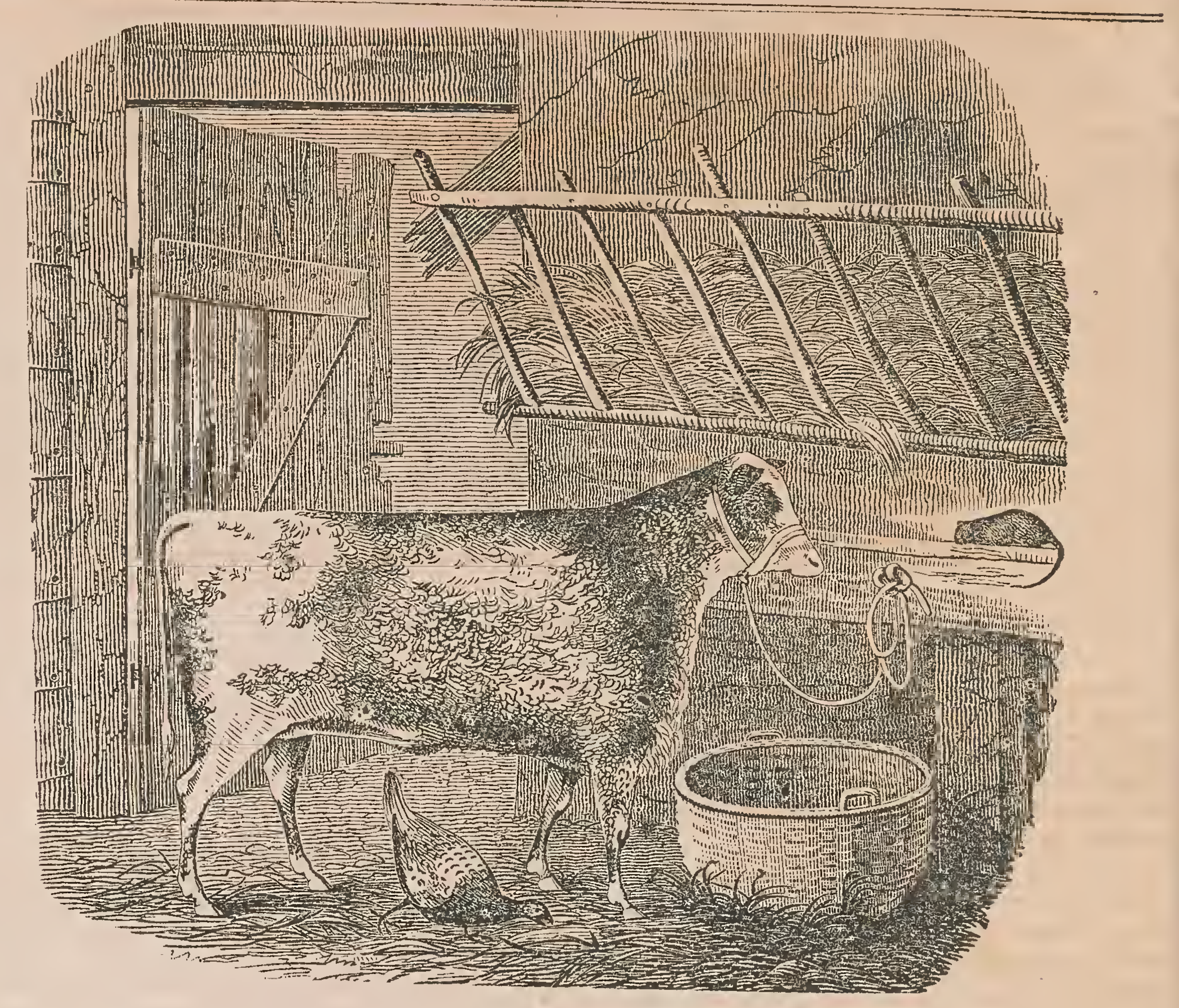
Messrs. Editors—Having made some experiments in the use of machinery, I send you the result for publication, if you think best. About 18 months since, I purchased a thrashing machine at an expense of $85. It has worked to my satisfaction, as I have found its use a great saving of labor. Last fall, having fourteen acres of flax, from which I wished to take the seed, I concluded to try my machine, and found it the most expeditious method of taking off the seed which I have ever seen. It was done by the attachment of one small wheel, which reduced the motion of the cylinder three-fourths, and running the band across, turning the cylinder the opposite way from which it runs when thrashing grain; then put a stick across on the back side of the cylinder, just so as to clear the teeth in the cylinder, and make it fast on the frame at each end, when it is ready for use. I put the flax in on top of this stick as far as there was any seed, and pulled it out as quick as possible. Every particle of seed was taken off. without injury to the flax. I think one man can take off more seed in this way, than three can in the ordinary way by whipping it off on a stone.

My next attempt was to fix a machine to the horse power to dress the flax; and this I did at an expense not to exceed $5, and five day's work. It works as well as ever I saw one work by water. Two hands can break and dress of good flax one hundred pounds a day. It is worked by two horses with ease. If it is requested, I will give a description of the flax dressing machine. [We shall be glad to receive it, accompanied with such drawings as may be necessary.—Eds.]

I am fixing a circular saw to saw my wood; and I design to attach a cross-cut saw to the horse-power, for the purpose of sawing logs, which I think can be done, and a great saving of labor be thereby effected.

I saw an inquiry in one of your papers respecting the best and cheapest thrashing machine. The preference was given to the one horse power. Almost every one thinks his own the best. I think mine the best, because it is the cheapest and managed with as little help as any other. Three men and one boy are sufficient to thrash 150 bushels a day; and 500 bushels may be thrashed in a day with help and team enough. So you see we can thrash on a moderate scale or more rapidly as circumstances require. My machine is a lever power, and can be used with one or more horses up to six or eight. It was made at Scaughtacook Valley.

Berlin, Conn. April, 1840. G. N. G.



PORTRAIT OF ONEIDA—[Fig. 74.]

Messrs. Gaylord & Tucker—I have to acknowledge the receipt of an impression from the "block" left with Mr. Pease of your city, and must confess that my mutilated drawing has been in some degree restored by the corrections and alterations of that artist, whose taste and feeling for the subject enabled him at once to detect and amend some of the absurdities committed in the engraving room of the celebrated Mr. Adams, where the "tool" had, in this instance, almost made a burlesque of the subject. It was not, however, in Mr. Pease's power to recut the whole block; you must, therefore, accept my assurance that the animal itself was, like other good calves, clothed in a thick mossy coat of fine *hair*, the engraving notwithstanding.

Having attempted an apology for the much that will strike you about the portrait as un-artist like, I most cheerfully accede to the wish you have expressed, that it should appear in the Cultivator; for I think it an admirable illustration of my favorite axiom, that the only *desirable* size is where we find the *greatest weight in the smallest relative compass.*

The original drawing was made by myself, from a heifer calf when about six months old. She was of the improved short horn family, and of course a "Herd Book" animal; bred on one side from Mr. Whitaker's stock, and on the other side she is descended from Mr. Wetherell's herd; her weight at the time was five hundred and sixty pounds, by no means an extraordinary one, unless her apparent mediocrity of size was taken into consideration, which from its symmetrical proportion, was most deceptive; the best judges never estimating her within fifty, and some an hundred, pounds of her ascertained weight. I therefore selected her, as embodying in a high degree, (though only a calf,) my apothegm, that *weight for inches*, not *superfice*, constitutes *true size.* I believe it will be found that this form of animal necessarily combines constitution, substance and beauty, and consequently constitutes what is most profitable in neat stock. I have, however, had very frequent occasions to remark, that where there is great justness of proportion, a due relation between the several parts, and a light offal, that the common observer is apt to under-estimate the size, and especially the weight of such animals; oftentimes overlooking the very best of the herd, while his eye is caught by an individual possessing some monstrous development, altogether out of proportion to the surrounding parts. An appearance of size and weight is thus often assumed which is unreal; these very projections standing out the more conspicuously from deficiencies elsewhere, which escape observation, making on the whole an uneven carcass of deceptive weight, though abounding in superfice.

On reference to the portrait, it will be seen at once, that "*Oneida*" combined great weight *in the most valuable* points, with an unusual lightness of offal: her head, neck and shanks being quite small, and the plates of the abdomen sustaining its contents on a nearly horizontal line.—The neck vein is so full as to blend the neck beautifully with the shoulder point, which is small, and the elbow lays well to the side. She is remarkable for the laying out of the fore rib, and is full in the crops, the width of her loin extending itself nearly the whole length of her back; she measures well across her hips, which are level, the rumps high and fleshy, with great length of quarter, and her twist is well let down; her flank is full and heavy, and her general appearance indicating "mellow handling" and great "proof," two points I think indispensable.

I have in my portfolio the sketch of a calf about the same age as "*Oneida*," exhibiting both size and weight, but neither of them, in my opinion, of the right kind.—Should you think the subject worth pursuing farther, I will make a drawing of one of those "*Beat-that-if-you-can*" breed, by way of illustration, and send it you, with some few remarks on the calf himself. But if you think my "hobby" has been rode sufficiently for the present, I'll stable him, and look on, with all imaginable good nature, while some one else takes his turn. R.

Butternuts, July 15, 1840.

THE PLACE TO DIG A WELL.

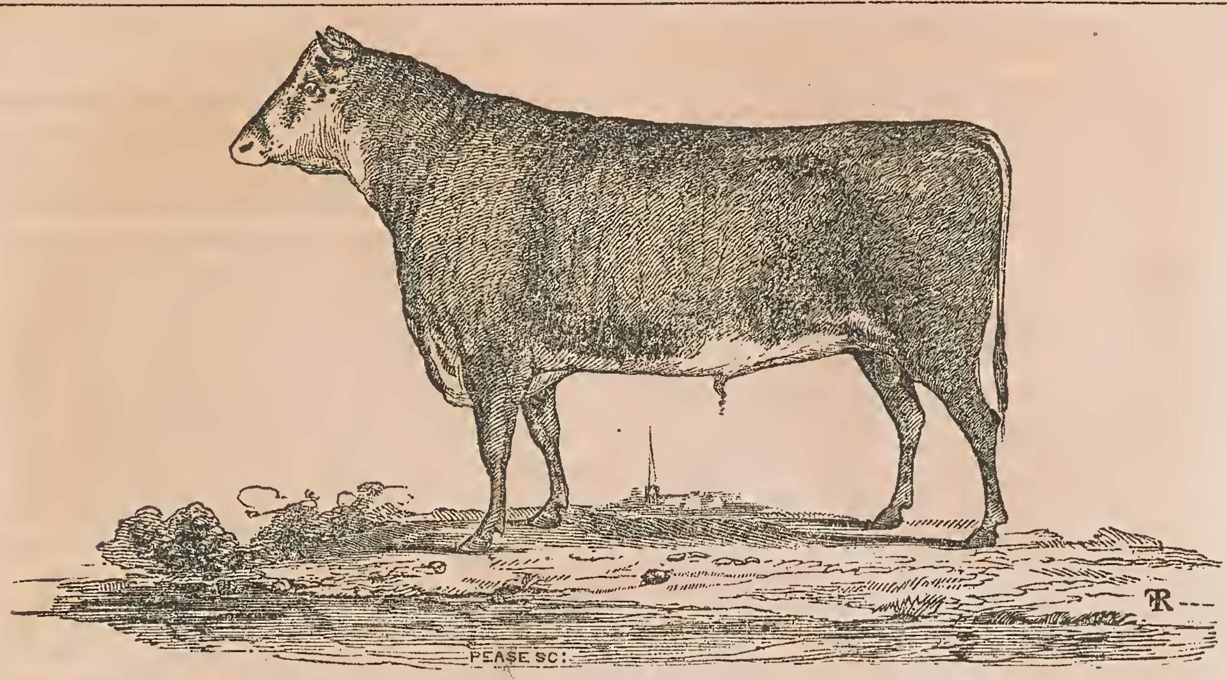
Messrs. Gaylord & Tucker—I saw in your paper an inquiry for the best mode of finding water, or rather a place to dig a well. I have had some information on the subject, but do not profess to be a very experienced hand at the business. The way I manage, is to choose a clear day, when there are no clouds to interfere with the eye; about 1 or 2 o'clock, I go out to the place I wish to look for water; I turn my back toward the sun, and look toward the sky, to examine the vapors that arise from the ground into the air, and if there is a vein of water near in that direction, there will appear a vapor to rise quick to a certain height, and then it will move off on a level, in the same way that the smoke will rise from a chimney over a very hot fire of coals, where there is no smoke, and will rise as high above the surface as the water is below the top of the earth. The facts are, that water must have vent, and the deeper in the earth the water lies, the harder the pressure and the higher it will rise. Now, as I have stated, I am not a professed water witch, I would wish to hear from those of more experience, as there are many who do profess to know, and say that they can trace a vein of water not larger than a rye straw, that lies 60 feet under ground, and tell as to the quality of the water. I know that many men wish to keep such things secret, but I think it the duty of every man or woman that can be useful to their fellow beings, to do so. As to qualities of water, all I know is, that salt water gives a stronger cloud than fresh, and lime water gives a whiter cloud than pure soft water. Any information that can be given on the subject, will be thankfully received.

Newark, Ill. May 30, 1840. W. STOWELL.

HIVING BEES.

In the 7th volume of the Genesee Farmer, page 236, is a description of an easy method of hiving bees. If it would answer the purpose as there described, it would be valuable. I have put up a board in the manner there described, but have not had a swarm on it yet, although I have had a number this spring. Perhaps the description is not right. If you, or any of your correspondents have tried it, I should like to hear how it answered. Perhaps the board should be laid on the bench or stand on which the hives are placed, instead of the ground. Any information on the subject would be very acceptable to A YOUNG APIARIAN.

Note.—The "easy method" referred to above, was contained in an article from the Yankee Farmer, purporting to be a description of the plan pursued by Mr. Moses Winslow of Westbrook, in hiving bees. We know nothing more of the matter than is contained in the extract alluded to, never having seen the plan recommended pursued.



Portrait of Mr. Bement's Hereford Bull, Dallimore—[*Fig.* 75.]

HEREFORDSHIRE CATTLE.

I was much gratified on perusing the excellent "Essay on Cattle," in the February number of the Cultivator, from your talented correspondent, Henry S. Randall, Esq. His short and pithy history of several varieties, is well calculated to arrest the attention of farmers, and guide them in the selection of that breed best adapted for the different sections and purposes for which they may be wanted; whether for the dairy, yoke or shambles. For instance, where the climate is mild, and a full and rich bite of grass at hand, and the dairy and beef the object, I would by all means recommend the Durham; but, where the climate is cold, seasons short, land rough and hilly, with a short and sweet bite of grass, with labor and beef the object, I would recommend the Hereford or Devon; and at the Northwest, in Missouri, Illinois, and Wisconsin, where only beef is wanted, and where they have to be driven any great distance to a market, from what I have seen and can learn, the Hereford certainly would be preferable, being hardy in constitution, good travelers, of great size, will fat at an early age, and will make more pounds of beef with the quantity of food consumed; and when *better known in market*, will command the highest price. At the south, where the climate is warm, I should think the Ayrshire or Devon would be preferable.

Dallimore, a full bred Hereford bull, whose portrait stands at the head of this article, was imported with a two year old heifer of the same breed, in 1839. He was two years old the 6th of June last, bred by J. D. Kedwards, Esq., Westhide, Herefordshire, England. The heifer was bred by C. A. Maison, Esq. of Torrington, and was two years old last fall. Having had them in my possession for more than a year, enables me to form some opinion of their qualities. They were much bruised, and reduced very low in condition, (from the effects of a long and boisterous passage, and on short allowance,) when they arrived at my farm; but on turning the heifer into pasture with my other cattle, without any other food but grass, took on flesh more readily than any other animal I have ever had. She dropped a fine bull calf on the first day of November last, and was then fit for the butcher.

Being rather inclined to be vicious, I did not cause her to be milked, but let the calf run with her until he was six months old, when she became so gentle and quiet, we milked her without much difficulty; and if, under such circumstances, she is a fair specimen of the breed for milk, they have been most wofully belied, for when turned out to grass in June, seven months after calving, she has given seven quarts of milk per day. I consider it bad policy, and I believe it is so considered by every one who has paid any attention to the subject, to let the first calves suck their dams. Here, I must confess, I was not a little disappointed, for I had been led to believe they were the poorest milkers to be found of any breed. I have been informed, however, that their milking qualities have been increased of late years.

There is nothing, (except great size of her age,) very prepossessing in her appearance. Her marks, however, answer the description of this breed, given by Youatt, in his excellent history of "British Cattle," in the "Farmer's Series" of the "Library of Useful Knowledge," which I have transcribed.

"The Herefordshire white faced cattle," says Youatt, "with the exception of a very few Alderney and Durham cows, have almost exclusive possession of this, (Hereford) county. They are usualy of a darker red; some of them are brown, and even yellow, and a few are brindled; but they are principally distinguished by their white faces, throats, and bellies. In a few, the white extends to the shoulders. The old Herefords were brown or red-brown, with not a spot of white about them. It is only within the last fifty or sixty years that it has been the fashion to breed for white faces. Whatever may be thought of the change of color, the present breed is certainly far superior to the old one. The hide is considerably thicker than that of the Devon, and the beasts are more hardy. Compared with the Devons, they are shorter in the leg, and also in the carcass; higher, and broader, and heavier in the chine; rounder and wider across the hips, and better covered with fat; the thigh fuller and more muscular, and the shoulder large and coarse."

"They fatten to a much greater weight than the Devons," continues Mr. Youatt, "and run from fifty to seventy score. A tolerable cow will average from thirty-five to fifty score. A cow belonging to the Duke of Bedford weighed more than seventy score, and an ox belonging to Mr. Western, one hundred and ten score. They are not much used for husbandry, though their form adapts them for the heaviest work, and they have all the honesty and docility of the Devon ox, and greater strength, if not his activity. The Hereford ox fattens speedily and at a very early age, and it is, therefore, more advantageous to the farmer, and perhaps to the country, that he should go to market at three years old, than he employed as a beast of draft."

"The Devons and Herefords are both excellent breeds, and the prejudices of the Devonshire and Herefordshire farmers for their peculiar breed being set aside, a cross of the one will often materially improve the other. The Devon will acquire bulk and hardihood, and the Hereford, finer form and activity."

I have tried this cross, and have now two calves, a bull and heifer, and they are certainly very beautiful animals, and so far, I am well pleased with them, The heifer is a little coarser in the head and neck, than I could wish, but has many very fine points, and on account of their great length, size, and dark, rich, red color, are well calculated to please our eastern and northern farmers.

"I am quite aware," says John Ellman, Esq., that eminent breeder of South Down sheep, "that it is a well received opinion amongst all our first-rate breeders of cattle and sheep, that the first cross generally succeeds, but that if you attempt to go on with that cross, you will breed very inferior animals; and indeed, it is impossible to carry it on. I am not of that opinion. I am quite aware of the *unceasing* attention and great skill it will require to counteract the great difficulties to be encountered; but I do not think them *insurmountable*."

Now, according to the doctrine that "like begets like," I cannot see why two good animals, and especially where the resemblance is so nearly alike as the Herefords and Devons, may not produce a third equal to either.

I am aware that in crossing very superior with very inferior animals, the improvement will be much more conspicuous, and the hazard of continuing the improvement greater; but let me ask, how has the great improvement in all kinds of domestic animals been effected, unless by crossing and selecting only the best for breeding? Are not the present beautiful, and I might say magnificent, Durham and Hereford cattle, splendid South Down, New Leicester and Bakewell sheep, superior Berkshire, Bedford and other improved hogs, a made breed?

"The Durham breed of cattle," says Mr. Knight, "appears to possess the power of eating and digesting a much larger weight of food than the Hereford. The only instance in which the experiment, I believe, was ever tried, has been given an account of in Youatt's work on cattle."

"Three Hereford and three Durham cattle were put into stalls to be fattened on the 3d of Nov. The weight of the Herefords was then 33 cwt. and that of the three Durhams 38 cwt. and 14 lbs. Between that period and the 30th of March, when all were sold in Smithfield, the Durhams had consumed 12,755 pounds weight more of turneps and 1,714 more pounds of hay than the Herefords, but the Durhams, notwithstanding the large size when put to fatten, and the greatly larger quantity of food consumed, sold for only twenty shillings more per head than the Herefords, and such, I believe, will ever be the result of similar trials, when one class of animals has been properly fed, and the other over-fed, the merits of the breed equal."

At the meeting of the Smithfield Club in Dec. 1839, the Herefords took the four first prmims in class 1 and 2.—In class 3d the second prize, and second prize in class 7.

In the prizes for extra stock, the Herefords took the only prize. In the list of commendation, the Hereford stands 13—Durham 8—Sussex 1—North Devon 1.

I have examined the Hereford cattle, lately imported by our spirited and enterprising citizen, Erastus Corning, Esq. and Wm. H. Sotham, as noticed in the last Cultivator. I must confess I was greatly disappointed in the size and general form of the cows, for they were apparently as large as the Durhams, and possessing the broad loin, large capacious bodies, deep, broad and projecting brisket, but with a coarser head and neck, which to those familiar with the Durhams, would appear oxy, if I may be allowed the expression. The shape and size of their udders would indicate fair milkers. Mr. Thornton, the person who has charge of them, informed me they gave on an average full a middling quantity of milk.

Mr. Corning has sent out for a bull of this breed that has taken several premiums, which he expects to arrive in the course of the season, as the owner would not part with him until after he had used him this summer. This will enable him to make a fair start, and we shall soon be enabled to ascertain how they will compare with the Durhams, Devons and native stock.

Dallimore, as you perceive by the portrait, is in form and symmetry a very beautiful animal. He has all the fine points so conspicuous in the Durham. His low brisket, deep and broad chest, are pretty sure indications of a vigorous and strong constitution. He is full of life and vigor, and as playful as a kitten. He is not fat, but in good growing condition, and by an application of the tape, he measured in girth 6 feet and 4 inches; in length, from root of the tail to between the horns, 6 feet 8 inches; around his arm, 15 inches; leg, below the knee, 7 inches; around the brisket and shoulders, 6 feet 10 inches; neck, 3 feet 2 inches, and 4 feet 5 inches high. He was just two years old when measured. I do not give this as being extraordinary in size, for he has never been pampered or even fed on grain, but has been well cared for, and in the winter, until February, has hadhalf a bushel of ruta baga per day, and as much good hay as he would eat.

Mr. Kedwards, the breeder of Dallimore, has been the winner of a great number of prizes for the Hereford cattle, and whose herd lately sold at auction at prices which indicate the high estimation in which they are held in England. A cow sold for £80, ($355); a heifer and calf for £81, ($360); a calf, ten days old, for £79; a yearling bull for £80, &c. and the cows averaged over $133 each.

I agree with Mr. Randall, that "to the pure improved Durham we must look for the basis of the desired improvement;" but "that a cross with the Devon or Hereford would sacrifice milking qualities," I must, with all due deference, dissent. "Facts are stubborn things." I have now in my herd heifers of the Durham and Devonshire cross, that are fully equal for quantity and quality of milk to my high bred Durhams, and for my soil, should desire no better cattle.

While they retain the rich red color of the Devon, they have the broad hip and loin of the Durham, which, to me, are desirable qualities. They do better on our light soil and short grass, and appear to thrive, where my Durhams decline. The Durhams, as far as my experience teaches me, and from what I can learn from others, require a full bite of rich grass in the summer, and a liberal allowance of substantial food, with careful attention and comfortable accommodations, in the winter. For those who have not the above conveniencies at their command, the lesser and more hardy breed ought to be preferred.

I have seen some very superior milkers produced from a cross of the Devon bull and native cows; and for beauty of symmetry and richness of color, not easily surpassed if equaled. As to a cross of the Hereford with our natives, whether advantageous or not, remains to be proved; for, with the exception of those imported a few years since by Mr. Clay, until recently, I am not advised of any having been imported.

To sum up in a few words—any person who is about to adopt a new breed of cattle, must ponder well, and take into consideration the situation, climate, soil, and the purposes for which they may be wanted, whether for the butcher, dairy or yoke. The Durham, like the China hog, would not bear driving any great distance to a market.—The Herefords may not endure a long drive when fat, but their appearance is certainly much in their favor.

I do not wish to be understood as saying any thing against the Durhams, Devons, or any other breed; each has its advocates and admirers, and each are entitled to favorable notice. The Durhams, in spite of the very high prices they have commanded, have worked themselves into favor, and have obtained such a strong and permanent foothold in several of the middle and southwestern states, that they cannot be easily displaced by any other breed.—Great size, in all animals, whether cattle, sheep or swine, at the present day, appears to be the predominant and ruling object, and as long as that is the fashion, the Durham will, most assuredly, stand preëminent.

CALEB N. BEMENT.

Three-Hills Farm, July 1st, 1840.

CULTURE OF MADDER.

Messrs. Editors—Will you give us from persons of observation, or on good authority, the process of growing madder; and of preparing it for the mill of the manufacturer?

What should be the quality of the ground—how prepared, planted, and crop managed?

The time required to mature; and the weight of dried product per acre, circumstances being favorable?

The usual market price per pound of the imported root, delivered fresh and in good order?

Possibly some experienced manufacturer, or late traveler in Europe, from the motive of encouraging a greater division of labor in agriculture, may be inclined to furnish through your valuable paper, some practical information on this important article of commerce.

Respectfully, ROBERT SILVEY.

Blue Rock, Ohio, June 8th, 1840.

THEORY OF VEGETABLE NUTRITION.

Gentlemen—The subject of the following suggestions, is a part of "*a Theory of Vegetable Nutrition*," to which I have given some reflection, and upon which, through your columns, I would seek elucidation from abler hands, if I have misled myself.

The action of plaster, sulphur, lime, salt, nitre, soda, kelp, barilla, sea-water, potash, ashes, charcoal, magnesia, metallic oxides, &c., &c., upon the functions of vegetable life, I suppose to be *essentially medicinal;* each operating upon the juices and their elaboration, and upon the organization and structure of the plant, with distinctly *similar* medicinal influence and results to those which the same materials separately or combined would effect *upon the blood or its circulation, or upon the alimentary principles of animal or human life* or functions.

To arrive at a conclusion as to the truth or falsity of this suggestion, let us begin by an exposition of principles connected with it, as a branch of the theory, established by physiological writers, assented to by practical agriculturists, and which carry out and support *analogies* between animal and vegetable anatomy, nutriment, functions, and life.

The juices of the plant, and the blood of the animal, are alike the product of animal or vegetable organization and nutriment; and, other things similar, medicinal results upon such substances, as matter of *vital circulation*, should be equaly so.

The health of the vegetable, its growth, and the quantity and quality of its seed, are as dependent on its juices, and the purity of them, as the human being or the animal, or their health, is, on the juices and blood, and their healthy condition.

The ruddy bloom of the human cheek is no better indication of wholesome food and healthy action in the system, than is, with the plant, the deep green which it exhibits to the experienced eye of the husbandman, who, while in that he predicts the promise of the coming harvest, as assuredly forecasts a failure when a yellow or sickly tinge is discovered in the hue of the plant. The aroma of the rose, and the velvet aspect of the dahlia in flower, are assured indications of the quantity and quality of the food with which its infancy and maturity have been supplied.

It is difficult to overcome in a plant, as in an animal, the diminutive influences of a want of proper aliment in its infancy; in short "a consideration of the life, growth and propagation of plants, as well as animals, *necessarily involves similar topics,* such as germination, nutriment, digestion, growth, and development of parts; sexualities, impregnation, and the changes consequent upon it; propagation, and dispersion of the species;" and as truly as man descended from his first parents and ultimately looks to his God for a solution of the mysteries of his formation and being—even so has every plant and its flower had *its original seed,* each requiring equally the intervention of a Creator to give it birth; both alike giving as incontrovertible evidence of a providential purpose in their *vital* formation, as does the watch or the steamboat, of the hand of man in its mere mechanical structure. Although human ingenuity may succeed in hybridizing a plant, in that, as in the mule, "nature abhors the production," and will assist no farther for its continuation.

Destruction of life gives aliment to vital succession; for as to plants, animals or human beings, as well as every living and creeping thing upon the earth, in the air, or in the sea, it is alike the doom of nature and its round of recreation, that they shall find aliment *in nothing* that has not, like themselves, had a previous vital existence.

But, in considering the plant in connection with the human being or animal, let us advert to another branch of the same theory, that is, to the prominent *dissimilarities* which exist between them as living structures. The animal is provided with a stomach and organs fitted for masticated and digestible food—animal, before decomposition has taken place, and vegetable, while its fiber is yet more or less adhesive. *The plant is not similarly provided, and consequently can have no power over such substances.* Its organization requires *previous* digestion or decomposition of both, to a point or degree which, assisted by atmospheric moisture, may render them capable of solution in water, and we are to conceive its nutriment as entering into the plant, where in the animal the labors of digestion have passed, and its food converted into chyle is about to enter into the blood of its system. The roots of the plant, in taking up its food, can only do so by absorption or introsusception, and it has no faculty of rejecting even noxious properties, if aqueous, and presented to its spongioles combined in a liquid state with its food. Evidence, however, is here found of instinctive influences, and consequently of sensations in the plant. If manure be placed on one side of it, roots from the plant will, underground and in the dark, seek and appropriate it as naturally as an animal would, in open day, go to luxuriant vegetation for its nutriment.

The plant has no aversion to excreted vegetable or animal substances;—on the contrary, decay above or underground, or a previous animal digestion, are indispensable to their preparation as its food. While some animals extract food from the excretion of others, it is principally from the undecomposed, or undigested portions of it, and none do so from that of their own species. Though plants too, are supposed to benefit by the excreted matter of other plants, they are evidently averse to that of their own species.

These suggestions should naturally lead to the impression, not only that the food—its nutrimentive juices—their circulation through the system—and the operations of medicinal remedies, are in the plant similar to the operations of the same remedies in the animal system. But (unless the earth has a purifying influence on the tainted or putrefactive condition of animal or vegetable aliment,) the plant has more need of medicinal condiment than the animal, because all the impurities attendant upon previous animal digestion would otherwise be visited on the juices of the plant.

Hence I assert, and seek to prove, that while, *without exception, all* vegetable and animal substances, and *every thing* of vegetable or animal origin, or derivation, and their extracts in a soluble state, are, with more or less effect, according to fixed principles, (forming another branch of the theory) *the proper and the only food* of the plant,—lime, plaster, sulphur, salt, nitre, and soda, are *neither its food nor manure,* but that they come *in aid* of them by their *medicinal action* on its circulation, juices, and system, *distinctly as the same materials affect the blood or its circulation in a human being or an animal.* That some of them when taken into the juices contribute to the rigidity and fiber of the plant, and exhibit the product of it on analysis in increased quantity, I apprehend to be as true as that lime is necessary to the fowl, and contributes to the induration of the shell of its egg; and I would be understood as including in the nutrimentive action to the plant of manures, alike all those vegetables which have a poisonous or injuriously medicinal effect upon the human system, because I am not yet aware that this medicinal property *of the plant* in any degree influences its nutritive action on succeeding vegetable products of a different species when decayed and applied as a manure.

Silex and alumina (sand and clay) are incombustible, and therefore incapable of absorption, or the appropriation of extraneous substances; their fitness and adaptation to vegetable nutriment is *only as a medium for holding,* with more or less aptitude according to the various relative compositions or prevalences of sand or clay, manures and their condiments in solution, and as an element for the plant, as water is for the fish, or air for the animal or human being.

Nor is it necessary that mere earth should, as to the plant, perform any other office, unless it be as to moisure as hereafter stated.

Look with a magnifying glass at the sand of the sea shore—the interstices between its angular granulations, as visible as in a stone heap, show that liquid manure would drop through them as through a sieve. Look again at clay, through the same medium, and the strongest glass that can be found, will not enable the observer to separate visibly one particle from another: agitate a soil composed of both, actively in a tumbler of water, and the sand on cessation will be immediately precipitated by its comparative gravity, while the minute particles of clay will remain suspended for a long time in the liquid. Sand or clay, in the prevalence with either of 90 per cent, is sterile; because, with the sand, neither can the small roots of the plant hold in it, nor will it hold manure in solution long enough to enable the roots of the plant to imbibe or take it up; nor, in the same proportion with clay, can either the roots of the plant perforate between its compact and adhesive particles, or the liquid aliment with ease enter into it, or if in it, be easily extracted by the roots of the plant; yet in the relative proportions of 40 of sand to 60 of clay as a mixture, we find the best constituted soils. Because, while the sand prevents the adhesion of the particles of clay to its glassy granulations, and consequently makes it friable and loamy, the clay fills up the angular interstices of the sand, easing the perforation of the roots, and carefully holding as a cup-bearer or hand-maiden to the plant, manure in solution as its food, till its roots can absorb and take it up.

We see, therefore, that a stomach, or its digestive functions, are useless to the plant; and that the earth to it is but an element in which it may exist there, as we do in the air, till both of us get our aliment "*aliunde.*"

Still, as to *moisture,* sand and clay perform an indispensable office to the plant, independent of the fall of rains, and of their medium for the alternate influences of air, moisture and heat upon vegetable decomposition.

Wet either sand or clay, or both—weigh them—expose them to strong solar heat—weigh them again—it will be found that much of its moisture has been evaporated by the sun. Throw them into a crucible, over a strong fire, and when heated, weigh them again—the farther reduction of weight will show that more moisture *than solar heat could throw off* has been evaporated. Take the heated earth from the crucible, and put it in the hotest sun, and it will be perceived on weighing it again, that it spontaneously regains from the atmosphere the moisture the crucible had driven from it. This would seem to show a positive attraction or affinity in earths for moisture.

The solid weight and measure of dry dust is necessarily less than the same material wet. The solar noonday's summer heat, and the midnight dew should, in so far as mere moisture is concerned, naturally produce that pressure of the particles of the earth by night, which would become relieved at noon by the evaporation of the midday's sun.

When we consider the minute and tender roots of the growing plant, and its meanderings through the earthy particles of sand and clay, seeking in the interstices, alike its alimentary nutriment, and its medicinal condiments, may we not suppose the swelling roots to be aided by these alternate changes of night and day, and that this tendency is promoted more or less directly with reference to the diurnal production and dissipation of moisture, and to the friability of the soil and its texture, and thus account for the continuous aliment from manures to the plant, even in a time of severe drouth, and when rains have not fallen to assist the solution. But let us again consider the unctuous properties of manure, when moistened by the earth, and its comparative induration when out of the earth, and exposed to the sun. We here perceive the necessity and the office of that spontaneous affinity for moisture, which the earth exhibits under all conditions of solar heat—more especially underground, where the passage of the tender fibers and the roots of the plant are finding their aliment, and their way in quest of it. We see them flourish often in a drouth, and decline only in times of its utmost severity, and when the earthy affinities for moisture can no longer sufficiently protect them, even below the surface, from its effects.

But here again nature has, as I apprehend, enlisted *nitre* in aid of vegetation. That nitre and its tendency to moisture assist, we know—and "no phenomenon has excited the attention of chemical philosophers more than the *continual spontaneous reproduction of nitre* in certain places, after it has been extracted from them." In the proportion of 1 to 300 nitre is beneficial to vegetation, but in a greater degree it is unsafe and deleterious. "It is formed spontaneously in all situations *where decaying vegetable or animal matters are decomposed, with access to air,* and proper substances with which it may combine, such as *soda, lime, alumina, magnesia and alkalies.* Ground frequently trodden by cattle, and impregnated with their excrements, or the walls of inhabited places, or where putrid animal vapors abound, such as slaughter-houses, drains, or the like, afford nitre by exposure to the air." And I apprehend the formation of it in the earth, (the ordinary manuring substances contributing,) is promoted by merely stirring it with the plow, the harrow or the cultivator.

This or salt is as congenial and necessary to the vegetable as to the animal creation, and sustenance; and may it not be questionable, too, whether the saline exhalations of the mighty deep, abounding throughout the world, are not as equaly indispensable to the general purposes of nature, and of nature's God, in that never-ceasing supply, and spontaneous formation of nitre in the earth, I have alluded to.

But we see, while a *little* salt is beneficial to vegetation, used in excess, it, as well as nitre, destroys living vegetables;—in other words, it affects *deleteriously* or *medicinally,* the juices of the plant precisely as it would the healthy state of the blood or juices of the animal, or the cutaneous functions of either plant or animal. That a certain excess may be excreted, see the white efflorescence on salt hay, or sedge, in places where marine moisture is in excess, often exhibited on the outer sides of the leaf.

The medical action of soda, kelp and the barilla of sea-weeds, in their tendency to correct acidity in soils and their vegetable products, I recently hinted at on a former occasion, in your paper.[*]

So, also, as to the medicinal influence of lime upon sorrel. Lime destroys sorrel, because acid extract from the manure for its juice, is the essential need and quality of that plant; and lime in the vegetable as in the human system, corrects acidity, which comes into a soil as a sufficiency of healthy vegetable or animal nutriment and consequent fertility depart from it.

And is it not likewise true, that as the human system fails to correct acidity in the secretion of its food, imperfect digestion, unhealthy juices, sickly offspring, (if any,) disease and death, are the consequence? Acidity in the digestive process is necessarily a precursor; the danger is in the tendency to excess. Acids are chemical digestive assistants—alkaline earths and the salts operate as the correctors of those acids.

An animal is best fatted on acidulated slops, because the gastric juices, which a previous meal prepares for its successor, being met by food already acidulated, are the less requisite, from being thrown into the stomach of the animal in that state, and in so far fitted for digestion—and what otherwise would be required to promote digestion, goes to enrich the juices of the system. The danger only is in the excessive acid, and its tendency or progress to a putrid fermentation, in which state, as a food, it is poisonous.

The more caustic lime is, if applied to earth or soil in compost, or to the raw surface, the more effectual to correct or destroy the acid. But its action on the skin of a living plant, or the coats of the human stomach, would, unless diluted from that caustic state, be destructive.

Sulphur is beneficial to plants in due quantity, and forms, generally speaking, in plaster, about sixty per cent of its compound, as a sulphate of lime. The action of plaster is medicinal to the plant, *as sulphur would be to the human being or animal.*

Thus, a little sulphur given to a horned animal, will, circulating through the blood, purify it, and secreted through the pores of the skin, will throw off enough to drive vermin from him. So, *if a hole be bored in a tree,* and filled with sulphur, it will, when dissolved or taken up by the moisture of the sap, be circulated through the tree, and while improving its health, and the hue of its leaf, will excrete through the skin of the leaves, after purifying their juices, enough to drive insects from the surface—so, if it could be presented in a liquid state, with the manure in solution, to the roots of the tree, it would, I apprehend, at least in a limited degree, be taken up through that medium, and tend to the same result—the hole in the tree being only an artificial mode of administering with certainty the requisite supply.

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[*] Vol. vi. page 18.

So, sulphur, administered to a human being, will often excrete sufficient to give a sulphurous smell to the skin, and perspiration will often saturate in like manner, even the clothing which covers it. But if *salt* be put in the hole of the tree in excess, though in a small quantity, it will, as it dissolves from the moisture of the sap, be circulated through the tree, and effectually destroy, both above and under ground, every root and branch through which it is circulated.

It has often been considered astonishing that the small quantity of plaster, or of lime, ordinarily applied in agriculture, should produce the results which evidently flow from them. But if we assent to the position, that their action is medicinal upon the juices of the plant, we cease to wonder; because we find a spoonful of sulphur enough to affect medicinally all the juices, the blood, and the flesh in the system of an animal weighing several hundreds weight.

The relative quantities of lime, salt or plaster to manure, are as disproportioned to each other, as *medicine is to aliment*, in either plant or animal.

Plaster is said very generally to be, and I believe it is, inoperative within the *saline humidity* of the ocean. It is so, as I apprehend, for the same reason that lime is inoperative within a limestone region—because the former regions are *atmospherically* supplied with the sulphur, and the muriate of soda (or sea salt,) or their equivalent in the requisite quantity for vegetable growth. Sir Humphrey Davy says, "In examining the ashes of sain-foin, clover and rye grass, I found that they afforded considerable quantities of gypsum; and the reason why it is not *generally* efficacious, is probably because that *most cultivated soils contain* it *in sufficient quantity* for the use of the grasses. In the common course of cultivation, gypsum is furnished in the manure, for it is contained in stable dung, and in the dung of cattle fed on grass, and it is not taken up in corn (grain) crops, or crops of peas, and beans, and in small quantities in turnep crops; but where lands are exclusively devoted to pasturage or hay, it will be continually consumed."

So where plaster is not used, manure is more extensively employed, and in that, some of the requisite sulphur is supplied.

Again, Sir Humphrey says, "seeds sown by way of experiment, *in nothing but sulphur*, have produced healthy plants, and many soils which nature has impregnated with sulphur, are highly fertile."

As an evidence of this, see the environs of Mount Vesuvius and its vineyards, with the delicious wines, particularly that irreverently called the "Lachrymæ Christi," so much esteemed and sought after by those who visit the mount.

Sulphur, therefore, would almost seem never to be in excess—(though this, for reasons I may give hereafter, I feel inclined to doubt.)

Deane says, (title *Plaster*,) "It is possible, that the sulphuric acid contained in gypsum, may give that substance its principal value, and it would be well to experiment on the efficacy of *sulphuric and other mineral acids*, by applying them in a very diluted state, *as a manure* to plants, and likewise to mix them with composts in such proportions as may be most likely to ascertain their *fertilizing properties, if any such exist*."

Gypsum contains little else than sulphur and lime, and the small portion of plaster used, as compared with lime, shows, that the lime in that compound, relatively can have but a trifling action.

Deane, in continuation, says, "It has been affirmed that gypsum is not useful as a manure in the vicinity of the sea," and he there stops, without adverting to what he says in another part of his work, of the agricultural effects of *sea water*—"This fluid" he says, "contains, besides water, and particles of common salt, according to Dr. Russell's account, *sulphur, nitre and oil*."

Sea weeds, I apprehend, on analysis, would be found to have imbibed from sea water much of its sulphuric influence. But if we suppose sulphur at all to exist in sea water, and we advert to the very limited quantity which suffices for vegetable effects, may we not suppose lands within the reach of marine fogs, dews and vapors, in the lapse of ages, to be sufficiently supplied atmospherically, to make additional or artificial supplies unnecessary to vegetation; more especially if it be true that a plant inhales atmospherically much (some say even nine-tenths) of its nutriment.

Here too, it would be well to become assured that the mere saline humidity of the ocean does not offer in *salt itself*, a substitute for the effects of plaster. Any person, who for the first time visits the sea shore, will often be made sensibly aware of the atmospheric salt prevailing around him, by tasting it perceptibly upon his lips. Besides, too, is it not true, (and I am assured it is, by experienced medical men,) that cutaneous diseases, which find an antidote in sulphur, are not as prevalent in saline humidity, as in parts more retired from oceanic influences.

But for the present, to conclude, if we consider the effects of *these aids* to manure as medicinal merely, *we have at once a conclusive reason why manures are not only requisite, but indispensable to the soil, in connection with them, because the plant cannot support life on them alone*, more than the animal or human being, *neither being in itself*, or by any compound of which they are capable, *in any degree alimentary or nutritive*.

I would here offer some further observations on the effects of sea water, soda, kelp, barilla, ashes, potash, charcoal, magnesia and metallic oxide, but I fear I have already trespassed on your columns.

These are, nevertheless, subjects on which my mind is in a train of reflection, and I offer them in the hope that wiser heads may do them better justice.

In your March number of the present volume, page 39, a Virginian correspondent desires you to remind me of the concluding paragraph to my communication of the 18th January, 1839. (Vol. 6, page 19.)

The heading of that article was editorial. Had I written it, I should have prefaced it "BARN-YARD MANAGEMENT." The promise was proposed by me, rather *as to that*, as the principal subject, than as to turf as a branch of it, or of the theory which forms the subject of this communication. I would cheerfully satisfy yourself, or your correspondent on *any point* of inquiry connected with the agricultural use of that material if so desired, by letter. Agricultural experience, observation or knowledge, in my view, is *common property*, and I would be, I hope, the last to withhold from my fellow laborers in the harvest, the mite which I may contribute to extend its usefulness.

Before writing the article in question, I exhibited my use of the turf to our lamented friend, Judge Buel, on one of his cherished visits to my residence. I showed him its influence on every product of my garden, which covers about two acres, and in my field crops. I yet continue its use, as there suggested, with the exception only, of burning it for ashes, which I do not do, only because it is, in my mind, a waste of a valuable material, which can be made more extensively useful where the supply is not absolutely unlimited. My field crops, of every description, and my garden yet as then, "*tell the truth about it*," and exhibit high luxuriance in every department.

I have freely given of it, a load at a time, to my neighbors for essay, and to induce them to practice the use of it, on the sole condition that they would put it by the side of their best manure, and tell me the comparative results. Their reports have, without exception, been to me, that it was fully equal, if not superior.

The most profitable use I make of it, is through the aid of fish; of which, in May or June, I bury one load to 12 or 15 of turf—remaining for decay, and to overcome in contact with the putrescence of the fish, the antiseptic properties of the turf, until the ensuing spring, when the thermometer is likely to range above the spontaneous decay of the fish and turf, and greater heat may aid or lead on its fermentation, say 65 or 70° of Fahrenheit, it is then broken finely over, carefully intermixed, and a stick put in it to give notice of the state of the internal fermentation of the heap. The whole then soon comes into a heat as active as the best of horse manure, and I find it quite as much in danger of "*fire fanging*," as that, if not properly watched and turned, to check its first heat when inclined to rise above 100°. The fish but slightly contributes in itself to this heat. It is mainly the vegetable matter, of which the turf is entirely composed; the antiseptic properties of which thus overcome, it becomes quite as well heated and prepared for decay and aqueous solution, as the vegetable fibre of hay, as partially digested by the stomach of the horse.

Fish as a manure, in the concentrated form in which it is generally used, in my view, is ultimately prejudicial to land, and its use should be otherwise understood. But, properly applied, it is the most powerful, ready, and appropriate, particularly for the wheat and grain crops, of any of the manures in common use.

Respectfully, gentlemen, your obedient servant,

W. A. SEELY.

Wheat Sheaf Farm, Staten Island, July 4, 1840.

Rittenhouse's Machine for Cleaning Clover Seed.

MESSRS. GAYLORD & TUCKER—In your November number, 1839, page 181, Francis H. Gordon wishes to know something about the clover machine that I use. I will now endeavor to answer his inquiries as far as my knowledge extends, in the use of Rittenhouse & Co.'s machine. I will take up Mr. Gordon's questions as he puts them.

1. What amount of seed the machine will clean per day?

The one that I have used for four winters, for cleaning clover seed, will clean from two to twelve bushels per day. I am now having it altered so that it will take more hands and more power, as it does not blow out the chaff at the time of cleaning, as it did before I increased the motion. So you will be obliged to clean the seed from the chaff after it is hulled with a fanning mill. There are some in this vicinity that have hulled thirty bushels in one day, although the fanning mill separated only twenty bushels the same day.

2. Is it worked by horse or human power?

It is worked with horse power, the same that is used to thrash grain, or it can be attached to water power, although I prefer the thrashing horse power, as they can be easily moved from one barn to another, and one machine will answer for a town, and it is easier moving a machine than clover chaff far.

3. How many hands are required to attend it?

It has only taken two hands to use the one I have worked—one to attend the machine, the other to drive the team. As I have my machine altered, it will take two extra hands to clean the chaff through the fanning mill, at the same time you are cleaning the seed. It makes quick work.

4. Does it get out all the seed from the chaff?

It will get out all the seed that is fair and plump. There is a great deal of clover seed that is shrunk, occasioned by drouth, insects and frost, in this vicinity, that cannot be hulled by any machine with profit; as the fanning mill is in motion at the same time with the machine, all the chaff that falls near the fanning mill, is run through the machine again and again, until it is all out that will make merchantable seed. There is considerable seed, that is called with us tailings, that is almost always kept by the raiser for his own use. I had about ten bushels of these tailings in the spring of 1838, from fifty bushels of seed. It was owing to frost and the clover seed worm; the worms had eaten up one-third of my crop; some of the grains half, some more eaten up. So this and the shrunk seed made up so great a quantity of tailings. I sold some at half price to one of my neighbors, who told me that it produced as fine a piece of clover last summer as he ever raised. My opinion is, that there is no machine that will take all the seed from the chaff. You cannot have much tailings by thrashing or hulling it out with horses, as this kind of seed always gets blowed out with the fanning mill. I always sow my chaff after I get all the seed out that I can, as there will be considerable to come up. I have often cleaned seed where the employer has not thought it worth sowing, but I always sow my own chaff. These machines get it out cleaner than any other I ever saw.

5. What is its weight? How large, or what space does it occupy?

The machine is about the size of the common fanning mill. I have never weighed one of them. Two men can move them about the barn floor. I should think they would weigh between three and four hundred. They consist of a concave and cylinder, similar to that of a thrashing machine—cylinder thirty inches long, covered with hoop iron, with teeth stamped on, similar to a rasp—concave two-fifths around cylinder, covered with same materials; teeth set in opposite directions. It is the motion that hulls the chaff. The cylinder is eighteen to twenty-two inches diameter; motion about the same as a thrashing machine, and takes about as much horse power; can be used with strap or rod.

6. Can a common farmer keep it in order, or does it require a workman?

There is not much machinery about it. The only thing that requires much workmanship is the preparing the hoop iron, and the hardening the same. After the hoop is prepared and hardened, any person can make one that has ever made thrashing machines, or other machinery;—they require to be made very true in the cylinder and concave: there is a small fan under the fore part of the concave, like that of a fanning mill, that blows out the chaff from the machine; the wind is thrown up in the same manner as the fanning mill, by a small strap on the end of the cylinder, to the whirr on the fan or shaft.

7. Can one be had in Philadelphia, Baltimore, or New-York city, and to whom should I apply?

The patentee lives at Albion, Orleans county, New-York, who would prepare the hoop for any place. The machines are made by Halburt & Blaine, at Waterloo, Seneca county, N. Y., who have the right for that and some other counties. The machines are also made at Trumansburgh, Tompkins county, N. Y., by Grant & King. Persons wishing a machine, could be accommodated by addressing Izi V. Blackwell, Albion, Orleans county, N. Y.

I would here say a few words to Mr. Gordon and others, who are in the habit of getting out clover seed by trampling it with horses on the barn floor. It is a tedious job for man and beast, for I have tried it to my own satisfaction. It is like the plan recommended to increase our manure by hauling sods, washings of highways, and other matter into the yards for manure. It may do in Europe, or where land is very high, and labor cheap, but I think it is a slow way of manuring one's farm, where they can make clover grow; for I conceive that I can enrich my farm cheaper by clover than I can have my manure drawn from my yards eighty rods to the fields—so that hauling in and out would be like thrashing clover with horses, tedious work. Since I have had my clover machine in this vicinity, the crop of seed, as well as clover for hay or pasture, has increased beyond all expectations, as almost every farmer has more or less seed of his own raising to sow and to spare; and instead of sowing it as if it was gold dust, they sow it by the handful, as they think it does not cost much to raise it, and they can have it cleaned for 21 to 23 cents per bushel, at their barns.

Brother Farmers—Some one of you venture, as I did, to buy a machine, and see how soon your neighbors will have plenty of business for the machine in winter, while your wheat thrasher is lying idle. Then you will soon see your neighbors enriching their farms with that valuable manure, (clover,) and you will soon see their barns filled and new ones built to hold the hay and grain. You won't see but few of the barren, sunburnt fields that are intended for summer fallows, but you will see the clover fresh and green. So when you are plowing your fallows, you need not go half a mile to turn your teams out at noon or evening, but strip off the harness or yoke, and let your teams go in your summer fallow, in clover up to their eyes. **Try it,** brother farmers, and see if you will be obliged to dig up highways to make your hogs earn their living in the summer, when they ought to be in your pasture of clover; and be sure and get that good breed, that will not only grow, but will fat on clover: that there is such a breed of hogs, I will vouch for, as I have tried it to my satisfaction. The value of clover to a dozen hogs, is worth more than the seed costs, to say nothing about the feed it makes for your other stock, and the food for a crop of wheat or corn, oats, barley, &c. Brother farmers—I do not wish to be understood that I am an opposer to animal manure, for I think as much of that as any of you, and I try and keep as much of it under cover as I can during winter, so that I can have all the benefit of it in the spring of the year, for my corn and potatoes, ruta bagas, &c. I scrape my yard every spring, and never move my barn, as has been done in western New-York, to get rid of the manure. Brother farmers, let me hear from some of you about the value of clover as a manure, that our editors may have some facts before them, from which they can judge of its virtue. Yours, &c.

HENRY BREMEN.

Enfield, Tompkins county, N. Y. 1840.

INQUIRIES.

Messrs. Editors—There is a farmer in this vicinity who desires an expression of your opinion on some points upon which he is not aware that he can obtain satisfactory information from the former volumes of the Cultivator. His land consists of two farms; one of 240, the other, 380 acres; 450 acres on both farms suitable for the plow, without any expense of draining; the soil generally a gravelly loam; some of it might be called by some farmers, a sandy loam; quality at least equal to mediocrity in this region; stands drouth very well, and does not retain the water so as to prevent plowing at any time. This land is now a large portion of it, to be broken up this season. There are about 90 acres now in wheat, and 56 in rye; 40 of which he intends to plow in for manure, about the first of June, and plant potatoes and ruta bagas; this rye is the second crop that has ever been on the land. The whole 450 acres appears to be well adapted to the cultivation of the ruta baga, potato, carrot and clover; and is a middling good wheat soil. This farmer does not expect to make himself rich by burning his straw, or moving his stables to get them away from the manure; and therefore requests a few such suggestions as your experience may dictate, for the management of his farms; and also answers to the following questions, so far as you are able to furnish them:

1. Can sheep husbandry be made profitable at the present prices of wool and tallow, in locations where mutton will bring but a low price?

2. How many sheep can be kept on the same quantity of food, or on the same quantity of land, that will keep one cow?

3. Can pumpkins be profitably cultivated by planting them with potatoes, in the manner they are usually planted with corn?

4. How many tons of pumpkins can be produced on an acre of good land, if there be nothing else on it?

5. Are pumpkins equal to ruta baga, for food for cattle, pound for pound?

6. Is rye meal worth more, or less, than barley meal, pound for pound, to mix with boiled or steamed potatoes, or ruta bagas, for making pork?

7. Are peas a good crop to plow in for manure?

8. If a crop of rye, oats or grass be turned into the soil, which, if cured for hay, would have produced a ton and a half of dry hay to the acre, how many loads of unfermented barn yard manure is it equal to?

9. Are ground peas worth more than corn meal, for making pork, pound for pound?

10. Is one bushel of dry peas, after being ground, worth 2½ bushels of potatoes steamed, for making pork?

11. How many sheep can be pastured during the summer and fall, on one acre of good clover pasture?

12. How many pounds of ruta-baga seed can be produced on an acre of good land?

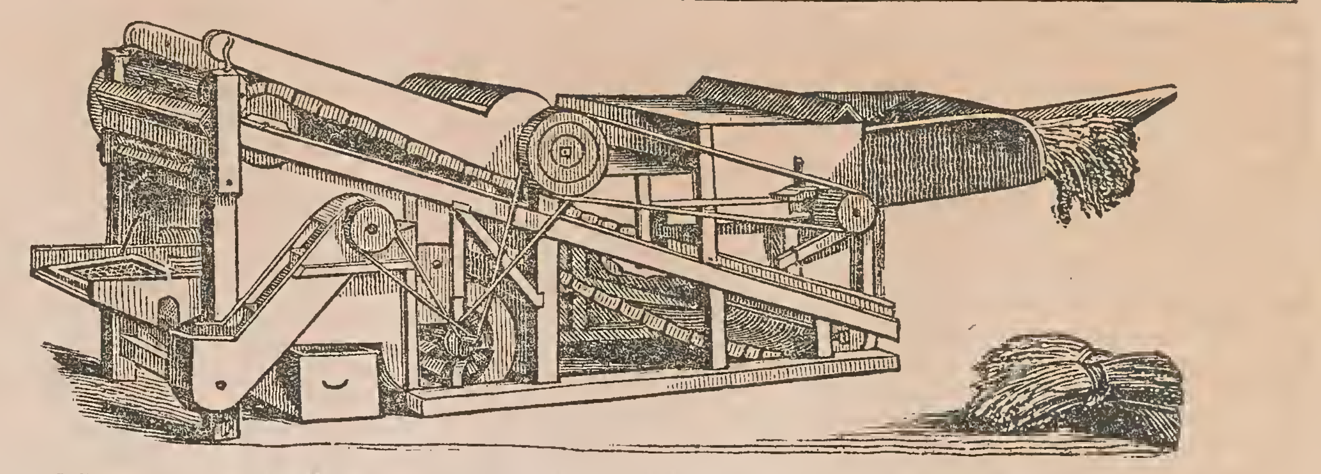
A new Straw Cutter.

Mr. H. of Virginia, who is dissatisfied with Green's Straw Cutter, is informed that I have invented one that will suit him; have used it about three months and thus far, it answers the expectations of the inventor. This machine was constructed principally of wood, and performs the work well; but to make them preferable to any in use, for durability, I am now constructing one wholly of iron, except the frame. Measures will be immediately taken to obtain a patent, and the machines will be afforded at as low, if not lower price, than any other good machine. They will be so constructed, that in one minute they can be changed from hand to horse, or water power, by taking off a crank and buckling on a band. They perform the work very fast, and with the application of but little power, and cut the fodder of any length desirable. Yours, &c.

S. W. FOSTER.

P. S. Will Messrs. Brentnall inform the public with what kind of food they fed their hog, of which they gave an account in a late number of the Cultivator, and which obtained so great weight, in so short time?

Scio, Washtenaw Co. Mich. S. W. F.



PITTS' MACHINE FOR THRASHING AND CLEANING GRAIN—[Fig. 76.]

Messrs. Editors—The above cut is a true representation of Pitts' Machine for thrashing and cleaning grain. Its weight is 700 pounds, occupying a space about eight feet by two feet four inches. The whole machinery is durable, and easily kept in repair. It thrashes and cleans all kinds of grain in the best manner, performing the work at the rate of from 25 to 50 bushels per hour. Four hands are required to tend the machine when in operation, viz.—one to forward the bundles, one to feed, one to measure and put the grain into bags, and one to pitch the straw away as it comes from the machine. It can be easily moved from place to place, and attached to any horse power, and can be used in the field as well as on the thrashing floor, there being no loss or scattering of grain after it is once fed into the machine.

It may not be improper to state, that I have located in the city of Albany, N. Y., where I am engaged in manufacturing the above machines, together with a superior four horse sweep power; price of the above machine, without the horse power, $150—$100 will be added for the horse power. Respectfully,

Albany, July 20, 1840. JOHN A. PITTS.

"POPULAR ERRORS" RECONSIDERED.

Gentlemen Editors—In the May number of the Cultivator, (page 81,) I noticed an article headed "*Popular Errors*;" in which the writer, among other things, asserts, and labors to prove, that wheat will not turn to chess. That it will, is certainly a very popular belief among the farmers in this wheat-growing community; but I very much doubt whether "M. S. D." will be able to convince them that their belief is founded in ignorance. His very logical arguments amount to this, that, "because an oak will not turn to a maple, a pine to a tamerack, or the progeny of a Durham bull to an alligator, why, forsooth, wheat will not turn to chess!" I do not intend at present, to enter into any lengthy arguments, to prove this "*Error*" to be correct; but shall merely introduce one *fact*, that I am an eye witness to, and can prove by others who have seen the same, which I think must settle the point at once, in the mind of every one, not even excepting that notorious unbeliever, "M. S. D." himself; which is, *that wheat and chess will both grow on one stalk, the head being part wheat and part chess.* Now I contend the wheat turns to chess, but if it can be accounted for on any other principle, I should like to be apprised of it through the columns of the Cultivator. It would annihilate the argument of "M. S. D." to say the chess turned to wheat—it is out of the question. The above fact may have been published and before the public; if so, I am ignorant of it. That a belief in the transmutation of wheat, has a pernicious tendency, by causing the believer to be negligent in tilling his land, or careless in procuring good seed, as asserted by "M. S. D." is another mistake; because tilling the land well, sowing good, sound, healthy seed, not already half degenerated, and but one remove from chess—ditching and furrowing after seeding to drain off all standing and surplus water, will obviate to a great degree, the natural causes that produce a degeneration and transmutation. Until the union of wheat and chess on one stalk is disproved, or otherwise accounted for, (and other good reasons,) I shall remain a firm and sincere believer in the transmutation of wheat.

Yours, &c. LOWELL HULETT.

Byron, Genesee Co. June, 1840.

Note by the Editors.

We cheerfully give a place to the communication of Mr. Hulett, on the question of the transmutation of wheat, and add a few remarks on what we consider its agricultural heterodoxy. "M. S. D." will answer for himself if he pleases.

In the first place, the theory of transmutation is in direct contradiction to the whole known order of nature. Not a single instance has been given in the long controversy to which the dream has led, or ever can be given, of the conversion of one *species* of plant to another, or one species of animal to another. Until this is done, we have a right to infer that it cannot be done. The true doctrine is, *varieties* change, *species* never. Now wheat is a well defined species of plant called *Triticum*, with many varieties; and chess is another distinct *species* called *Bromus*. The difference in root, leaf, stem, flower, head, and seed, is as well marked, invariable, and distinct throughout, as it is possible to be in any two plants; and there is as much reason to suppose that wheat changes to oats, broom corn or the sugar cane, as to chess. A few years since, Mr. Thompson announced that he could change wheat into chess at any time, by cutting off the tap root of the plant, below the upper or surface roots. His experiments were repeated by hundreds, and it is needless to say no chess was the result. The pear has a tap root in most cases, the apple rarely; will cutting off the tap root of the pear tree convert it into an apple tree? The mere statement of such an absurdity is a sufficient refutation, and yet it is precisely on the same level with the transmutation of wheat into chess, by mutilation or injury.

In the second place, we deny the "fact" upon which Mr. Hulett rests his belief, most confidently and positively. We do not mean to assert that Mr. H. does not believe he saw what he states, most firmly, but we mean to assert that he was mistaken in the result of his observation. We have known so many instances where a similar demonstration has taken place, in which, under a more careful examination the "facts" vanished into thin air, that we are incredulous as to any such, where they contravene a known law of nature and nature's God. We will mention one or two of these cases that have fallen under our observation, and almost any one who has taken the pains to examine for himself, will recollect similar instances.

In October, 1832, Mr. Wadsworth brought from Michigan, a head of wheat, which he left at the office of the Genesee Farmer, as furnishing proof positive, and such as every man might see for himself, that wheat did turn to chess, and were here both growing on one ear. A single small branch of the chess sprung out among the kernels of wheat, apparently truly attached to the same stalk. The head had been kept some time, and all pronounced the "fact" decisive. To put the matter beyond a peradventure, a minute examination and dissection of the wheat ear, was made with the aid of a magnifying glass. The process of removing the glumes or chaff of the kernels was made with care, and it was discovered that the stem of the panicle of chess, which was not larger than a horse hair, had in the reaping, or some other way, been forced between the main stalk and the glume, thus retaining the chess in its place; while the slender stem of the chess was bent up in the direction of the beards of the wheat, and thus entirely escaped notice. Thus was dispelled fact No. 1, to the astonishment of a multitude of firm believers. Those who have the curiosity to look at this instance more fully, may find it detailed in the second volume of the Genesee Farmer, page 353.

Another "fact" of a similar kind was presented to our notice a short time before leaving Rochester. Mr. Andrews of Pittsford, a most respectable and intelligent farmer, a disbeliever in transmutation for forty or fifty years, liberally educated, and accustomed to think for himself, was converted to the theory of transmutation by a similar ear of wheat, and was kind enough to bring it to us for our inspection. The head had been shown to many, and was considered as affording an unanswerable argument in favor of the change of wheat into chess; and we doubt not the "fact" would have by some been cheerfully sworn to, on the evidence offered, had it been necessary. Yet this head of wheat when examined, and the glumes carefully removed, was found to be as far from affording any evidence in favor of transmutation, as others. The stem of the chess panicle was twined around and drawn close to the base of the glume and broken off, so as to leave no trace to its detection, so long as that remained unmolested. Mr. Andrews was astonished at the result, as also several others who witnessed the unravelling of the mystery. One such ear of wheat will confirm hundreds in this popular error, when if men would do in this as they do in other cases, use their fingers, as well as their eyes, such "facts" would soon be seen to be no facts.

The unanswerable arguments brought forward by David Thomas in the Genesee and American Farmers, against the theory of transmutation, should forever have settled that question; certainly until those arguments and facts had been disposed of. For ourselves, we have canvassed so many "facts" like the one stated by Mr. Hulett, and those noticed above, that independent of our belief in the impossibility of such a departure from the law of nature, we always look on such statements with suspicion, and however respectable and credible the individual, utterly unworthy of the least credence in themselves.

We must be permitted to believe that the position of our correspondent "M. S. D.," that a belief in the theory of transmutation, has a tendency to induce carelessness in cultivation, and thus perpetuate the evil, notwithstanding Mr. Hulett demurs to the statement, is correct. Observation and experience, reason and fact, prove that men rarely take much precaution in guarding against ills over which they have no influence, and consequently, that he who believes in the transmutation of wheat into chess, will not be as anxious to free his seed from chess, as he who believes that the order of nature is followed in this, as in other matters.

We have extended our remarks to a greater length than we intended, as we consider this "popular error," a most injurious one, and one of those remains of ancient ignorance, which should long since have been dispelled by the increased lights which science, and a knowledge of the relation existing between cause and effect, have thrown over the operations of nature.

REARING CALVES.

Editors Cultivator—In almost every number of your valuable paper, we find some new and economical manner to rear calves. The following is one recommended in one of your Cultivators of last year, and as I have tried it, I can cheerfully recommend it to any one wishing to rear calves. From the 1st of March to the 11th of April, I had five calves dropped. As soon as they were found, they were taken from the cow, and given a good handful of salt, and then fed flax-seed jelly and hay tea mixed, three times a day, until the 15th of May, when they were turned out in pasture to live on grass and water; and, sir, it is a fact that I have not seen a calf that has been raised in my neighborhood this spring, (and in every case they have been fed milk,) that is as likely as the five raised on the flax-seed and hay tea. I estimate the expense of rearing each calf at 18 cents up to the time they were turned into grass.

E. S. WILLETT.

Bethlehem, June 18, 1840.

REVOLVING HORSE RAKES.

Eds. Cultivator—I notice in the last number of the Cultivator, an inquiry for the revolving horse rakes, and your descriptions of the kinds used. Will you please say in your next number, that these most useful labor-saving implements of agriculture, are manufactured at my establishment in this place, and may readily be shiped to any point on the canal. I have made them for five years past, but the demand in my vicinity has taken all I could produce. These are greatly improved from the kinds described in your drawings, and will perform much more labor, and with more facility, as there is no difficulty owing to winding of the hay around the head and journals, to which the kinds described in your paper are subject, and the command over them is so perfect, that they are used on rough grounds without much inconvenience. On our smooth grounds, the farmers do not carry a hand rake into the field, as these will perform the labor better, and one man, boy and horse, will rake ten acres of hay in half a day. I have made 400 this year, and intend to enlarge my operations next season. The price of them at the shop is $7. I intend to forward a dozen or two to Mr. Thorburn, where you can inspect and try them. Yours truly,

AMASA MANN.

Frankfort, Herkimer co. June 19, 1840.

"SO MUCH FOR"—BERKSHIRES.

Friend Tucker—You have probably judged from the tenor of some of my former communications, that we were cursed in this part of the country, with a species of wild animals, called hogs; and also of my intention to take some steps to convince my fellow-citizens, that they were entirely mistaken in the article. I am happy to state to you, that I have been eminently successful. The witnesses which I have introduced to prove my case, have, by a speaking, though dumb, eloquence, convinced the most sceptical.

In short, I received a few days since from A. B. Allen, Esq. of Buffalo, the first pair of Berkshire pigs ever seen in this country; and had I introduced an African lion, I verily believe it would not have excited more curiosity. They have been visited by hundreds, who had read the description and seen the picture of them, every one of whom believed it to be an overwrought description and picture; and every one of whom is now convinced, that "the half had not been told them." Were the pair that I have as prolific as a swarm of bees, I have already had more applications for pigs than I could supply.

This, sir, is the benefit of demonstrating to the eyes of the people the advantages of improvement in agriculture, in stocks and implements of husbandry. This is one of the fruits of agricultural journals. What a lesson may every day be learnt by examining these fruits. It is a lesson that should teach every philanthropic mind, how much good he may do his country by a little exertion to extend the reading of such journals, by the easy method which I have several times pointed out before.

And it is a positive duty that every friend to agricultural improvement, owes to himself and his country, to take immediate measures to introduce improved stock into his neighborhood.

Let those that are now able, set the example, and those that are less able will surely follow.

We are all creatures of example; influenced by the circumstances with which we are surrounded; and say what you will about "rich and poor," the poor look to the rich for example, and it is the positive duty of the rich to see that they have such examples as American freemen ought to follow. Reader! I speak now directly to you! Mark the fearful responsibility that I fix upon you! Let not another day pass over your head, till you inquire whether you are not able to extend the reading of an agricultural journal in your neighborhood? Is there not one poor laborer who would willingly work a day or two for you, if you would procure the paper for him? Are you not able to procure a pair of the improved breed of pigs, or some other stock, and introduce it into your neighborhood? You will soon see the leaven work; and it will do your heart good, to see the smiles and hear the congratulatory expressions that will welcome your efforts in a good cause.

Try it my friend; you never will curse the good advice of your old friend, SOLON ROBINSON.

Lake C. H. Ia. July 6, 1840.

"SULPHUR SHOWERS."

Messrs. Editors—Under this title, I observe some of your contemporaries are discussing the question of the origin of the substance that sometimes accompanies summer showers; and a correspondent of one of them says, that investigation has led him to the belief that it is nothing more than the blossom or farina, washed by the rain from the mosses growing on the roof of the house; a conclusion that subsequent observation has confirmed. "I have never," he says, "found this substance on water remote from buildings, or very early in the spring, or after the frosts of autumn, or on water caught from slate, tile, or tin roofs, or in any situation to negative the origin above assigned to it."

That the yellow substance supposed by many to be sulphur, is the pollen, or farina of flowers, is undoubtedly true; but that it could have the origin above assigned it, would never have entered the head of a man who had ventured beyond the sound of Bow-bells, or witnessed the operations of nature, where man rarely intrudes. I have hunted for days, in the woods, when my sleeves would be covered with this dust, brushed from the weeds or plants upon which it had fallen from the millions of flowers on the trees overhead; and from which, while blossoming most freely, after a day or two of warm still weather, a sudden gust, such as frequently precedes a thunder shower, would bring it down in such quantities, as to give the pollen color to all my clothes. I have seen too, this farina carried by a thunder gust nearly half a mile, in such quantities as to darken the air, and produce a greater deposition from a new shingled roof on which there was not a particle of moss, than I have ever noticed from any other building. The reason why this dust is not often found in water from slate, tile, or tin roofs, must be obvious to every one, who remembers that such roofs are not often found in or near those places where farina is produced most plentifully—I mean our native forests.

WOODSMAN.

AGRICULTURAL MORALITIES.

Messrs. Editors—I am a plain man, not versed in metaphysical subtleties or legal abstractions, but I have my notions about right and wrong, old fashioned, perhaps, and I sometimes meet with things that rather run counter to my ideas of what is correct, and I wish to state some of my difficulties for you or some of your correspondents to remove, should you deem them worthy of notice.

There seems to be but one opinion respecting the men who wilfully injure the property of their neighbor. If I should poison the spring of my neighbor, mix arsenic with the oats fed to his horses, or feed nux vomica to his sheep, I should probably be committing an offence against the laws that would subject me to a deserved punishment. If I should girdle or cut down his apple trees, set fire to his woodlands or fences, obstruct his water courses, turn animals into his wheat fields, or turn his stock into the highways, I should deserve, and should receive, the execrations of every honest man, in addition to the exposing myself to retributive justice. All these are considered crimes, and their magnitude is estimated by the injury done or intended to be done to my neighbor.

Now I would ask where in *reality* is the difference between the above class of offences, and acts I shall now specify. I carry to market a load of clover seed, or a friend applies to me for a bushel for his own use. I know, but the buyers do not, that there is a plentiful sprinkling of Canada thistle seed in it, and that if sown on his farm, it will be the means of stocking his soil with that pest of the farmer. I have some wheat that is in great demand for seed, I am aware that it is full of stein krout or charlock, but the purchaser does not notice their presence, and I make a good bargain in common parlance, by saying nothing about it. I have some corn, that resembles some valuable and celebrated variety, and I take advantage of the ignorance of my friends and others, to sell it to them for high prices, while I am aware that it has not a single feature of the corn they imagine it to be. I might enlarge this catalogue of similar acts, but enough has been given to illustrate my meaning.

I repeat the question. wherein does the guilt of the man who feeds his neighbor's horses with arsenic, differ from his who sells his neighbor the seed of the Canada thistle? For my part I am simple enough to consider the latter the greater offence. The crime is the destruction of property. In the one case it is the destruction of a few animals that can be replaced: in the latter the farm itself is comparatively ruined. Ask a Pennsylvania farmer which he would choose, to lose his best span of horses by poisoning, or have his fifty or his hundred acres stocked with the thistle, stein krout or charlock; and if he understands the nature of these plants, he would not hesitate an instant. The injury in one case would be but a trifle, compared with the other; why then should not a corresponding estimate be formed of the crime?

I make these remarks because I do not imagine the crime of injuring others in these ways, is sufficiently realized by farmers and others. The man who puts off spurious animals for good ones; who sells impure or bad seeds for clean or proper ones; who knowingly injures his neighbor or the public in these and other common methods of fraudulent imposition and puffing, is not to be held guiltless, because he does not put his hand in a pocket and extract its contents directly, or because he does not commit other overt acts against the majesty of the laws. *He does not do as he would be done by;* a plain unsophisticated test of conduct, to which all would do well to take heed; at least such is the opinion of an OLD SCHOOL MAN.

RUST IN WHEAT.

Almost total failure of Crop in Northern Indiana and Illinois.

Messrs. Editors—One month ago, could you have seen this fertile region of *too* rich land, you would have seen the greatest prospect of a great wheat crop that you ever saw. But that short month has been a succession of warm showers and hot sun, and the most universal blight has fallen upon us that I ever saw or heard of. It is not a piece here and there, but it is everywhere. Thousands of acres will never be cut, and such as will be, will barely pay the cost. Some fields are already rotten and stinking. It is only here and there a field can be found that will afford seed. There is yet much old wheat in the country, or the prospect would be still more gloomy than it is.

All other crops hereabouts look well. We must eat corn dodger and potatoes, and drink "hard cider," and have hard times one year more.

In haste, I am your friend,

SOLON ROBINSON.

Lake C. H. Ia. July 13, 1840.

A certain Cure for the Scours.

I had a mare that had the scours so bad, that it reduced her to such a state of debility, that she could not get up and down; and the final result was, that her hoofs came off, and new ones grew out. I tried every thing that I had seen prescribed in the Farmer and Cultivator, without success. The young men that worked my farm, then procured the leaves and roots of the red, not the black raspberry, and made a strong tea of it, and gave it to the beast three times a day. In a few days she got upon her feet without assistance, and the result was, a perfect cure.

A. H. N.

SALTING FLOWERS.

BY ALEXANDER WALSH.

It is asserted by a distinguished writer of great antiquity, that "he may conquer all things, who mingles the useful with the sweet." It may not be generally known, that common salt applied to flowers, will preserve them with nearly all their peculiar odor, undiminished for several years.

Roses, and other flowers, and aromatic plants, may be picked and salted, and kept in that state, until a convenient time for distilling.

By this method, the season does not hurry the manufacture. Vegetables may be distilled in New-York, which were gathered in France or Italy, or even in Asia; and the perfumed water, or essential oil, will be in nearly as great perfection, both as to quantity and odor, as if the leaves or plants were fresh gathered.

The salting may be performed thus: Take one and a half pounds of rose leaves, or whatever other vegetable substance you choose, add a half a pound of salt, and rub them together about four minutes. The friction produced by the salt forcing out the juice of the flower, will reduce the whole to an aromatic paste, which must be carefully collected, and kept in a tight vessel, in a cool place, until wanted for distillation. When to be distilled, place the paste in the still or retort, with twice its weight in water.

I noticed in New-York, in March last, at a public sale, by Austin, Wilmerding & Co., of drugs and dye stuffs, a large quantity of articles connected with the line of perfumery, such as rose water, cassia buds, myrrh, frankincense, &c., imported from Europe and Asia; and among them, two large packages of dried rose leaves. Although every other article went readily, and at a fair price, yet the rose leaves could not obtain a bid, though some of the first perfumers in the United States, were present. Now had these been preserved in salt, and their value known, they would have commanded a readier sale than any other article offered

To make Poperee, or a substitute for fresh flowers.

By collecting the leaves of roses, wall flowers, lavender, sweet brier, &c., and packing them with layers of salt, in a tight covered jar, or other suitable vessel, sprinkling with each layer a little powder of cloves and cinnamon, in equal parts, may acquire a delightful and refreshing perfume, which will last for years, with very little waste, which waste may be supplied, by adding fresh leaves, on the return of the following season.

Nothing on earth can more regale the senses, than a beautiful display of roses, and other ornamental flowers. But this has been hitherto considered as a luxury which could only be enjoyed by the rich, who wholly disregard profit. But if the most brilliant productions of Flora's kingdom can be rendered equally an object of profit and of pleasure, who would not have a flower garden? Every family, almost, can be furnished with a cheap apparatus for distilling, and may thus render pleasure and profit mutual auxiliaries to each other—[N. Y. Far. Vol. 7.]

HILLING POTATOES.

Messrs. Editors—In one of your late numbers, (March, I think it was,) you were pleased to notice a remark that I had made in a former communication on the disputed question of hilling or not hilling potatoes, in which I said that both sides were right, and both wrong; the propriety of either practice depending upon the kind cultivated, and requested some farther explanation with reference to the different varieties. I am acquainted with but few of the numerous varieties now before the public as candidates for general preference, and therefore my observations must necessarily refer to such as I am acquainted with. In order to exemplify my position, I will take those two of them which I consider most dissimilar in their habits and manner of growth, the Kidney and the Black. It has been observed and truly, that potatoes do not grow from the roots proper, but from fibers or laterals shooting out from them; and the great difference consists in their tendency to form their tubers at longer or shorter distances from the parent stem. The Black potato seems possessed of the very spirit of emigration: it is a wide wanderer from home. The Pink Eye has the same character, but not to the same extent; and yet in them I have often observed in digging, the fiber from one hill run slightly under the surface and form its bulb in the next. (I make small hills, about 2½ feet apart.) But the Black is often found 2 feet or more from the stem, so that it has almost gone into disuse with us on account of the labor of digging. It must be obvious then, that with potatoes having such a tendency, drawing the soil away at about a foot or a foot and a half from the main stem, must be taking it away where it is most wanted. Very different is it with the Kidney: they are no wanderers; of short fiber, a sociable family potato, attached to their homestead, they are fond of clinging together in one dense mass in its center; nourish them there then; give them all the support your soil will afford; if you do not, they will not wander abroad for it, but will push each other till some are thrust out at the top, and with their green eyes stare you reproachfully in the face

I remain yours, WM. BACHE.

Wellsboro, Pa. April 18, 1840.

FOWLER, SPARE THAT BIRD!

Messrs. Gaylord & Tucker—I know of few things more calculated to disturb the equanimity of mind, and ruffle the feelings of a humane man, one who lives among animals and birds, and feels as if they were all personal friends, than to see a shock headed, straddling thing, calling itself a man, with rusty musket or rifle, creeping about our highways, woodlands, or orchards, and popping away at the harmless little creatures, that give to the landscape half its charms, and to the eye and the ear half their pleasures.

I know these men cannot look upon birds as I do, or they would not have to be guilty of homicide, to know what the sensations of a murderer are, when they wantonly destroy these creatures of the air. I plead not for the hawk or the crow; but for the beautiful songsters, that greet the morn with a hymn, flutter over and through our meadows and orchards, and exhibit an instinctive happiness that would reconcile the most morbid misanthropist to life and its cares. I never hear the song sparrow, that with us is usually the first harbinger of spring, without a feeling of gladness "that the winter is over and gone, and the time of the singing of birds is come;" and this feeling is increased, as day after day, the blue bird, robin, tree sparrow, yellow bird, bob-a-link, brown thrush, oriole, and swallow, successively arrive, and enliven the woods and fields with their presence, and fill the air with their music.

Tell me not that birds have not memories; that when the mysterious instinct compels their migration from us, they never return to their loved haunts, or again build in the same grove, but go whither accident or chance may direct. Only a few days since, I was standing in the field, and suddenly I heard the far off twitters of the barn swallow, of which not one had yet appeared. Away up in the blue sky, I at last descried him, as he slowly and on weary wing descended from his long flight, and with a song which could not be mistaken but for one of joy that his journey was over, he resumed his accustomed place on the ridge of the barn. In a few minutes he was joined by his mate, and during the hour in which they were resting from their weary way, many were the congratulations that passed between them. On the spot where for years they have built their nest, and reared their young, they are now building, and their absence is like the absence of friends.

And what is the crime charged upon these beautiful birds, that they are doomed to death by every boy or man, who is disposed to show his prowess in shedding their blood? Why they eat our cherries, or perhaps occasionally peck our trees or our sweet apples. This charge is true; but only a very small part are guilty, if guilt there is about it; and must all the acknowledged harmless species suffer for the act of one or two? Where is the man who can accuse the sparrow, yellow bird, blue bird, swallow, thrush, bob-a-link, lark, and a multitude of others, of preying on his crops or his fruits? Yet these are sought after and destroyed with as much avidity and hot haste, as the most predatory ones. The urchin or the ragamuffin raises his weapon, and the half-warbled song, remains unfinished forever. I have admitted the charge, but if true in its fullest extent, would it justify extermination? Is there no good deed performed—no services rendered to the gardener or the cultivator, which may be plead in extenuation or mitigation? I think there are many, and that the good they do over-balances many fold, as a strict matter of profit or loss, the trifling injuries they produce. The robin, the cedar bird, and the wood-pecker, are the three of the small birds most destructive to fruit, but these are far from being useless. I this morning saw in my garden, a robin hopping along on the ground; soon I saw it seize a black grub or cut worm, and in a few moments another. Those two worms among my melons or cucumbers, would have done me more injury than a dozen robins in my cherry trees, and yet these two formed but a small part of the worms of various kinds this single bird would devour in a day. Of all birds, the cedar bird is to me, perhaps, the only one positively disagreeable; yet I owe to a flock of these birds, that made my orchard their home last year, many a bushel of beautiful apples, as they fed continually on the cankerworm that at one time threatened the total destruction of some of my choicest fruit and trees. And the woodpecker, while you think he is only amusing himself, by hammering away on your trees, will, if you observe him closely, be seen ever and anon to thrust his long barbed tongue into a hole, and extract a grub that was perforating and destroying inch by inch your tree. Depend upon it, the woodpecker will not hurt your trees, if there are about them no insects, or decayed wood, that requires excision.

Before you destroy a bird on your premises, or permit any one else to do it, be certain that you are not about to destroy one of your most faithful friends. Carefully weigh the good and evil they occasion against each other; think of the pleasure and instruction they afford; rise on one of our beautiful mornings before the sun, and hear from copse, and orchard, and grove, the thousand voices of joy and melody that are rising and mingling, and if you have a single feeling that belonged to man in Paradise, it will not be necessary to repeat to you—Fowler, spare that bird!

A FRIEND TO BIRDS.

WOOD LAND.

Messrs. Gaylord & Tucker—We can grow wood much faster than is by many imagined; and the best method is to enclose the wood lands, that the young growth may not be plucked by cattle or sheep. It is the common practice with us, to select and cut only the decayed trees, which is not so fast nor so good a method as it would be to take by rotation on one entire portion where an attack is made. The new growth has an equal advantage of sun and air. If a man has 20 acres of wood land, let him cut clean one acre each year, and at the expiration of 20 years, the first cut will be covered with a heavy growth, again ready for the axe. But if this should be permitted to remain many years longer, the food to nourish each tree would not be increased, and of course, a struggle would be the result among the trees; the weaker would be compelled to give up to the stronger, and the whole growth would be retarded. I have observed that the second growth advanced faster in an old country, than in a new. The reason that I would assign, is, that the wood land, having a chance to rest in most soils, a different variety springs up from that which was previously taken off the same ground, and this new variety requires different properties, which are deposited in the earth to feed upon. If the wood recently cut was beech, the young growth may be chiefly maple, pine, &c. The different varieties extract different neutralizing qualities from the earth; one property being exhausted by clearing the land, it gives new vigor to another variety. They also receive more light and heat, and collect more dew; those vessels by which it absorbs the air and moisture on which it feeds, are better supplied. In an old country, timber is less abundant; that portion remaining also receives a better supply of the electric gases; electricity being one principal agent in fructifying and in the advancement of the vegetable as well as the animal kingdom.

In New-England, in those portions of the states which have been settled the longest, wood comes forward much faster and of a better quality, than in the new districts. It has been observed, that trees grow one third faster in the oldest portions of this state, now, than they did thirty or forty years ago. Nearly all of the pine timber has been destroyed in this state; and it is considered a fallacy by most people, to let young groves remain, with the expectation of being any benefit even to the second generation.

A Massachusetts farmer who settled in this town, has a quantity of thrifty young pines, which cover a poor piece of land; he has been advised time and again, to cut them down, but he has ever insisted that they were as profitable, or more so, than any other young growth that could occupy the ground. Twenty years ago, they were all small bushes; now, many trees stand in this grove, which are nearly or quite large enough to saw into fence boards.

I have a grove of about five acres; the common height is from twenty to forty feet, and as thick as they can conveniently stand. The same grounds were resorted to by myself and other children twenty years ago, as a berry lot, with now and then a pine bush.

Woods intended for timber, should be of the second, not of the primitive or forest growth; and those growing in thick shade and moist air, are not so hard and tough as those which receive the light of the sun and free air. The growth of trees should be encouraged upon all poor and stony lands, unprofitable for tillage. The best timber trees are from isolated clumps and belts along permanent division fences; wood and timber trees, propagated by the road side and along side permanent enclosures, is an economical mode of obtaining timber and fuel; giving shelter to cattle and crops, and imparting beauty and health to the farm and landscape. The rock maple is the sweetest tree in the Green Mountain states; the second growth has a very handsome top, and is profitably cultivated for sugar.

Grass and grain crops are especially benefited adjoining the south side of wood lands, by the shelter they afford in cold winds; and cattle are benefited by their shade in the summer. As wood is advancing in value for timber, and the fire at home, and as an article of commerce, I hope the above hints will draw out from other correspondents corrections and valuable information. Your friend,

SOLOMON W. JEWETT.

Weybridge, Vt. Feb. 23, 1840.

PREPARATION OF SEED WHEAT.

Messrs. Gaylord & Tucker—Wishing to render some service to the cause of agriculture in this section of country, I will state my experiment with wheat. In the summer of 1837, having harvested a crop of very smutty wheat, and having been troubled in the same way for several previous years, I determined to try a recommendation I had noticed in the Cultivator. I accordingly used the same seed, which was very smutty, and, following the recommendation, I washed it in strong brine, made as strong as salt would make it, and then rolled it in lime, by laying it in a heap on the barn floor, and sifting the lime on it, and stirring it with a shovel till I could make no more stick to it. I sowed about nine acres in this way, and when I came to harvest it, very little smut could be found. I have continued the same process every year since, with the same wheat, and have now eradicated the smut from it. I have received more benefit from the experiment than the Cultivator cost me.

The ruta baga is beginning to be raised pretty extensively in this section of country, and is fed to all kinds of animals. Hogs eat it in preference to potatoes when boiled together. SALMON MUNSON.

Exeter, Luzerne Co. Pa. April 20, 1840.

THE PEA BUG.

Messrs. Editors—Having seen some description of the pea bug in the Cultivator, a more particular description of the manner in which they gain access to the pea, may not be uninteresting, as erroneous opinions have been formed respecting it. The pea bug, it is well known, comes out of the pea in the spring, before or after planting, and flies about like other winged insects, until the season for them to deposites the nits, that is, when the pea is formed in the pod. The bug then deposites the nits (which are small and yellow,) on the outside of the pea pod, which adhere to it by the adhesive moisture they contain. When the pea is about half or two-thirds grown, these nits hatch a small white worm with a black head; these make their way through the pea pod, and enter a pea if directly against one; if not, they crawl on the inside of the pod until they come to one. They may be easily discovered before the pea is hard, by the small speck on the pea where they have entered, where they remain until their transformation. The ensuing spring they emerge from the pea a perfect insect, to continue the general round of propagation. Very early, or very late peas, seldom have any bugs in them.

DAVID KIRBY

Rye, Westchester Co. N. Y. June 25, 1840.

CURING HAMS.

Messrs. Gaylord & Tucker—From the commencement of the publication of the Cultivator, I have been a constant reader of that valuable paper, and have received both pleasure and profit therefrom.

An article in the January No. of the present volume, on page 19, from your correspondent "W. S. T." on "Preserving Hams," has attracted my notice.

Your correspondent (probably through inadvertence,) does not inform us how much *meat* his pickle was intended for, although he says "and so on in proportion for a less or greater quantity, as you may have to save."

As I have had some experience in curing hams, as well for my own table as for market, and my hams have always been sought for by those who have once purchased of me, I will inform you of my method of preparation, which is as follows:

For 100 pounds of ham, I take 6 pounds of Turks Island salt, 4 ounces saltpetre, 1 quart molasses, or 2 pounds sugar—having added water enough to dissolve them, place them in a vessel over a slow fire and stir till dissolved and brought to the boiling point, carefully skimming off whatever impurities may arise; set it away until cold; the quantity to be increased or decreased, in proportion, for a greater or less quantity of meat.

As soon as the meat has become perfectly cold, (but not frozen,) I pack it as close as possible, in a sweet and clean barrel, and immediately pour the pickle to the meat; if the meat is closely packed, the pickle will cover it. Should the pickle not cover the meat, add pure water until it will. In four to six weeks, the hams will answer to put into the smoke-house, if wanted; if not wanted so soon, it may, without injury, lay in the pickle as many months.

When taken from the pickle to be placed in the smoke-house, *I by no means allow a drop of water to touch it,* but it may be wiped with a *dry* cloth. I have used corn cobs for smoking meat, and think them very good, but I think *green chips* (or wood) of the *sugar maple*, quite as good, or rather preferable—perhaps a part of each would be better still.

I have usually smoked my hams from ten to fourteen days—have never tried an open smoke-house, but have one of brick, and perfectly tight, except the door and a *small* flue in one corner to let the smoke pass out. I am aware that in my smoke-house there is some danger of *heating* the meat, with too large a fire. To obviate that difficulty, I intend this year to make my smoke in a furnace *out of the smoke-house*, and to conduct the smoke in a small pipe from the *covered* furnace, through the sheet iron door of the smoke-house, which, I think, must entirely prevent any damage by heat.

Your correspondent's method of keeping hams, after taking them from the smoke-house, is one which I have tried, and much approve. One equaly good, and attended with less trouble, is, where you have a tight smoke-house, in a cool situation, to let them hang in the smoke-house, and, perhaps once in two to four weeks, make a little smoke under them. Should hams be pickled with a view of keeping them through the summer, I should say *seven*, instead of six, pounds of salt, for 100 pounds of meat. Your friend, HARRY HALE.

Chelsea, Vermont, Feb. 19, 1840.

PRESERVING WINTER APPLES.

Messrs. Gaylord & Tucker—Last April a year, I visited a friend, when he made me a present of a large dish of fine flavored apples, and it being out of season to have apples in such a good state of preservation, I inquired his mode of keeping them. He informed me that in the fall he made a box six feet long and two feet deep, which he sunk into the ground to a level with the surface, then he filled the box with sound apples, and covered it with boards in the form of a roof, but leaving an opening at both ends. The roof he also covers with straw and earth, to the usual thickness of an apple or potato hole.—In this condition he leaves it till the apples are frozen, but as soon as a thaw comes, he makes it perfectly air tight, and in a few days the frost is altogether removed, and the apples are as fresh and perfect as when they were taken from the trees.

I am aware that this is an excellent plan, because I know that most of the apples and potatoes in holes rot and decay, in consequence of the warm and foul air accumulating having no opportunity to escape. I thought, however, to improve it. I consequently last fall buried my apples in the usual way; then I took four strips of one inch boards and nailed them together in the form of a chimney, leaving a vacancy in the middle, of one inch square; this I placed in the center of the apple hole, the end resting on the apples inside, and the other end projecting two feet above the ground. This succeeded far beyond my expectations. The vacancy in the chimney was barely sufficient to permit the warm and foul air to escape, and not so large as to let the frost in to affect the apples. My family, during the winter, whenever they wished to have apples for consumption, only removed the chimney and reached in with the hand to get a supply, and then replaced it again; and I can assure you that, of eight bushels which were thus buried, only three rotten and five or six slightly affected apples were discovered, whereas my neighbors, who buried their apples in the old fashioned way, lost a large quantity.

Can you inform me whether asparagus roots can be set out in the fall? [They may be transplanted in autumn as well as in the spring.—*Eds.*]

WILLIAM J. EYER.

Cattawissa, Pa. July 7th, 1840.

ROHANS, INQUIRIES, &c.

"I never nursed a dear gazelle,
To glad me with its soft dark eye,
But when it came to know me well,
And love me, it was sure to die."

Messrs. Editors—In the spring of 1839, having formed a high opinion of the Rohan potato for a great yield, I procured a single tuber from New-York and planted with great care; but no sooner had the shoots appeared above the soil than they were attacked by the brown grub, whose habits threatened the little colony with annihilation, and spite of my efforts to protect them, they were so much injured that I did not realize half of a crop.

This season they are suffering from the same cause, while, as last year, the common potato, growing near by, is nearly exempt from the ravages of these depredators.—Is this species of the *Solanum tuberosum* generally more liable to injury from the grub than others? And is it (as I have often heard asserted,) "the identical Merino potato which was common among us fifteen or eighteen years ago?"

With vines, also, I have been unfortunate. Last season I procured seeds of some large and choice varieties of the pumpkin, but not a single one arrived at maturity; and the present season I devoted a considerable portion of my garden to the same purpose. I planted of four different kinds, and the few that came up have been completely destroyed by the striped bug. There is not one left among them—"no, not one." Cucumbers have also shared the same fate, and other tender plants been injured; and it was my sole object in taking my pen, to inquire for a remedy against the brown grub and the striped bug. By pointing out some remedy, you will oblige your friend, the writer, and perhaps confer a favor upon many others of your subscribers—too late, indeed, for this year, but in good time for the next. I have overhauled each volume of the Cultivator (except one) for information on the subject, but have not obtained it.

I am no farmer, gentlemen, as most of your readers probably are, but notwithstanding, agricultural pursuits have a charm for me. The contemplation of this noble calling is one of the most pleasing subjects that can claim my attention. What pity that so many of our farmers even, do not look upon agriculture as of the first importance to a country—as the breast, the source from which society derives its sustenance. What pity, that prejudice, soul-benumbing prejudice, should so blind them to their own best interests, as to keep them walking hoodwinked in the beaten track of their ancestors, rejecting without trial, or even the least consideration, as innovations, the improvements now making in the agriculture of many parts of our state, by which means crops are doubled, and the soil at the same time constantly improving. Prejudice, prejudice, that bar to human improvement, can do all this.—It can and does make farmers follow the "old system," until their farms are absolutely "worn out," and will no longer support their families, and they are compelled to "sell out" and go to "the west," there to follow the same round.

Did your journal find its way to the parlor of ever farmer, and meet with as welcome a reception as it does at my "cabin," a change would come over us, and the necessity of immigration would soon cease, as barren fields would give place to "nature's green and gold." But while we hear so much sneering at "paper farming," "book farming," &c. we can expect no such thing. A.

Ellenville, Ulster county, N. Y. June 10, 1840.

UNDERDRAINING.

Messrs. Gaylord & Tucker—Having seen a communication on the subject of underdraining from your worthy correspondent, Mr. Jesse Langford, of Southampton, Va., and believing that my method of constructing underdrains is preferable to his, I have thought proper to make it known through the medium of your valuable and widely circulated periodical.

Cut the ditch sufficiently wide and deep to effect the object intended; make the upper half or part of the ditch from five to six inches wider than the lower or bottom part, thereby leaving a shoulder about midway the ditch, upon which place pieces of plank sufficiently thick to bear the weight of the dirt removed in cutting the ditch, either cross or lengthways, as may suit the convenience of the undertaker, then return the dirt, and the drain is completed.

This method of underdraining is attended with less labor, and of course less expense, than the one recommended by your correspondent aforesaid. It does appear to me that the water in some cases, owing to the quantity, cannot be let off by and through the aqueduct proposed by Mr. Langford. The old mode of cutting open ditches for the purpose of draining land, ought to be entirely superseded by every cultivator of the soil. I look upon it, as time, labor and money employed in vain. An open ditch requires annually at least half the amount originally expended in cutting it, to clear it out; but an underdrain, constructed after my plan, will last a man's life time.

I must avail myself of this opportunity of acknowledging my indebtedness to the columns of the Cultivator for much valuable and useful information. I am no enemy to book farming, and I do not know how a young man would undertake the improvement and proper cultivation of his soil, without the aid to be derived from some agricultural paper. I regret to say that we have no agricultural society in our county. The Cultivator and the Farmers' Register, however, have awakened a spirit of inquiry and enterprise among many of our best farmers, and I look forward with great anxiety and interest to the day when the occupation of a farmer shall be properly appreciated by all classes in society, ranked upon equality with the learned professions, and suitably aided and encouraged by the legislatures of every state in the Union. Then, and not till then, will agricultural societies spring up, premiums be awarded for prize crops of wheat, corn, &c.

Smithfield, Va. March 20, 1840. J*****.

THE CHINCH BUG.

Messrs. Editors—The chinch bug in this region is making great destruction of small grain, ruining whole fields—damage incalculable. Whole phalanxes of these pests are travelling, or rather flying and creeping over large sections of our state. For three or four years we have heard of their desolating progress coming toward us in these parts from the northwest and going southeast.—They were rife in mischief last year, in an adjoining county; but they are now in the full tide of operation in our midst. About 50 years ago, old people say here, they made their way before, ruining small grain, corn, &c. for about three years, in any particular section, and from thence passing on. They say also that ants seemed to be very destructive to them at that time. I have resorted to sowing ashes as a remedy, and have noticed that in some places of my wheat, where they were abundant, say 50 or 100 at the foot of a single stalk, now there are none; but in such places, I observe plenty of ants, so the remedy of ashes is rather equivocal.

The remedy of tomato plants, in and around fields of small grain and corn, I am trying in the manner stated in the Farmers' Register of last year. The result I will make known to you in due time.

You may have noticed in a late number of the American Farmer, that I have offered to contribute $10 as my quota of premium for an efficient and feasible remedy for this scourge of farmers. The amount now, with the $20 of the "Farmer," and others, is upwards of $50 so far as I now know. SIDNEY WELLER.

Brinkleyville, Halifax county, N. C. May 22, 1840.

DEATH OF DALLIMORE.

Messrs. Editors—Soon after I sent you the portrait of my Hereford bull Dallimore, I sent him, with the heifer, to my son, who resides in Northumberland, about forty miles north of Albany. The weather being at the time extremely hot, and the person who had him in charge not having been accustomed to driving cattle, and the bull not used to much exercise, having always been kept in the stable, was probably driven too far the first day, being twenty-five miles. He was started early the next morning, when it was first discovered that one of his hoofs had given way, which must have increased the fatigue, and about ten o'clock, when very hot, coming by the side of the canal, he plunged in, and before he could be induced to leave the water, it is supposed he became chilled or foundered, for it was with great difficulty he was driven the last three miles. He arrived at his destination about twelve o'clock, very much fatigued, and immediately laid down, and before night expired.

It is said, "bought wit is best—if not bought too dear." Had the person in whose care I had entrusted him followed my directions, or possessed either discretion or judgment, when he found the bull giving way, and the weather so excessive, he should have laid by in the heat of the day and only traveled in the morning and evening, which would, in all probability, carried him through safe, and he might still have been living and done the "country some service."

The loss is great, not only in a pecuniary point of view, but in the improvement of our stock—he being the first and only bull of that breed which has been introduced in this section, and more particularly now, since the introduction of those lately imported by Mr. Corning, which are attracting considerable notice in the country. Fortunately for me, I have a full bred Hereford bull calf, begotten in England and out of the heifer imported with the bull. CALEB N. BEMENT.

Three Hills Farm, July 20, 1840.

DESCRIPTION OF BERKSHIRES.

Messrs. Gaylord & Tucker—I did not expect when I gave, in the May number of the Cultivator, a general description of the color of genuine Berkshire hogs, that gentlemen were going to half read the sentence, and then take a microscope in hand in search for "two white hairs" in the tail, or less or more, and then pronounce me in error. By referring to the article, it will be seen that I ended the sentence by saying, "there are, however, slight variations from the aforesaid color," &c. Now in addition to the correction that you have made for me in the July number, where the printer mistook the tail "*invariably* white," for "*occasionally* white," I wish further to add, that all four of the feet are generally white, and I do not recollect now, of ever seeing one when critically examined, clean, with less than two or three of the feet with white on them. I will farther say that pigs when young, sometimes show nearly, if not quite, one-third as much white on them as black, but as they grow up, the white gradually lessens, and when they have attained their full size, appear in general as I have described them. This was the case with my Newbury boar and Teal sow, that Mr. Hawes brought over for me in the autumn of 1838. The Reading boar was much darker, and scarcely changed in color as he grew up. The dark color on the Teal sow, may be said to be tawney rather than black.

I wish to add, also, that there are unprincipled persons, both in this town and elsewhere, that are greatly injuring the well bred Berkshires, by purchasing up at a low rate, pigs that have been bred in and in so long as to completely destroy their size and constitution, and also grade and spurious animals, and are palming them off upon the public as the get of my late imported boars or thorough-breds, and by issuing hand-bills, and extensively advertising, and selling below established prices, are gulling the public to a large extent; many of these animals, to my certain knowledge, did not cost the purchaser more than ten to twenty shillings per head, and yet they are offered as fully equal to mine, for which I charge $20 per pair. Let the public be on its guard, and depend upon it, that no established breeder of reputation, will sell anything but *culls* and *runts* below the above price. With the pains that they take and expense that they are at in breeding, they cannot afford it.

JOHN LOSSING, 253 Washington-street.

N. B. I have been called upon occasionally to give certificates of animals that were small and bred in and in, which I have reluctantly done, and wish it to be understood, that I meant them only as pure in blood, but by no means large well bred pigs, or such as could compare with those bred by myself. J. L.

Albany, July 20, 1840.

DISEASE IN SWINE.

Messrs. Editors—There appears to be one thing among the diseases in swine, of which I have not seen any notice in the Cultivator. It is a complaint occasioned by the small issuing holes on the insides of the fore legs, opposite the knee, becoming stopped. A hog complaining in this way, has the appearance of being foundered, and may be cured by having his legs, or those small holes, rubbed in soapsuds or salt water with a corn cob.

Yours, &c. SAMUEL B. SHANNON.

Shelbyville, Ky. May 26, 1840.

NOTES FOR THE MONTH.

The Turf Register for July, is embellished with a beautiful engraving on steel, representing a Hunting scene in Bogota, S. A.

The Spirit of the Times, of the 4th, is accompanied with a superb steel plate engraving, 11 by 16 inches, of the celebrated race-horse Wagner, owned by Mr. John Campbell, of Baltimore. Wagner has won 12 out of 14 races in three years past, winning the enormous sum of $34,150. The Times of the 25th, has a portrait of Little Wonder, the winner of the Derby, 1840.

Royal Agricultural Society of England.—The society heretofore known as the English Agricultural Society, has received a charter from the Queen, under the above title. At the anniversary meeting in May, Philip Pusey, Esq. M. P. was elected to the presidency of this institution. Their great show for this year, was to be held at Cambridge on the 16th of July. We hope to receive an account of it from a foreign correspondent in season for the next Cultivator.

A Good Farmer.—The Farmer's Magazine (London) for June, is embellished with a portrait of a Hereford ox, which took the prize of 15 sovereigns at the last Smithfield cattle show. He was bred by W. F. Hobbs, Esq. of Marks Hall, Essex, who appears to be a very successful farmer, if we may judge from the number of prizes awarded to him in 1839, at the different agricultural shows, on bulls, oxen, cows, swine, sheep, wool, wheat, mangel wurtzel, ruta baga, turneps, &c. amounting in all to over $500.

White Berkshires—Mr. Skinner, editor of the *American Farmer*, says that he has recently sent to his friends, several pairs of Berkshires, that "for shape and good points cannot be excelled," and which were "*all white* with black spots on the *skin*." They were from the piggery of Mr. Geo. Law of Baltimore, whose imported sow came from Mr. J. C. Etches, Barton Park, Derby, England—the pigs being by the boar sent to the Messrs. Shepherds, and mentioned at page 121 of this number.

Hogs from Brazil.—We learn from the same paper, that F. Harrison, Esq. of Baltimore, has just received from Rio, a sow of the pure Chinese breed; a boar out of a pure Chinese sow, by a boar of the Parkinson breed of England, and a Brazil sow. The first is black and white, the second white, and the third, blue, black and white.

Genesee County Agricultural Society.—We learn with pleasure that an Agricultural Society has been organized in the county of Genesee, one of the richest and most fertile of Western New-York. Theodore C. Peters of Darien, was chosen President; E. Bishop of Attica, Wm. E. Heston, F. P. Pendell and G. A. Briggs of Batavia, and L. C. Draper of Alexander, L. Peck of Bennington, L. Clark of Darien, and C. Brown of Pembroke, Vice Presidents; Chipman Turner of Batavia, Corresponding and Recording Secretary; L. E. Heston, Treasurer. They will hold an exhibition and fair on the 14th of October.

Agricultural Statistics.—The *Poughkeepsie Journal* furnishes us the rusult of the census in the town of Fishkill, Dutchess county, N. Y. from which it appears that the population is 10,513—No. of horses 1,776—neat cattle, 2,700—sheep, 14,000—hogs, 7,904—value of poultry, $7,055—bushels of wheat raised, 54,035½—oats 240,347—rye, 10,674½—corn, 126,449—buckwheat, 11,165—potatoes, 71,648—pounds of wool grown, 26,000—tons of hay, 11,451—value of product of dairy, $88-878—of orchards, $4,902—of domestic goods, $1,861—cords of wood sold in 1839, 2,326—pounds of wax, 55.

An Editor *Cheat*-**ed.**—The editor of the Rockbridge Farmer is respectfully informed that instead of being "misled by the intelligent editor of the Farmer's Register," he has permitted himself to be *cheat*-ed by his own eyes into as great an error as it would be to suppose that Jonah swallowed the whale, instead of vice versa. We hope he will read the remarks attached to the communication of Mr. Hulett in this paper, and then see if he can find *one* (not to say "thousands) of wheat stalks with cheat heads on them."

Fair—Sale of Stock—The *Maryland Agricultural Society* will hold a fair for the exhibition and sale of the various kinds and breeds of stock, implements of husbandry, &c. at Ellicott's Mills, on the 16th of September, 1840. Extensive preparations are making, and a large collection of animals of all kinds is expected.

Great Crop of Oats.—A correspondent of the Yankee Farmer states that Latham Hull, Esq. of South Stonington, Conn. harvested 341 bushels of oats from 3¾ acres of land in 1839, being nearly 81½ bushels to the acre. This is a good crop, but falls 40 bushels to the acre short of a crop raised by our correspondent, Mr. J. F. Osborn, of Port-Byron, mentioned at page 50 of current vol.

Milk.—Adam Antony of North Providence, R. I. keeps 18 cows, which give an average of 593 gallons of milk per year.

Powers of the Arab Horse.—Fraser, in his 'Tartar Journey,' relates as an undoubted fact, that an Arab horse traveled 520 miles in six days—rested three days, and then went over the same ground in five days.

Good Milker.—Mr. Gowen, near Philadelphia, has a pure Short Horn cow, "Dairy Maid," which gave the first seven days of June, an average of more than 33½ quarts milk per day.

Botts' Straw Cutter.—James M Garnett, Esq. in the Southern Cultivator, says he has compared Green's straw cutter with one made at Richmond, Va. by Mr. C. Botts, and gives a decided preference to the latter in every particular. We should be pleased to receive from Mr. Botts, a drawing and description of his machine.

Great Sales of Cattle in Kentucky.

The *Fayette* (Ky.) *Importing Cattle Association* held a public sale of their imported thorough bred Improved Short Horns, near Lexington, on the 15th July, 1840. We learn from the *Franklin Farmer*, that the sale was numerously attended, and that the prices, for the times, were fair, excepting in two or three instances. The following is a list of the animals sold, with the names of the purchasers and the prices.

COWS.

Names.	*Age.*	*Price.*	*Purchaser.*
Victoria, ...	5 y'rs,	$1,750	R. Fisher, Mercer co.
Miss Hopper, ...	6 y'rs,	270	Thomas Cahnes.
Miss Luck, ...	6 y'rs,	800	H. Clay, Jr. Bourbon.
Elizabeth, ...	5 y'rs,	505	A. M'Clure, Jessamine
Fashion, ...	8 y'rs,	440	G. W. Williams.
Splendor, ...	6 y'rs,	650	B. Gratz.
Tulip, ...	4 y'rs,	700	A. M'Clure.
Brittannia & calf,	2½ y'rs	375	H. Duncan.
Isabella, ...	2 y'rs,	355	R. Fisher.
Lady Eliza, ...	2½ y'rs	660	H. Clay, Jr.
Lilly, ...	6 y'rs,	390	T. Calmes.
Nancy, ...	3 y'rs,	730	C. J. Rogers.
Avarilda, ...	4 y'rs,	920	John Allen.
Beauty, ...	6 y'rs,	700	H. Clay.
Miss Maynard, ..	3 y'rs,	1,005	A. M'Clure.
Jessica, ...	1½ y'rs	330	Joel Higgins.
Resabella, ...	1½ y'rs	465	Wm. Warner.
BULLS.			
Carcass, ...	3 y'rs,	$725	B. Gratz.
Æolus, ...	4 y'rs,	610	R. Fisher.
Eclipse, ...	3 y'rs,	1,050	R. Fisher.
Crofton, ...	1½ y'rs	155	J. Downing.
BULL CALVES.			
Prince Albert, ...	2 mo's	$350	J. Flournay.
Washington, ...	5 mo's	85	Dr. W. H. Richardson.
Nelson, ...	6 mo's	610	P. Todhunter.
Orlando, ...	2 mo's	305	H. Clay, Jr.
Trajan, ...	6 mo's	150	Wheeland & Co.
Bruce, ...	2 mo's	315	M. Williams.
Milton, ...	2 mo's	285	James Gaines.
HEIFER CALVES.			
Maria, ...	......	$310	J. R. Ford,
Zela, ...	5 mo's	445	G. W. Williams.
Flora, ...	6 mo's	410	J. Thorn.

Seventeen cows brought $11,045, or an average of $650, (wanting a fraction) each. Four bulls, $2,540, or an average of $635 each. Ten calves, $326.50 each.

There was a sale near Louisville on the 8th July. Two superb cows were sold at $490—one brought $210—another $325. Two year old bulls were sold at from $100 to $230. The prices being so low, the greater part of the cattle intended for the sale were withdrawn.

In England.—The *London Farmer's Magazine* for *July*, received by the British Queen, furnishes us with the names and prices of a large lot of Short Horns, sold at public sale, by Mr. Wetherell, on the 29th May, 1840, at Mr. Parkinson's farm, Nottinghamshire. The list comprises 95 cows and heifers, and 27 bulls. The cows and heifers averaged about $150 each, and the bulls about $134 each.

NOTICES TO CORRESPONDENTS, &c.

☞ "R." will please accept our thanks for the portrait of his beautiful calf Oneida, which graces this number of the Cultivator, and we beg to assure him that he "rides" with too much taste and skill to permit the possibility of a desire for him to "dismount" on our part, or by his readers. We hope for a speedy fulfilment of the promised illustrations from his pencil.

☞ "J. E." of Lockport, is requested to furnish the specifications and estimate of the expense of the house for which he sent us so beautiful a plan.

Madder—Mr. Silvey will find the information he desires in the previous vols. of the Cultivator, to which we refer him. We, however, publish his inquiries, in the hope that Mr. Bronson, or some other person engaged in its culture, will furnish us with the result of their experience, and their views as to the expediency of a more general culture of this root.

To Patentees.—Patentees or manufacturers of Agricultural Implements, would find it materially for their interest to furnish descriptions and drawings of their machines for publication in the Cultivator, as by so doing, they would make their implements extensively known in all parts of the country. Where the implement is patented, it is expected that the patentee or manufacturer will pay the cost of the engraving, but in other cases, the drawing would be engraved at the expense of the publishers.

☞ Subscribers to the Cultivator in *Monroe county*, who have not paid, are requested to pay their subscriptions to Mr. S. Hamilton, at the bookstore of Mr. Hoyt, in Rochester.

Advertising Sheet.—We shall not issue another *Advertising Sheet* at present, if at all. Advertisements will, however, be inserted on the cover, which will be issued the last of November, on the completion of the volume.

THE MARKETS.

New-York, July 25th, 1840.

Ashes—Pot Ashes continue in fair demand for export at $4.75, at which about 300 bbls. have been disposed of. Pearls are very dull at $5.25, without sales worthy of notice.

Cotton—The Cotton market since our last report continued inactive until yesterday, when exporters and manufacturers came forward more freely, and sales to some extent were made, though without variation from previous rates. The transactions embrace 1,700 bales Upland and Florida at 7 a 9½ cents; 1,050 Mobile, 7½ a 10¾; 150 New-Orleans, 9 a 10½; and 150 Texas, 8½; short price—making a total for *the week* of 4,700 bales.

Flour and Meal—The inquiry for western flour for export to England noticed in our last, almost entirely ceased with the transactions then reported, and on the date of our last publication there was but little done; on Thursday, however, there was some revival of demand for the same destination, and about 4,000 barrels Genesee and Ohio changed hands, at $5 for common brands of the former, and flat hoops of the latter. The market yesterday was inactive, and we heard of no sales worthy of notice, though holders, in the absence of other than moderate receipts, are firm at our quotations, which are slightly varied. Southern Rye Flour is in better request, and an advance of 12½ cents per barrel has been obtained. About 150 hogsheads Brandywine Corn Meal sold for export, at some improvement on former rates, though it is understood at something less than $15. 12,713 barrels of Wheat Flour were exported from the 1st to the 22d July.

Grain—The last cargo of new southern wheat sold at $1.10, cash, since which there have been no further receipts. Nothing done in old. The demand, as well as the supplies of northern rye, is moderate; 1,500 bushels were taken for distilling at 57 cents, delivered, and this may now be considered the market price.

Hemp—Clean Russia is in moderate request at $215, 6 mos. at which 15 a 20 tons have been disposed of, in lots from store; 100 bales Manilla sold, supposed, $133; and 6 tons Kentucky at $130, both 6 mos.

Provisions—We have no variation to notice in Beef or Pork; there is a fair demand, principally for the small parcels usually required for ship stores and city use. Lard is rather scarce, particularly in barrels, for which there is considerable inquiry for city consumption. Hams, smoked beef, &c. are without change.

Wool—We have no improvement to notice in this article, there is rather less inquiry for coarse, and we have only to notice a sale of 2,000 lbs. Smyrna, at 12 a 14 cents.

American Saxony, Fleece, lb............	32 a 35
American full blood Merino,...........	30 a 33
American ½ and ¾ Merino,.....	25 a 30
American Native and ¼ do.............	20 a 23

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THE CULTIVATOR:

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

STATE AGRICULTURAL SOCIETY.

Some of the readers of the Cultivator are aware that a proposition has been made, that semi-annual meetings of the State Agricultural Society shall be held in the autumn of each year, in connection with some County Agricultural Society, and at some central point in the several districts, as the means of giving greater efficiency and activity to the institutions respectively, and as a matter of course, conferring proportional benefits on the agriculture of the state. We regret to state that the late period at which the proposition was made, and the long time necessary to perfect the arrangement, has induced the officers of the State Society reluctantly to defer the fall meeting, at least for the present year.

We are fully convinced that no better method has yet been proposed of awakening an interest in the prosperity of the State Society, and reflectively in those of the counties, than the one of having fall meetings as has been proposed, at which premiums shall be liberally distributed, and the show of animals, implements, &c. be such as to induce farmers from all parts of the state to attend. We are the more convinced of the correctness of this opinion, from observing the effect which such ambulatory meetings has on other societies. There can be little doubt, that much of the intense interest which attaches to the semi-annual meetings of the British Society for the promotion of Science, is caused by the fact of their being held at different places. The first meeting of the Royal English Agricultural Society was held at Oxford; the second at Cambridge, and the next is to be held at Liverpool; and in succession all the principal cities of the kingdom, or agricultural districts, will thus be visited.

It is this system of annual removal which has given such efficiency and energy to that noble institution, the Scotch Agricultural Society. Last year the meeting was at Glasgow, this year it is at Berwick; next year at Aberdeen; and so visiting the several counties of Scotland, benefiting and improving all. We have now before us a list of the premiums offered by this society for the present year, nearly three hundred in number, and varying from $2,500 for a steam machine for plowing, down to five dollars for a cottage window. There is scarcely an article embraced in the whole circle of rural economy, which is not here encouraged by premiums. Essays on every important and debateable question of agriculture; the best methods of breeding, rearing and training all our domestic animals; the merits of the several systems of rotation and plowing shown by actual experiment; the cultivation of wood and timber lands; grain, its enemies, and the means of avoiding them; domestic manufactures, cottages, gardens, in short all that can awaken attention to, or promote agriculture; all that can give beauty, health, and prosperity to the country, are here noticed, and the industrious occupant of the soil, or the ingenious mechanic, invited to avail themselves of the liberal and numerous rewards offered for their encouragement.

We are unable to see why similar beneficial results might not flow from a corresponding movement here. Confined to a single point, either of the societies we have noticed would have effected little; now, they have done wonders; and we have seen enough of the meetings of agricultural societies in this state, and their influence, to believe that a movement of the state agricultural society's meetings would be productive of essential service to the farmers of the state. They would stimulate to exertion; they would bring farmers in contact with each other; they would, by their exhibitions of animals, implements, articles of domestic manufacture, grains and plants, show the improvements that had been made, and encourage all to attempt much; and they would add to the funds of the societies interested, so that premiums sufficient to call out the public, would be at once at the disposal of the managers. For these reasons, we trust that such autumnal meetings, may be adopted. New-York, Poughkeepsie, Albany, Plattsburg, Watertown, Utica, Syracuse, Ithaca, Rochester, and Buffalo, are points at which the farmers of the state or the several districts might meet in rotation, we think with decided pleasure and profit, while the winter sessions of the state society might be continued as usual.

WHEAT CULTURE.

Of all the crops cultivated in the northern or middle part of the United States, *the crop*, par excellence, is unquestionably wheat. Its intrinsic value as an article of food, its importance as an item of export, its influence on trade, and its vast sway in regulating the exchanges and commerce of the world, render it every where a crop of the greatest consequence, and particularly so in this country. To raise good wheat many things must be kept in view; the nature and texture of the soil—its quality, so far as richness or poverty is concerned—the kind of wheat most suitable for cultivation under the circumstances of the case—the cleanness and preparation of the seed—the time and method of sowing—and in short all the things that go to ameliorate the soil and secure a crop, must be attended to, rendering the growing of wheat one of the most arduous as well as profitable occupations of the farmer.

A good wheat soil always contains sonsiderable clay, but it is so balanced and corrected by other ingredients as never to be cold and sour; if such is the character of any soil, good wheat need not be expected. Freedom from superflous moisture or stagnant water, is an indispensable condition of a good wheat soil; and when such exemption does not naturally exist, it must be produced by draining. A moist cool climate is found not to be unfavorable to wheat, if the roots are preserved from stagnant water, and are allowed to range in a pervious soil; but in any climate wheat will fail where the soil is saturated with water that does not circulate. To give the requisite dryness and depth where they do not exist, draining and deep plowing may be relied upon, and where these go together, with proper manuring a soil can scarcely fail to improve, or to be productive.

Deep plowing, on most lands as they naturally are, and on all lands as they should be made, is essential to good wheat crops. The roots of this plant penetrate in a permeable soil to a great depth, and spread to a considerable distance. The single fact of its being provided with two sets of roots, one of which spreads near the surface, and the other strikes deeply, is a sufficient proof of the necessity which exists for deep plowing in its culture. In a few instances subsoils may be found which will not admit of deep plowing, being composed of materials injurious to the wheat crop; but great crops of wheat are not to be expected on such soils.

The application of manures is a very essential point in growing the wheat crop. Land can be too rich, as well as too poor for wheat, or rather the manure in the soil may be in that condition which renders it unsuitable for wheat. There are some crops on which fresh or unfermented manure exercises a good effect, and to which it can scarcely be applied in too large quantities, corn for instance; while on others they produce results of the most unfavorable kind. Nearly all the cerealiæ are injured by fresh manures, the stalk growing too vigorous, while the berry is usually imperfect. Compost manures, or such as are made by layers of turf, stable manure, vegetable mold, lime, &c., in which the decomposition is already effected, can scarcely be applied too abundantly to land otherwise well constituted. The great crops obtained around old barns, or other decayed or removed buildings, is a proof that large quantities of decomposed manure may safely be used, while a much less quantity of fresh or undecomposed would be fatal. One of the greatest evils of direct manuring for the wheat crop arises from the liability of the grain so manured to lodge. The rapid growth of the stem renders it unable to suport its own weight, it is soft and flexible, contains much less silex than those grown in a poorer soil; the wheat does not usually perfect its berry, and at all times, from the thinness and weakness of its skin or cuticle, is more liable to mildew or rust. These things render it certainly unadvisable, unless the land is very poor and reduced, to apply unfermented manure to wheat.

The rotation of crops, has furnished the means of applying fresh manure advantageously to crops, and at the same time retaining its principal value for wheat. The cultivation of corn or roots in alternation with grain crops, clover, &c., gives the farmer the means of greatly increasing his crops, and at the same time constantly improving his soil. It may be considered as a settled maxim in agriculture, that land improves little or none while nothing is growing upon it. It is the general acknowledgment of this truth, that has substituted hoed or green crops for naked fallows, in the preparation of lands for wheat. Peas and clover are among the best green crops to precede wheat, and the latter may be considered inseparable from the successful culture of this grain. Corn would be one of the very best crops to precede wheat, could it in all cases be removed from the land in season to get in the wheat properly. The thorough manuring and tilling required for corn, puts the ground in good condition for wheat; and should experience prove that *very late* sown wheat is more safe from danger in winter, and more productive than that sown a little earlier, a result said to be established in some of the best wheat countries of Europe, the crop of corn would cease to be objectionable, and might be considered as nearly a clear gain.

There is a practice which has prevailed to a considerable extent in our wheat producing districts, of growing wheat after wheat several times in succession. Such a system of farming deserves the severest reprehension, and will never be adopted, except by those who are in a haste to be rich, no matter at what price, and in defiance of acknowledged consequences. Farmers may have succeeded in raising good crops in this way, where the soil was of the fine quality and excellent adaptation to wheat of much of our western land, but nothing short of the most imperious necessity can justify this procedure, or tolerate such a departure from the correct principles of cropping. Land, which has once produced good crops of any kind of grain, may again be made to produce them; and under skilful treatment lands would never cease to yield good crops, where their first cultivation proved the adaptation of the soil to that particular one. The worn out and exhausted soils of New-England can be made to produce as good and as plentiful crops of wheat as they formerly did, but the labor and cost of restoring would be infinitely more than would have been required to have kept them continually fertile and productive. Crops have a specific food, which may be more or less plentiful in a soil, and without which they cannot be brought to perfection. Take for instance a worn out eastern farm. A liberal supply of fresh manures will give all the growth necessary for a great crop of wheat; but will it fill the berry? will it make such flour as the wheat of western New-York? We know it will not. The principal essential to the perfection of grain can only be restored by time and skilful cultivation to such soils; it would be wise then, where it exists, to prevent its decrease or its exhaustion.

It is unhappily too true, that on a large portion of our best cultivated wheat lands, the soil has become so infested with a variety of foul and noxious plants, that a course of naked summer fallow, thoroughly performed, has become necessary to counteract them, and prevent their increase and spread. On clean soils this would not be required, but some valuable crop might take its place, and thus add essentially to the profits, while it lessens the labor of the husbandman, so far as the operation of summer plowing was concerned. The only alternative of such fallows is hoed crops, and these must of necessity for the reasons before given, be too limited, to seriously affect the propriety of fallows on weedy land. Spring crops, such as barley, oats, spring wheat, or even peas, do not allow of sufficient cultivation to check the spread of weeds. The sowing of such crops on land where the Canada thistle for instance abounds, is precisely the treatment to make it spread and flourish. The thistle, stein krout, charlock, &c. will succumb only to plowings and hoeings so oft repeated that the mutilated plant has no time recover from one blow before another is given.

The preparation of seed, and the quality of that sown, are objects of the greatest consequence. In the most favored sections of our country there are but few fields of wheat in which smut cannot be detected, and in a country so favorable to the perfection and purity of this grain, as the best wheat districts in the United States are, none at all should be suffered. In Europe, continual care is requisite to keep their wheat free, and in the best wheat countries the crop is almost wholly exempt from smut; here but a trifling attention is requisite, and the consequence is, it is found almost every where, and in some places to the serious injury of the crop. Now it is well understood, that soaking or washing wheat in brine, and drying it with *caustic* slaked lime, will effectually prevent smut, as well as benefit the crop in other respects; to sow wheat therefore, without such preparation, is voluntarily to incur the risk of smutted wheat, and the inevitable consequent loss. There are some other substances that used as a wash for wheat appear to possess the power of destroying smut, such as copperas, vitriol, arsenic, &c., but as none are more certain in their operation, or can be used with less trouble or danger than lime, the application of that substance is undoubtedly to be preferred to any other.

The kind of seed used, and its quality, are things of too much consequence in the culture of wheat to be left to chance. There are many varieties of wheat cultivated, some very productive, and some very hardy; some ripening later and others earlier; and these kinds in sowing should be chosen with reference to the soil and location. Varieties which ripen at the same period, may sometimes be advantageously mixed, for sowing in the same field; but those that ripen unequally should be carefully kept separate. Some varieties of wheat may stand in the field longer than others before cutting, without danger of the seed shelling or wasting. Thus of the two kinds of flint wheat, the white and the Canadian, (the latter a comparatively new variety) if the last should be allowed to stand after arriving at maturity as long as the first can be permitted with impunity to do, the loss by shelling would amount to no small portion of the crop. The first may stand almost to suit the convenience of the husbandman, while the last must be cut as soon as its maturity will admit, or certain loss will be incurred; and nearly the same remarks will apply to some other kinds. There are some farmers who seem to think that any thing that is in the shape of wheat, however imperfect or defective the berry, if it will only grow, may be used as seed. This is very mistaken policy. It is impossible that the young plant should be as vigorous and as perfect, when springing from defective and shrunken seed, as when growing from that in which the peculiar principles of the plant are fully developed, and the germination commences without check or hindrance. The seed that ripens first in the ear, and is separated with the greatest ease, is the most proper for seed, as these circumstances show it is the most mature. A farmer in one of the northern states, a few years since was in the habit of selling large quantities of seed wheat annually and at high prices, as his wheat was of a superior quality, very heavy, and productive, and supposed to be a new variety. It appeared, however, that he had brought his wheat to that degree of perfection, by selecting some of the finest ears from a field in the first place, and then instead of threshing the whole crop grown and using the seed promiscuously, he gently beat the sheaves over a barrel, by which only the best and most perfect grains were separated, and by repeated sowings had rendered the qualities so desirable permanent. The quantity of seed sown differs much in different parts of this country and in Europe. Perhaps the English use a greater amount of seed than any other people, and their crops are certainly not often excelled. From two and a half to four bushels per acre are there used; while here the quantity varies from one to two and a half bushels per acre. The general quantity is about a bushel and a half. Where wheat is sown late, more seed is required, as the wheat does not tiller or spread as much as when sown early; and when the berry is unusually plump and full, more is required than when the kernel is lighter. As on soils too, that are not rich, a single plant will not throw out as many stalks as where the land is very rich and fertile, it would seem that on such lands more seed would be necessary to seed it properly; as it is clear that where but one or two stalks shoot from a root, these must be more numerous than when a root produces half a dozen.

Opinions among farmers have been somewhat variant on the subject of changing seed; but we think unless more pains is taken to originate and preserve good seed on a farm, than now usually is, there is essential benefit derived from such changes. Wheat is certain to succeed better on lands not naturally adapted to its production, when the seed is brought from a good wheat soil or district. For many years the farmers of large sections of the western district of New-York, where the wheat crop at that time was apt to fail or smut, found a profit in sending some twenty or forty miles to procure seed from the best grain districts, and the crop from such wheat rarely failed in producing grain of good quality. There is also a decided advantage secured in bringing seed from lower land and a milder climate, to elevated lands, or a cold moist climate. Such a change of seed renders the mountain crop earlier and better than it would be if seed from the same neighborhood was used. Professor Brown has on this subject the following remarks, which are undoubtedly correct, as they are founded on the experience of husbandmen in the high and low lands of Scotland:

> "We are convinced that the cultivator of a mountainous district, if he always used seed from his own crops, would reap later and later harvests, so that at last they would with difficulty be brought to maturity; a circumstance easily explained by the comparative shortness of summers in mountain districts. If, on the other hand, the cultivator of a flat country, the climate of which is mild, and the soil dry and light, continually made use of his own seed, it would head every year sooner, the stalks would become shorter, and the heads and grain smaller and smaller, and in time there would result but a poor produce. In this last case, the cultivator brings his seed with advantage from a country or district more cold, the soil of which is good and substantial."

The instances in which benefit has been derived, on what are called beech and maple lands, by using seed from oak lands, are so numerous that almost every one must be familiar with them. The advantages in this case, however we may choose to explain them, cannot with propriety be disputed.

As to the time of sowing wheat, it may be remarked, that very early sown wheat gets more firmly rooted, than later sown, and in consequence is less liable to injury from freezing out. Wheat may be sown so late as not to germinate until the severity of the winter is past, or the greatest danger from frost is gone by; but such late sown wheat is far more liable to the attacks of blight or rust than that which ripens early, or which is so far advanced before the close, hot, showery weather, that marks the advent of blight commences, as to be safe from injury. On the other hand, late sown wheat is very certain to escape the Hessian fly, which in some parts of the country is the greatest enemy wheat has to encounter. It would seem then, that where wheat is liable to winterkill or blight, early sowing is to be preferred; and that where the fly is prevalent, sowing should be delayed as long as possible. It may be added, that some experiments would seem to prove, that in districts where the wheat worm has been so fatal to spring wheat, very late sowing, by delaying the earing of the wheat until the period of the worm fly was passed, would preserve the crop.

There is more wheat lost to the husbandman from the single cause of winterkilling, or freezing out of the ground in the winter or spring, than there is in this country from all other causes put together. The worst period is in the months of February or March, when the the ground is bare of snow, and thawing mild days are succeeded by sharp freezing nights. This freezing expands the surface water, lifts the roots from their place a little at each time, and by successive freezing and thawing, leaves the plant without any hold upon the soil, and consequently to perish. Heavy soils are more apt to winterkill grain, than gravelly, or light ones, as these can retain little water. It would seem to be a necessary inference, then, that thorough draining such soils as are apt to winterkill wheat, would prove a remedy, and theory and fact in this case are found to agree. We have lately had the pleasure of seeing beautiful fields of grain growing on lands, from which a few years since the production of wheat would have been impossible. Thorough draining had removed the water that formerly saturated the soil, and by freezing the surface, prevented the lifting out process that always accompanies the freezing of wet grounds. It is usually the case that such wet grounds contain a large supply of vegetable matter, and draining renders them so productive, that the profit of a single crop not unfrequently repays all the expense incurred in the improvement, leaving the land, which in its former state was nearly worthless, a clear gain to the husbandman. If on common farms the means of trench or thorough draining are not at hand, surface drains made in such a manner as to carry off the water that falls on the land, should be constructed immediately after the sowing is completed. By preventing such water remaining in, and consolidating the land, grain is less liable to be thrown out; and though far less beneficial, or permanent in its effects, than thorough draining, surface drains should not be omitted where there is the least danger from excess of water.

Cream Pot Cattle and Ten Hills Farm.

One of the most attractive places to the agriculturist in the vicinity of Boston, is the Ten Hills Farm, occupied and managed by Col. S. Jacques, and owned by an association principally composed of rich merchants in Boston. The object of the association was to form a stock farm, and a company was formed of one hundred shares of three hundred dollars each, the property held in trust for the owners of the shares. On this money the proprietors receive from Col. Jacques five per cent annually, or fifteen hundred dollars in the whole. It is a noble instance of private liberality, for the advancement of agriculture. How easily might such a pattern farm be established in any of our rich agricultural counties, if the same spirit of improvement was as operative in them as in Boston. On this farm Col. Jacques bred the celebrated merino ram which yielded 42 lbs. of wool at three shearings, an amount probably not equaled by that of any sheep in this country, merino or otherwise.

But the most interesting object on the Ten Hills Farm is the breed of cattle, called by Col. Jacques, the Cream Pot Breed, and which for richness of milk are unrivaled. The origin of this stock, according to Mr. Colman, was a fine native cow raised in Groton, Massachusetts, but of her origin farther, nothing is known. She was sold to a gentleman near Boston, a dealer in milk, and so rich was her milk, that the movement necessary in carrying it, frequently converted it into butter. Mr. Jacques procured this cow, and by crossing with the short horn bull Cœlebs, afterwards owned by Mr. Jacques, originated the breed which has since become so famous. Mr. Jacques a short time since informed Gov. Hill, that "this celebrated bull, while in his possession, went to four hundred cows at ten dollars each; and on his head he received in cash thirty-eight hundred dollars." Col. Jacques' improvements have received the test of three generations, and he has now about forty cows and heifers, and ten or a dozen bulls and bull calves. The color of this stock is a rich deep red, one of the most beautiful and favorite colors, and of good form and proportions; and in the language of Mr. Colman, "if they continue to display the extraordinary properties by which they are now distinguished, they promise to prove themselve for dairy purposes the most valuable race of animals ever known among us;" and in that of Gov. Hill, "such an animal as the five months calf, at the price of one hundred dollars, for a breeder, would be capital well invested, if kept only for the use of a farm of a dozen cows."

Col. Jacques' own account of the manner and object in his course of breeding, is as follows: "It has been my object to effect such an improvement in milch cows, as should produce the greatest quantity of rich milk, affording the largest quantity of butter. There is a greater difference in a pecuniary point of view, between a good and a poor cow, than among any other domestic animals. In some yards may be found those that will not produce more, than three pounds per week, and others that will make nine, and all on the same keep. As we sometimes hear of cows, which have produced seventeen pounds of butter per week, and even more, it occurred to me to inquire why a breed or race could not be formed with the same valuable properties. This I have attempted; and have carried it to the third generation, and I am confident of success. I have a cow whose milk has produced nine pounds of the best butter in three days; and this on grass feed only. This I call my *cream pot breed.*"

It is evident to us that Col. Jacques has adopted the true course in producing a valuable stock. He selected animals combining the qualities he desired to perpetuate in the greatest degree; and in continuing his operations, a selection only of such for breeding as evince the same properties, have been chosen by him. With this precaution, he cannot fail of success. The qualities that in the first instance may have been partially accidental, become constitutional and permanent, and we can see no good reason why the Cream Pot stock of Mr. Jacques should not become as celebrated as the short horns of Messrs. Collings or Berry, to which, indeed, they are so nearly allied.

BERKSHIRE PIG.

We have the pleasure of acknowledging the safe arrival of a Berkshire Pig, a present to the editors of the Cultivator, from the superior stock of Mr. LOSSING, of Albany. This pig is about eight weeks old, and is from the celebrated sow Maxima, by the imported boar since sold to Mr. Beach, of Ohio, for $200. A description of both may be found in Mr. Lossing's paper on Berkshires, and Nonpareil will doubtless do honor to his "*illustrious ancestry.*" It may seem absurd to some to talk of beauty in a pig, but if the most fastidious were to see the animal under notice, they would allow that he was beautiful; and Hogarth himself, with his line of curves which is the line of beauty, would have been driven to the same admission, as with the exception of his short nose, there is not an angle about him.

Some curious facts, showing the correctness of Mr. Berry's statements relative to the breeding of short horns, (and they are equally applicable to other stock,) that breeding in and in generally in a short time causes the loss of the reproductive powers, have occurred in the history of the Berkshire pig in this country. We obtained, two years since, a pair of these pigs, well bred, from one of the earliest importations, and the *boar* has proved perfectly impotent, none of the sows stinted to him, having ever produced a single pig. A similar result obtained in the case of a pair purchased by Mr. Marks of this county, with the exception that in his case, the *sow* has given no progeny. Such cases prove the necessity and advantage of the course so strongly recommended and practiced by Mr. Berry, in the case of cattle, and now adopted by the intelligent breeders of Berkshires, of a recurrence occasionally to pure blood animals of the original breed, in preventing the deterioration complained of. W. G.

Otisco. August, 1840.

LIGHTNING RODS FOR BARNS.

No sooner is the harvest gathered, and the farmer's barns well stored with hay and grain, than the newspapers are constantly bringing us accounts of their destruction by lightning. Every year the loss sustained by the burning of barns by lightning, is far greater than that of dwelling houses, and more lives we believe are annually lost in them; yet while houses are protected by conductors, or insured against fire, barns are left to take care of themselves. In a single storm that passed over the Delaware river near Trenton, a few weeks since, three barns were struck and destroyed; 14 cows were lost in one, and the whole loss was several thousand dollars. None were protected, and on one only was there a trifling insurance. The reason why barns at such a season of the year are so frequently struck, is owing to the column of heated vapor that rises from the partially fermenting mass within, which vapor is one of the best of conductors for the electric matter of the cloud. After this vapor ceases to rise, barns are in no more danger than other buildings of equal elevation; and the necessity of protection, or insurance, arises from the fact that the greatest danger is at the precise time when the greatest value is accumulated in them. Common prudence demands that protection by rods should be given, or insurance against such casualties effected.

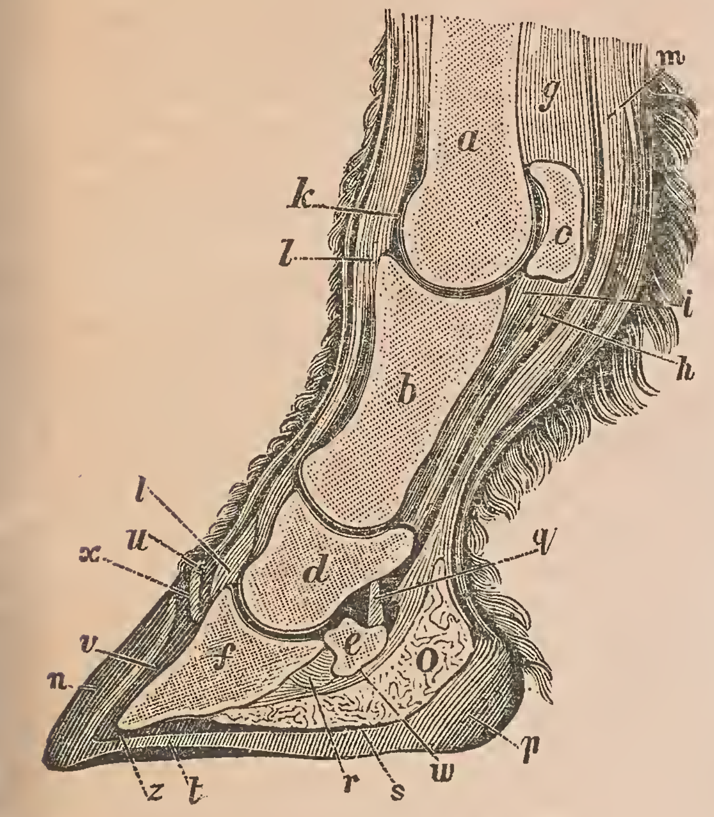
PLOWING PASTURES.

Judge Hayes of Maine, says he is accustomed to use alternately his pastures for mowing fields, and his mowing fields for pastures; and finds a great advantage in this mode of treatment. He plows his pastures, even though he has no manure to apply to them; inverting the sod, laying it completely over, and then sowing grass seeds upon it. In this way the feed of his pastures is greatly improved, both in quantity and quality. In plowing pastures, when he has no manure to apply to the soil he plows shallow; but, at any rate they should be occasionally plowed, and renewed with grass seeds.—*Report in N. E. Farmer.*

Judge Hayes' method is a good one; as every such plowing adds about 12 or 14 tons of vegetable matter in the grass, roots, &c. to the acre. We have known this method tried on meadows that were "bound out," or on which the valuable grasses had mostly run out, with good success. On these meadows, however, after turning over, a dressing of manure was put on, and a crop of spring grain with the grass seeds put on. Where plowing cannot be performed conveniently, a thorough harrowing with a fine sharp toothed harrow, and new sowing with grass seeds will produce a good effect.

THE HORSE.

The foot and leg of the horse exhibits a most curious adaptation of complicated means to produce a given result; and as these parts are the seat of several diseases, and liable to serious injury, and are besides but little understood, we have given from Youatt's Work on the Horse, an engraving affording a fine illustration of the parts, their relative position, and enabling the farmer to trace the seat of some of those complaints to which this noble animal is subject. The references will point out these parts and their arrangement, fully, as shown in section.



[Fig. 77.]

a The shank-bone.
b The upper and larger pastern-bone.
c The sessamoid-bone.
d The lower or smaller pastern-bone.
e The navicular or shuttle-bone.
f The coffin-bone or bone of the foot.
g The suspensory ligament inserted into the sessamoid-bone.
h A continuation of the suspensory ligament inserted into the smaller pastern-bone.
i The small inelastic ligament, tying down the sessamoid-bone to the larger pastern-bone.
k A long ligament reaching from the pastern-bone to the knee.
l The extensor tendon inserted into both the pasterns and the coffin-bone.
m The tendon of the perforating flexor inserted into the coffin-bone, after having passed over the navicular bone.
n The crust or wall of the foot.
o The inner or sensible frog.
p The cleft of the horny frog.
q A ligament uniting the navicular bone to the smaller pastern.
r A ligament uniting the navicular bone to the coffin-bone.
s The sensible sole, between the coffin-bone and the horny sole.
t The horny sole.
u The coronary ring of the crust.
v The sensible laminæ to which the crust is attached.
w The seat of the navicular joint lameness.
x The covering of the coronary ligament from which the crust is secreted.
z Place of bleeding at the toe.

It will be seen that the engraving exhibits six bones, in whole or in part, viz: the leg or shank-bone, the sessamoid-bone, the large pastern-bone, the small pastern-bone, the coffin-bone, and the navicular or shuttle-bone. The oblique or slanting manner in which these bones rest on each other, and the peculiar manner in which the powerful ligaments of the leg and foot are placed to support them in this position, will be seen at once. Much of the character and ability of the horse for particular kinds of service, is depending on the degree of this obliquity in the bones of the foot. The race horse, and the horse intended for the saddle, require a length of the pastern-bones, and an obliquity in their position that would be objectionable or fatal in the horse intended for labor in the field, or heavy draft on the roads. The race horse requires these bones to be long, and the inclination of them to be great, in order to have them in the best position for large and rapid strides; the saddle horse or hunter, requires something of the same property, though in a less degree, to enable him to carry a rider easily, and make the leaps at times required in the chase. In the heavy team horse, this obliquity would be destructive, as the effort in drawing would press the foot into an angle so acute as to rupture the tendons and destroy the horse. The pastern-bones of the draft horse, then, require to be shorter, larger, and much less oblique than those of the saddle or race horse. It is to the upright or pillar like form and position of the bones of the foot, that the hard jolting movement of the draft horse is to be attributed; and to the elastic spring which an oblique position of these bones give, the ease experienced by the rider of a hunter or good saddle horse. This difference in obliquity produces effects observable in another way. The horse in which this slanting position of the bones is considerable, rarely kunckles or rolls his toes under or falls with his rider, unless by over exertion, the ligaments of the leg have become weakened. On the contrary, the horse with upright pasterns, is unsafe to ride from this cause, and the frequent recurrence of it is almost sure to be followed with ossification or hardening of the cartilages of the joints, and consequent lameness.

The suspensory ligament (*g*,) exercises a most important influence in the movement of a horse. It is of the most dense and elastic description; is firmly secured to the sessamoid and pastern-bones; and while, as the horse usually stands, the tuft of the fetlock is some inches from the turf, when in rapid motion, or the weight is thrown violently on the feet, this tuft descends and sweeps the ground. Mr. Percivall, in his Veterinary Lectures, thus alludes to this ligament:

> "The suspensory ligament, by its reaction instantaneously after extension, aids the flexor muscles in bending the pastern joints. The astonishing activity and expedition displayed in the movements of the race horse at speed, seem to be referable in part, to the promptitude with which the suspensory ligament can act before the flexor muscles are duly prepared; the latter we should say, *catch* as it were, and then direct the limb first snatched from the ground, by the powers of elasticity in this tendon."

Rupture of this ligament, or what is called on the turf, letting down, is one of the most serious injuries that can happen to the horse, but fortunately is of rare occurrence. Perfect quiet, bandages, and a high heeled shoe, afford the most probable means of relief; but this can never be considered more than partial or temporary.

The disease called grogginess, or weakness and tottering of the foreleg, indicated by kneeling, is undoubtedly owing to ill judged, or cruel exertion; and when occurring in old or hard worked horses, rarely admits of cure. In younger animals, rest and freedom from exertion, for some time, may afford relief.

The joint between the coffin-bone and the lower pastern is liable to sprain, and animals are not unfrequently lame from this cause. The lameness is usually sudden, and an inflammation is produced, causing heat and tenderness, principally around the coronet. Mr. Youatt says:

> "There is no species of lameness more confounded with affections of the shoulder than this, because it is the custom of ignorant and prejudiced persons to trace every lameness to the shoulder, which is not palpably referable to some other part."

It is after violent and repeated sprains of the coffin and pastern joints, that inflammation of the periosteum or membrane covering the bone ensues, a deposition of bony matter takes place, which usually increases until it is visible, when it is known by the name of ringbone, one of the most obstinate diseases to which the horse is subject.

> "Ringbone commences in one of the pasterns, and usually about the pastern joint, but it rapidly spreads, and involves not only the pastern-bones, but the cartilages of the joint. Where the first deposite of bone is on the lower pastern, and on both sides of it, and produced by violent inflammation of the ligaments, it is recognized by a slight enlargement or bony tumor, on one or both sides of the foot, and just above the coronet. * * * At this time the lameness is not very considerable, and it is not impossible to remove the disease, by active blistering or the application of the cautery; but there is so much wear and tear in this part of the animal, that the inflammation and consequent disposition to the formation of bone, spread rapidly, producing irreparable injury, unless promptly arrested."

Ringbone is more frequent in the hind than fore-feet, owing perhaps to the greater force exerted on the ligaments in propelling the horse forward; yet on the hind feet the lameness caused is not so great, as here it is principally confined to the ligamentary parts, and the bones do not suffer so much from violent concussion as in the fore foot. But wherever it appears, it is one of the most serious evils that afflict or injure the horse, and when the bony deposite begins to spread, the disease is incurable. The multitude of recipes for its cure are either the result of sheer quackery, or are applicable to the first stages of the disease. After this peroid has passed, and the bony deposite is formed, permanent lameness may be expected.

COOKED AND UNCOOKED FOOD.

There is in the Maryland Agricultural Reports, a record of an experiment of this kind, conclusive in favor of the cooked food; though from some cause, the gain in either case was not such as ought to take place when hogs are well fed. This defect was probably owing to the breed, as it is well known that some breeds take on flesh with more than double the rapidity of others. We give in a condensed form, the substance of the Report.

On the first day of December four shoats of the same breed and nearly of the same size, were selected from a lot of 90 hogs; two of which, weighing 185 pounds, were put by themselves, and "were fed on one gallon of shelled Indian corn, weighing seven pounds, to each, for every 24 hours, and as much water as they wanted." This was a full supply, and though not always all consumed, was generally so. "For the two pigs whose weight together made 173 pounds, seven pounds of good Indian corn meal, by measure ten pints, were made into good mush or hasty pudding, and divided between them, for every 24 hours." Thus these last, had exactly half the amount of corn given them that the first received. The cooking was done daily, and took an hour and a half. The seven pounds, or ten pints, when made into pudding "weighed an average of thirty pounds, and measured three gallons." The evening feed of mush was usually warm, that of the morning cold. Between the two pigs fed on cooked food, there was a difference of nine pounds, and while the allowance of fifteen pounds to the smallest, was as much as he could eat, the other was always greedy and sharp set.

Before being killed, on the 4th of January, they were all again weighed; and those that had been fed on the corn, were found to have gained, one five pounds, and the other twenty, on the same daily allowance of seven pounds each. Of the pair fed on cooked food, or mush, and the daily allowance of which was $3\frac{1}{2}$ pounds of meal each, the greedy one had gained 23 pounds, and the other 21 pounds. This is no great gain, to be sure, but taken in connection with other experiments of the kind, it gives rise to the important question,—whether, when so much corn is annually fed to hogs, if a saving of one-half can be made by cooking it, is it not well worthy the attention of farmers to adopt such a mode, and provide a proper apparatus?

VALUE OF ASHES.

Professor Jackson, in one of his lectures in Boston, in illustrating the manner in which soils might be rendered fertile, said that—"a farm within his knowledge, which was a blowing sand, a pine barren, and almost hopeless, on which ten bushels of corn to an acre could scarcely be grown, by the judicious application of ashes, had been made to produce forty or fifty bushels to the acre." We do not question the correctness of Dr. Jackson's statements. Our observation has convinced us that on sandy soils, with the exception of clay marl, there is nothing more beneficial in the application to such soils, than ashes; and very fortunately, unless uncommon quantities of acid exist in such soils, leached ashes are nearly as beneficial as unleached ones. Ashes do what lime cannot; they render the soil more tenacious of moisture, and although their action is not as prompt or efficient on cold sour soils, they are for the reason assigned, considered as valuable on light sandy ones. Of this fact the farmers on the light soils of Long Island and New-Jersey, are well aware, and in the gathering and application of ashes, find a certain source of profit.

PEAT AS A MANURE.

Peat, it is well known, is a vegetable substance produced by successive growths and decay of sphagneous or mossy plants, with a slight intermixture of other vegetable and earthy matter. It has formerly been considered worthless as a manure, as notwithstanding its nearly pure vegetable nature, its application injured instead of benefiting land, rendering it apparently more wet and cold, and aiding the growth of nothing but sorrel. Science has, however, at last been brought to act upon it, and it is found that its great defect is the large quantity of acid it contains, and that by neutralizing this, by the addition of some alkali, it becomes a valuable manure. Various methods have been adopted for doing this. By making a compost heap of three parts of peat and one part of stable manure, a slight fermentation is produced, by which the acid is corrected, and decomposition effected. "By mixing it with lime and animal matter or manure, ammoniacal gas is evolved, which dissolves the peat and converts it into a powerful manure." In Rhode Island, considerable quantities of manure are made by mixing the fish called *manhaden*, of which large numbers are taken in the bays, with peat or swamp mud, in the proportion of one load of fish to ten cart loads of peat or mud. Dr. Jackson says the rotting of the fish decomposes the peat, and this absorbs the gasses from the decaying fish, converting the mass into an active manure, in some cases increasing the crops to which it is applied, fifty per cent. In short, the farmer who has, what was formerly most dreaded, a peat bog on his farm, may consider himself as in possession of an invaluable source of first rate manure.

PROOFS OF INFILTRATION.

The question of infiltration, or the tendency of vegetable and animal matters to descend in soils, is a matter of considerable importance, as on it is greatly depending the decision of the proper position of manure in the soil. Some maintaining that manures never sink below where the ground is moved, advocate the placing of manures deep in the soil; others believing that the most valuable parts, the soluble salts, in such cases spedily pass beyond the reach of the plants, prefer a slight covering, that allows the manure to remain as near the surface as possible. On this subject Dr. Jackson makes the following remarks:—

> "The infiltration of manures is doubted by some, but the condition of our wells prove it. The water in a barn-yard is never pure. As much as a tea-spoon full of vegetable matter to a gallon is often obtained from waters that are considered pure. This may be seen by any one who will evaporate the Boston water to dryness. In the purest water obtained from lakes, $1\frac{1}{2}$ grains of vegetable matter to the gallon may be obtained. In the water of Boston 38 grains are found to the gallon. Soils brought from 150 feet depth in this neighborhood, are found charged with vegetable matter."

The Massachusetts Commissioner, Mr. Colman, says:—

> "There are salts of lime enough in the waters of Boston wells drank every year, to make ten statues as large as Lot's wife, and as to the other ingredients or impurities which, according to Dr. Jackson's account exist in it, they are not to be named."

Such facts prove, incontestibly, that manures do infiltrate, or descend, and the natural inference, therefore, would be, that to produce the best and greatest effect, they should be buried near the surface.

DOMESTIC ECONOMY.

The month of September is the month for preserving fruits, &c. and for the benefit of our lady readers, who wish to furnish for their tables a supply of fashionable sweetmeats, pickles, &c. we devote this chapter of our Domestic Economy, to those subjects exclusively.

Where the fruits to be preserved are very delicate, or sweetmeats of a superior quality are desired, white or loaf sugar will be best; but for most kinds of fruit, or ordinary preserves, good brown, or maple sugar, will do very well. Brown sugar requires clarifying or cleansing, which is done by dissolving it in a small quantity of water with a gentle heat, then, after cooling, stirring in the whites of eggs well beaten, and gradually heating the syrup until all the impurities rise to the surface, when they are to be skimmed off, and the clarified syrup left pure for preserves.

Any kind of fire proof ware will do for the making of preserves, with the exception of iron; but as most of the fruits used contain more or less acid, brass or copper vessels tinned are the best. In no case should they be allowed to stand in any such vessel to cool, as injurious consequences might ensue. Stone, or china, or glass, make the best vessels for depositing sweetmeats in; as they furnish nothing injurious for the acids to act upon. After preserves are made, the pots must be covered close, kept in a cool place, frequently looked to, and if about to ferment, let the syrup be poured off, scalded, and returned to them while hot. A paper wet in good brandy, and laid on the surface of the sweetmeats, will assist much in their preservation. As a general rule, a pound of sugar to a pound of fruit is sufficient; but some kinds of fruit require more, and others will do with less than an equal quantity, according to its ripeness or the acid it contains.

Pears.—When made into preserves this fruit requires three quarters of a pound of sugar to a pound of pears. Syrup made as directed from brown sugar is good. Put the pears in the syrup and boil them till soft. The astringent or choak pears are good for preserving. A little ginger tied in a bag and boiled with the fruit improves their flavor, or lemon, or orange, sliced, may be added at pleasure. To make *Pear marmalade*, boil the pears with the skins on; when soft rub them through a sieve, and put to each pound of pulp three fourths of a pound of sugar. Stew it slowly till it is a thick jelly. Marmalades must be stirred constantly, or they burn on the kettle.

Quince.—This fruit makes the best of preserves, and one the least injurious to health. Pare and cut the fruit in slices an inch thick, taking out the cores carefully, so that the slices remain in the form of a ring. One pound of sugar is required for a pound of fruit, and white sugar is to be preferred. Dissolve the sugar in cold water, a quart to a pound, put in the sliced quinces and let them remain half a day. They are then put over a slow fire, and boiled gently, always having sufficient syrup to cover the quinces. When a small splinter will go through them easily, they are done, and are to be turned out. In about a week turn off the syrup and boil it down, so that there will be just enough to cover the fruit. They must be ripe, to preserve good in this way. The parings and cores of quinces are used for *marmalade*, which is made by stewing them in a small quantity of water over a fire till soft, then rubbing them through a seive, and adding to each pound of strained quince a pound of sugar. Put the vessel on a few coals, and stir constantly for one hour. When cold, it cuts smooth if sufficiently stewed, making a jelly of the richest kind.

Plums.—This fruit requires equal weights of sugar and fruit. Boil the plums slowly in the syrup for ten minutes; turn them in a dish and let them remain four or five days; then boil again till the syrup appears to have penetrated the plums fully. Put them in jars, and in about a week turn off the syrup, scald it carefully, and return it while hot.

Apples.—Tart mellow apples are the best for preserves, and they must be pared and the cores taken out with a small kinfe. Three fourths of a pound of sugar, a tea spoonful of ginger tied in a bag, and water to cover the apples, is allowed to a pound of fruit. The apples must be put into the prepared syrup when it is lukewarm; boil them till they are transparent; and when taken up and partly cooled, put in a little essence of lemon. In a week turn off the syrup, boil it, and return it hot to the fruit. The Siberian crab apple makes a superior sweetmeat, preserved as above, whole and without paring.

Barberries.—Barberries preserved, approach in their qualities the nearest to the East Indian tamarinds, and like them, are frequently found useful in fevers. The fruit should be fully ripe and allowed to remain on the stems. The syrup must be rich, using as much sugar as fruit; when made, and lukewarm, put in the barberries and boil them till they appear penetrated by the syrup. An orange sliced is thought by some to improve the flavor.

Tomatoes.—An "experienced lady," gives the following directions for preserving this fruit. "Take them while quite small and green—put them in cold clarified syrup, with an orange cut in slices to every two pounds of tomatoes. Simmer them gently over a slow fire for two or three hours. There should be equal weights of sugar and tomatoes. If very superior preserves are wanted, allow two fresh lemons to three pounds of tomatoes, pare thin the rind of the lemons, so as to get none of the white part, squeeze out the juice, mix the parings, juice and cold water sufficient to cover the tomatoes, and put in a few peach leaves, and powdered ginger tied up in bags. Boil the whole gently for three fourths of an hour—take up the tomatoes, strain the liquor, and put to it a pound and a half of white sugar for each pound of tomatoes. Put in the tomatoes and boil them gently till the syrup appears to have entered them. In the course of a week turn the syrup from them, heat it scalding hot, and turn it on the tomatoes. Prepared in this way, they resemble West Indian sweetmeats."

Water Melon Rinds.—The rind of a good ripe, water melon cut into small strips, and boiled in water till tender, with a tea spoonful of saleratus, and a dozen peach leaves to two quarts of water. The rinds are then to be taken out, and soaked in alum water an hour. For the syrup, allow as much sugar as rind. Put the rinds in the syrup while cool, with ginger tied in a bag. Boil till the rinds are soft, and when partly cooled, add some essence of lemon. In the course of two or three days, take out the ginger, turn off the syrup, and boil it till there is just enough to cover the rinds; return it to them while hot.

Pickling—*general directions*.—Brass should be used for vessels in the process; thoroughly cleansed before using, and no vinegar allowed to cool in them. This precaution is necessary to prevent the formation of verdigris, an active poison. Boil alum and salt in the vinegar, in proportion of half a tea cup of salt and a table spoonful of alum to three gallons of vinegar. Vessels that have any grease about them will not do for pickles. Stone and wood are the only proper materials in which to keep pickles when made. All pickles should be stirred up occasionally. When any scum rises, the vinegar needs scalding. Pickles may be spiced or not at pleasure; and when the vinegar becomes weak from use, it may be thrown away and fresh vinegar substituted. Good, but not the sharpest vinegar, is the best for pickles.

Cucumbers.—The best are those that are small and green, and those of a quick growth. Turn boiling water on them as soon as picked; let them remain five hours, and then put them in cold vinegar, with alum and salt in the proportion of a spoonful of the former, and a tea cup of the latter to a gallon of vinegar; add vinegar as you add cucumbers; and when you have done collecting cucumbers, turn the vinegar from them, and scald and skim it till it is clear, then put in the pickles and let them scald without boiling for a few minutes, and return them to their vessel while hot. Cucumbers may be preserved in salt, or saturated brine, for any length of time, and then prepared for pickling by soaking and scalding. In the preparation of these pickles, no salt will be needed in the vinegar.—Peppers are added to the vinegar while hot, and before it is turned over the pickles.

Peppers.—Take those that are fresh and green, soak them in salt and water eight or nine days, changing the brine each day, and keeping them in a warm place. If they are not wanted very fiery, make a slit in them and extract the seeds, being careful not to mangle the pepper. If it is desired to stuff them, chop white cabbage fine, season it highly with mace, cinnamon, cloves, and nasturtiums if liked, and fill the peppers with the mixture. Sow them up carefully and put them in cold spiced vinegar. Tomatoes may be treated in the same way, and when green are very good pickled with the peppers. Peppers are one of the best of pickles, but those used must not be allowed to grow hard or tough before gathering.

Nasturtiums.—Gather them when small and green; put them in salt and water, and change them once in three days. When the gathering is done, turn off the brine, and pour on scalding hot vinegar. Season at pleasure, though generally used without.

Mangoes.—These are made of green muskmelons, as late in the season as possible. The common muskmelons make the best mangoes. A small piece is cut from the side, and the seeds carefully scraped out; it is then soaked in salt and water three or four days; when taken out, it is sprinkled on the inside with powdered cloves, pepper, nutmeg, and filled with strips of horse radish, cinnamon, small string beans, small pieces of flag root, nasturtium, small onions, radish tops, &c. The crevices are filled with whole mustard seed. The piece of melon is then put back, and a piece of white cotton cloth sowed around it. The melon is then placed in a jar, and vinegar prepared with alum, salt and pepper corns, as for cucumbers, made boiling hot, is poured over it.

Cabbages.—Quarter the firm head of the cabbage; put the parts in a keg, sprinkle on them a good quantity of salt, and let them remain five or six days. To a gallon of vinegar put an ounce of mace, and one of pepper corns and cinnamon. Cloves and allspice may be added, but they darken the color of the cabbage. Heat the vinegar scalding hot, add a little alum, and turn it while hot on the cabbage, the salt remaining. It is necessary to turn the vinegar from the cabbage several times, and scalding it, return it again while hot. This makes them tender. Purple cabbages, the heads not large, but fine and firm, are best for pickling.

Pickling Oysters.—Boil and strain the liquor, first taking the oysters from it. Rinse the oysters, and see they are free from pieces of shells. Put them in the liquor while boiling; boil them one minute, then take them out of it, and to the liquor put a few pepper corns, cloves and a blade or two of mace; add a little salt, and the same quantity of vinegar as oyster juice. Let the whole boil fifteen minutes, and then turn it on the oysters. If the oysters are to be kept any time, they must be bottled and corked, as soon as cold.

One way of saving both time and breath, is to use slips of paper for lighting candles or lamps. Lucifers are not always at hand, and if they were, their smell is not perfume, while the burning of a slip of paper lighted in the fire, or at the stove, offends no one. Cut a few dozen slips from old papers, letters, &c., and fold them some six inches in length. Put them in a glass, where they can be conveniently reached, or place them in a paper case within reach. If you want something a little showy, use paper of several colors. Try this a few weeks and the old mode of matches, or coals and tongs, will not willingly be returned to by the housekeeper.

LINCOLNSHIRE AND BAKEWELL SHEEP.

We had the pleasure, last month, of viewing a flock of sheep, which were on their way west, consisting of twenty-five bucks and ewes, selected with great care by Mr. George L. Watson, of Sennett, Cayuga county, from various flocks, but mostly from that of Mr. Clift of Westchester county. Among the number bought of Mr. Clift, was the famous Lincolnshire buck "*Nonesuch*," of which a portrait was published in the June No. of the Cultivator for the current year; also three other bucks and seven ewes of the same breed, all of which do great credit to Mr. Clift's flock, for an account of which, as well as a particular description of the buck "Nonesuch," the reader is referred to the communication of Mr. C. at p. 93. There were also in the herd, several Bakewell bucks and ewes, affording fine specimens of that breed. Taken together, they were a beautiful lot, and Mr. Watson, the purchaser, deserves much praise for his effort to introduce these breeds into western New-York, where as yet they are comparatively little known; and we doubt not he will be well rewarded for his investment. He desires us to say that a part of the bucks will be for sale; his object being to aid others, as well as to procure an improved breed for himself.

SEEDLING PLANTS.

One of greatest sources of improvement in cultivation is to be found in the proper selection of plants to cultivate; and the law of nature is such that the opportunity for selection, and consequent improvement, is almost infinite. The seeds of plants may be said to rarely produce plants precisely like the original stock, and this is owing to a now well understood cause, the mixture of pollen from several varieties of the same plant; in sowing seeds, therefore, and cultivating the seedlings, we establish new varieties, superior in some respects, and perhaps in many to the old. As instances of this, we may refer to the strawberry, potato, pear and apple. So improved has the strawberry been in size and flavor, that the original plant is now rarely or never cultivated. The Methven, Wilton, Knight's seedling, &c. have been propagated from seedling plants; and it is but a few days since it was announced that a new variety, a seedling in a garden near Boston, had proved itself superior to every known variety of this delicious fruit. The potato also has proved the value of seedlings, in the new and excellent varieties to which sowing the seeds has given rise. As a proof of this we need only mention the Rohan. By sowing the seeds and cultivating the seedlings of the pear the celebreted Van Mons of Belgium, has originated several hundred new varieties of pears, many of which are the finest fruits, and promise to supersede nearly all others in cultivation. Every one can recollect some superior apple cultivated from seedlings, and in our orchards there are many apples that are of the first quality almost wholly overlooked, because they have no sounding name, and are only the "natural fruit." We have in our orchard a seedling tree that produces a sweet apple which for winter use is superior to any sweet apple with which we are acquainted. It is of middling size, yellow, with a tinge of red when ripened, keeps till March, is a good bearer, and highly esteemed for the desert or for cooking. We have also some grafts now bearing from a seedling tree in the orchard of a friend and which for distinction's sake, we call Parsons' Fall Greening. It is a good sized, round apple, deep green, smooth skinned, uniformly fair, ripe in October, flesh juicy, yellow, slightly acid, and of fine flavor. Nearly every seedling orchard can produce some variety worthy of extensive cultivation, and while there is no excuse for the allowing orchards of such miserable fruit to exist as are now, seen. the growers of seedling fruits or orchards, may reasonably expect to find in the collection many which will amply reward by their excellence, the labor bestowed on them. All our best fruits are from seedlings, and let it be remembered that every new fruit of superior quality produced, is only preparing the way for a future crop of still greater value.

WORMS IN FRUIT.

"Messrs. Editors—Can you give me any information, how to prevent the worm in fruit—apples for instance? I have an apple tree covered with fine fruit, and almost every one the habitation of a worm."

The worm in the apple as well as in the plum and cherry, is a species of curculio, the perfect insect of which, or the bug, deposites its egg in the fruit while it is small, and the worm when hatched preys on the fruit. After attaining its size, the worm, with the fruit, falls upon the ground, in which the worm takes up its abode in the chrysalis state, until, revivified and changed by the spring, it issues a perfect insect to recommence the work of destruction. To destroy it, dislodge the bug from the tree by jarring it off and killing it; by picking up all the premature fruit that falls, as this state is usually induced by a worm, and feeding it to swine, or allowing these animals to run under the trees and gather the windfalls and defective fruit for themselves; or by beating down, or paving the ground under the trees so that the worm when it falls cannot readily penetrate the earth, but be picked up by birds or fowls.

AGRICULTURE IN FRANCE.

The agriculture of France differs in some respects from that of most European countries, particularly from that of England, and while the husbandry of both is flourishing, the causes and means of making it so are very dissimilar. We have gleaned from various sources, principally from an article in the English Agricultural Journal on the State Aricultural Establishments of France, some facts which we think will interest the American farmer.

In traversing France, the first thing that strikes the agricultural observer, is the almost total absence of fences. One may travel from the Belgian frontier to the Pyrenees, from Calais to the Rhone, and scarcely see a hedge or a partition fence of any kind. The eye ranges over vast plains, or sloping hills, covered with every description of crop; the pieces occupied by each kind varying from one fourth of an acre, to two acres. The owners of these plots do not reside near their lands, but are congregated into villages or towns; these hamlets constituting another singular feature of the country. The reason of this state of things is found in the fact, that in France the land is almost infinitely divided among small proprietors, while in England, and the other countries of Europe generally, the land is owned by large proprietors, and cultivated by tenants possessed of capital and skill.

In England and in this country, agricultural improvements are introduced and carried forward by individuals, or by associations; in France, the government "steps in, and partly by establishments maintained entirely at its cost, and partly by aiding local institutions with patronage and funds, leads the way in the path of improvement." In this respect France is imitating Prussia, and the public agricultural establishments of each, are such as do honor to the comprehensive minds that planned, and the skill which directs them. The advantages and beneficial effects of these institutions are so palpable, that no objectors in those countries are found to such a disposal of the public money, and we think that our state governments might take some useful hints from the interest these countries take in the promotion of agriculture within their limits.

The establishments maintained entirely by the French government, are—sheep farms, model farms, veterinary schools, and haras or studs.

The government sheep farms are three in number, Rambouillet, Perpignan, and La Hayevaux. There experiments are made in crosses, and the best breeds of sheep are reared. The kinds to which attention is chiefly directed, are the Merino; the Naz, a race with small frames, fine wool, but more hardy than the Merino; and the English long wooled sheep. The annual sales of wool and sheep nearly cover the expenses of these establishments. The principal cross is the Naz Merino, and the object, to ascertain how far increased weight of carcase and fleece can be carried without sacrificing the fineness of the wool. Rambouillet has 715 head of sheep, Perpignan 504, and La Hayevaux 312.

Of the model farms, Grignon is the chief; and consists of 1,100 acres of different qualities, arable, pasture, meadow, water meadow and wood. Here the best implements from all parts of the world are collected and proved, the best systems introduced, and under the guidance of able professors, theory and practice go hand in hand.

The pupils of this agricultural school are classed as "external" and "internal;" or those that find food and lodgings for themselves, and attend the courses of the institution, and those that reside within the walls of the establishment. The charges of the first vary from $50 to $100 annually; the last from $150 to $250 annually. The shortest course is two years. The pupil passes a close examination, and if qualified, receives a diploma, giving him rank as a sort of M. A. of Grignon.

There are three veterinary schools, at Alfort, Toulouse, and Lyons. The course of education lasts four years; and includes botany, chemistry, as well as the anatomy and diseases of animals. Being in the vicinity of Paris, the school at Alfort has abundant opportunities of investigations and dissections in the diseased animals of that metropolis. From 280 to 300 scholars attend this school, and are boarded, lodged and instructed for about $70 per annum. In order to give information of consequence on all diseases of animals, establishments of sheep, pigs, and dogs are connected with the institution. A few years since the French government purchased a herd of Durhams in England, part of which are kept at Alfort, as specimens of the improved breed. The favorite color in France is red, and that color is preferred perfect, or not broken with white or roan.

The greatest and most expensive of the government establishments is the haras or studs; of these three are kept as breeding establishments, Du Pin, Rozieres, Pompadour. Du Pin is the most important, as here great numbers of horses are bred from the pure English blood; at Rozieres the attention is directed to a mixed breed called the "race ducale;" and at Pompadour, the breed is almost exclusively Arab and Persian. These establishments contain 1,300 horses; of which about 400 are thorough bred. Connected with these government establishments, is the system of providing covering stallions for the departments; and the last report shows that of these stallions there are 870, covering on an average 35 mares each, or a total of 30,450. These do not travel, but are kept at their respective stations. The influence of so many carefully selected horses, is visible in the rapid improvement of the French horses generally, having the effect of crowding out of use the miserable animals that formerly there, as here now, are kept for the purposes of propagation. Every thing relating to these horses is recorded at each station with the greatest precision; their stations, posts in winter, feed in summer and winter, in short, every thing is the subject of minute regulation, and carefully adhered to. As an example of the mode of feeding these horses, we select the three first of the 23 stations.

	Ordinary allowance.					*Allowance in the season.*				
	Oats.	Hay.		Straw.		Oats.	Hay.		Straw.	
	Pints.	*lbs.*	*oz.*	*lbs.*	*oz.*	*Pints.*	*lbs.*	*oz.*	*lbs.*	*oz.*
Abbeville,	16	6	11	17	10	21	6	11	17	10
Angers,	14	11	0	13	4	17½	11	0	13	4
Aurillac,	14	11	0	15	7	16	11	0	15	7

The second method in which the French government aids agriculture, is in contributing to the support of lectures, agricultural societies, and local or departmental model farms. Application is made by the prefect of the department to the government for aid, and when it is ascertained that a society has been organized, a model farm provided, and a subscription secured, government grants such assistance as is deemed proper, to carry out the plans of the society or association.

In the year 1834, there were 17 societies, and 41 associations receiving aid; in 1839, 154 societies, and 468 associations. The societies, the chief of which is in Paris, are chiefly engaged in theoretical matters; while the associations are very much on the plan of our county agricultural societies; holding meetings, distributing prizes for good management, improved implements, improved cattle, &c. &c. Agents under the direction of government are engaged in the various regions of the globe, in selecting such plants and animals as may be deemed worthy of introducing into the culture of France; in Brazil, in China, in America, they are found; while at home, entomologists and botanists visit the departments to ascertain the habits and history of the insects and plants, useful or injurious to the farmer, and give information respecting their increase, or their extermination.

The expense of all these aids to agriculture amounts annually to a considerable sum, but it is deemed on the whole one of the most decidedly beneficial expenditures of government, and is cheerfully voted by the Chambers. The latest report classifies the expenses as follows:

Sheep Farms,........................	£2,303
Veterinary Schools,..................	11,263
Haras or Studs,......................	70,526
Other items of expense,..............	32,000
Management,.............	3,360
	£119,452

Or not far from half a million of dollars annually; a sum literally nothing when compared with the resources of the kingdom, or the great good it is effecting

GRINDING CORN IN THE EAR.

"Messrs. Editors—Can you, or any of your subscribers, give any information on the additional value that would be conferred by grinding the cobs with the corn for feeding animals; and if any, what kind of mill would be the best for grinding? A Corn Grower."

Some experiments have been made in this country to test the value of the cob when ground with corn, as an article of food, and we believe they have uniformly proved successful; but the difficulty of providing fixtures for grinding, and the little attention usualy paid in this country to savings of this kind, has had the effect to prevent the attention of farmers from being much directed to this mode of preparing food for animals.—That a great saving would be made in feeding corn meal, by grinding the cob with the grain, might be reasonably inferred from the fact that when corn meal is fed to horses, it requires to be mixed with some coarser food, such as cut straw or hay; and that so mixed, a smaller quantity causes the animal to thrive better, and perform work as well, as a larger quantity of meal without such mixture would. Pure corn meal does not appear to sufficiently distend the stomach to bring into exercise its digestive faculties fully, without taking so much as to clog that organ and impair its functions eventually. For this reason, a mixture of less nutritive materials is desirable; and one of our most successful feeders of pork has assured us, that he always mixed oats with his corn, in the proportion of one-fourth, previous to grinding, and thinks he should find a profit in exchanging corn for oats, bushel for bushel, rather than feed the former to his pigs clear. It appears, from recorded experiments, that the cob, though doubtless possessing no inconsiderable portion of nutriment in itself, makes about the requisite mixture with the grain, and hence is of great value for the purpose of feeding.

In the N. E. Farmer, for 1825, may be found a communication from the Rev. H. C. Perley, giving the history of some experiments made by him in feeding with corn and cob meal. Mr. Perley broke his corn and cobs together by pounding, and the mixture was then ground in common corn millstones. "Meal made of this composition, I scalded, and made about as thick as common hasty pudding; or mixed about one peck of meal with three pecks of boiled potatoes, thickened to the consistency of pudding. With this kind of food and what wash was made in the family, I constantly fed my swine; there were none in the neighborhood grew so fast, or were fit to kill so early in the autumn. The neighbors were surprised that my hogs looked so white and grew so well, being fed as they were, with cob meal, potatoes, and the wash of four cows. Some ridiculed the notion, others disputed and disbelieved the account; but finaly all were obliged to believe the fact, though reluctant to repeat the experiment. I am this year using the same discovery and process of the cob meal, and can show better swine than any of my neighbors can produce of the same age." Mr. Perley had one batch of bread made of this mixed meal, combined with rye flour in the usual proportions, and found it as light, moist, sweet and palatable, as that made from pure corn meal.

According to Dr. Mease, the practice of grinding corn with the cob, is common among the German inhabitants of Pennsylvania. They consider the practice as a great improvement in the feeding of corn, and many of their mills have an apparatus for grinding. Dr. Mease adds, that "corn meal alone is too nourishing or heating, and it is therefore, by those who use it, mixed with a portion of cut straw, and coarsely ground rye or shorts, and in this state constitutes the daily food of that fine body of draught horses that do so much credit to our carters and draymen of Philadelphia, and the industrious farmers of the state at large."

That the cob of corn contains considerable nourishment in itself, is very probable; indeed, instances are on record, in which poor people, in times of a scarcity of food for animals, have converted them to a good use by pounding and boiling them, and feeding them out with a small quantity of cut corn leaves or straw. On such food cattle have for some time subsisted, and even seemed to be in good heart, if not to thrive.

In the Mass. Agric. Repos. for 1823, is a communication from Mr. Rice, of Shrewsbury, on the subject of feeding cattle, which constituted a part of his business, in the course of which he gives an account of one of his experiments in using cob meal.

"The second year, if I mistake not, in which I made use of cob meal, I thought I would try an experiment by feeding one ox with corn and oats ground, the other with corn and cobs, having a yoke of oxen so even matched, that no one who viewed them was satisfied which was best; accordingly I fed them as above. The cob is computed to make a little more than one third, therefore I mixed the other with one-third oats as was my former mode. I gave each ox an equal quantity at a time, except the one which had corn and oats sometimes became dainty, and would not eat his allowance, while the other kept a regular course. The allowance for both was a little over three pecks per day. When taken to market and killed, they weighed twenty-eight hundred and a half; the one fed on corn and oats weighing half a hundred the most, while the one fed on corn and cob meal was considered half a dollar per cwt. the best beef. The one fed on corn and cobs had 163 lbs. of tallow, the other 162 lbs."

From this, and other experiments, it would seem that cobs ground with corn, add to its value for the purposes of feeding, nearly or quite as much as would the same quantity of oats. If such is the case, there can be little room for doubt as to the propriety of making the practice of grinding the cob with the corn general, where this grain is used for feeding.

The mill used in Pennsylvania, is one invented by Evans, and much resembles the ordinary plaster mill in its operations. A cast iron screw revolves over a grate fixed in the bottom of a strong hopper, iron lined. The ears of corn thrown into the hopper are taken hold of by the screw, broken to pieces, and then they fall through the grate into a spout, by which they are guided to the millstones. Dr. Mease, however, strongly condemns the use of the same mill for grinding both plaster and cobs, as without great precaution, the plaster will be mixed with the cob meal, and produce dangerous concretions in the intestines of the animal eating it. In some parts of the country a common pair of millstones are used, the opening in the upper being made larger than usual, and the stones being more bosomed out, or made to fit less close in the inner part, than when used for grain. It is believed that corn in the cob might be broken sufficiently fine in a common iron bark mill, to admit being ground in ordinary millstones without difficulty. We should think that in any district where Indian corn is extensively grown, a miller would find it for his interest to attach a cob cracker to his machinery, as we are confident the farmers would find themselves well repaid by the great saving and superiority of the meal so made, for feeding.

KICKING COWS.

It is not unfrequently the case, that cows, excellent for milk, acquire some habit that materially lessens their value, and of these injurious habits, that of kicking, is perhaps, the most common. Bowing up one fore leg, tying both hind legs together, holding by the horns, and various other means have been resorted to, in order to break up the practice, but frequently without avail. Mr. Kidder has communicated to the Hancock Agricultural Society, a mode which he pronounces an effectual cure, and which he thus describes:

"Noticing the position of a cow while kicking, which was to drop the head and curve up the back, I thought I would try a new and simple method to cure her. After tying her in the stanchels as usual, I made one end of a rope fast round her horns, and put the other end over the girt, which was about two feet higher than the top of the stanchels, and about the same distance in front; drew it pretty tight and fastened it to a stud. This so effectually secured her, that she was milked with the most perfect ease and safety; and after practicing this method of tying a few times, she gave me no more trouble. Several subsequent trials have proved this method not only superior to all others as an effectual remedy, but it is so easy and simple that a female or a boy can secure a cow without difficulty."

AMONG THE FARMERS.

If a man would understand the value of agriculture; if he would learn to prize the art of all arts, the one that confers wealth and bread on the world; if he would see the true nobility of the country, the real sovereigns of the United States; if he would learn to look upon labor in its true light, honorable and useful to all; if he would have his heart gladdened at the successful results and rewards of honest industry, let him go among active, intelligent, practical farmers, men who in their practice enforce the same salutary lessons they embrace in their theory, or inculcate with their pen. We know not of any other sight so well calculated to show at a single glance the great source of national prosperity, the manner in which *wealth* is *created*, as a ramble in the fields among the ripening or growing crops, or a few hours' ride through a well cultivated district, when the farmer is filling his barns with the fragrant hay, and the reaper his arms with the golden sheaves; when the light wind comes scented with the odor of millions of flowers from the meadows and pastures, and gently bows the heavy heads of the maturing grain, when the rich silken tassels begin to wave amid the deep green of the luxuriant corn, and when, in short, on every hand, are to be seen unfailing indications of plenty, and for the toil and labors of the husbandman, an abundant reward.

The pleasures we have described, we yesterday enjoyed in a hurried call, (for farmers must husband their hours in harvest,) upon some agricultural friends in the south part of Onondaga. The fertile section of country to which our remarks allude, lies on what is called by our state geologist, the Marcellus shales, or the formation between the Onondaga and the Tully limestones. It of course partakes largely of the character that would result from the decomposition of the rocks and strata farther north, and the boulders of limestone and sandstone indicate the nature and direction of the agents that have there produced the present order of things. The result is a soil in general favorable to cultivation, rich and productive, rather uneven, and where well managed, giving ample returns.

Mr. Cummings is a gentleman who combines in a greater degree than most others, the experimental with the practical, and has been the agent of effecting much good to his agricultural friends, by the introduction of new and valuable kinds of seeds and vegetables. The introduction of the Canada flint wheat, a valuable English variety received through the Canadas, is an instance of this, and from him it has received the name by which it is in this section of the state generally known, the "Cummings wheat." It is a fine grain, bearded, very hardy, and appears likely to supplant to a considerable extent, the cultivation of the common flint wheat. It is more liable to shell in harvesting than ordinary wheat, and hence must be cut earlier than those that part with their seeds less readily. He has a beautiful crop of it now growing, and the seed has been extensively distributed within three or four years. He has at the present time six or seven varieties of Indian corn growing, in order to test their productiveness and early qualities; and as many or more varieties of the potato, cultivated for the same purpose.

Mr. C's farm is not a large one, but well managed and very productive. His manures are applied to crops that will be the most benefited by them, such as corn and roots, and these alternating with grain and clover constitute a profitable course of husbandry. We here witnessed another proof of the great superiority of manure from the hog yard, over all others, in bringing forward rapidly and giving a great growth of corn. Common stable manure appears entirely inefficient, compared with it. An experiment on a small scale, of the application of ashes to corn as a top dressing, gave most satisfactory evidence of the utility of such a measure. It was the 20th of July, and he assured us he had in his garden corn fit for boiling. We question whether many farmers in latitude 43° could have said the same. We saw in his garden a quantity of the Sweet Water and Isabella grape vines. He told us, that he had for some time attempted to grow fruit on them by training on frames, unsuccessfully, but now, as they lie spread over or near the earth, we found them loaded with fine clusters. We saw in 1838, in the garden of the Hon. E. Edwards of Sodus Bay, grapes, the vines of which were spread over frames only a few inches from the earth, and which were laden with the finest fruit. Is not proximity to the earth more desirable in the more delicate varieties of the grape, than in hardier or common kinds?

Mr. C. has invented a machine, consisting of a beater, running in a spiked cylinder, and worked by the power attached to his thrashing machine, by which he cleans clover seed after the chaff has been separated from the straw, most expeditiously and effectively. We understood him to say, that from 12 to 14 bushels might be turned out daily. To exhibit the advantages of draining, he mentioned a field of his, formerly nearly worthless, which was thoroughly underdrained, the whole expense of which was more than repaid by the additional value of the first wheat crop, and which we now saw was covered with a luxuriant crop of clover and timothy.

Another hour of our excursion was spent on the farm of E. Marks, Esq. in examining some of the improvements he has made and is making on his farm. The farm is of the same general character as Mr. Cumming's, but more level, and containing in the soil, perhaps, a little less sand in the composition. We have known the farm owned by Mr. Marks, for more than thirty years. It was naturally good, although from its position some part of it was always too wet for profitable cultivation, but it had passed through several hands, not very skilful managers, and when purchased by Mr. Marks, a few years since, it was in the condition, termed "completely run down." After putting the buildings, fences, &c. in order, the attention of Mr. Marks was directed to the low, sunken "swale" that crossed his farm nearly in the center, the timber of which had been cut off, but which to the extent of several acres produced nothing but coarse grasses, unfit for meadow or pasture, and was wholly unfit for tillage, on a large part of which, indeed, it is believed, it had never been attempted. To drain this thoroughly, was the first object. This was effected by a skilful series of cuttings, some of which required considerable depth, but which succeeded most admirably in draining the swampy ground of its superabundant water. It is now one of his most productive fields, and is covered with corn of the most magnificent and promising growth. The corn in this field is the yellow, and the red blaze. Both Mr. Marks and Mr. Cummings, have small fields of the Brown corn, which we aided them in obtaining from his Excellency Gov. Hill, of New-Hampshire, which are very promising, and of which we hope to be able to give a good account hereafter, though the late season at which the seed was received, very much lessens the probability of a good crop.

Encourged by the success of his first experiment in draining, Mr. Marks has extended his operations, and has already laid upwards of 700 rods, and intends to put down more. Those parts of his farm which were considered worthless, are now among the most valuable and productive, and although the expense has been considerable, his augmented crops are repaying it with accumulated interest. The beautiful crops of corn, potatoes, and roots, now growing on what, only two or three years since, could scarcely be made to produce coarse grass enough to feed a calf or sheep per acre, afford an argument in favor of thorough draining, more powerful than any which mere theory could devise.

Mr. Marks has cultivated roots extensively for several years past, including the carrot, turnep and the sugar beet. His crop this year of these plants has a fine appearance, though some of the seeds planted failed to germinate, causing the sugar beet and the carrot to have a somewhat unequal growth. His experience with roots, both in feeding animals, and in making pork, is such as to give him a high opinion of their value, and induce him to give them a prominent place in his system of cultivation.

Last year, in order to store his increased products, Mr. Marks built him a new barn, of a construction differing from ordinary ones, and which is unquestionably, in many respects, a decided improvement on the common system of building. It is built on a gentle declivity, with an underground apartment, and adjoining cellar, the last dug into the earth, with heavy stone walls, pointed with lime mortar. The part not occupied by the cellar, is neatly enclosed, with windows and doors, forming a retreat for his stock from storms, and a place for folding ewes and lambs in the spring of the year. The height of the barn is another point in which it materially differs from common ones. The upper part, or that which is intended for the reception of grain, is 20 feet from the sills to the top of the plates, which, added to the size of the building, gives an opportunity of securing a large quantity of grain, without being obliged to have recourse to stacking. Mr. Marks is very careful in his management of manures, and he remarked to us that one load made and kept where it was not liable to be leached by the rains, and its salts wasted by washing and evaporation, was worth two which had lain exposed in the yard through the season.

Mr. Marks was one of the first to introduce the pure Berkshires into Onondaga, and although unfortunate in not having any progeny from the first sow he purchased, the attempt has rendered essential service to the farmers of that section, as the pigs of various grades abounding in the neighborhood, prove. We have had the present season, various opportunities of observing the greater ease with which a Berkshire pig can be kept in good condition, by noticing such as run in the same fields, with others of the common breeds, and all faring in every respect, precisely alike.

As the efforts of Mr. Marks have been principally directed to the culture of grain, in connexion with the permanent improvement of his farm, he has not paid particular attention to stock, with the exception of pigs and sheep. He has, we believe, a few animals of the Short Horn cross, but the experience of our wheat growers seems to have decided that sheep and clover, are better than cattle and clover on a grain farm.

It would unquestionably be greatly for the interest of agriculture, if every neighborhood of farmers contained a few such men as Messrs. Cummings and Marks. Their influence is beneficially felt, even when their efforts are doubted or derided. Farmers, as well as other men, will imitate when they find it is for their interest. The draining of one such swamp as that of Mr. Marks, and the subsequent crops, would convince a hundred disbelievers in the theory of draining. It is needless to say, these men are reading, as well as acting, practical farmers. On their tables we saw many of the back volumes of the Genesee Farmer, an entire set of the Cultivator, and the excellent Monthly Visitor of our friend Gov. Hill.

BONE DUST.

Considerable quantities of this material are used at the present time in this country as a manure, and so far as we have been able to learn, with the best effect. It is to be hoped the use of the article will extend, until what is now frequently looked upon as a trouble and a nuisance, shall be converted into a substance most useful to the farmer. Immense quantities of bones have heretofore been cast into the rivers and sea, in our country, from soap boilers' works or other places where they accumulated, or have been shipped and sent abroad to benefit the agriculture of other nations, at the expense of our own. Some farmers appear to have doubted the efficiency of bone dust, but experience in most cases has dissipated such impressions, and shown that for ease of application, and immediate energetic action, bone dust has few or no rivals among the manures. That such should be the case, the nature and composition of bone would lead us to expect.

According to the chemical analysis of Fourcroy and Berthollet, bones are composed of a variety of matters, which for convenience sake may be divided into two kinds; animal matters and earthy matters. The first class consists of *gelatine, animal oils, fat* and *albumen*, to the amount of about 28 per cent; the second class, or the earthy materials of bones, consist of *phosphate of lime, carbonate of lime, fluate of lime, sulphate of lime, carbonate of soda*, and a small portion of *muriate of soda;* the whole amounting to about 72 per cent. All these articles are more or less efficient in promoting the growth of vegetation, and many of them are essential to the formation of plants, being found to constitute a greater or less portion of them.

Animal matters have always been known as among the most active fertilizers; and this power is supposed to reside principally in the nitrogen or azote such matter contains. They also decompose readily, and consequently become available very quickly; and to this cause the speedy action of this manure must doubtless be attributed. The most familiar use of animal matter as manure, is perhaps to be found in the general use of fish on the sea coast of this country, as a preparation for corn land. A gentlemen residing in the country who always has a fine kitchen garden, stated to us a short time since, that having a quantity of what is called halibut fins, of a rather inferior quality for cooking, on hand, he determined to make the experiment of depositing a small piece under the earth of each hill of a bed of cucumbers he was then planting, with the exception of a few reserved as a contrast. The result exceeded his expectations altogether. The hills so manured were far more vigorous in their growth than the unmanured, their production was greater, and the products earlier than from the others. As it is clear that the value of bones is depending very much on the quantity of gelatine and oil or fat they contain, any bones subjected to a process that deprives them of these ingredients, must render their dust far less valuable than that made from bones not so treated; and hence bones that have been boiled in ley to extract the fat, are not as rich in fertilizing materials as those not so used.

The earthy matter of bones comes under the denomination of mineral manures, and setting aside the fluate of lime, of which mere traces only can be detected in plants, there remains no less than five active materials as specific manures, in the earthy part of the bone. Next to the carbonate of potass and lime, there is no salt of such extensive use in the structure of the plant, as phosphate of lime; and its presence in the cultivated plants of wheat, barley, peas, beans, oats, corn, and most of the leguminous and garden plants, proves that to these it is at least necessary. The same may be said as to most of the other earthy salts found in bones, and accounts most satisfactorily for the efficient action they are found to have as manures.

Experience proves that doses of bone dust repeatedly made to land, in a short time lose their efficacy, in the same manner that lime loses its power of promoting vegetation by long use. This may be attributed to two causes; first, as but a small quantity is required as a specific manure for the use of plants, a larger quantity than is required for this purpose must in this respect be useless. Secondly, as the fertilizing property of bone dust, especially the animal part of it, is in a great degree depending on the organic matter already existing in the soil, it is clear that repeated applications of bone dust, without corresponding additions of other vegetable manures, will in time cease to produce the desired effect on soils. It is in this way, and this way alone, that lime, gypsum or bone dust can be termed exhausting manures. When this occurs, the remedy is easy; a rotation of such crops as do not require mineral manures, but to which farmyard manure is of great service, or in which clover, fed off upon the ground by sheep, forms a prominent part of the course, will soon do away the objection that bone dust is inert and worthless.

Large Fleece.—A fleece, weighing *twenty three pounds*, was taken at the present year's shearing, from a Cotswold ram, owned by J. Gould, Pottimore, Eng.

Compost Manure.—M. Quenard, an experienced cultivator of France, recommends as perfect, a compost prepared as follows:—1. A layer of green stuff taken from a pond. 2. A layer of quick lime, ashes and soot. 3. A layer of straw and green grass. 4. The same as first. These layers to be repeated as often as need be. Holes are then made through the several layers, and sufficient water introduced to saturate the mass, and cause a thorough mixture of the vegetable and alkaline substances.

DICTIONARY OF TERMS
USED IN
Agriculture and its Kindred Sciences.

CLOVER. (*Trifolium.*) This valuable plant constitutes a numerous family, botanists reckoning nearly sixty of the cultivated varieties. Of these the most common are the *Trifolium pratense*, or red clover, and *Trifolium repens*, or white clover. Clover will grow in any soil that is not too wet, but its favorite soil is a deep sandy loam, and on this its produce is usually great. The long tap roots of the red clover penetrate deep into the earth, and it will of course flourish in a soil so dry as scarcely to support any other grass or plant. All calcareous matter, or the salts of lime, as the sulphates and phosphates, the carbonates or marls, are excellent for clover, and plaster or lime will cause clover seeds to spring up from soils in which they must have lain dormant for a long time. White clover is a natural grass of the United States, succeeds best on a light soil, and when mixed with other grasses, as timothy or rye grass, makes a first rate hay. Clover seeds, in all countries where severe frosts occur, should be sown in the spring, and of the spring grains, none are perhaps more favorable to its taking well, than spring wheat. It is found by experience, that clover plants from seed put into the ground in autumn, are more apt to be frozen out, than when the roots have had a summer's growth. Some sow the seed on the land after the harrowing is done, but the best way is to sow the seed with the wheat, or other grain, and harrow it in with that. Seed scattered on the surface may vegetate, but many will fail, and the plants will not be as vigorous and well rooted, as if covered with the grain. Great care should be taken that none but pure seed is sown, as much foul stuff is put into lands with grass seeds. Johnswort, sorrel, dock, and Canada thistle seed may sometimes be detected in clover seed; and so liable are farmers to be deceived, that it is better for them to grow their own seed, unless so circumstanced that they can be satisfied of the purity of that they can purchase. Growing best on soils that are suitable for wheat; like that plant, requiring calcareous earths or manures to arrive at perfection; it has become associated most intimately with the culture of wheat, and in the best wheat growing districts of the United States, its presence in the wheat rotation is indispensable. In some places clover and wheat, the latter crop every third year, is the simple and profitable course pursued with manifest improvement to the soil and the crops. Clover makes the best of pasturage, and when cut for hay, if properly secured, is unrivaled for the horse and sheep. It requires, however, considerable skill to make it into hay without its either losing its leaves from over ripeness or dryness, or becoming mouldy by the moisture not being removed from its stems in the process of haying. There is no plant of which swine are more fond than of clover, and when allowed to run in a field of it, their rapid thrift is the most convincing evidence of its suitableness for them. Clover lasts in full vigor not more than three years, and it is usually turned under for wheat at the expiration of this time, its long tap roots and the decaying tops furnishing one of the best dressings that can be provided.

COAL. This invaluable article is very widely distributed, and embraces several varieties. The first is called *anthracite*, and being destitute of bitumen, burns with more difficulty than any other. This obstacle has been overcome by the invention of peculiar grates and furnaces, and as it is composed almost entirely of pure carbon, is destitute of any unpleasant smell, perfectly safe, and very durable, it has come into extensive use as fuel in the United States, as well as other parts of the world. Pennsylvania is the region of anthracite in this country, though it occurs elsewhere in smaller quantities. In no part of the world can it be obtained so easily and in such quantities as on the Schuylkill, Lehigh, Susquehannah and Lackawaxen; and the coal trade of the eastern part of Pennsylvania, furnishes no inconsiderable item in its prosperity. *Bituminous* coal is another variety, and is much more widely distributed in this country than the anthracite. It contains bitumen with the carbon, whence its name; it burns readily, and is extensively used by blacksmiths, in furnaces, and for manufacturing purposes. As fuel for the family, it is less agreeable than anthracite or even wood, the strong bituminous or sulphurous odor being unpleasant to all. Miners divide coal into slate coal, foliated coal, coarse coal, cannel coal, pitch coal, &c. from the different appearances and qualities it exhibits. There is scarcely a substance found in the bowels of the earth, of more consequence to man than coal, and one can hardly look on the immense stores of it so deposited, without conceiving there was design in the preparation of such an inexhaustible supply of fuel for the use of man, when the forests that long covered the earth should be removed to make room for a continually increasing population. It seems at the present time scarcely to admit of a doubt, that all coal has a vegetable origin; and the gradation can be traced by almost insensible steps, from the scarcely bituminated wood, up to the perfect coal, and purest carbon. In most of the kinds, the trunks of trees, branches, fruits, and foliage, can be distinctly recognized in the masses; and the character of the beds, and their relative position, furnish the geologist with interesting facts and data, in determining the earlier history of the world. When coal is burned in close vessels, the bituminous part is driven off in the form of carburetted hydrogen, or inflammable gas; and it is in this way that the vast quantities of gas used in lighting our cities are mostly prepared. The coal so treated possesses the qualities of common charcoal, and is used like that. It is called *coke*, and for many purposes is far better than in its first state. Charcoal is wood burned in pits or close vessels, and is so called to distinguish it from that found in the earth and produced by mining.

COMPOSTS. Animal manures combined with earths, and rendered fine by decomposition, are called composts; and when the preparation of them is well managed, a great increase in both the quantity and quality of manures on a farm may be obtained. Where the dung of the stables or the barnyard, is allowed to ferment before it is placed in the field, or in situations, where it is uncovered or unmixed with some substance to absorb and retain the gases generated, a great loss to the farmer of nutritive matter certainly ensues. To avoid this, and provide a supply of fine manure indispensable in gardening, and some other farm operations, it is found an excellent plan to mix the vegetable matter of swamps, the muck of drains, wash of roads, peat, &c. in heaps with the unfermented manure, and in this way the insoluble part of the vegetable matter used is prepared to become the food of plants, while they at the same time serve to prevent the escape of matter from the fermenting mass. In preparing these heaps, the manure, and the muck, or the earth, (for even arable earth will be better as an absorbent mixed with the fermenting dung than nothing,) is placed in layers until the requisite height is obtained, when it is left to ferment and decompose. If the heat rises to much over 100°, the pile should be shoveled over, and this incorporation of the materials will check the too rapid fermentation, and promote the fineness and quality of the compost. Another mode of making compost, and perhaps the best, where it can be adopted, and there is no fine manure required, is to carry on the field the proceeds of the stables and yards, spread them, and turn them thoroughly under with as little delay as possible. A compost is also made by spreading the yard to the depth of ten or twelve inches, with swamp muck, or other earth containing insoluble vegetable matter, and allowing this to receive the wash of the stables, manure, &c. As the straw, hay, dung, urine, and other matters, will, in the course of the winter, become, by the trampling of beasts, thoroughly incorporated with the added earth, the volatile salts which are so apt to escape, as well as those which being soluble are washed away by the rains, are retained, and the quantity of manure is most beneficially augmented. In this way on some farms where but comparatively small numbers of stock are kept, from 500 to 1000 loads of manure are annually obtained, and the fertility of the farm rapidly increased.

CORN. (*Maize.*) This plant is one of the most interesting of the *graminal*, rivaling the rice and the sugar cane of the tropics; and in the United States, in the opinion of some, ranking in utility higher than wheat itself. European writers place it in the third rank, as a plant bearing food, giving rice and wheat the preference, but it is there comparatively uncultivated, and its value little understood. In England, and all the northern countries of the eastern continent, the temperature, though excellent for wheat, is too low for corn, while the hot summers of this country render it one of the most certain and valuable of crops. America is undoubtedly the native country of the maize or Indian corn; since, though corn is mentioned in the earliest records of the world, it is evident that by the term was understood the common grains, such as wheat, barley, &c., and not a shadow of evidence can be adduced to prove that such a plant as the maize was known previous to the discovery of the American continent. There are many varieties of Indian corn known, of which the most prominent are those distinguished by color, as the yellow, white, red and blue; those that have different numbers of rows as the eight, ten, twelve, sixteen, and twenty-four rowed kinds; those that differ in taste, as the common or sweet kinds, and those that have peculiarities in the shape of the kernels, as the common northern round corn, the gourd seed corn, the rice corn, and the Texas corn, each kernel of which has a separate husk or envelope. Dr. Brown of Pennsylvania, in his excellent treatise on corn, enumerates thirty-five of these varieties, and several have since, with propriety, been added to his catalogue. Indeed there seems no reason to doubt that this plant, like the potato, may be greatly improved by cultivation, and that varieties may be multiplied to any extent by judicious selection of kinds, and crossing by careful impregnation. Corn is usually the first crop in a regular and well conducted rotation, coming on the lay, and requiring a heavy manuring. There is no plant cultivated, that bears heavy manuring so well as corn, while there are many to which fresh manure is decidedly injurious; and by applying it to the corn crop, that is highly benefited, while the manure undergoes the decomposition that fits it for the use of the succeeding one. The quantity of corn grown in the United States is immense. It has been variously estimated within a few years at from one hundred, to one hundred and fifty millions of bushels, and when we consider that it is produced to a great amount in every part of the country; that it is used as food for man and for beast, we shall be justified in believing that it does not fall materially below the highest estimate.

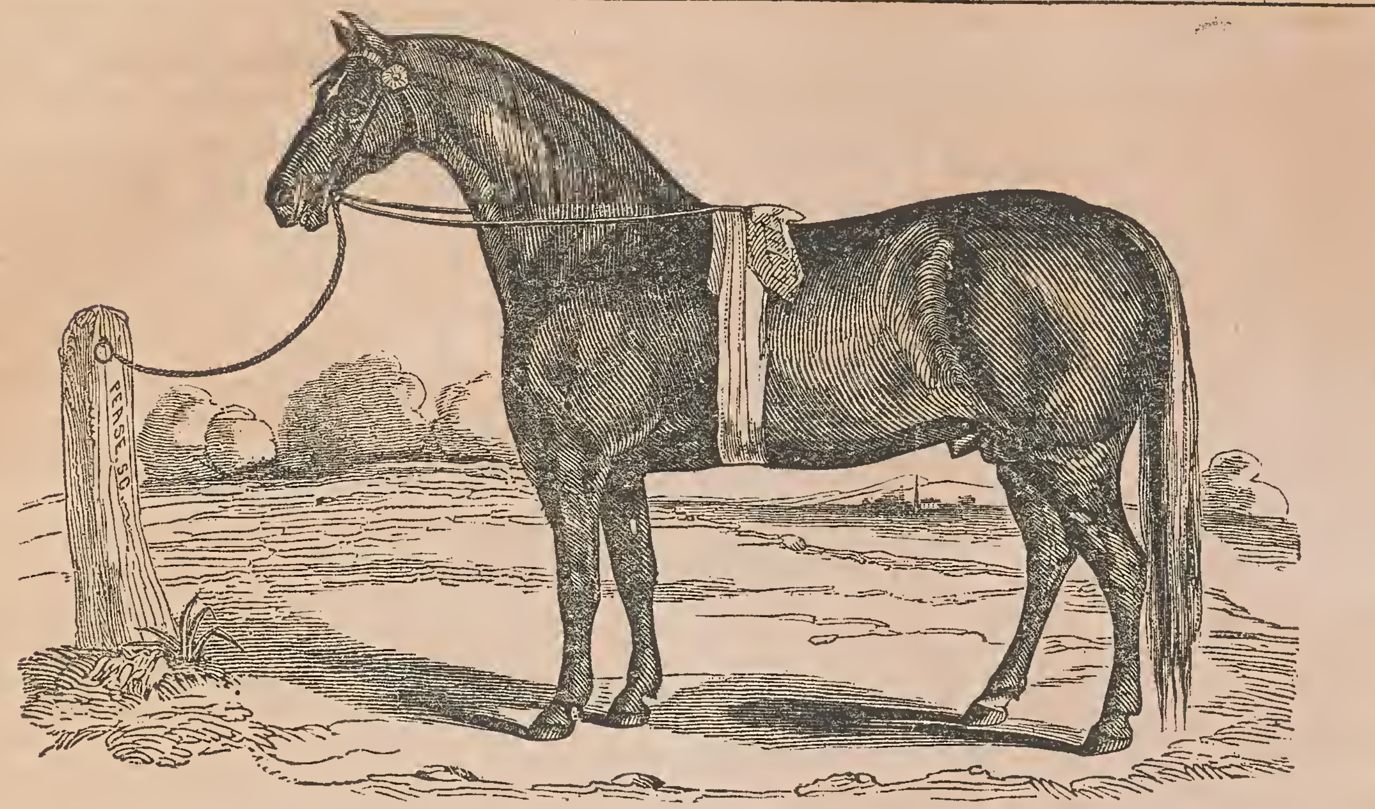
COULTER. The iron which is attached to the beam of the plow, immediately before the share, and with its sharp cutting point, by dividing the turf renders the operation of plowing more complete, is called a coulter. It is constructed and applied in many ways and forms, but the object is nearly the same in all, the cutting of the turf before the share. When properly made and affixed, the coulter greatly lessens the force required on the plow to turn the turf well, as it is easier to cut than to tear or break the matted roots of the grass. The coulter should be as near the share, as can be conveniently, unless the surface to be plowed is very level, and the depth is regulated by wheels, in which case a greater distance between the coulter and share is admissible. The point in all cases should be set slightly forward, as it will, if inclining backwards, exert a constant tendency to throw the plow out of the earth. The cutting should be as near the line to be made by the share as possible, though if there is any deviation it is found to be better to have it made to land, as the plowman's phrase is, than otherwise.

COW. One of the most useful and valuable of all animals is the cow. Perhaps there is none in a very large part of the world that contributes so essentially to the comfort of mankind as the cow; and certainly there is none that better repays what care and attention is given to them by the owner. Milk, in many respects, is one of the most indispensable articles of food, and by far the largest quantity in nearly all countries used for human sustenance, is obtained from this animal. The cow is in prime condition for milk, from four or five years of age to eight or nine; though many of them retain all their valuable milking qualities to a much later period. In all temperate climates, the cow and her products, of milk, butter, cheese, and beef, constitutes one of the most important items in the profits of agriculture. By paying attention to the breeding of the cow, with particular reference to her milking qualities, they have been greatly improved in this respect, though as a general rule, the tendency to be a great milker is found to be incompatible with that of great size, and ready fattening. We much question whether instances among our native breeds of cows cannot be found which fully rival in quantity and quality the best milkers of the improved breeds; but the difficulty in such cases lies in the fact that the heifers from such cows do not always partake of the milking qualities of the parent; while those which have been bred with reference to this point, rarely depart from it. Some of the finest dairies in the United States, and which perhaps will exhibit as great a product in proportion to the number of cows kept, as in any dairies in the world, may be found in the western part of Massachusetts, and the northern part of Connecticut, in the counties of Berkshire and Litchfield. The quality of the products of the dairy, depend in a great measure on the sweetness and purity of the herbage on which they feed; and the fine clovers and grasses of elevated pastures are better for milk than the coarser and more luxuriant herbage of lower and richer lands.

CRADLE. The cradle is an implement of agriculture of comparatively modern invention, and is intended to aid in cutting and gathering grain, which, when well constructed and skilfully used, it does most materially. Formerly the sickle was relied on in gathering the grain crops, now, unless on new lands, its use is mostly abandoned. The cradle consists of a broad scythe connected with a snath and light frame work, the fingers of which, projecting in a line with the scythe, gather and retain the straw as it is cut in the semicircular sweep of the implement, until it is deposited on the earth in a position for binding into sheaves. Serious objections formerly existed to the use of the cradle in the wheat field, as with the clumsy implement as first used, much grain was lost that might have been saved by the sickle; but now a skilful cradler, with a good cradle, followed by a competent raker, will in the wheat field lose little if any more than the sickle, and a saving of at least one half the time will be made. When we compare the ancient cradle, as delineated in the books of agriculture, and even those now used in England, with those constructed at this time in this country, we shall cease to wonder at the objections made to their use, and be convinced of the great improvements effected in their making. The best implement of the kind, is the one termed the Mooly cradle, in which a very curved snath is used, and the weight of the grain when on the implement, brought so much nearer the operator, as materially to lessen the labor and fatigue of carrying it, while it cuts the grain with great evenness, and of the desired width.

CULTIVATOR. This is an implement of agriculture, the use of which is to loosen the earth between rows of plants, so as to destroy weeds, and give the earth and plants the benefit of atmospheric influence. It is formed of a central piece of timber with diverging moveable side pieces, into which shares or points of iron are fixed, and the whole, drawn by a horse, pulverizes and stirs the earth, without penetrating so deeply as to injure the roots of the plants under cultivation, as is sometimes done by the common plow, particularly in crops of corn and potatoes. In preparing these plants for hoeing, the cultivator is now generally used in preference to the plow, as possessing all the advantages of that implement, with none of its disadvantages. As with the plow, so with the cultivator; a great variety of these implements have been placed before the public, the general principle in all the same, and differing only in the details and construction.

"*The Practical Farmer, Gardener, and Housewife,*" is the title of a volume recently issued at Cincinnati, by Edward J. Hooper, editor of the Western Farmer. It is highly recommended in the papers of that city, and is no doubt a valuable work.



THE SUFFOLK HORSE BRITTON.—[Fig. 78.]

As a representative of this excellent breed of horses, considered in England for use on the farm, or for heavy draught, as unequalled, we copy from the London Farmers' Magazine, a portrait (fig. 68,) of the horse that received the first prize as a cart or farm stallion, at the meeting of the English Agricultural Society at Oxford, 1839. "He is a bright chestnut, eight years old, sixteen and a half hands high, full of bone, and of admirable symmetry, good constitution, and staunch worker. Britton is one of the fastest walkers, and best tempered horses, that ever traveled Suffolk, or any other county."

According to Mr. Youatt, and other high English authorities, the Suffolk horse, originally descended from the Norman stud and the ancient Suffolk mare, is the very best horse in England, for those kinds of labor in which activity is combined with great strength and powers of endurance. The true Suffolk, like the Cleaveland race, a cross of which with the full bred, has given England her hunters and carriage horses, is almost extinct. Some few however, remain, and the breed is in great request in the neighboring counties of Norfolk and Essex, both for the farm and for breeding. Some of the most highly prized carriage horses of the Duke of Richmond, combining strength, activity and figure, were obtained by crossing the Suffolk with one of his best hunters.

Mr. Youatt, in speaking of the Suffolk Horse, says—

"The excellence, and a rare one, of the old Suffolk, (the new breed has not quite lost it,) consisted in nimbleness of action, and the honesty and continuance with which he would exert himself at a dead pull. Many a good draught horse knows well what he can effect; and after he has attempted it and failed, no torture of the whip, will induce him to strain his powers beyond their natural extent. The Suffolk, however, would tug at a dead pull, till he dropped. It was beautiful to see a team of true Suffolks, at a signal from the driver, and without the whip, down on their knees in a moment, and drag every thing before them. Brutal wagers were frequently laid, as to their power in this respect, and many a good team was injured and ruined. The immense power of the Suffolk, is accounted for by the low position of the shoulder, which enables him to throw so much of his weight into the collar."

Some traces of the Suffolk horse, may doubtless be found in the United States; but we are not at present aware that any attempt to introduce this breed, as such, has been made among us. There appears scarcely a room for doubt, that a breed such as the Suffolk is represented to be, is precisely the one wanted by our farmers, to work their fields, draw their grain to market, or make their team and wagon horses. Lively, fast walkers, strong constitutioned and hardy, good tempered, honest, never trickish or baulky, and a well built, handsome horse. it appears to us to combine most of the qualities desirable in an animal intended for labor, rather than show, for use rather than to be petted and admired. Some attempts have been made to improve our horses, by crossing with the small hardy French Canadian horse, with our large common mares; but we have some doubts as to the success of the measure, it having wholly failed in Virginia, where, a few years since, the experiment was fully tried. It is not desirable to make our farm horses smaller; what is wanted, is to give form, firmness, constitution, and fitness for draught; and for this, we should altogether prefer horses like the modern Suffolk, the Cleaveland cross, or some of our horses that have blood enough about them, united with a sufficiency of bone and muscle, to ensure activity and endurance. We think some of the gentlemen engaged in introducing first rate animals from abroad, would confer a great benefit on the country, by bringing to this country a Suffolk horse, whose descent, and the character of his colts, are alike indisputably good.

WORK FOR THE MONTH.

September is the month in which the great staple crop of the north is put in the ground. Experience has shown, that, unless in extraordinary cases, wheat sown in this month succeeds better than in any other. August is too hot, generally. The ground is dry, the dews which aid the young wheat so materially, fall sparingly, and the germination and first growth is imperfect and comparatively feeble. If sown much later, unless very late, it does not get rooted sufficiently to endure the winter well, and frequently suffers much from freezing out. We take it for granted your ground is in good condition, thoroughly fallowed, free from every vestige of a weed, fine, and rich from previous, not recent manuring. The quantity of seed on such land should be about a bushel and half per acre, and it should be harrowed, not plowed in, as the plow will cover some of the seeds too deep for vegetation. Wheat has two sets of roots, one set near the surface, and the other deeper. If covered too shallow, the two sets are confounded in their growth; if too deep, the connecting part of the root, uniting the two sets, becomes feeble, from its length, and the shoot if thrown up at all, is imperfect. Do not fear harrowing too much after the seed is sown, and a heavy harrow is better than a light one, unless the soil itself is very light. Passing the roller over the new sown grain is an improvment, as it ensures germination, and leaves the surface in a suitable state for gathering the grain. Prepare your seed by brining, and liming it. You may not fear smut, but the young plant will be sufficiently benefited by the process, to reward the trouble. Above all things use clean seed. Trust no man's word that his seed is perfectly clean, unless a few handsful spread on the table and examined thoroughly, show that it is free from every thing but pure wheat. The farmer who examines seed wheat in this way, will be surprised to find how little clean wheat actually exists. The man who sows charlock, steinkrout, or cockle must expect to find such plants spring up to plague him for years. Look out for chess; if you sow it, it will grow, and your wheat field will be adduced by the careless, as proof that wheat has changed to chess. If any part of your field is liable to injury from surface water, lay out your water furrows so as to remedy the difficulty. Water standing on wheat makes the ground heavy, injures the plant if it does not destroy it, and in the spring, renders it liable to freeze out. Make your water furrows before the plow leaves the field, and afterwards see they are kept clean with the hoe.

Selecting seeds is one of the most important items of the farmer's business. The farmer who pays proper attention to this subject, will not only find he has made quite a saving in the course of the year, but that he is more certain of their quality than when purchased in the usual manner.

In our climate it is always very desirable to have our vegetables and plants come forward and mature as early as may be; and as the first and most perfect vegetables give the best and earliest seeds, such should be selected for this purpose. It is a common practice to use all the earliest plants, or fruits, and trust to such as are later for seeds. This is a very injudicious practice, and should never be adopted where seed is wanted. In saving seeds from plants liable to crosses, as beets, squashes, &c. care should be taken to select from those least in danger from such action, and of course from those the farthest removed from each other.

Hops should be gathered as soon as matured. If left long after this period, they rapidly part with the rich material which gives them their principal value. They should be allowed to hang until bleached and dried on the vine, but gathered and dried in the shade. Every farmer should grow his own hops, and they are essential not only in making good beer, but in many of the culinary operations of the housewife. When well dried, they must be packed in bags, and kept where they remain dry. Exposed to the air, they lose much of their peculiar aroma, and depreciate in value.

If your hoed crops have been properly cultivated, they are now free from weeds; still, as it is a practice where the Canada thistle prevails, and one founded on correct principles, to plant and hoe such lands, it may be well to look over the corn, potato, and other crops, and see that none of these weeds escape. A piece of ground kept perfectly free from vile weeds one year, is in a fair way to be recovered from their dominion. To succeed in their extermination, the advantage gained must be followed up, and neither respite or reprieve allowed. A few hours' work properly applied now, may save the labor of weeks hereafter.

Don't be in a hurry to let your animals into your meadow lands. If you do not allow them to be fed off at all, you will probably be the gainer, but if fed at all, it should be reserved for sheep and lambs in the spring. In but few cases is it advisable to cut the second growth for rowen; such repeated mowings exhaust the roots too much, much more than grazing, from the time and manner of their performance.

If the lands you are intending to put into spring crops next year, are infested with weeds of any kind, there will be an advantage in plowing it once if not twice before winter. If the wire, or cut worm is in it, fall plowing is advantageous, as exposing the larvæ or chrysalis of these pests, to such atmospheric changes as are fatal to many of them. The roots of many weeds are also destroyed in the same way; and as frost is one of the best pulverizers to which soil can be exposed, heavy lands are much aided in preparation for spring crops, by fall ploughing.

There are many herbs used for culinary purposes, such as sage, summer savory, parsley, &c. and for medicinal purposes, such as tansy, wormwood, arsmart, penny royal, &c. which should be saved as they arrive at the proper state. They are generally in their greatest perfection, when the foliage is fully expanded, and they begin to flower. At this time in a dry day, they should be collected and dried in the shade. When the moisture is entirely exhausted, they must be pressed into masses of four or five inches square, papered and labelled. Put into a dry box and in a dry place, they may be kept almost any length of time. The farmer during the winter finds occasional use for herbs in treating diseased animals, and the want of them or the trouble of procuring them, in running over the neighborhood to beg them, is far greater than that of saving them.

Where it is intended to sow wheat after corn, this crop should be cut up and removed from the ground as early as its maturity will admit. If the ground is well manured for the corn, as it always should be, and well cultivated, a crop of wheat may properly follow corn, and but comparatively little labor in plowing is required to get in the seed. We have seen very fine wheat raised after corn; and as many experiments go to prove that corn cut up by the bottom is superior to that ripening as it grows, or that is topped, it would seem the practice might be advantageously extended.

Cattle and swine intended for fattening should now have increased attention paid to them. Although the fact is generally known, that animals will take on fat much faster in moderate, or warm weather, than they will in cold uncomfortable weather, it does not seem to have influenced the course of farmers as much as it should. The same quantity of food will give a far greater amount of pork in September and October, than in November and December. Begin to feed them as early as your means will admit, and you will probably find your account in the method. Dealers in pork may not like to have their operations commence too early; but when meat is making for home consumption, this objection does not apply.

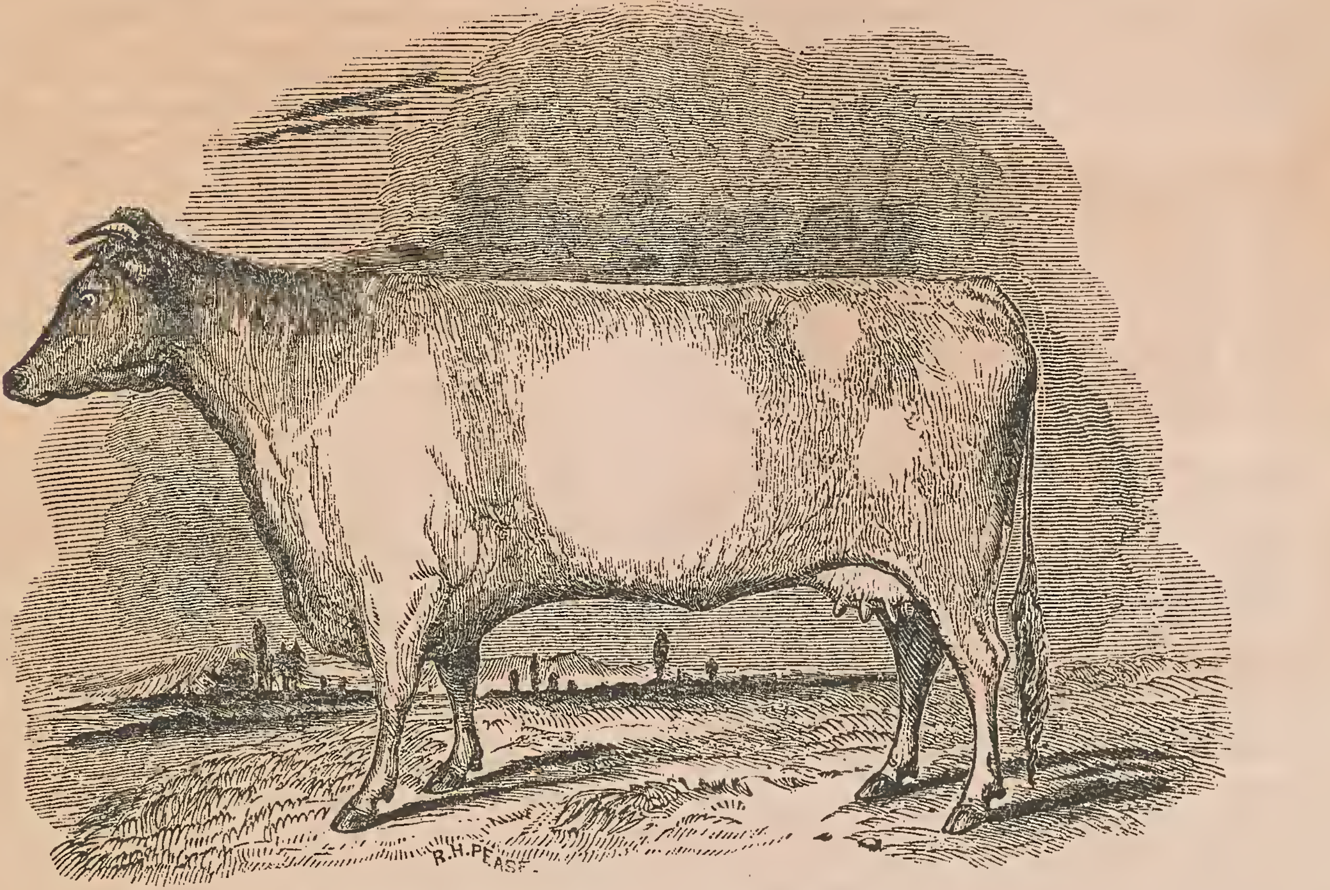
MILKING.

"Is there any remedy to keep a cow from holding up her milk? or in other words, to make them give it down when weaning the calf? I have two cows that hold up their milk at such times, so that they would dry themselves up in a short time; one of them I have milked for two hours at a time, and could get but very little milk, and then let in the calf and she would give it down in a moment. I have been compelled to let my calf suck through the summer and fall to get any milk. Any information on the subject will be gladly received.

"*Middlebury, Ia. July*, 1840. A. Freeman."

Gentle treatment at all times; accustoming the heifer to having her udder handled before calving; and milking her at first while the calf is about her, if she shows any disposition to retain her milk, will usually prevent a cow from holding up her milk. We have never had a cow addicted to this practice, and we know of no remedy for the habit. disagreeable as it is, when once contracted. A writer in a former volume of the New England Farmer asserts that placing a rope around the horns of a cow when in the stanchels and drawing her head high while being milked, will not only prevent her kicking, but is a remedy for her holding up her milk. This may be reasonable, as elevating the head, must prevent that contraction of the muscles, and curvature of the back, always observed when a cow holds up her milk or kicks. If any of our correspondents know a remedy, and will communicate it, it shall have a place with pleasure.

Sowing Grass Seeds.—A correspondent of the *Franklin Farmer*, recommends that where the grass is wanted for pasture, a mixture of timothy, red clover, and blue grass be used; but where it is wanted for hay only, timothy alone is to be preferred. Red clover and blue grass have been found not to answer for meadows in Kentucky, according to this writer, who recommends sowing timothy in September, on ground well prepared by plowing and harrowing. It should be slightly harrowed or brushed in. He sows clover on rye in the spring, after the rye is sufficiently advanced for pasture, and then turns in his stock to feed on the rye until the seed is about to germinate, when the stock is taken off.



Mr. Vail's Short Horn Heifer Dutchess—[Fig. 79.]

IMPORTATION OF SHORT HORNS.

We had the pleasure a few days since, of making a visit to the farm of George Vail, Esq., near Troy. Mr. Vail has within a few weeks, imported from England, and has now on his farm, a bull and a heifer from the celebrated stock of Mr. T. Bates, of Kirkleavington, Yorkshire, England.

One of the animals imported by Mr. Vail, is a white heifer, 2 years old, got by the celebrated bull *Duke of Northumberland*, dam Nonesuch 2d; the other is a roan bull calf, 9 months old, got by Short-tail, dam Oxford, the cow which obtained the first prize for the best Short Horned cow, at the meeting of the English Agricultural Society, at Oxford, in July, 1839, competition open to all England.

A beautiful engraving of the bull Duke of Northumberland, is in the Sept. No. of the London Farmers' Magazine; and from the notice accompanying which, we gather the following facts, as showing the high character of the stock imported by Mr. Vail. This bull is now four years old, and gained the first prize of £30 at the Oxford meeting, as the best Short Horn bull, beating, among other celebrated animals, the famous bull "Roderick Random," never before beaten. Mr. Bates' herd of Short Horns, originated from a purchase made of Mr. Charles Colling, and the whole of this family of Short Horns are alone in his possession, and have been so for 35 years. No better proof of the great excellence of Mr. Bates' stock could be adduced, than the fact of his having obtained prizes at the great Show at Oxford, for each of the four animals he exhibited. Mr. Bates states that this tribe or family of Short Horns have always been distinguished not only as quick grazers, with the finest quality of beef, but as giving a great quantity of very rich milk. A cow Mr. Bates bought of Mr. Colling, kept on grass only in a pasture with nineteen other cows, made in butter and milk for some months, above two guineas per week. We further extract from the Magazine, one fact, as showing how much animals lose in traveling:

"The live weight of 'Northumberland,' July 1st, (two days before starting for the Oxford meeting,) was 180 stones; (14 lbs. to the stone,) [2,520 lbs.,] on arriving home from Oxford, July 29th, his live weight was 152 stones, (14 lbs. to the stone) [2,128 lbs.,] so that he lost 28 stones—nearly one-sixth of his weight, in traveling 20 days."

A large colored print of the "Duke of Northumberland," lithographed by J. W. Giles, London, may be seen at the office of the Cultivator. Of the fine qualities of Mr. Vail's importation, the reader may form an opinion from the preceding remarks, and the engraving of the heifer "Dutchess," at the head of this article; an engraving of the bull "Duke of Wellington," may appear hereafter.

On Mr. Vail's farm we saw several other Short Horn cows, fine animals; one of which the owner remarked, was milked three times a day, and gave, before the grass was dried up, a pailful at each milking. He has a quantity of fine young stock from these cows, yearlings and calves; also Berkshires and other improved animals. The cost of "Dutchess," and "Duke of Wellington," including purchase money, commission, and expenses to New-York, was about $1,400. Mr. Vail is a merchant of Troy, yet finds time to devote to the improvement of his farm, and deserves much credit for his efforts in introducing superior animals.

Pedigrees.

A roan bull, [Duke of Wellington] bred by Mr. Bates, Kirkleavington, near Yarm, Yorkshire, calved Oct. 24th, 1839, got by Short Tail (2621,) dam Oxford (having obtained the first prize for the best Short Horned cow, open to all England, in July, 1839, given by the Royal English Agricultural Society,) by Duke of Cleveland (1937;) grand dam Matchem, cow by Matchem (2281;) great grand dam by young Wynyard (2859,) sometimes called Young Wellington, (page 494 Coate's Herd Book.)

A white heifer [Dutchess,] bred by Mr. Bates of Kirkleavington, calved May 13, 1838, by Duke of Northumberland (1940;) dam Nonesuch the 2d, by Belvidere (1706;) grand dam Nonesuch, page 546, by Magnet (2240;) g. grand dam by Major, (a son of Minor) (441;) g. g. grand dam old Sally, by a grandson of Favorite, (252;) g. g. g. grand dam by Punch, (531;) g. g. g. g. grand dam by Hubback, (319.)

The above are true Pedigrees, and may be found in Coate's Herd Book; see the first, second and third volumes; for the merits of Duke of Northumberland, see the print. He has proved himself, and no doubt is the best bull in England of the pure short horned breed. I have in my possession, 19 months old, (Locomotive,) from the cow Oxford, by Duke of Northumberland; he is a very fine animal, in all respects equal to his sire at the same age, now 12 cwt. 3 qrs. live weight—his propensities to fatten cannot be excelled.

(Signed)

J. C. ETCHES.

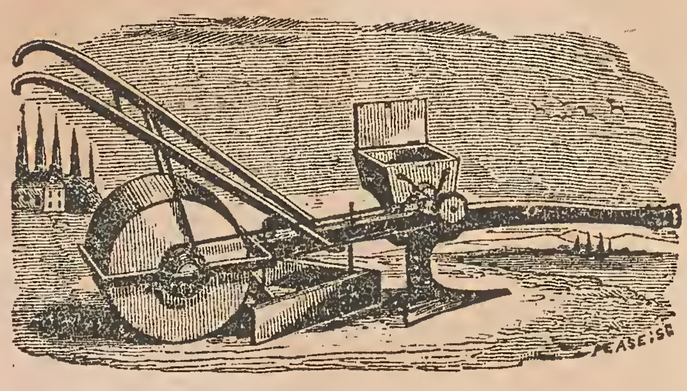
December 24th, 1839.

WHEAT AND A ROTATION OF CROPS.

We copy the following extract of a letter, from J. Alexander, Esq. from the Lexington, Va. Gazette, a journal that most laudably devotes a part of its columns to the dissemination of agricultural intelligence, in which it might, we think, be very profitably followed by a large portion of the political journals of the country. Mr. Alexander's course of cropping would appear to be a very good one; and we have no doubt, a farm so cultivated would rapidly improve. Here at the north, a more mixed husbandry would in general be deemed advisable, and the keeping of cattle combined with the growing of grain. To do this to advantage, the culture of roots is nearly indispensable, and by making the course one of five years, instead of four, these might be properly included in the rotation. Although Mr. A. does not state the fact, we presume his manure is now applied to the corn; if roots were to be included in the course, a portion would be required by them, but the cattle and sheep they would feed, would furnish the adequate supply. Mr. Alexander received the premium for the best ten acres of wheat, awarded by the Rockbridge County Agricultural Society, and offers to undertake with either of his shifts to raise more corn and wheat, taking the two crops together, than can be made on the same quantity of land by any other person in the county.

"I have for a number of years pursued what is called the four shift, or four field system. I divide my arable lands into four equal parts; in field No. 1, I commence with corn, fallow it up deep early in the winter, harrow it well in the spring, lay it off in horizontal ridges, throwing three furrows together, at four feet and a half apart. On the 15th of April, I commence planting, splitting the ridges with a small shovel plow, planting the hills at two feet and a half apart, leaving two stalks in a hill, commence working the corn as soon as it is up, and continue it early and late until harvest, and I have done. On the 1st day of October, or as soon as it can be done safely, I commence cutting up the corn, haul it off to an adjoining field, stacking it up into small stooks, fallow up the ground with a large plow, sow the wheat at the rate of a bushel and a half per acre, give it two good harrowings, and sow clover seed in the following March, at the rate of a gallon of seed per acre. I pursue the same course with fields No. 2, 3 and 4, as I come up with them. The operation of the system will be readily observed. The same crop is cultivated on the same land only once in four years, except the clover, which continues two years. It will also be remarked that one half of the land is always in clover, one fourth in wheat, the remainder in corn and oats. Under this system with the application of what manure I can make, together with the moderate use of plaster on corn and clover, my land has improved at the rate of one hundred per cent every ten years. In the application of manure, my object is to bring my land as near to an equality as practicable."

Communications.



Bachelder's Patent Planting Machine.—[Fig. 80.]

This machine, recently invented by L. & S. H. Bachelder, of Hampstead, N. H. is one of the most convenient and labor-saving implements ever introduced to the notice of the farmer. It is simple in its construction, certain and regular in its operation. It is calculated to plant all kinds of seed usualy planted in hills or drills.

This machine is constructed on principles altogether different from all others for similar purposes. It performs the operation of planting without opening a furrow, thereby dispensing with coverers, that are continually liable to clog, and get out of order. It simply raises the soil a little, and at the same time drops the seed at any distance desired, when the soil falls back to its original place, and is immediately followed by a moveable guage, that leaves the soil to any depth over the seed that the operator chooses; it also removes all small stones and sods from the place where the seed is deposited.

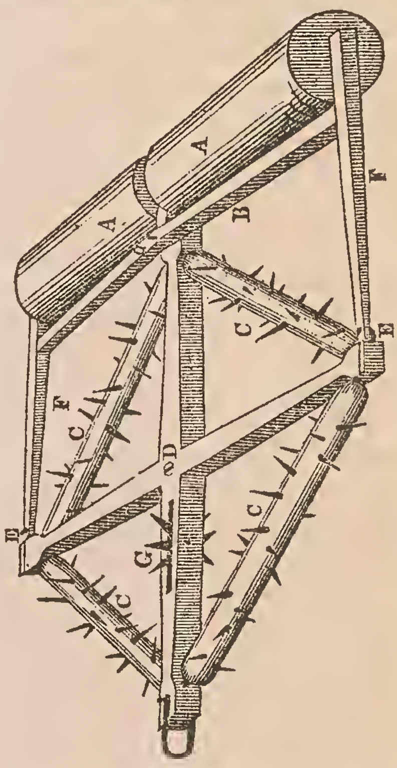
☞ This machine has been in operation, the past season, and thoroughly tested by practical farmers and mechanics in Massachusetts and New-Hampshire, and is pronounced by them a complete and useful machine, and it is allowed by all who have seen it, to be superior to every other implement of the kind now in use in the United States. It operates equaly well on wet or dry ground, and is warranted to work well on any ground that can be furrowed with the common plow.

☞ Orders will be received by L. & S. H. Bachelder, Hampstead, N. H. or the subscriber, at Haverhill, Ms. for the planter, or a right to manufacture and dispose of them. Any communication addressed to either will receive attention.

T. J. GOODRICH.

Haverhill, August, 1840.

CASS' REVOLVING HARROW.—[Fig. 81.]



Messrs. Gaylord & Tucker—I send you an engraving of a "Revolving Diagonal Harrow," invented and patented by Moses G. Cass of Utica, N. Y. together with the report of the committee of Arts and Sciences of the Mechanics' Institute of Philadelphia, on the subject. The report was made to the Institute, Feb. 18, 1840, and is as follows:

"C, C, C, C, are revolving cylinders working in the frame D, by means of gudgeons placed in the ends. Each cylinder is charged with teeth placed perpendicular to the axis, as seen in the drawing. G, is a toothed wheel intended to break up the ground that would otherwise be passed over untouched; being under the lengthwise rail of the harrow. B, E, F, a moveable frame supporting the rollers A, A, which may be attached to or disconnected from the harrow at pleasure.

"An examination of this machine, and a little reflection, will serve to show its superiority to the ordinary harrow. In its passage over the ground, the teeth enter the earth in all directions, breaking, removing, or tearing up all slight obstructions; while if it meet with a large stone or any obstacle that would throw the common harrow out, the cylinder, which in this machine encounters the obstruction, is enabled by a whole or partial revolution to pass over it.

"An experienced farmer, who has for some time had one of Mr. Cass's harrows in use, remarks that 'by attaching the seed sower and rollers a most perfect finishing operation will be performed, and at a saving of one half if not three fourths of the labor commonly required to do the same work.'"

It is also worthy of remark, that as this harrow never clogs with sticks, stones or sods, or such other obstructions as usualy interrupt other harrows, so as to occasion it to be lifted from the ground to clear it, the roller can be used in connection in almost every case; and in fact it is useful in overcoming the sudden lateral motion which all harrows are liable to. It will be seen that the hinder cylinders cross the track of the forward ones at right angles, which is equivalent to harrowing and cross harrowing at the same time, with only one operation.

The right of this harrow, which is patented, is owned by Jese Hodgkins of Westfield, county of Orleans, and state of Vermont, in the following states and territories: All of the New England states, Pennsylvania, Michigan, New-Jersey, Indiana, Missouri, North Carolina, Maryland, Mississippi, Arkansas, Wisconsin and Florida, and the counties of Clinton, Franklin, and St. Lawrence, in the state of New-York, to whom any communication for the purchase of rights may be addressed, and will be duly attended to. For the other parts of the United States, it is owned by the inventor. J. H.

Culture and Diseases of the Potato.

Messrs. Gaylord & Tucker—As the time for commencing the campaign for 1840, has arrived, I think it will not be amiss to call the attention of farmers to the subject of raising potatoes. In order that we may know the expense of raising each crop, it is necessary that each crop should be charged every night with its proportion of the labor of the day, a course which I have adopted for several years, and I find it both pleasant and profitable. Below I will give you the expense of raising potatoes for several years, and then farmers can judge whether it will be profitable to devote more land to that crop than they have usualy done.

The cost is, on my whole crop, ranging from two to eight acres, as follows:—cost in labor and manure, per bushel, in 1834, was 12 2-10 cents; in 1835, 12 7-10 cents; in 1836, 18 7-10 cents; in 1837, 10 5-10 cents; in 1838, 12 cents; in 1839, 12 1-10 cents. You will perceive that with the exception of 1836, the cost has not been over 12½ cents per bushel, and that year I had 8 acres, which did not yield 100 bushels per acre.

I have suffered from the curl, for several years past, in a kind of potatoes which I have been raising, which I called 'Long Keeps,' from their excellence as a summer potato. As they are an excellent potato to yield, I have been very loth to lose them, and have continued to plant them. In 1838, they did not curl so as to injure them materially; and in the spring of 1839, I sent a bag of them with pink eyes, to C. N. Bement of Albany. When mine, which I had planted, came out of the ground, I found they were badly curled, and I immediately wrote to Mr. B. to examine his, and if possible ascertain the cause and a remedy. In January last, I received the following letter from him, which I take the liberty to publish:

"S. P. Rhoades—Dear Sir: I have delayed answering your kind favor of the 7th of July last, on the subject of 'curl' in the potato crop, hoping I might be enabled to furnish you with something which would throw some light on the cause and cure of the disease. On the receipt of your letter, I immediately went into the field and examined the potatoes (long keeps) you sent me, and found them as you described. In some of the hills the tops were very much curled or shriveled and looked sickly, while other hills adjoining were healthy and vigorous. When planted, they were cut, and two sets put in each hill; in many cases I found in the same hill one healthy plant and the other diseased or curled. They were planted along side of the pink eyes, I also obtained of you, which I examined thoroughly and could not discover a single diseased plant, which I think is pretty conclusive evidence that *the cause is not in the soil.* I then dug up several sets of the curled plants, and could not discover any worm, insect, or other cause that would be likely to occasion the injury. On another part of my farm, I had planted about one bushel of what I supposed were the 'old fashioned reds,' as they are called. I immediately repaired thither, and found them much in the same situation as the others, more or less curled. On reflection, it occurred to me that these were the product of some potatoes selected from pink eyes, which I received from you some two or three years since; and on comparing them, when harvested in the fall, I was satisfied they were one and the same variety. I afterwards examined several varieties which I had then under cultivation, viz. Rohans, Mercers (or Chenangoes,) Sault St. Marie, Quaddie Blues, and some I obtained from France and Ireland, and could discover no traces of the 'curl', from which I am satisfied it is in the *variety* and not in the soil, or caused by the influence of the atmosphere, insect, or worm.

"I find on referring to some of the European magazines and other works on agriculture, that it was very prevalent a few years since in England, and more particularly in Scotland; so much so in Scotland, that the crop in many instances was an entire failure. Much was written and published on the subject, and diligent inquiry made at the time, and the conclusion finaly arrived at was that the disease was attributable to the *age of the variety*, as it was never known to occur in the new sorts, and the only remedy recommended was the entire abandonment of the variety. Truly yours,

"C. N. Bement."

It must be observed the disease above spoken of, is not the rust or premature decay which occurred in the whole of our country the last year, and which affected every variety of potato, but is a disease which shows itself as soon as the plant is out of the ground, in the *puckered* appearance of the leaves.

I will now state my method of planting, not asserting it as the best, but shall be happy to hear of a better. I use only large potatoes for seed. If the variety has many eyes, such as pink eyes, Mercers, &c., I prefer them cut in three pieces, and one piece put in a place at three feet apart, and other kinds cut once and one piece in a hill. I prefer a clover sod, plowed in the fall, thoroughly worked with a drag and cultivator in the spring, and then 20 or 30 loads long manure from the yard spread evenly over the ground; after which, I furrow for my rows at three feet distance from each other; and then drop the seed, and cover it with a plow, by which means the straw and ground become well mixed. If I plant old land, I consider the straw as absolutely necessary, be the land ever so rich. I do most of my *hoeing* with a *cultivator* and *shovel plow.* In digging, I pull my tops with a subsoil plow.

I am glad to see that so many farmers are keeping an account with their different crops. It will enable them to compare the seasons one with another. It will also enable them to see what is, for a series of years, the most profitable crops for them to raise; and I hope there will more of them furnish you with a balance sheet that we may see what has been done, and that will stimulate others to *beat* it, as I contend no man should be content to merely equal others, but each should strive for the top step in the ladder.

I remain, truly yours, &c.
S. PORTER RHOADES.
Skaneateles, April 13, 1840.

POPULAR ERRORS—No. 2.

Messrs. Editors—On the 81st page of the current volume of the Cultivator, I have noticed a few of the popular, or common errors, and intimated that I might possibly recur to the subject at some other time. The theme is a fruitful one, and might be made to embrace a variety of topics. I propose, however, to touch only those that are brought to bear directly or indirectly on agriculture; and first, *farming in the moon.*

The moon has given rise to abundance of superstitious observances, and from the very earliest ages, has been supposed to exercise a great influence over the earth and men. Many of these superstitions have been exploded, while others still retain no inconsiderable hold on the public mind, and are the pregnant source of error. On no point is this more perceptible, than in that of farming. That the moon can produce any perceptible influence on crops, or deserves the slightest regard in their sowing or planting, is a notion as false in philosophy, as it is contrary to fact. That the waxing or waning of the moon, has any influence on the growth of vegetables or their germination, is a notion belonging to the same ages as astrology and witchcraft; and like these beliefs, should ere this have ceased to exist. The celebrated Arrago, collected from various sources all the well authenticated facts relating to the influence of the moon on agriculture and the weather, and came to the conclusion, "that there was no reason whatever to confirm the common notion that changes of weather attended changes of the moon, or that this luminary has any perceptible effect, or is in the least worthy of notice in conducting the processes of agriculture." Some of the old superstitions or notions on this subject, may, however, be worthy of notice here.

Tusser says, in his "500 points of Husbandry,"—

> "Sow peason and beans in the wane of the moon,
> Who soweth them sooner, he soweth too soon;
> That they with the planet may rise,
> And flourish with bearing most plentiful wise."

But though such was the general feeling, there were some enlightened and intelligent enough to perceive the absurdity of such notions, and expose these errors. Thus Werenfels in 1748, in an Essay on Superstition, says:

> "The superstitious man will not commit his seed to the earth when the soil, but when the moon requires it. He will not have his hair cut when the moon is in Leo, lest his locks should stare like a lion's mane; or when it is in Aries, lest they should curl like a ram's horn."

I would say to the farmer, don't trouble yourself about the moon. See that your land is in fine tilth, well manured and drained; your seed fresh, and free from foul matters; and when you are ready, sow, without consulting the moon or the almanac. If all is right in other respects, the moon, no matter what may be its position, will not hurt you or your crop; and if your land is but half prepared or tilled, rely on the moon as much as you please, and you have no right to expect a crop.

Another common error, is that relating to the "signs." Somebody among the ancients, for convenience sake, divided the stars into constellations, named from their fancied resemblance to the objects, Leo, Ursus, Aquila, Pisces, Taurus, Saggitarius, &c. &c. In its annual revolution, the sun passes through a dozen of these constellations, or signs of the zodiac; and by degrees, these signs were supposed to exert a magical influence on the several parts of the human body; and we all remember seeing in our old almanacs, the man mounted on the globe, in a state of nudity, that the place and effect of the "signs" could not be mistaken. This popular error influenced mankind wonderfully, and though common sense has in most cases displaced the *man*, the *signs* still retain their ascendancy over the conduct of multitudes.

There are many men at the present age, so far behind the times, that if they have a tooth to pull, a vein to open, a pig or a calf to castrate, a patch of thistles to mow, a bunch of white birches or shrub oaks to cut down, or a dose of physic to swallow, the chapter of signs must be consulted, and their connection with the body, or the plant, ascertained before any thing can be done. The full believer in signs, would as soon swallow poison as physic, when the sign was in Taurus, as that animal chews the cud; and in that state of the signs, the cathartic would assuredly prove an emetic, or in other words, follow the course of the cud. Weeds or trees must be cut when the sign is in the heart, that the whole may perish together; for if the sign was in Pisces or the feet, we suppose when cut down, only the extremities of the plant could be persuaded to perish; and wo be to the unlucky calf or colt, that happened to undergo castration, when the sign indicated the forbidden region; his fate was sealed beyond the possibility of mistake. If you see at the present time, a man's fences buried in briars, his fields overrun with bushes and thistles; half a dozen of uncastrated pigs and colts running about, as if to perpetuate, by in and in breeding, all the defects of their races; and his orchards and woodlands neither trimmed or pruned, that man may be set down as a believer in signs, one who governs his farming by the moon, and who will in all probability, reap such a harvest, and experience such results, as so irrational and unphilosophical a course indicates. M. S. D.

DIFFERENT BREEDS OF SHEEP.

Messrs. Gaylord & Tucker—In the last number of the Cultivator it is requested that some one who has kept different breeds of sheep, will give a comparative value of them. In the first place, I will notice their lambs, supposing them to sell at the same rate per pound.

A Saxon lamb,	6 mos. old,	weighing	18 lbs.	at 8 cts.	$1 44
Merino lamb,	"	"	20	"	1 60
Bakewell,	"	"	30	"	2 40
Cotswold,	"	"	60	"	4 80
South Down,	"	"	50	"	4 00

In the second, their wool:

Saxon fleece	weighing	3 pounds,	at 50 cents,	$1 50
Merino,	"	3 "	40	1 20
Bakewell,	"	5 "	30	1 50
Cotswold,	"	10 "	36	3 60
South Down,	"	5 "	40	2 00

The above I think will show the difference in value of the lambs and fleeces; but no one is to suppose that eight cents per pound is the value of the Cotswold or South Down lambs. They are now worth about $20 to $25 each; I would not sell at a less price.

In the third place, the sheep, when full grown:

Saxon sheep,	weighing	50 pounds,	at 6 cents,	$3 00
Merino,	"	60	6	3 60
Bakewell,	"	110	6	6 60
South Down,	"	120	6	7 20
Cotswold,	"	240	6	14 40

The Bakewell, I consider a sheep not at all adapted for this climate, being of a tender constitution, hard to keep, wool coarse, small fleece; another objection is, when the wool is a few inches long, it parts and leaves the back of the sheep naked, and when exposed to cold storms, the animal is much injured, and many of them die. The Saxon and Merino, I find much alike; both of a weak constitution, and require great attention to keep them alive through the winter; they are also very bad nurses—a great difficulty in rearing their lambs. I have conversed with many gentlemen who keep large flocks of Merino and Saxon sheep, and they all agree what I have stated respecting them, to be correct, but they say we must have fine wool. If such sheep must be kept for their wool, let it be in states where land is of little value, but not in a state like New-York, where the carcass of a large breed of sheep can be sold from $10 to $20. For my own part, I will never keep a Merino or Saxon in this state, and I should think no man would keep an animal, where he could keep another which would bring him three times as much for the same trouble and expense, but it is a hard matter to convince people of the benefit they derive from having good stock; and those that are, say it costs us so much to get those things, that we are fearful we shall never see our money again; of course they must not expect to see it the next day. If they would only give it a trial for two years, they will receive good interest for their investment, and I am much pleased to see that some spirited individuals are making considerable progress in the improvement of stock, as many valuable shipments have been made into this country this last year. For the last five years I have imported more than 500 head of cattle, sheep, and pigs. With those and other shipments, I am confident we are on the improving side. I again leave, in a few days, for Europe, to select some of the choicest of their animals for this country, and having traveled through both, I am confident that no country can go ahead of us, if we start right.

I must say that the South Down and Cotswold sheep have exceeded my expectation. I have seen some of the South Down wool manufactured into cloth, fine enough for any man; and if people get the pure blooded South Down sheep, they have an animal in every respect that is wanted; their mutton superior to any in the world; of a hardy constitution, the wool good, and no sheep will live on shorter pasture. The South Down has a brown face and legs or dark grey. One thing I should caution people, not to buy before seeing the importer's certificate, that the sheep are imported and pure in blood, or from pure blooded imported sheep. I have not sold to any one that has taken two or more without giving one, and I have no doubt but other importers have done the same; if they have not, they should do so, as it would check many impositions of cross bloods, being sold for pure.

I consider the Cotswold sheep a hardy animal, well adapted for this country; but they want better keep than the South Down; they make great weights and their fleeces are heavy. I had last year 18 Cotswold ewes, whose fleeces averaged 10½ lbs., and one buck whose fleece weighed 18¼ lbs. I sold a lamb to Mr. Haviland of Long Island, who had it shorn at one year old; the fleece weighed 12½ lbs. clean wool. I saw some of this breed of sheep slaughtered in Gloucester, England, which weighed 75 pounds per quarter; a noted breeder there informed me that they often exceeded that weight.

Some may say that the South Down and Cotswold lambs cannot weigh 60 pounds at the age stated. If any doubt it, if they will call on Bagg & Wait, of Montgomery, N. Y., they can see lambs of five months old much heavier.

Yours, respectfully, JAMES BAGG.
Montgomery, July 21, 1840.

GENTS.—I wrote to you a few days ago respecting different breeds of sheep which I have kept; since that time I have weighed some of my South Down, also some of my Cotswold lambs. I find their gross weight to be from 94 to 98 pounds; those lambs are not five months old. I think this is enough to convince any one of the advantage of keeping good breeds of sheep. I have also weighed some of the largest Merino flock, and I cannot find one that would weigh one-half of the above weight.

Yours, respectfully, JAMES BAGG.
Montgomery, Orange Co., N. Y. July 27, 18 '0.

LATE SOWN WHEAT.

MESSRS. EDITORS—In answer to the call for information concerning late sown wheat, (current vol. page 106) I would say, I sowed a piece the last day of December and first day of January, 1838, and had a good crop—better than the average I have generally obtained from fallow ground. The land, which is dry, and formerly covered with oak and chestnut timber, had been well manured, the sward broken and planted to corn the spring previous. After taking off the corn, the plowing was begun, but before it was finished, winter set in. At the time above mentioned, there was a dry warm spell of weather, and the plowing was finished, and the wheat sown and covered. When harvested, it was stored with other wheat, and no account kept of the quantity.

I think it will not do for farmers in a good wheat growing country to depend on opportunities for this kind of late sowing, lest they fail of being able to sow at all; but where spring wheat only is now raised, the land might be put in preparation for sowing the fall beforehand, and then if an opportunity should offer for late sowing of winter wheat, it might be improved; if not, no labor or advantage would be lost, as the ground would be in readiness for the spring crop at the first opening of the season. L. D.

Otisco, August 7th, 1840.

REMARK.—We may add in reference to this subject of sowing winter wheat late, that last year we let a field to a neighbor, on which, with other crops, he grew an acre of ruta baga. When the other crops came off, the ground was plowed and sown with winter wheat, not early, but in good season. A pressure of work prevented his removing the turneps as long as it was safe for them to stand, and it was not until the 13th of November, that this acre was sown. Rain prevented more than a partial harrowing, snow followed, and in that condition it was left for the winter. The wheat has been cut within a few days, and though not a heavy crop on any part of the field, the acre of late sown is at least equal to any of it. On the whole, we are inclined to the belief that late sown winter wheat may succeed in those districts where autumn sown wheat is liable to freeze out. The subject is an important one to many farmers of this state and others, and we should be pleased to have communicated to us the results of experiments having a bearing on the policy or impolicy of this method of sowing wheat.

AGRICULTURAL COLLEGE.

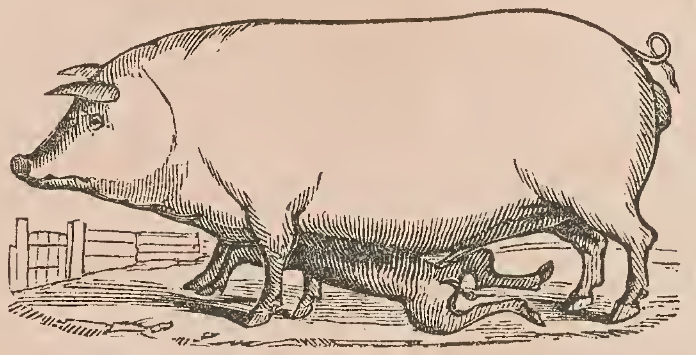
MESSRS. EDS.—I have read much in your valuable paper concerning an agricultural college in this state. I hail the day when that happy period shall arrive. We want such an institution in our land, and I have no doubt that thousands would embrace the opportunity, by sending their sons, provided such an institution were in operation by an intellectual and scientific agricultural society. As our country is advancing in almost every other art, so the art of farming, which is of the most importance, and which has heretofore been the most neglected, is destined ere long to become an art above all others.

Observation has taught us that men, sons of farmers, well educated, and possessing fine talents. are frequently inclined to think their father's occupation degrading, and have therefore entered into other business, expecting to make money faster, and be more respectable in society; but after flourishing awhile, have been reduced to want and ruin, regretting the time they left following the plow, to seek a fortune in a city where business was already overdone; but too late perhaps are regrets—land is gone, money is spent, and no redress; their only alternative seems to be, to linger out the remainder of their days in poverty and misgivings for past folly.

These hints are given to encourage an agricultural school, which would very much raise the farming community from the degraded state in which they have heretofore been considered by some of the professions. I would not wish to discourage other professions; far from it; it is necessary to have young men study divinity, law, medicine, and the different branches of trade, and practice them accordingly; and as agriculture flourishes, so in proportion do they all flourish. But I do say, that if many young men had been educated in an agricultural school, they would thereby have preserved their moral habits, and made first rate citizens, who now have turned out worse than useless.

Again, a man having knowledge, is prepared to act with more discretion than one who is ignorant, be he a farmer or professional man. An ignorant farmer may get along, but his mind is by no means so much enlightened; and if his desire be money making, he takes great care to watch his more intelligent neighbor, and follows him in his improvements, notwithstanding the lurking prejudice against book farming. One remark further—give people education, teach them good morals, and they will make better citizens, better rulers, and of course a better government may be expected. A. B.

New-Utrecht, L. I. June, 1840.



FREAK OF NATURE.—[Fig. 82.]

MESSRS. EDITORS—Inclosed I send you a pencil sketch of a pig. He is about three months old—in perfect health—weighing about 100 pounds—he is all white—in shape and beauty he is equal to any Berkshire pig in the country. The body and legs of the additional pig (with the exception of the head and a part of the back) are on the chest and breast of the main pig; the four extra legs, from their situation, hang useless, but are about the size of the other legs. Perhaps not the least curiosity is, that the main pig is a boar with two penises and four testicles, the one penis and testicles in their natural place, the other penis and testicles are near the chest, the penis pointing backwards towards the other about one inch apart; water is discharged from both, but the largest discharge is from the natural one; and in the appending pig there is plainly, and in the natural situation, a distinct female organ of generation.

Should the above appear to your mind, as it does to mine, as one of the most extraordinary of nature's freaks, and worthy your attention, the same is at your disposal for insertion in your highly valuable paper.

Very respectfully, yours, JOHN C. DEWEY.
Leeds, Greene Co., N. Y., August 6, 1840.

The Peach Tree Grub destroyed by Brine.

MESSRS. GAYLORD & TUCKER—I have been looking over the back volumes of the Cultivator, to see what receipts I could find for killing the *wire worms* and grubs that infest peach trees. For the last seven or eight years we have not been able to raise peaches at all. When the trees would get to be two or three years old, they would die; every effort to cure them of the grubs having proved unsuccessful. Last spring, (a year ago,) I found that all our peach trees were going, as they had done before—the leaves began to curl up, and upon examination I found them full of wire worms and grubs just below the surface of the ground. I cleared away the dirt two or three inches around the body of the trees, and applied to each tree about a pint of *good brine or pickle* from a pork barrel, and in a moment I could see the wire worms (as I call them,) coming out of the ground "*post haste*," as though something "*was up*" with them. They would curl up and die on the top of the ground by dozens. From that time the trees have flourished wonderfully, by applying the brine twice during the summer afterward. This spring I applied it again to the same trees, and also to some other trees we had; and every one to which it has been applied, is doing well, and most of them have peaches now on them.

I have no doubt that the application of brine to other fruit trees, would prove beneficial, and I intend to try it this summer on some. JOSEPH H. JACKSON.

Rockaway, N. J. July 20, 1840.

INFORMATION WANTED ON DRAINING.

MESSRS. EDITORS—Though farming has been, for the most part of my life, my constant employment, (and I have just passed my fiftieth year,) yet I have now undertaken a branch of it which is new to me, and about which I desire the best information I can obtain. I have been a subscriber and attentive reader of the Cultivator, commencing with the third volume; and shall now, for the first time, claim your indulgence, by requesting you, or any of your numerous correspondents, who have made any experiments in reclaiming swamps, to publish the results, whether profitable or not. Most men are ready and willing to publish to the world, the result of their experiments which prove successful and profitable; but few men have the humility to publish those which are unsuccessful, lest their imperfections or ignorance, (of which none are wholly exempt,) become more apparent; but as I believe in my case, more benefit would accrue to me from the latter, than the former, I will set the example, though on another subject; and if, by exposing my ignorance, others should become enlightened, I shall be amply rewarded for the sacrifice. Last spring I bought half a barrel of Rohan potatoes, and as one means of obtaining sixty pounds for one, as many had done, I put about one gill of good house ashes on the potatoes in each hill, after dressing, a thing which I had often done on common potatoes, with good effect; but my Rohans were cut in such small pieces, that the lye struck clear through them, and there did not one in twenty come up, and those which did, from that cause, or some other, looked rather feeble.

Now, if any one experimenting on swamps, muck, or muck ashes, has got any bought wit, (which is said to be the best, if not bought too dear,) if he will give it to the public, together with such as has netted him ten fold, I shall consider him a public benefactor. The swamp in which I have undertaken, contains about one hundred acres; about eleven of which, I have bought to experiment upon. The streams flowing in, are mostly small, receiving the waters for about one mile distant, on the north, west, and south; rather high hills north and west, gradually sloping from the south, and descending to the east. The hills mostly hard wood land. Muck in general, deep enough, and at a boiling spring only eighteen rods from the shore, it is eighteen feet deep. About thirty years ago, seventy acres of it was cleared, having had from the present appearance, quite a growth of timber, and much expense in ditching, but to no purpose, as the present appearance of the swamp indicates, being three-fourths of it grown over with bushes, and are gaining every year.

I have agreed to open a wide ditch at the outlet, so as to be four feet below the surface in the meadow, which is nearly level, and I think, was once a pond. Queries.—Is 4 feet in that case, deep enough? Can one part of the swamp be drained to any effect, by ditching round it, while the water stands on the surface in another, as we can neither drain or ditch to the bottom of the muck, which is forty feet deep, for aught I know? After draining and turfing, how much sand or gravel should be put on an acre, so that with the help of turf ashes, potatoes or grass will grow luxuriantly?

Could not turf and muck be burned in something like a lime kiln, with a grate at the bottom, and would not the heat expel the acid, and more and better ashes be obtained, than if burned in pits on the ground?

Has no machine been invented, better than a bogging hoe, to cut swamp turf? I shall try to make one, and should like to know what has been done for that purpose.

Yours, &c. Z. GOODELL.
Orange, Franklin Co., Mass., August 10th, 1840.

PRESERVATION OF PEACHES.

MESSRS. GAYLORD & TUCKER—When a boy, I received a hint which I have never had an opportunity to practice upon, but which I have no doubt, will be of great practical utility to the lovers of the delicious peach. My brother, N. Dille, Esq. of Euclid, near Cleveland, in this state, had a clingstone peach tree growing in a large hollow tree in the center of a field, which for several successive years, he cultivated in corn. The soil was rich, though a very loose and friable sand, and the field inclined to the north, at a general angle of some four or five degrees, so that in times of heavy rains, the sand was washed down in quantities, while the ground was in cultivation, and arrested when it reached any obstacle. The fruit of this tree, ripened about the last of September, and I remember well, was sound, sweet, and luscious. As peaches were very plenty that year, a large portion of its fruit was permitted to fall off, and lie upon the ground, which was soon after completely covered by the sand, brought down by the heavy rains which succeeded. Yet, from my best recollection, I do not think it was any where covered more than 12 and generally about 6 inches in depth. It lay under this covering all winter, and the next spring, when the frost came out, and the rains returned to cut sluices in the friable soil, it disclosed many of the peaches in a perfect state of preservation; and so well were they preserved, that they lost but little of their rich and delicious quality. I have never heard of any attempt to preserve peaches in sand, and living in a country not very favorable to the production of the peach, I have not been able to try the experiment. But I believe from this fact, that the clingstone peach may be preserved by packing them in moist sand, so that they will not touch each other, and pressing the sand hard upon them, so as to exclude the air for a long time. I send you this fact, that if you think it worthy a place in the Cultivator, others may practice upon this suggestion, and should they succeed, I shall be amply paid for this little trouble.

I design when leisure affords opportunity, to give you my views at large, on the culture of the strawberry. By my practice, I believe I very much increase the quantity of fruit produced, as well as the duration of the bed or plantation. I have a bed now eight years, which this year produced its usual quantity. Yours truly,

Newark, O. July 20, 1840. J. DILLE.

A SHORT HORN HEIFER.

MESSRS. EDITORS—I send you the following description of a Durham Short Horned heifer, bred and owned by me, three years old last spring, and expected to calve in August.

Girth back of shoulders,.......	6 feet 5 inches.
Width across the hips,........	2 "
Length from nose to root of tail,	8 " 10 "
Weight,....................	1360 lbs.

Her keeping has been hay in winter, and grass in summer, with the addition of a few roots the second winter. She is a small boned, compact animal; thin hide, soft hair, and is descended from a very extraordinary family of milkers; her dam having given nearly fifty lbs. of milk per day, and made 14 lbs. of butter per week, in the month of January, without much feed but hay.

SAMUEL W. BARTLETT.
East Windsor, (Scantic,) Conn. July 24, 1840.

ON SHELTER FOR CATTLE AND SHEEP.

MESSRS. GAYLORD & TUCKER—In the June number of the Cultivator, I find a communication from James M. Garnett, of Va. in which he propounded some questions. In reference to the one, " which is best, to shelter or not to shelter sheep and cattle from snows and coldrains ?"—I would say, that about the year 1817, I commenced the winter in Onondaga county, N. Y., with a small flock of sheep, mostly of the native breed, and no other shelter than what nature provided. The country was then comparatively new, and the improvement, (if improvement it could be called) on the farm on which I had then but recently settled, was small, and made by girdling the large, and clearing out the small timber and bushes. In this situation my sheep increased and did well. I was rather inclined to the "let alone system" of which your correspondent speaks, and went on without providing shelters. I bought, sold, raised and soon began to lose some, till in about nine years, I had something over 150 in my flock, mostly a mixture of the native and merino breeds.

During this time the country had undergone an essential change; the improvements had much extended, and the girdled timber had nearly disappeared. The bleak winds of winter, frequently laden with snow, came heavily upon us, and in the winter of 1826—27, which was distinguished for the long time snow lay upon the ground, my flock was reduced more than one-third, that is to less than 100. I was not sensible that I did not take as good care and feed as well as formerly, when more successful, but all to no purpose, the sheep would die for all that. I consoled myself that it was a season of uncommon mortality among sheep every where, as many of my neighbors lost near or quite the same proportion of their flocks that I did; and from Vermont to Ohio, there were accounts of the same fatality attending the flocks of the woolgrowers. So I still continued on without shelters for sheep, and my loss continued to be large in proportion to the number that I kept, till at length driven—yes, absolutely driven from my prejudices, I began to try shelters, and having followed that plan for several years, I am now persuaded, that with good shelters and good suitable food and *attention*, there is not much if any more danger of loss in wintering than in summering sheep; at least my experience shows such is the result.

Cattle and sheep will frequently leave good hay, if placed in exposed situations, in hard storms, for their shelters. If they choose their shelters rather than remain out long enough to fill themselves with good food, is it not unmerciful and bad policy, to compel them to remain constantly exposed to the severity of such weather. I am aware there is a difference between the climate here, and in Virginia, and do not know that shelters are as imperatively necessary there as here, but still think they must be decidedly beneficial. Here, sheep and cattle appear to suffer as much from the storms of sleet and rain in the spring, when the season is not colder than the winters in Virginia, as they do in the cold snow storms of our winters.

Having tried several kinds of shelters, I will here give an opinion of the kinds that are to be preferred. Good sheds attached to barns are probably the best, or on sideling and dry situations, good shelters may be made under barns, which I think a very economical method of building. Supporting roofs, make a large item in the expenditures necessary for farm buildings, and where shelters are formed under other buildings, this expense is saved. Permanent shelters made in this way, should not be less than about seven or eight feet high. If made low, it occasions great inconvenience when getting away manure; also when taking care of cattle, and especially sheep and lambs in the spring season, when much attention is necessary, and when the greatest amount of manure in the year will have accumulated. Beside the convenience, I think the health of animals, particularly sheep, is better promoted by a high rather than a very low shelter, where the air must be more confined, and consequently less pure. But there are many others besides myself, who are not able immediately to have all the good and permanent shelters that are necessary; I will therefore describe a temporary kind which I have found very convenient for sheep.

Two sills only of light and durable timber, about eight inches thick before being worked, are used, and these serve for runners also. They should be about 15 feet long, the lower side left round, the upper side straightened by hewing, and trimmed down the other way to about five inches thick. The ends should be hewed off on the under side, so as to turn up something like runners. Thus prepared they may be placed about ten feet apart, from outside to outside of the timber. Four posts, or one for each corner of the building should be set about eighteen inches from the end of the sills, which will make the building about ten by twelve feet square. One girt for each end only should be used, of smart timber, and large enough to hold to draw the building by; and be framed into the posts about six inches above the upper side of the sill. This elevation is necessary in order that the building may be moved over uneven ground, or through snow; and the boards or siding should not run below the girts. The posts for the front, or open part, should be about four feet long between tenons, or from the upper side of the sill to the plate, and from the backside two feet. Three sides of the frame should be covered with thin, light boards, and the highest side left open. A loose board may be fitted down at each end to close the space below the girt, and removed whenever it is desirable to remove the building. Sheds of the above description may be moved easily by one pair of oxen or horses. Larger ones I have found to be heavy and uncomfortable to move, I think it better to enlarge the number than the size. But neither good shelters, or good shelter and good food alone will make healthy fat animals, without regular feeding. The breeder of animals, whether cattle or sheep, will find that the attention necessary to ensure success, will always be amply repaid by the fine condition and rapid improvement of his flocks and herds.

Otisco, 1840. LEVI DEMING.

URATE AND POUDRETTE.

MESSRS. EDITORS—An establishment for the manufacture of the manure called urate and poudrette, has been erected at a considerable expense in the state of New Jersey, near the city of New-York, and an act of incorporation has been granted by the legislature of the state of New-Jersey, by the name of "The Lodi Manufacturing Company," for purposes of agriculture, wherein it is provided that 500 shares, a portion of the stock reserved for subscription by farmers and gardeners, within a limited time, shall be entitled to receive 50 bushels of poudrette yearly for 5 years, viz. in 1840, 1841, 1842, 1843, and 1844, upon each share of $100, which is at the rate of 20 per cent per annum for those years, and after that period to receive an equal dividend with the other stockholders.

The manufactory has gone into operation according to law, a sufficient number of shares having been subscribed for that purpose and capital paid in, and the first dividend has been regularly paid to the subscribers; the next dividend is payable in September. But the company needs a larger moneyed capital than it now has to carry it on to better advantage. Inquiries having been made whether all the stock had been taken; and the difficulty at the present time of obtaining funds, to a sufficient amount, from a few individuals, has induced a renewal of this notice to farmers and gardeners, and every other person who may have spare funds, (as every person is now permitted to subscribe,) that there is yet a considerable portion of the reserved stock, which by law is to receive 20 per cent per annum payable in poudrette; one half in May, and the other half in September, in the years 1840, 1841, 1842, 1843, and 1844, not yet subscribed for, and the books are now open to receive subscriptions for the same, by any person, whether gardener, farmer or otherwise, at the office of the Lodi Manufacturing Company, No. 73, Cedar street, in the city of New-York. Terms for the reserved stock, $100 per share in cash; and for the other portion of the stock an instalment of $25 per share on subscribing, and the residue, (being $75 per share,) to be called in by instalments of $5 per share after 30 day's notice.

These manures have been fairly tested and very generally approved of, as being the cheapest and best manures, and more economically applied than any other known substance used for manure.

As the article can be furnished from the city of New-York only to a limited extent, (not more than sufficient to manure 35,000 acres annually,) it must follow that in a few years it will necessarily be confined to the use of the stockholders alone.

It is important to agriculture, and the enterprise deserves the liberal support of every enlightened farmer.

By order.

WM. M. WILLSON, *Sec'y.*

At an election for directors of the Lodi Manufacturing Company, held at Jersey City on the 6th day of July, 1840, the following persons were elected directors of the company, to hold their offices until the first Monday in October next, namely, Anthony Dey and Jacob C. Dey, of New-York, J. D. Miller, Andrew S. Garr, and Rodman M. Price of New-Jersey.

INQUIRY.

MESSRS. EDITORS—I have a large body of flat land, lying on a water course, which is subject to be inundated in case of high water, and which I propose securing by dykes or embankments. The construction of the embankments with a view to getting rid of the running water is plain enough; the difficulty is in repelling the back water, and also securing the means of escape to the surface water, and that rising on the flat within the dikes. I could cover up or blind (as it is here termed) the small ditches, and pass them under the embankment, but in that case there would be no vent or issue for the water furrows, which are necessary to discharge the surface water. The object of this communication is to ascertain from you or some of your readers and correspondents, the best mode of constructing a trunk, gate, or valve, calculated to discharge the water that stands or rises on the land, and in case of high water to repel the back water. In the tide water section of Virginia, trunks are very common on reclaimed marshes, and are constructed to raise and sink with the tide, which ebbs and flows at regular intervals. I fear, however, that trunks constructed on that principle would not answer the desired purpose on streams that are swollen only by extraordinary rains at long and irregular intervals, as they would be prevented from rising and subsiding with the water, by the sand, loam, &c., which would accumulate in the ditches, and be lodged upon them. The construction of these dikes will be attended with considerable expense, (not commensurate, however, with the increased value of the land in case it can be made secure from overflow). Before incurring this expense I wish to be satisfied of the feasibility of the scheme, which is my apology for troubling you with this inquiry, the answer to which will be thankfully received by one of your readers and subscribers.

LEWIS E. HARVIE.

Elk Hill, Amelia county, Va., July 9, 1840.

FLORIDA KEYS.

MESSRS. EDITORS—I have lately observed, in the periodicals of the north, several articles from the pen of Dr. PERRINE, upon the character of the Florida Keys; and I have seen in them, with regret, much that must tend greatly to mislead the public mind. Now, as I am a resident of one of these keys, and as several of the articles alluded to, have appeared in your widely circulated paper, I desire, through the same medium, to present your readers with a more accurate view of the true character of this peculiar region. I would premise, however, that Dr. Perrine is deserving the thanks of the public for his energy and perseverance in attempting to introduce and acclimate in South Florida, such exotic fruits and plants as may be beneficial to the country. And I am well satisfied, that though he may be vexed and disappointed at his own slow progress, and the apathy with which the world may look upon his labors, his exertions will eventually be truly beneficial to his country, and particularly to the barren and desolate regions which he so much desires to improve.

The Doctor dwells unceasingly upon the "*wonderful productiveness of the exclusively calcareous soil*" of the Florida Keys, and would make the public believe that they are in reality rich and readily productive of profitable crops. But to the stranger, a little explanation is necessary to enable him correctly to appreciate the nature of this exclusively calcareous soil. The foundation of all these keys is solid but soft limestone, which, in some places, appears naked, without any soil, and here and there, in cavities of a few feet or rods in diameter, called pot holes, may be three or four feet beneath the incumbent vegetable mold. But *generally* it lies but a few inches below the surface of the ground. Upon this solid rock lie loose limestones of all sizes, which generally are as closely packed as if they had been emptied there from a cart; and the *soil* is nothing but the vegetable mold that has settled among these loose stone. Consequently it can neither be plowed nor hoed; and if the stone be removed, the sun will dry up the soil and it will soon disappear.

Along the shores, the sea has in many places thrown up ridges of calcareous sand, to the depth of several feet, upon which cocoa nut trees thrive very well, but nothing else. So also, where the rock foundation lies below the surface of high water, there lies a deposite of salt calcareous soil, upon which nothing grows but mangrove bushes and coarse stinted grass.

Poor, however, as is the soil of these islands, something might be done with it if there were sufficient rains. But there are not. I have known six continuous months to pass without sufficient rain to wet the surface of a board. Nevertheless, as the Doctor says, these keys are covered with a dense growth of native vegetation; but as might be expected, it is stinted, dwarfish and of little value.

In the spring of 1839, the Doctor glowingly urged the immediate cultivation of the Chinese mulberry upon these islands, and set forth the large profits that thus might be realized; and he succeeded in inducing one gentleman of Key West to try the experiment. He selected the best spot, in his opinion, upon the island—cleared it off—dug a well, that he might water it in time of drouth—and planted out several thousand cuttings of the Chinese mulberry, taken from trees that he had reared in his garden. Some ten or fifteen of these grew to the height of a foot or less, and finally, towards the end of the summer, died; and thus ended the experiment.

The red mulberry has been transplanted from Cape Florida, where it is indigenous, to Key West. To these the Doctor refers, and says, that they are flourishing and green throughout the year. I have lived there, and noticed them for five years past, and well know that they are bare of foliage every winter for several weeks, and are never flourishing, except during a short time when rains are frequent.

The intimation, that tropical fruits thrive on these keys, is a deception. Cocoa nuts and limes do well—tamarinds, so so—papaws, passably, with good care and cultivation—bananas and plaintain are abandoned at Key West. But indifferent fruit of the kind may be raised, with good nursing, upon artificial ground. Capt. Housman, of Indian Key, has succeeded better with these fruits, than any other person on the whole coast. But he is wealthy, and has devoted to their cultivation several thousand dollars. There are a few bearing lemon trees on these islands—one only at Key West. None have yet succeeded in raising oranges, though hope has not quite left us. But pine apples, mama apples, alligator pears, mangoes and other unmentioned tropical fruits, are believed to have a desperate chance, for our citizens are constantly trying them without success. It is true, that Dr. Perrine may have young seedlings of all the fruits you enumerate, but he will find great difficulty, I apprehend, in bringing them to maturity. It is to be hoped that he will continue his efforts, as some in Key West are now doing and intend to do.

The *colony* of the Florida Tropical Plant Company, which, in your May No. you say was established by Dr. Perrine, in the southern part of Florida, and broken up by the Indians, was like the Dutchman's barn—

"forty feet one way and forty feet back again, but *not built yet*." The Doctor never sat his foot in Florida until long after the commencement of the Indian war, and his *colony* consisted of plants sent from Campeachy to the light house keeper at Cape Florida, who planted them in his own vegetable garden, on the main land, ten miles from the island, where he lived, and still farther from any other inhabitant. These plants were left to themselves when the war commenced. But the inhabitants who fled from their houses at that time, were as unconnected with Dr. Perrine and his plans, as were yourselves.

The Tropical Plant Company originally consisted of three directors, to wit: Dr. Perrine and two others, one of whom now lives in Texas, the other at Indian Key. And the Doctor is now not only the *superintendent* of the company, as he styles himself, but literally the company itself.

Neither had the Doctor any agency in the improvement of Indian Key; and it is but justice to Capt. Housman to say, that he, unaided, and at great expense, made Indian Key what it is—a beautiful little island village, long before the Doctor ever saw it.

In conclusion, I must observe, that my remarks apply to the *islands* and not to the *main land* of South Florida; for there is a vast difference between the two in soil and native productions, as well as the amount and frequency of rains. Yours, &c.,

July 25, 1840. L. W. SMITH.

THE RYE CROP INJURED BY RUST.

Messrs. Gaylord & Tucker—Throughout the whole county of Burlington, N. J. the rye crop is seriously injured by the rust. It was promising in the early part of the season, indeed the old saying was rife "that it was too forward to do well." The stalks are generally large, as well as the heads, but they are very uneven, denoting imperfect or irregular filling. It was in early bloom, the dust or pollen was observed to be meager, as well as at long intervals. We have had much wet and cold weather, one cause of this, and which is generally injurious to this grain crop. But the greatest evil that has befallen it; is the rust, by some called the blight. I am induced to believe there is not a single isolated acre of rye in the whole county, exempt from it; as far as my observation extends, it is to be found on almost every stalk, whether of sporadic growth or otherwise. It is estimated that the average crop will not be more than a half one, (seven bushels per acre.) It exists upon the leaves, stalks and heads, taking from the plant the substance necessary for the ripening of the berry. For this end, it is important that the leaves and stalks should be healthy.

Should the leaves only be injured, then seed will be produced, but not in such a perfect state; but whenever any plant is deprived of nourishment, or its healthy functions interrupted, we may naturally suppose that the fruit will be imperfect and in no great abundance. It has been the means of hastening harvest, near a fortnight sooner than usual. Ten weeks since our rye fields looked as if they had been scorched; the leaves mostly destroyed.

Rust is of fungus growth, a parasite, subsisting on living plants, and when too numerous, destroying or consuming the vital substance of the plant. It is the Uredo linearis, (yellow grain rust) and appears generally in June. Botanists give the following specific characters of the genera Uredo: epidermis of the leaf, forming a pseudo-peridium. Seeds one celled, free, mostly globose: And of the species linearis linear, very long; stained yellow, at length but obscurely colored. Found on the culms and leaves of rye, barley, oats, wheat, &c. It is annual, and forms its sporules in June. The seeds are very minute, are distributed by the winds, adhering to the plants tenaciously, grow with an amazing rapidity, becoming perfect for reproduction in a few days, multiplying abundantly. It is in its simplest form, "little articulate filaments, composed of simple alletus, placed seed to seed." It is also leafless, and flowerless, (at least not visible, and has no cotyledonous seeds, but a grain like body as a substitute for seeds,) lying in the substance of the plant, (called sporules) without any covering analagous to cotyledonous seeds.

The aphylœ or fungus tribe of vegetables is a remarkable one. They grow in air, on decayed animal and vegetable productions. From their singular appearance, quick succeeding growth, vast quantities, extending over a great surface of country, appearing suddenly after a heavy thunder shower; they have been considered by some as meteoric, by others as fortuitous developments of vegetable matter, called into existence by special agents, air, heat, moisture, earth, &c. They certainly grow with a rapidity unknown in other plants. But this theory has been exploded by the array of facts and argument of M. Tiers, the celebrated cryptogamist of Sweden. That able writer contends, that reproduction is produced by means of the sporules of the plants, but that certain conditions of air, heat, moisture, soil, &c. is necessary for their germination; indeed such appears to be the case in the appearance of rust fungus. This year it is universal through this county, when years prior it was seen only in spots. What definite state of air, heat, &c. or combination of elements is positively necessary for reproduction in this singular species of plants, science has not yet defined to us.

Can you give any information respecting a tribe (by far too numerous,) of insects, vulgarly called rose bugs. It has not yet been my fortune to meet with any information, touching their organization or habits; they are very destructive, and attack our early fruits: they appear to be partial to sweets, preying on the rose, hence I suppose their name, rose bug. With me, the cherry, grape and honey locust, are the most injured; the fruit has the preference. Respectfully yours,

J. N. KEELER.

Mulberry Farm, June 14, 1840.

EXPERIMENTS IN THE USE OF PLASTER.

Esteemed Friends—The 7th No. of the 6th Vol. of the Cultivator, contains a letter from me on the subject of applying plaster to clay lands, and a recommendation that at least one individual in each of the Senate districts of this state, and as many more in the United States, as felt disposed to do so, should, during the present year, try an experiment with a view of settling some of the questions in dispute, respecting the circumstances under which plaster is beneficial to clay land. I hoped that some of your active and zealous correspondents, who know the necessity of more accurate knowledge on the subject than we possess at present, would have been induced to try the experiment in the manner proposed in the letter above referred to; but as I have seen nothing in any of the agricultural journals on the subject, I fear the plan has not attracted that attention from farmers, which in my opinion, it richly merits. As a *single* experiment is liable to so many fallacies, it is obvious that a general law cannot be deduced from it; yet I have thought that my results might be worthy of record, as a means of comparison to future experimentalists.

Last fall, I measured with a surveyor's chain, on a piece of clay land, ten square rods, as in the annexed diagram, each square containing one rod:

West.

South	1	3	5	7	9	North.
	2	4	6	8	10	

East.

The ground slopes from south to north, 2 feet 3⅜ inches, and from east to west, 1 foot 6 inches.

On the 18th of 3d mo., nine hours and fifty minutes after the full moon, I sowed half a pint of plaster on No. 1. The frost was entirely out of the ground, and a moist snow had fallen the day before, and remained on at the time of sowing; the wind at the time of sowing, was south.

4th mo. 3d, twenty-two hours and four minutes after new moon, sowed half a pint of plaster, on No. 3; ground wet, wind strong from N. W.

4th mo. 16th, six hours and one minute after full moon, sowed half a pint of plaster, on No. 5; ground much drier than when No. 3 was sowed—a gentle breeze from the north.

5th mo. 2d, thirteen hours after new moon, sowed half a pint plaster on No. 7; ground drier than before; wind south.

5th mo. 18th, forty-eight hours after full moon, sowed half a pint of plaster, on No. 9; ground quite dry; wind N. W.

7th mo. 18th.—This afternoon mowed the 10 squares as closely as possible, care being taken that all the grass was kept in its own square.

21st.—Early this morning, weighed the hay as follows:

No. 1, 19	lbs.	No. 2, 18¼	lbs.	gain	from	plaster,	¾	lbs.
No. 3, 25½	"	No. 4, 22½	"	"	"	"	3	"
No. 5, 23½	"	No. 6, 21¼	"	"	"	"	2¼	"
No. 7, 22½	"	No. 8, 21¾	"	"	"	"	¾	"
No. 9, 28	"	No. 10, 21½	"	"	"	"	6½	"
118½		105¼				Gain,	13¼	

At the first glance, it would appear that No. 9, which was plastered at the time of full moon, in the 5th mo., gave the most favorable result, but the result is rendered ambiguous by the fact noted at the time of sowing, that the ground was much *drier* than it was at the time when the previous squares were plastered. A multiplication of similarly conducted experiments would settle this question conclusively.

It appears from the above, that every square that was plastered, produced more hay than those which were unplastered. I have not yet been able to spare time to analyse the soil, but shall do so before long, when I will send you the results. I have not deemed it necessary to burthen your columns with a meteorological register; as each academy in the state is obliged by law to keep one, there will be no difficulty in obtaining one hereafter, should it be required for comparison with future experiments.

Very respectfully your friend, N. N. D.

Stockport, 8th mo. 10th, 1840.

Gapes in Chickens—Treatment of Fowls, &c.

Messrs. Gaylord & Tucker—I was absent from home two weeks in June, and on my return, found one litter of my chickens had the gapes. While absent I saw a friend giving chickens assafœtida for the gapes, which he assured me, he had used successfully for two seasons. On examining, I found the diseased chickens all had more or less lice upon them. By applying lard as before recommended, and giving a quantity of assafœtida, pounded fine and mixed with Indian meal—pursuing my usual course of treatment with chickens in feeding &c.—I had the satisfaction of soon seeing all of the litter entirely free from gapes, except one, which was nearly dead on my return, and which died soon after; that, on examination I found had a red worm, much resembling the common earth worm, nearly an inch in length in the wind pipe, and perhaps more, had I examined deeper.

The remedy of your correspondent, Mr. Westfall must be the only successful one, if indeed that is, when the strength of the chicken is nearly exhausted.

If fowls are from necessity kept housed in the summer, they will continue to lay nearly as well as when at liberty, if they have access to sand or gravel and water, provided they are well supplied with corn, oats, boiled potatoes, &c. and have thrown to them egg shells, fresh grass, burdock leaves and the like, to afford material for shells. This fact I know from demonstration. My hen house is without a floor, and the ground within I occasionally spade up, to give the fowls worms, with which they thrive far better than without. Fowls that have been shut up, if properly attended to and fed the same quantity of food as when at liberty, will be found to be, when killed, much the fattest.

Yours, &c. J. R. S.

BLOODY MURRAIN IN CATTLE.

Messrs. Gaylord & Tucker—In the Cultivator for July, I observe a communication by J. Baxter, M. D., of Ohio, on the subject of "Bloody Murrain in Cattle." Farmers generally have but little knowledge of the diseases of cattle, hogs, or horses, and more frequently kill than cure, when they attempt to apply a remedy. Relative to the bloody murrain, it is considered a fatal disease in most, if not in all cases, and attempts at a cure, however desperate, are therefore not unwarrantable.

Some years since, a likely cow of mine was violently attacked with this disease, and I applied what had been recommended to me as a dose that would kill or cure in one minute's time; this was clear cold water poured down her throat in as large a quantity as could be forced down, say two or three common buckets full. In this case the relief was immediate, and the cow walked off at once, to all appearance perfectly restored. This circumstance took place in the heat of summer, say in July or August, and we continued to milk the cow until late in the fall. Early in the winter she failed to come up, and our searches for her were fruitless. In the spring her bones were found in a bottom prairie. Whether her death was occasioned by a return of the same disease or not, we had no means of determining.

This case, however, may be considered as corroborating Dr. Baxter's theory, the cold water giving relief by checking the effusion of blood. In a disease so desperate, there can be no hazard, however, in applying this remedy, by such as may have confidence in it.

Very respectfully, yours, WILLIAM S. WAIT.

Greenville, Ill., August 6, 1840.

Chimneys and a Substitute for Brick.

Messrs. Gaylord & Tucker—If you please, you may insert the following description of a kitchen fireplace; the back four feet in width; jambs, two feet in depth at the bottom, and ten inches flare in each jamb; the mantel piece four feet high from the hearth; the back to be carried one foot higher than the lower edge of the mantel piece, with an inclination forwards of ten inches in five feet; the inside of the mantel piece to fall back ten inches in one foot, which will bring it level with the back; this forms the flue and draft. Commence the tunnel by contracting the sides a little if necessary, and carry the front wall straight up; fall square back eight inches with the back, and then carry it straight up, and you will have a chimney that will be convenient, give out the heat well and will not smoke.

To those who have not brick handy, I would say that a chimney, equally good and durable, can be made of dry clay, in its natural state. I have built a number, though a farmer; and will tell you how it is done. Make a strong frame on the outside of the back and jambs, and the inside of the tunnel, and then secure the inside as you proceed; that is for a jamb, for instance set up a strong plank in front of the required width; take a piece of plank two feet long, one foot wide, and place it in the shape you want the jamb; secure it strongly; throw in clay that will pack by pounding, and not be sticky or soft, three or four inches in depth at a time, and pound it solid; then throw in more and pound it till you get as high as the tunnel; you will then work outside in the same way. When done and dry, you may take down your frame and burn out the chimney smartly, and you will have a good chimney. Ten dollars will build a good loghouse chimney, if the clay is handy.

Hadley, Mich. 1840. R. C.

RHUBARB FROM SEED.

Messrs. Gaylord & Tucker—I am of opinion that whosoever relies upon getting rhubarb of any particular kind *from seed*, will assuredly be disappointed. I am led to this remark, by observing in a late number of the Cultivator, an inquiry as to where seed of the Giant Rhubarb, can be obtained. I have seedling plants of rhubarb proceeding from the seeds of a *single plant*, and there are none of the plants that resemble the parent, nor are there two among the about two hundred, that are precisely alike, and this circumstance, together with information given me, as to this point, by a most intelligent friend and neighbor, induced me to import rhubarb roots of the Giant and Tobolsk sorts, from London, last spring. They grow very finely, and will have some seed next year, and this I shall give to any body who may desire some; and from it, some good and valuable plants may be produced, but none, I verily believe, that would satisfy any man who desires the true sorts. G. W.

Brooklyn, N. Y. August 12, 1840.

POTATOES FROM THE SEED.

Messrs. Gaylord & Tucker—One of your subscribers has made inquiry, as to the mode of raising potatoes from seed, for the purpose of procuring varieties: will you accept the following as a reply?

The saving of seed requires in the first place some little attention: being contained in a capsule of pulpy matter, it is necessary that it should be separated therefrom, by washing and drying, in the same way with cucumbers, melons, and some few other seeds, similarly produced; and then to be kept free from moisture till the following spring, or until when wanted, as thus saved it will keep good many years.

In order to its cultivation, in the month of April prepare a bed, in a portion of the garden that has been manured the previous year, in the usual course of cropping, and the soil being well pulverised, open drills, about a foot apart, into which drop the seed thinly; cover with the rake, and beat down gently with the back of the spade, so as to close the particles of earth, and afford little access to the small black skipping bug, so injurious to the seed leaves of turneps and cabbage, which are equaly pernicious to this crop, and require to be restrained from their depredations, by the best means in the grower's knowledge. When the plants have attained about half a dozen leaves, hoe, weed and thin them out, to three or four inches distance: the supernumeraries, taken up with a ball of earth to their roots, may be transplanted safely into a separate bed, and give the cultivator a fairer chance of the improved variety, and do away with the idea that may otherwise intrude on the imagination, that the better kind may have been lost in thinning.

Following the nature of the potato, the vine will now grow rapidly, and in a fortnight will require a second weeding, to be followed with what in farmer's language is called, earthing up; and it then remains only to watch the period of the decay or ripening of each plant, as some will reach their maturity early, and others will continue growing till the arrival of the autumnal frosts. It may be satisfactory and useful to notice these periods, and contrast them with their times of ripening the successive year, and thus identify them, as an early or late sort. They will now have to be carefully harvested, each root having its produce kept separate, and placed out of the reach of the winter's frost, for the next year's culture; for this purpose, it will be advisable to employ a flour barrel of dry chaff, into which the potatoes are to be packed, each sort previously wrapped in paper and thus secured from mixture with another. In the ensuing spring they must be again submitted to the earth. The growth of this year involves no little care and trouble. Separate the early from the late, and dwarfs from those of more luxurious growth, and prepare the ground as before. If you plant in hills, those with the longest haulm will require a distance of three feet; if on the contrary you drop them in furrows, the same distance will be needed from furrow to furrow, lessening the space as the plants decrease in the length of the vine to two feet. It may be as well also before planting, to take off a small piece of the peel to ascertain the color, the prejudice being in favor of a white potato over a yellow, and a yellow over a black, for there are all manner of varieties of hues, both externally and internally, and it would be useless to grow those which are quite black. Four or five tubers, where there are as many, will be sufficient for this year's cultivation, and as years are consumed in this undertaking, it will be necessary to commence an early system of experiment: for this purpose, of each sort plant one tuber whole, next a half, then two eyes, and lastly one eye (rohan fashion,) the distance between the planting when in drills from 6 to 8 inches, and if means are within reach, it would be proper to try as far as may be the effects of different soils on each potato, as the light, the heavy and the medium. No further directions are necessary for this years culture; they are treated as potatoes, and will at harvest have attained their full growth and may be introduced into the kitchen: for although popular opinion gives three years for a potato to acquire its proper qualities, the foundation of which is perhaps more in the mystery of numbers than in real truth, yet as it will have reached its natural size, I can see no reason why it should require another year to develop its other properties. Should the experimenter resolve to put faith in popular sayings, it will be necessary, in harvesting, once more to separate the sorts and repeat the experiments he has just gone through, and any others that may occur to him.

The chief points of goodness or value in a potato, are a white color, a good size, smooth skin, with eyes or shoots gently depressed; there is a preference also for a kidney shape; the tubers should grow close to the stem, be numerous and keep well, and the haulm or vine be short; and finally, above all, the potato must cook mealy: a combination of these points, would be the perfection of the root. To attain such a consummation, has been the continuous effort of the last nine years of the writer's life; that he has not accomplished his object, has been the result of a concurrence of unfavorable circumstances, an over fastidiousness to attain the most of the favorable points, and a soil unfavorable to the culture of the potato, stiff, cold, and clayey. Roots, that have promised well in the light soil of garden culture, have failed, when cultivated in the field; hundreds of sorts have been rejected on the score of color, the white only having been selected; length of stalk has condemned many, and perverseness, or incongruity of shape, with rude shoulders, &c. &c. many more; and I confess that the celebrated Rohan would have incontinently been condemned to the hog pen, had it been first raised by the humble individual who now addresses you. I have not recommended manure for the seed beds, as I have found an over rich soil raise anticipations, which were not realized in culture on a large scale. Much care is requisite to the safe keeping of the roots through the winter: the only sort I continue to grow, I had nearly lost some years back, by an early frost in November, which continued with so much unexpected severity, that I lost fifteen bushels, as I thought my whole stock; but fortunately one potato remained in the ground, and was preserved by the accidental dropping of a portion of salt hay on the spot where it lay. I was obliged to commence operations afresh, after having just raised sufficient seed to warrant the expectation of a full crop the succeeding year, for the market. I mention this to impress on the grower, a due care. It remains to be observed, that the experiment is quite a lottery. Five and twenty years since, I was fortunate the first trial; the last nine years I have industriously persevered, and from a thousand plants, have only saved one as deserving of culture, and that far from my ideas of a perfect plant. The fault lies in my seeking for too much, and looking for too many good qualities in the object of my experiment; many valuable potatoes I have thrown away in search of that, which perhaps is not to be found. With more moderate expectations, I might have been more successful, and perhaps on a lighter soil, might have obtained my object; my want of success must not deter your inquirer from making the attempt. I still continue on a small scale. I have been led to prosecute a variety of experiments, which, if they have not afforded profit, have supplied me with a fund of amusement, and probably some little increase of knowledge.

The Schoolmaster Abroad.

Making Auger Holes with a Gimlet.

"My boy what are you doing there with that gimlet?" said I the other morning to a flaxen haired urchin, who was laboring away with all his might at a piece of board before him. "Trying to make an auger hole!" was his reply, without raising his eyes or suspending his operations.

"Precisely the business of at least two thirds of the world, in this blessed year of our Lord 1840, is this making auger holes with a gimlet;" I said to myself, as I walked musingly onward.

Here is young A. who has just escaped from the clerk's desk behind the counter. He sports his mustaches; wears his hair long; has acquired the power of being shaved; carries a rattan; drinks champaign when he can command an X to purchase a bottle, and treat a friend to a dinner; talks large of the price current, fall of western stocks, and profits of banking; stands in his boots two inches taller than Astor or Appleton; and speaks of foreign exchanges as would Rothchild or Biddle. He thinks he is a great man, when all others know he is only making auger holes with a gimlet.

Mr. B. is a rabid politician. He has labored hard at caucuses, at ward and town meetings, has talked of the dear people till the words flow parrot like from his lips, and has done a full share of the dirty work of party for years. Office has been the lure held out to lead him onwards, and which has made him neglect his business, spend his time in hunting up recruits, drilling the refractory, and qualifying himself for bar-room argument and stump oratory. He can settle the affairs of the nation in a trice; diplomacy has no intricacies for him; he has shaken hands with the president, and is a great man. He will soon be used up, and cast aside; and will then see, as others now do, that he is chasing a jack o'lantern, that he is making auger holes with a gimlet.

There is Miss. C. who is really a pretty girl, and who might become a woman a man of sense would be proud of. Now, she apes the *ton* in all things; reads exciting novels, goes to the opera, admires Celeste's dancing, has nearly ceased to blush at the most indecent nudity, lounges on sofas, glories in her idleness, keeps her bed till noon, coquets with male animals as feminine as herself, imagines she is a belle, forgets that her father was a cooper, lisps of high life, and plebeian presumption, and is in a fair way to ruin herself. All this comes of her belief that an aguer hole can be made by a gimlet.

Mr. D., whom I have just passed, may be put down as a distinguished professor of the gimlet. He was a farmer. His father left him a fine farm free of incumbrance; but speculation became rife, fortunes were made in a twinkling, and D. fancied "one thing could be done as well as another." So he sold his farm, and bought wild lands in the prairies, and corner lots in lithographed cities; and began to dream of wealth worthy of "golden Ind." Work he could not; it had suddenly become degrading. Who could think of tilling or being contented with a hundred acres of land, when thousands of acres in the broad west were waiting for occupants or owners. D. was not the man to do it, and he operated to the extent of his means. At last the land bubble broke; lithographed cities were discovered to be mere hogs; and prairie farms, though the basis of exhaustless wealth, worthless unless rendered productive by labor. But D's. beautiful farm is gone, and as he is now preparing on compulsion to become a pioneer in the west, he feels that it is difficult making auger holes with a gimlet.

Mr. E. is the representative of quite a class. He had his attention awakened to the subject of religion, and obtained new views of its importance and his own obligations. Believing what cannot be disputed, that love to God and good will to man, is the only true source of happiness, and feeling, as every benevolent mind must, a desire for the welfare of his race, he fancied himself called to declare these truths to the world; and forsaking his lapstone, his anvil, or his plow, became without delay an expounder of the scriptures, a self-delegated instructor of mankind. He forgot that the age of miracles had ceased; and that the ability to teach must now be acquired by the slow but necessary process of human learning. He begins to have misgivings that he has mistaken his call; and will probably discover, when too late to rectify the error, that he has spent the best half of his life in trying to make auger holes with a gimlet.

Observer.

EXPERIMENTS IN THE CULTURE OF CORN.

Messrs. Editors—There is one subject, which I have not yet seen treated of in your paper, or any other, that I now recollect; which has been hard for me to account for, and I would now make the inquiry—Why is it that the replanting of corn (although it may grow as strong,) is so much less productive of grain than corn of the same kind planted at the same time in a lot where all is planted? I have believed there was no effect without a cause. I will mention some of my observations, and my conclusions from them; perhaps they will draw from abler pens something that will be more satisfactory.

About two years since, in passing through my lot of corn, in a moist time, I observed many white specks on the surface of the ground, and on examination, I found them to be corn roots, which appeared to occupy the whole surface; (it was at the time of the corn shooting into ears,) I passed it without much reflection at the time, but after reading in the 2d volume of the Cultivator, an extract from Chaptal's Chemistry, as applicable to agriculture, and of the power in plants to draw nourishment from the atmosphere, particularly for the formation of seeds or grain, it appeared rational to conclude, that the cause why the few stalks of replanted corn were so much later forming their roots, was that the roots of the first planting pre-occupied so much of the surface, that there was little room left for the second to draw their portion from.

If the above should be the cause, or have any considerable influence, would it not be much more rational to work corn early, and when left, leave it with a smooth surface, such as the cultivator and harrow would leave, (by the by, I have used nothing else in my corn crop since I saw the first cultivator, which is above 20 years since, except under particular circumstances,) than to plow, as is sometimes done, till August, and then leave it in hills, which become so dry, that these roots can find nothing to nourish them, and the bottom of the furrows perhaps so hard, they cannot penetrate.

I will mention one little circumstance which occurred last season. I let one of my neighbors have a small part of my lot, (it only contains about ten to twelve acres,) to put in corn, &c. We planted the same kind of corn, and I believe the same day. He plowed his corn, I worked mine with the cultivator. It was new ground, and of course in poor condition to work with the cultivator, but I would not fly, as it was understood when planting, we would see which would have the best corn. When it was gathered, I do not know that the quantity differed materially, but I think there was not one half of his fit for the crib, or that could be called sound, while mine was nearly all sound corn.

DANIEL EMBREE.

Logansport, Cass Co., Indiana, June 28th, 1840.

LARGE CALF.

Messrs. Gaylord & Tucker—Having seen in the last Cultivator, the weight of Mr. Younghans' calf, which, by that statement, beats mine 106 lbs, mine weighing the day he was one year old 920 lbs. I had him weighed at 10½ months old; he then was 840 lbs. When he was last put on the scales, he made 970 lbs, but thinking it impossible for him to have gained so much since weighed, we took him off, and found the scales were not balanced; on adjusting the scales his nett weight was 920 lbs. I mention this, lest there might have been a similar mistake in weighing Mr. Y's. Had mine not been weighed at 10 months, I undoubtedly would have thought his weight 970 lbs. Mine was weighed by Mr. Moses Hall, sealer and weigher, Geneva.

Yours, &c. JOHN JOHNSTON.

Geneva, July 23, 1840.

CURE FOR THE POLL EVIL.

Messrs. Editors—I send you a receipt for the cure of the poll evil and fistula. Secure the horse for the operation. You must make an incision in the tumor, and put in a piece of ratsbane the size of a grain of corn, or if fine, wrap it in a piece of soft paper and put it into the incision, and take a stich or two to secure it from coming out, and it will perform the cure. It is necessary, after it commences running, to keep it clean from the outside, as, if the matter is suffered to remain on the outside, it will take off the hair. There has been a good many cured in this neighborhood in this way. After the operation, the horse can be turned to grass or kept in the stable, as it may suit the owner.

JOSEPH GOOD.

Madison C. H. Va. March 18, 1840.

Comparative value of Green or Dried Crops as a Manure.

Turning in green crops, such as clover, buckwheat, &c., while in full vigor, as the means of enriching or manuring soils, is a practice which has been extensively pursued, and by farmers in general looked upon with great favor. Some have, however, doubted whether this was the better way, and maintained that more benefit was received from allowing the crop to decay, and then plow it in, than if plowed in while in a green state. In the course of his survey of the agriculture of Massachusetts, Mr. Colman found the opinion of some most successful farmers, to be in favor of allowing the crop to mature and perish, before it was subjected to the plow as a manure for the soil. As the opinion of such men was at variance with the commonly received one, Mr. Colman addressed a letter to the well known chemist, Dr. Dana, requesting his views on the matter, as a question for chemical investigation. Dr. Dana's reply is contained in the report of the commissioner; and for the benefit of our readers, we give an abstract of his argument, or the reasons for the result at which he arrives

The essential element of fertility in a soil, has been called humus, geine, vegetable extract, mold, as well as several other names, all meaning a brownish black powdery mass, the result of putrefactive decay, and the remains of decomposed organic matter. This substance combines with the alkaline, earthy or metallic bases of the plant or the soil, and constitutes the means of growth or nutrition in the new vegetable. Without it, there seems to be no power in the earths of producing vegetation, and if in too great excess, as it sometimes appears to be in very pure manures, it is destructive or unpropitious to all growth. In the question now at issue, the inquiry of course, was, which furnishes to the soil the greatest quantity of geine or humus, the green or the dried plant. Dr. Dana decides in favor of the latter.

Fermentation appears to be the great agent in the decomposition of organic matter; and Dr. Dana's survey of the several kinds, such as vinous, acetous, and destructive fermentation, seems to have a direct bearing on the formation of the elements of fertility. The juices only that contain sugar or starch, convertible first into gum and then into sugar, by the action of *azotized* vegetable principles, especially gluten, are capable of the vinous fermentation. The conditions necessary to this fermentation, are moisture, air, and a temperature not below 50°, or above 86°.

"If," says Dr. D. "we plow in green plants, we put them in a temperature favorable to the commencement of vinous fermentation; we bury them full of sap, the requisite moisture for vicious fermentation. The sugar and starch of the plant, fermented by its gluten and albumen, are converted into gases and alcohol; the former are lost in air, and the last washes away or is changed to vinegar. All that remains for the farmer, is the altered gluten and albumen, which soon putrefy and form geine. All the starch and sugar of the plant are thus lost."

In his remarks on destructive fermentation, Dr. Dana has the following:

"Doubtless all green plants plowed in, undergo to a greater or less extent, destructive fermentation, which succeeds the vinous and acid fermentations, perhaps caused by the rapidity of these processes. Hence, in addition to the sugar gum, and starch of the plant, we lose a large portion of its other substances, by turning it in green. The products of this rapid fermentation have been but little studied. Happy the farmer who never witnesses the process. He should never induce it, and may generally prevent its extension when once begun. It is a dead loss to him; but in all the other cases of putrefaction, the products are valuable."

Will not the remark made above by Dr. D. that the alcohol formed during the vinous fermentation, washes away, or is converted into vinegar, account for the fact of what some farmers complain of, as *souring the soil* in turning in heavy crops of green clover? We have heard some very successful farmers and wheat growers assert that their experience in turning in the clover crop before it had reached maturity, or while abounding in sap, had been so unfavorable, that they had relinquished the practice, and chose either to feed it off with sheep, or let it decay on the ground.

Still, no one can doubt but that excellent effects are produced by turning in green crops, particularly such as buckwheat, of which three or four can be plowed in, in a year; thus evidently giving more geine than where the ripened product is turned under. The danger of the practice, appears to arise from plowing in the green crop in that condition, and under such circumstances, that the vinous fermentation and acetous one are so rapid as to convert the valuable products into vinegar, and thus seriously injure the land; or when the destructive fermentation converts the plant into substances unfit for the food or nutrition of vegetables.

It will be seen that the argument of Dr. D. extends only to plants used for manure while green; we imagine it is partially applicable, so far as the escape of the gases is concerned, to the preparation, decomposition, and use of stable manure. The salts, and animal parts of such manures are doubtless available at once, but the vegetable part must undergo the decomposing process spoken of by Dr. Dana, before it can become available. It would appear, therefore, that the manure should be so managed, that the gases which escape during the necessary decomposition shall not be lost, and on the other hand, not in so confined or close a position, that the fermentation can reach the destructive point, and render the mass of no value.

That the manner in which manures, or decomposed organic matter is useful in promoting the growth of plants, or the best manner of preparing this substance for their food, is fully understood, cannot be pretended by any one; and the vast importance of the subject to the agriculturist, fully justifies all the efforts that can be made to ascertain the facts that have a bearing on this subject. In developing the relations which geine bears to nutrition of vegetables, and the peculiar qualities of this substance, Dr. Dana deserves well of the agricultural public for the aid he has rendered; and we trust he will continue the investigations he is evidently so well calculated and qualified to conduct. The public also desire facts, practice, as well as theory; and those who have in the course of their farming, made such experiments as would throw light on the value or action of green plants as manures, would confer a favor by making them public.

BEST AGE OF THE HORSE.

Some difference of opinion appears to exist as to the time in which the horse is best fitted to perform labor, or rather respecting the age at which a horse intended for labor can be most profitably purchased. There is a general feeling in favor of young horses, and most individuals who wished a horse to perform hard work for five or six years, would choose one not more than four years old to begin with. We doubt whether this would be the best course, and imagine that one of seven years of age, will for five or six years do more work, and can be more confidently relied on, than one younger. It is very true that where a farmer or other person is intending to keep or wear out his horse, one at four, may properly enough be chosen; but where five or six years of severe labor, without regard to other circumstances, is required, an older horse is unquestionably to be preferred.

A principal reason, and in our opinion a decisive one, for choosing a horse of a greater age than four years for severe work, is, that at that age, the horse is immature, and of course unfit for great or long continued exertion. They have the life and the spirit, but the muscular energy is wanting. The bones have not acquired the hardness, and the tendons the firmness, necessary to prolonged effort, and any action in which these elements are essential to success, must either end in a failure, or be accomplished at an injurious expenditure of physical energy and power. We may learn much respecting the capacity of animals for labor, from what we know of the effects of muscular exertion on ourselves. The man under twenty may be active and capable of a great effort, but he is wanting in the powers of endurance. There is not that firmness of muscle essential to severe and continued action. Taking the comparative ages to which man and the horse live, as a standard, and allowing that the man is incapable of his greatest and continued efforts until he is twenty-five or past, the horse should certainly not be less than seven or eight, to answer the same conditions. Overtasking does not produce the same effect on the man, that it does on the boy; and the horse at twelve, will scarcely feel fatigue at efforts which would have ruined him at the age of three or four. Light loads, short stages, and frequent stops while traveling, may enable a young horse to make a journey without injury; but where a heavy load is to be moved, or a quick pace is required, or on a farm a thick sward is to be turned, a horse under seven or eight, should not be chosen; and at such severe work, the eight year old, will last longer than the four year old.

It is a saying among English sportsmen, that what is required for a first rate hunter, or a horse of great work, is young legs, and an old mouth; that is, horses that have done little until five or six, and of course while their limbs are elastic, are at the same time in full muscular vigor. Elwes, the great miser, never allowed a colt to be broken until six years old; and when his horses were twenty or more years of age, his animals always led the field in the chase. Stage coach proprietors do not consider a horse past the most severe pace, or age, until after their sixteenth year. It must be admitted, however, that much is depending on constitution and treatment, and when these are good, a horse lasts much longer than has been generally supposed. It is stated in an English journal, that at this time there is a surgeon near Finsbury Square, London, who has a grey mare upwards of forty years of age, which still does her work in a admirable style. At thirty-six years of age, this animal performed the distance of eighty miles a day, on two successive days; and one hundred miles in one day, and without exhibiting any indications of being severely tasked. An extraordinary instance of what the horse can perform, is given in the New-York Spirit of the Times of June 6th, from which it appears that the horse *Filo*, a six year old gelding, on the 12th of May, trotted between sun and sun, one hundred and six miles, carrying 470 lbs. The match took place near Boston.

We think we hazard little in the assertion, that while no animal is more deserving of attention to his improvement than the horse, there is none to which, among the mass of our farmers, so little attention is paid. It is enough, if the animal attached to the carriage or the plow, is a horse; it matters but little what is his performance, or his bearing; and not unfrequently, such as are unfit for the merest drudges, are selected to perpetuate the race. For our farm horses, we do not want the Arabian or the English blood horse; we require more weight, more bone and muscle, than these afford; but we do want some of their activity, and powers of endurance, and all these desirable qualities, it is believed, can be obtained by a proper selection, and by crossing. Some of the best horses in England, for the carriage or the farm, are the produce of a cross between the Cleveland bay, or the Suffolk Punch, and a half blood horse, combining the essential requisites of weight and action, as far as they can be united; and that a similar process here, would be attended with the same beneficial results, does not admit of a question. Farmers should discard the caricatures of this noble animal, that disgrace their premises; in breeding, give a preference to *good*, rather than to *cheap* cattle; beware working their colts too young, or too severely; let the food correspond to the labor; and always remember that "*it is the pace that kills the horse*," whatever may be his business, or his condition.

BEET SUGAR MANUFACTURE.

Mr. Childs' book on the making of sugar from the beet, derives much of its interest from the history of the experiments made the past season at Northampton, to test the new method of manufacturing by desiccation or drying the root before rasping, instead of using it while fresh, as has been heretofore practiced. The results appear to have been very satisfactory under the circumstances; and in the opinion of Mr. Childs, establish the following positions:

"1. That all the saccharine contained in the beet can be extracted by the method of desiccation.

"2. That the raw sugar can be obtained without any bad taste, and fit for immediate consumption.

"3. That American beets, though generally inferior to the European in saccharine richness, can by suitable culture be made inferior to none.

"4. That 50 per cent more of crystalizable sugar can be obtained by the method of desiccation, than has generally been obtained by the method of grating and pressing, or macerating the green beet.

"5. That the beet, once dried, may be kept an indefinite time without liability to injury."

In the experiments of Mr. Childs he constantly obtained from 7 to 10 lbs. of saccharine from 100 lbs. of fresh beet, or 14 lbs. of dried beet. Owing to some imperfections in the process, too large a quantity of the molasses at first resisted all efforts at crystalization; but these difficulties were at last overcome, and the sugar was not only of a beautiful quality, but what little molasses remained, "was of a bright amber color, and so pure and pleasant, as to be preferred by many to any but sugar bakers." The actual cost of the sugar made, when the material has been good, was 11 cents per pound, the pulp and manure or scum, not taken into the account.

Mr. Childs also made experiments on the stalk of maize or common corn, and on the pumpkin, and from both obtained good sugar and molasses. We imagine, however, that sugar from the corn stalk cannot be expected to any extent, as they must be gathered before the ear could mature, and that would occasion serious loss. Should it be found on experiment that the pumpkin could be made to produce sugar to any considerable extent, it might possibly be worthy of culture as an independent crop for the sake of its sugar, and its seeds for oil, the latter producing at the rate of a gallon of fine pure oil to one bushel of seeds.

Taking into consideration the facts, that to those engaged in it the business was entirely new; that the beets were procured at a great disadvantage; that the fixtures, implements, &c. were untried, and afterwards found to require alteration and improvement; we think the results such as warrant the conclusion, that the northern states can produce their own sugar at a reasonable rate, though we have some doubts whether the opinion of Mr. Childs, "that with proper and sufficient means beet sugar may be manufactured in the United States for four cents per pound," will be speedily realized. Mr. Childs' book contains a letter from Mr. Schuzenbach, a brother of the German artist, who discovered the important process of desiccation, stating that his brother was still improving his methods, and had reduced the cost of manufacture considerably below four cents per pound. This letter gives the nature and expense of the several items in the process, and is therefore interesting. On the whole, Mr. Childs' book will be found valuable to all who take an interest in the beet sugar manufacture, or wish to prosecute it themselves.

One thing more on this sugar question; if any of our readers have three or four acres of permanent pasture, or other lands suitable for the purpose, and will plant out some 150 or 200 of the sugar maple, they will have a lasting resource for a supply of superior sugar. If the maple orchard is planted so as to break the wind from the dwelling, or the fruit orchard, so much the better. If you have no land you can conveniently spare for such a use, plant the sides of your roads, lanes, or fences, and you will beautify your farm, as well as lay the foundation of a sure ultimate profit. O, but it will be so long before the trees will be large enough to make sugar from, I may not live to want them, or the sugar? Very true. You may not live the twenty or thirty years required to grow a good sugar orchard, and it is equally true you may not live to gather the harvest that is now ripening. But what if you do not? Is there no one to come after you, who will bless your memory for this or similar examples of forethought. No man has a right to enter the world and leave it, without at the same time leaving some proof that it is the better for his having lived in it.

Notes for the Month.

"An Agricultural Editor in Office."—Under this caption our esteemed contemporary, Gov. Hill, of the Farmer's Monthly Visitor, in his last number announces to his readers his appointment to, and acceptance of the office of Receiver General for the New-England States, under the late law of Congress for the collection and preservation of the national revenue. We had noticed in the public journals the rumor of his acceptance, not without regret, lest the duties of the office should induce him to renounce his connection with the agricultural press, or interfere with the management of his journal, which he has made one of the most valuable and welcome to the farmer of any in our country. We are much gratified to learn that our fears were unfounded, and that according to present expectations, instead of preventing the necessary attention to the Visitor, a residence at Boston will give increased facilities in conducting the work.

The American Institute.—The 13th annual Fair of this institution will open at Niblo's Garden, New-York, on the 5th, and continue open till the 16th of October.

South Carolina.—A State Agricultural Society has been formed in this state, within the past year, which has advertised a list of premiums on stock, amounting to near $300, to be awarded at a cattle show to be held in November next.

The Presents.—The horses sent to the President of the United States by the Imaum of Muscat, were sold at Washington, August 4—one to Mr. Powell, of Va. for $650, and one to Gen. Eaton, of Tenn. for $675.

The London *Farmer's Magazine* for August, contains the excellent "Chapter on Swine," by our correspondent A. B. Allen, Esq. of Buffalo, from the Jan. No. of the Cultivator, embellished with all the cuts. In a recent No. of the same work, we observed the article on "Breeding Horses for purposes of Utility," from the pen of the same correspondent.

South Down Bucks.—Mr. O. Elliott of Elizabethtown, N. J. desires us to say that he has six South Down bucks, imported from the flock of the late John Ellman, last year, for sale. If not previously sold, they will be offered at at auction at the Fair of the American Institute in October.

Public Sales.—Mr. B. Brentnall, English neighborhood, Bergen county, N. J. gives notice in the Spirit of the Times, that he is about to return to England, and will sell at public sale on the 29th of this month, (Sept.) the farm on which he resides, consisting of 300 acres of valuable land, together with his remaining stock of Short Horn cattle and Berkshire hogs. The cattle consist of one bull 18 months old, two cows with a bull and heifer calves by their sides, and two 2 year old heifers, whose pedigrees will be furnished—the hogs, of three boars and twenty sows, either in pig or with pigs by their sides, all of the Berkshire breed. Among them are several choice animals of imported and domestic stock. Sales of stock to take place at 11 o'clock, A. M.

"Taking up Bees."—According to the *Yankee Farmer*, this operation is generally delayed two months too long. Instead of being taken up in September, they should be taken up in July, "as they usualy grow lighter after the middle of July."

Heavy Fleece.—It is stated in the papers, that Mr. S. Brownell of Chautauque Co. in this state, sheared this season, 14 lbs. of wool from a Saxony sheep, which weighed, after the fleece was taken off, 130 lbs.

Hogs Poisoned—Several hogs have recently been killed in New-England, by drinking brine in which hams had been cured with the use of saltpetre. A man in Hartford also lost a fine hog, by giving him some refuse ham cured in this way.

A New Strawberry.—The *Magazine of Horticulture*, Boston, for August, furnishes us with an account of the origin and a description of "*Hovey's Seedling Strawberry*," which has attracted so much attention at the shows of the Massachusetts Horticultural Society, the last two or three years. It was raised from seed produced from flowers artificially impregnated in 1833. It is said to be the "largest, handsomest, best flavored, and most productive variety" yet known. Plants may be had on application to the editor of the Magazine, C. M. Hovey, Boston, at $5 a dozen. This strawberry is rendered more valuable from the circumstance (which is not the case with most other kinds,) that every flower is perfect, producing a due proportion of stamens and pistils, and every blossom which expands is followed by a fruit which arrives at maturity.

"Seymour's Superb White Celery."—We learn from the same Magazine, that a variety of celery under this name, has been for some years cultivated in England, which grows to a great size, some of the heads weighing as much as 13 lbs. and of the height of five feet. Five or six pounds is the ordinary weight of the heads.

Some of the finest celery we have seen, was raised in the following manner, which we are inclined to think an improvement in the manner of bleaching. Instead of planting in trenches and filling up as fast as the plants grow, they were set out on the surface, and the plants well tilled, but not earthed up until large enough for use, when they were earthed up, a row at a time, as wanted. In eight or 10 days they were finely bleached, and free from the rust and blotches, occasioned by insects, which so often injure the plants.

Quince Bushes.—A correspondent of the Journal of Commerce, at Norwich, Conn. says that while quince bushes were generally killed in Connecticut last winter, he noticed a cluster of them standing in his native garden, just as they did forty years ago, and that the secret of their safety, he presumes, may be found in the fact that they stand close under the north side of a stone wall, which so shades them as to retard the starting of the sap until the hard frosts are over.

Lucerne.—This grass delights in a deep sandy loam. The land should be thoroughly cleaned of all weeds, or the seed should be sown in drills, so that the plants may be hoed until the weeds are subdued. Mr. S. Howard, states in the Zanesville, (Ohio) Gazette, that he sowed a small quantity of seed in drills, the last week in May, on the "river bottom." The last of July it had reached eighteen inches in height, when it was cut and fed, green, to hogs and milch cows, who both ate it voraciously. In four weeks it had again grown to the same height, when it was cut the second time—on the first of November it was again cut, the crop being heavier than either of the preceding. A piece of very flourishing red clover adjoining, on precisely similar soil, did not yield near half as much as the Lucerne. Mr. H. has no doubt but it may be cut, after the first year, five times in a season, and that it will yield a ton and a half per acre of hay at each cutting. The culture of Lucerne has formed a distinguishing feature in the agriculture of France, where it has been in use for more than 250 years. The crop is there estimated at from five to seven tons to the English acre.

Flowers.—We cheerfully comply with the request of a correspondent to give place to the following beautiful extract:

"Flowers, of all created things, are the most innocently simple, and most superbly complex—playthings for childhood, ornaments of the grave, and companions of the cold corpse! Flowers, beloved by the wandering idiot, and studied by the deep thinking man of science! Flowers, that unceasingly expand to Heaven their grateful, and to man their cheerful looks—partners of human joy; soothers of human sorrow; fit emblems of the victor's triumphs, of the young bride's blushes; welcome to the crowded halls, and graceful upon solitary graves! Flowers are in the volume of nature, what the expression 'God is love' is in the revelation. What a desolate place would be a world without a flower! It would be a face without a smile—a feast without a welcome. Are not flowers the stars of the earth? and are not our stars the flowers of Heaven? One cannot look closely at the structure of a flower, without loving it. They are the emblems and manifestation of God's love to the creation, and they are the means and ministration of man's love to his fellow creatures: for they first awaken in his mind a sense of the beautiful and good. The very inutility of flowers, is their excellence and great beauty; for they lead us to thoughts of generosity and moral beauty, detached from, and superior to selfishness: so that they are pretty lessons in nature's book of instruction, teaching man that he liveth not by bread alone, but that he hath another than animal life."

Royal Agricultural Society of England.

The annual Fair of this Society for the present year, was held at Cambridge on the 13th, 14th, and 15th days of July. The proceedings, as reported in the Farmer's Magazine, would occupy eight or nine pages of the Cultivator. So great was the crowd that "a guinea a night for a bed, and half that sum for the accommodation of a horse, were very general demands." At the *Plowing Match* held near the city, fifty plows were started, and 16 prizes were awarded to the best plowmen. The show of *Implements* was very large, embracing no less than 86 different plows—thrashing machines for horse and hand power, with one of which, worked by four horses, upwards of sixty bushels were thrashed in one hour, at the trial—straw cutters, horse powers, harrows, scarifiers, mowing machines, drill barrows, &c. There were nearly 100 lots of *Cattle*—(of which one half were Short Horns, 21 lots Devons, 7 of Herefords, 15 Sussex, &c.)—offered for prizes. The prizes awarded on cattle amounted to $1,600. Mr. Bates, the gentleman from whom Mr. Vail of Troy, has just received a two year old heifer and a bull calf, received a prize of 15 sovereigns for the best Short Horn milch cow, and one of 10 sovereigns for the best bull calf. Mr. Hewer, of whom Mr. Corning's Herefords were obtained, received a prize of 15 sovereigns for the best Hereford yearling heifer. Over 30 lots of *Horses* were offered, and premiums to the amount of 75 sovereigns awarded for the best. Of *Sheep*, no less than 95 lots were present, to which were awarded prizes to the amount of $1,220 The *Swine* received about $125, the Essex breed taking the highest.

Premiums for *Essays* were awarded as follows:—1. On the Storing of Turneps, 10 sovereigns, to W. E. Geach—2. On the Admixture of Soils, 20 sovereigns, to W. Linton—3. On Early Spring Feed, 20 sovereigns, to M. M. Milburn—4. On Plantations, a gold medal, and 5. On Gypsum as a Manure, 10 sovereigns, to C. W. Johnson. Nearly 600 *new members*, who pay annually £1 sterling, were admitted to the society during the month preceding the meeting. At the great *dinner* on the last day of the exhibition, upwards of 2,650 persons were present, among whom were many of the ablest and best men of England. The United States were represented by Mr. Stevenson, our minister to the Court of St. James, and Mr. Maxie, our ambassador at Brussells, who both made speeches in answer to calls made upon them. £1,630 sterling were received for tickets of admission to the yard, being £450 more than the receipts of 1839

TO CORRESPONDENTS.

☞ The excellent communication of Mr. Rhoades, in this number, would have appeared in the May number, had it not been accidentally mislaid.

"Walker on Intermarriage."—We have had a review of this work waiting for room for several months As we intend to give it a place soon, and as it goes into the matter much more extensively and embraces all the points noticed by our friend S. W. Jewett, we have not thought it necessary to give his paper on the subject.

Cisterns.—Dr. A. S. P. will find the information he desires on building cisterns, on page 60, current vol. of this paper.

"C. H. R." is informed that the *Journal of the American Silk Society*, published monthly at Baltimore, at $2 a year, is "the best paper which treats of silk," and one which we can heartily recommend to all interested in the subject. $3.00 remitted free of postage, at the time of subscribing, will pay for the work for the years 1839 and 1840. Address G. B. Smith, Esq. Editor, Baltimore, Md.

Berkshires.—Mr. H. Wright, Suffolk, Conn. writes us that he is highly pleased with the Berkshire hogs, and that he has raised one which weighed 100 pounds, at three months old.

The portrait of Mr. Kendall's Short Horn Cow *Julia*, is in the hands of the engraver, and will be ready for next month.

NEW-YORK MARKET, AUG. 25.

Ashes.—The market has evinced considerable animation during the past week, and the sales of pearls comprise about 400 bbls., at $5.37½a$5.50. In pots, the rates have ranged at $4.75a$4.87½.

Flour and Meal.—The advance of about 25 cents per bbl., which took place upon the receipt of European intelligence by the Great Western, has not been sustained, and since the arrival of the President and Acadia, the market has been exceedingly languid, and sales of Genesee and Ohio have been made at $5a5.25 per bbl. Rye flour is in demand at $3a3.25; and of corn meal some small sales have been made at $3a3.25 in bbls., and $15 in hhds.

Grain.—There have been some moderate receipts of new wheat, consisting of North Carolina and Virginia, which has been taken by our city millers, at $1.12½a$1.14 per bushel 2000 to 3000 bushels Ohio, old, have been taken for export, on terms not transpired; but since the receipt of intelligence per Acadia, the export demand has subsided. Of Northern Rye there has been some sales for distilling, and for export at 65 a67½ cents. Corn—About 14,000 bushels has found buyers, at 59a60 cents for Southern, and 60a61 cents for Northern. Oats are without material change in price.

Provisions.—The demand for Beef and Pork has been quite brisk, and Mess and Prime of both kinds has been sold at an advance of 50 to 75 cents per bbl. Mess Beef commands $15, and Prime do., 10½ per bbl. Lard, prime, is scarce, and readily sells at 12 cents per lb. In other descriptions we note no material alteration in the market.

Wool.—There has been some inquiry the past week for American fleeces, but in consequence of the extreme low prices for American woolens, the manufacturers in this country yet buy very sparingly. Am. Saxon fleece, 32½a37½—Merino 28—Native and ¼ blood 20a25.

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"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

AMONG THE FARMERS—No. 2.

CENTRAL NEW-YORK—SKANEATELES.

In no part of the United States perhaps, can there be found a district more capable of the highest state of improved agriculture, or better adapted to the introduction and display of correct taste in rural embellishment, than the country of the Lakes in Central New-York, embracing that beautiful chain reaching from the Oneida and Cazenovia, to the Conesus of the Genesee Valley. Lying immediately on, or but slightly elevated above the limestone zone that makes so distinguishing a feature in the Agricultural Geology of this State, the vicinity of these lakes offers to the agriculturist some of the best soils in the world, and to the man of leisure and taste, a choice of residences, which for purity of air and variety and beauty of landscape, can scarcely be rivalled. These advantages have not been overlooked or unappreciated; and the traveler, as he views the rich and well cultivated fields, and respectable and comfortable dwellings, with here and there such as mark the abode of superior wealth and refinement, cannot but feel an emotion of surprise, when he learns or remembers, that all this is the work of only thirty or forty years.

Skaneateles holds, deservedly we think, a high rank among this cluster of lakes, for the beauty and salubrity of its waters, and the general fertility of its shores, the northern part particularly. There is but little of the wild or the sublime in the landscape, but very much of the rich, quiet, and the beautiful; and the same remark will be true of the other lakes in the district. On the shores of the northern half of the lake, the pastures, meadows, plowed fields and woodlands, slope gently to the water's edge, and in a still summer's day, village, and cottage, and grove, and the green pastures with their flocks and herds, are multiplied and reflected from its surface as from a mirror. Farther south, high hills press upon the lake; their steep sides clothed with evergreen woods, and giving to the deep dell in which the waters seem to be enclosed, new features and new beauties.

To the eye of the farmer, however, the agricultural prospects and processes of any region, will form the principal point of attraction, and it was in this light we viewed it, as, a few weeks since, we had the pleasure of calling on some of our farming friends in that vicinity.

THE CROPS.—The grain crops had been cut and secured with the exception of perhaps a few pieces of oats; and were good both in quality and quantity. The wheat crop could not be considered an extravagant one, but it was better than the last year's, and the berry of superior quality. Instances of failure in this crop, had indeed occurred, but they were rare. The earliest ripened wheat had proved the best; while that which was late, or had been heavily manured directly for that crop, had suffered more or less from mildew. In the latter case, and this was particularly the case with spring wheat, the growth of straw was so great as to cause the crop to lodge before the filling of the kernel was complete, and consequently nearly destroy the grain.

WHEAT CULTURE.—The practice of early sowing is getting into favor with the Skaneateles farmers, as they think early sown grain resists the frosts of winter better than that which is later, and that by ripening somewhat earlier, it is also more secure against blight. Although it was in August, many farmers had completed their sowing, and great numbers of others we saw engaged in putting in their seed. For wheat, a thorough summer fallow is preferred, as rendering the earth more friable, and cleaning it from foul stuff, so detrimental to crops. We observed one or two instances where a fine surface and seed bed was given, by turning over a clean smooth turf, rolling it level, and then harrowing the surface until it was sufficiently mellow and deep for seed, but without disturbing the clod in the least. In some cases, such a course may produce good wheat; but there is very little land sufficiently smooth and clean for this process, and it does not have the tendency to deepen and fertilize the soil, which more thorough plowing does. The doctrine of transmutation of wheat into chess, has not many advocates among the enlightened farmers of Skaneateles; and as they pay considerable attention to their seed to free it from chess, as a consequence they are usually very little troubled with it. There are some, however, who have fears as to the effect of the barberry bush on wheat, not having entirely eradicated the ancient but unfounded prejudice, that the blight is caused by this bush. Quite a number of years since, a severe blight occurred very generally in Western New-York. At Skaneateles it was attributed to some barberry bushes in some of the gardens, and to quiet the public feeling, the trees were eradicated. The wheat crop ceased to be much affected in a year or two, and this fact had a tendency to confirm some farmers in their previous sentiments, and was adduced by the late Judge Bradley in his controversy with David Thomas on this subject, as proof that the barberry did cause blight. The inaccuracy of this supposition is best shown by the fact, that in those seasons the blight was very extensive in the western district, as it has been this year in northern Indiana and Illinois. We had, the same season in which the Skaneateles farmers suffered so much, a field of fifteen acres ruined by blight, and there was not a barberry bush nearer than two miles. The cause is doubtless to be traced to some atmospheric agency, the nature of which has not yet been explained.

CATTLE.—The improvement of stock has evidently been a prominent object with the farmers of Skaneateles; and by well directed persevering efforts, they have so far succeeded as to have laid a broad foundation for the future. There are in the vicinity several fine Short Horns, and bulls and cows of the best breeds have been introduced by several public spirited farmers. The reputation of the Short Horns for milk, is here well sustained, and we think it doubtful whether any others can compete with them in this respect. Cattle, however, that take on flesh with the rapidity of the Short Horns, or yield such quantities of milk, cannot succeed well on such pastures, or winter fare, as our common breeds usually get. There is another error too, into which we think many farmers fall in their efforts to improve their stock, and we think the influence of this error can be traced to some extent about Skaneateles. A farmer has a good cow of the common breed, and puts her to a full blood Short Horn. The calf is of course a good one, but the error consists in using such half bloods to breed from. Experience in England shows that this course is not a good one, and that such cattle speedily deteriorate. Constant recurrence to the original pure improved race, and judicious selection among the progeny, can alone insure improvement, where any cross or mixture of blood is permitted.

SWINE.—We should not imagine that as much attention had been paid to the breeding of swine as of cattle, near Skaneateles. Some good hogs were seen, but none that we thought would bear a comparison with some of the improved breeds that have been introduced into the country within a few years. There are few animals, in which the difference of profit between keeping good and poor ones, is more sensibly felt in the pockets of the farmer, than in swine; and we have no doubt they would greatly consult their interest by attention to this point. Let no farmer, however, imagine if he gets Short Horn cattle, Berkshire pigs, or Leicester sheep, that he is going to have fat beef, pork, or mutton, without good feed; if he should have such dreams, experience will soon awaken him. The question is, *which will give the most profit from a given quantity of food?* Not, *which will live without any?*

SHEEP.—The farmers in the vicinity of Skaneateles have large numbers of sheep, and the amount of wool produced in the town for sale or manufacture is great. Some of the best of the imported breeds of sheep, as the Leicester and South Down have been introduced, as being well adapted to the common farmer; but by far the greatest proportion of the flocks are grades of the Merino or Saxon. Some superior flocks of both these kinds, are to be seen at Skaneateles, and as our country as well as others must rely on these two varieties for their fine wools, it is desirable that attention should still be paid to preserving the breeds pure. The best kind of sheep for the small farmer, one who raises no more wool than is required for his own use, and uses some mutton, is, we think, not satisfactorily determined. It is necessary that hardiness should be united with wool of medium fineness, and flesh of good flavor, and whether any distinct breed is to be found possessing these qualities, or whether one is yet to be produced by crossing, time must determine. Present appearances would indicate that the South Down approaches to the point required for the ordinary farmer; and for the production of wool of the best quality, (the very finest excepted) we are disposed to think highly of the cross of the South Down and Saxony, recommended in the Cultivator, by H. S. RANDALL, Esq. Some farmers (we may mention the Messrs. THORNS) in the town of Skaneateles, own from 1,000 to 2,000 each of Saxon and Merino, or grades of these. The present depressed state of the wool trade, is not very encouraging to the wool grower, but as that is one of the articles with which it is impossible to dispense, remunerating prices may always be reasonably anticipated.

ROOTS.—As a natural consequence, in any district where an improved agriculture has made much progress, considerable attention is given to the culture of roots by the thrifty farmers of Skaneateles. We were told that not as much land had been sown with ruta baga this year as formerly; the impression prevailing to some extent, that our climate is not exactly adapted to the growth of that root, it sometimes suffering from the heat and dryness of our summers, and particularly so, on soils that are not of considerable depth. That the turnep flourishes best in a moist climate and moderate temperature is certain; but we think when the soil is of the right kind, seasons of extraordinary dryness and heat excepted, this root may be profitably cultivated in this country. The sugar beet has by many been adopted, in room of the turnep, and that root, judging from some examples where both had been sown in the same field, will endure heat and drouth better than the ruta baga. We have heard many complaints the present season respecting the failure of beet seed. In some cases the seed may have been bad, but we think the failures have oftener occurred from injudicious planting. Mr. GAYLORD, who has a fine field of the carrot and sugar beet, informed us, that a considerable portion of his beet seed failed when sown without preparation, but when soaked before sowing, scarcely a single seed failed. Some have recommended to have boiling water poured over the beet seed; but this would be a dangerous experiment; steeping in warm water is better, and no risk is incurred. We know of no seed, the locust excepted, in which the heat of boiling water is not more or less injurious.

FARM BUILDINGS.—Much attention has been paid by the Skaneateles farmers, to the arrangement and condition of their farm buildings. A house well finished and furnished, may be very comfortable and desirable, but does not of itself furnish so sure a criterion of farming prosperity and good taste in agricultural matters, as does the kind and state of the barns and other out houses. Much is depending on the arrangement of the yards, wagon, and tool houses, hog pens, and places for cooking and feeding food. The barn of Mr. SILAS GAYLORD, President of the Skaneateles Agricultural Society, is in many respects, one of the most convenient and well arranged buildings for the farm, we have ever seen. It is one hundred feet in length, and with its long ranges of stalls for feeding cattle, its stables, its dry capacious cellar for roots, its extensive underground divisions for cows, calves or sheep, during stormy weather, or in the spring of the year, and its well ventilated yards and sheds, show an attention to the safety and comfort of an extensive and valuable stock, as necessary as it is worthy of imitation. The "let alone system," or allowing animals to shirk for themselves at all seasons and in all weathers, does not seem to find many advocates about Skaneateles, although there are some farms still sadly deficient in the necessary buildings, and where the want appears more apparent, from others being so well provided around them. In the construction and arrangement of the farm houses around the Lake, much good taste has been exhibited, and the exercise of this quality is becoming more and more apparent. For the ordinary farmer, very expensive, or very spacious buildings, are not required. They should be convenient and neat, rather than extravagant and showy; but there are few places in the country that furnish more pleasant and delightful retreats for the man of wealth and leisure, than the vicinity of the lakes; and in the construction of their villas, such men may consult their wants or their wealth. The neat cottages and splendid dwellings that look out from their groves and orchards and gardens on the beautiful lake, form not one of the least attractive features of the landscape.

FRUIT AND ORNAMENTAL TREES.—Few districts can show more valuable orcharding, or finer fruit gardens, than the neighborhood of Skaneateles. The apple, pear, cherry, and quince, are abundant; grapes of the best varieties suited to the location, are found in many gardens, and some very good specimens of the peach are occasionally seen. The latter fruit, and the kindred kinds, do not, however, thrive as well as on the shores of the Ontario. A feature of the place which strikes the observer very agreeably, is the very general planting out of ornamental trees in the yards and by the road side. The tree which seems to obtain the preference, is the locust, which grows well and rapidly, and several large nurseries of which, are near the village. The useless poplar has mostly disappeared, and its place has been supplied by the locust, maple, or other trees of decided utility, and far more ornamental. The practice, and a very commendable one it is too, we think, of filling up the vacancies in wood lots as they occur, with the locust, prevails to some extent, and the utility of this course, should the tree succeed as it now promises, will be yearly more apparent.

MANURES.—The Flemish maxim, without clover no cattle; without cattle no manure; without manure, no corn or wheat—is getting to be more generally understood and practiced upon than formerly. The propriety of using manure for root or corn crops, rather than grain crops, and allowing clover to alternate with these, is denied by few; and the consequence has been, that the quantity of manure has increased with the skill of the cultivation and the perfection of the rotation. Instead of the manure being spread on permanent grass lands, it is now given to the tilled ones, and covered after its application, with as little delay as possible. In one of the yards of Mr. Gaylord, we observed several long mounds made of alternate layers of earth and manure, intended for compost. With the exception of one, they were thickly covered on the surface with luxuriant weeds, and on inquiring the cause of the exemption, were told that none was known, unless it was a quantity of lime which was thrown in with the earth of that pile, and this was doubtless the true solution Did the caustic action of the lime destroy the vitality of the seeds of weeds in the soil? Or, did the greater heat and more active fermentation induced by the lime, produce the same result?

In any place where agriculture is found in as advanced a state as at Skaneateles, it is reasonable to infer that the population avail themselves liberally of the best sources of information on the subject which constitutes their great employment; and such we have the best reason to know, is the fact. There is scarce an agricultural publication of note in the country, which is not read here, and the habits of social intercourse which exist among the most influential farmers, have a direct tendency to render any such useful knowledge generally available. There is probably not a town in the state with the same population, which receives a greater number of farming journals than this; and the condition of their agriculture speaks volumes in favor of the practice. Such examples show that with a good soil, an industrious population, and labor directed by intelligence, much of our country may be converted into a garden, and the profits as well as the productiveness doubled.

COWS AND MILK.

Every farmer or dairyman is aware that there is a vast difference in the quantity and the quality of milk given by different cows, yet this variation is made by very few the basis of any calculation as to the actual profit or loss in keeping such animals. As a general rule, it must be admitted that cows that yield a large quantity of milk, require more and better feed than those which yield less, in order to maintain the same flesh; but this is a point much depending on the breed, and its constitutional qualities. The average of the best common dairy cows, will not for six months, exceed ten quarts per day, while numerous instances are on record, of cows which have averaged more than double this quantity for the same period. We very much question whether a majority of our cows produce half a pound of butter a day for the same period of time; while the instances are not few, in which cows have yielded from ten to twelve pounds per week, and some have much exceeded this, as the examples we shall give will show. We think if the vast difference in profit between a good and a poor cow was duly considered, much more pains would be taken to produce and rear such animals and breeds as would best serve the purposes of the dairy or the farmer. There is no propriety in the farmer's keeping some half a dozen inferior cows to devour his pasture in the summer, and empty his barns in winter, to make butter for his family, when half the number of good animals will do it much better, and enable him to dispose of the extra fodder the others would consume, or add to his other stock in the same proportion.

Very few instances have been given where the quantity of milk from a number of cows has been determined with accuracy. Mr. Aiton, from the record of several years with a herd of the best Kyloes or North of England cows, gives the following result, in which confidence may be placed:

" First	50 days,	24	quarts per day,	1,200.
Second	"	20	"	1,000.
Third	"	14	"	700.
Fourth	"	8	"	400.
Fifth	"	8	"	400.
Sixth	"	4	"	300."

being 4,000 quarts to each cow, or an average of 13 quarts for 300 days.

In Dickson's Survey of Lancashire, the quantity of milk produced by five short horned cows of the ordinary, not improved breed, in the summer at pasture, and winter at hay and turneps, is stated as follows:

" One which did not go dry at all,....	4,857	quarts.
One dry eight weeks,.............	3,985	"
One dry six weeks,...............	3,987	"
One dry "	3,695	"
One dry eighteen weeks,..........	3,383	"

A large dairy on the late Mr. Curwen's farm, gave on an average of four years, 3,700 quarts to each cow, but the average in Lancashire generally, is stated at between 8 and 9 quarts. Some of the county reports, in Transactions of the Agricultural Society, average the quantity as below:

Devonshire,	12	quarts per day.
Cheshire,	8	
Lancashire,	8 to 9	

Mr. Wm. Crams, in Sussex, had a cow that in four years from 1805 to 1809, gave 23,549 quarts of milk, producing 2,132 pounds of butter; probably the greatest instance of continued productiveness on record. Since the improved Short Horns have become so well known, occasional examples of still greater amounts of butter or milk for a short time, have been furnished. Thus the Rev. Mr. Hacket, near Newark, Eng. had a cow which produced 19 pounds of butter in a week, though the average of the cows in that vicinity did not exceed six pounds per week. A cow of Mr. Calvert produced 373 pounds of butter in 32 weeks; and for 20 weeks averaged 20 quarts of milk a day. The Yorkshire cows have in many instances been remarkable for the quantity of milk produced by them; many, during the height of the season, yielding 30 quarts a day, and instances have occurred of reaching 36 quarts.

The instances of uncommon productiveness both in milk and butter, among the cows of this country, are very numerous. These instances of great yields are more common among the improved breeds of imported stock, or such as have been derived from them, by crosses with the native stock of cattle, than among the old stock alone. Thus Col. Jacques' Cream Pot breed, the result of a cross between the Durham bull and a native cow, has produced butter at the rate of seventeen pounds in a week. We noticed not long since in the Pennsylvania Inquirer, a statement of Mr. Gowens' Short Horn cow "Dairy Maid," which yielded 33½ quarts of milk per day for a week; but the most remarkable instance of productiveness in a cow, all things considered, we have ever noticed, is found in the following statement of Mr. S. Canby, of Woodside, Delaware, furnished for the Delaware Journal. Mr. Canby's cow is called Blossom, and is from the excellent stock of C. H. Hall, Esq. of New-York.

After mentioning *Dairy Maid*, Mr. C. adds:—

"I concluded to try my cow *Blossom*, a statement of whose milking for one week you will find below, and by which you will perceive she averaged for the week over 35 quarts per day, and yielded 13¼ pounds of well worked butter. * * My dairy maid is firm in the belief that at a cooler season of the year, or with a spring house, the cream she had from Blossom would have yielded 15 or 16 pounds of butter.

"Uncommon as this produce may be, I do not consider it more so than the fact of her never having been dry since she had her first calf, more than two years ago, and in the space of 25 months, has produced five living calves, viz—on the 5th of April, 1838, she had her first calf (*Delaware*;) on the 4th of July, 1839, she had twins, (*Liberty and Independence*;) and on the 16th of May, 1840, she had twins again, (*Romeo and Juliet*;) and I think I can safely say, that during the whole of that time she has averaged full 20 quarts of milk per day; she gave 25 quarts per day with her first calf, and made nearly 12 pounds of butter per week."

Mr. Canby in both years tried to dry Blossom before calving, but found it impossible. If Mr. Canby is right in his estimate of the average daily quantity of Blossom's milk, she greatly exceeds any other cow on record in product. The average of Mr. Cram's cow, which has been considered at the head, was 5,837 quarts per annum, while Blossom's is 7,300. The average yearly product in butter of Mr. Cram's cow was 533 pounds, and that of Blossom, as estimated by Mr. Canby, 624 pounds.

It is not to be expected that the average of the cows in any country can be made to equal these extraordinary yields of milk and butter; yet when we see what has been done by Col. Jacques, and to what perfection care and judicious selection has brought other breeds of domestic animals, we can conceive no good reason why our dairies should not have their profits vastly increased by improvements in the milking qualities of the animals composing them.

PROSPECTS OF THE SILK CULTURE.

From every part of the country we are receiving the most gratifying intelligence respecting the success of the experiments instituted by such numbers the present season in feeding worms. The multicaulis fever ran its course last year, and though multitudes must rue the result of their speculations, yet the excitement spread the tree far and wide, and directed the attention of thousands to the silk business, that would otherwise perhaps never have taken any interest in it. The experiments made last year showed there was nothing mysterious in the production of silk; that in our fine climate the difficulties encountered in other countries are unknown; and that where the mulberry can be grown or had, and room for feeding obtained, the formation of the cocoon and silk of the best quality for manufacturing, is as certain as the growth of grass or corn. In this, as in every other business, there will be some disappointments. Those who expect to make themselves rich the first year; those who enter largely upon feeding worms without experience; those who hatch thousands or millions of worms, and undertake to feed them, while they have foliage for not more than one-fourth the number, will belong to this class.

One of the most serious obstacles in the way, has been the retardation of the hatching of the worm from the egg, until the foliage would be sufficiently abundant for their use; and this has been particularly the case where the tender varieties of the mulberry have been relied upon, as it was necessary for the shoots to spring and the foliage to grow, before feeding could commence. At the south, where the Chinese mulberries do not require protection, and the foliage is ready for the worm at the earliest season, this difficulty of course is not apparent; but at the north, it has proved a serious one. We are pleased to learn from the Farmer's Register, that Mr. Pleasants has been making such experiments in preventing their hatching, as will enable him to have complete control over his worms, and regulate the number by the foliage at command. He does this by means of his ice house, which in other hands, has hitherto been found a very ineffectual and uncertain method of retardation. Where the multicaulis has been mainly relied upon for feeding, (and this, the Canton, and Broussa appear the greatest favorites,) it has been found advisable to have some of the common white mulberry to commence the feeding with, to be followed by the easier gathered Chinese, when the quantity of food required is increased by the greater age of the worms. This method was adopted by Miss Rapp, of Harmony, who made the beautiful silks exhibited last year at Washington. We venture to predict that the amount of raw silk grown this year in the United States, will greatly exceed the expectations of the firmest friends of the culture in the country; and we should not be surprised if such specimens of raw silk and manufactured articles should be exhibited at the Fair of the American Institute, as to convince the most incredulous of the deep root the silk culture has taken among us, and our ability to render ourselves independent of other countries for this important article.

IRRIGATION.

Irrigation or watering lands is practiced for two purposes; the first for supplying the roots of plants with moisture, when suffering from drouth; and the second to supply the soil with various matters, animal, vegetable and mineral, which abound in most waters that have passed over any considerable space of the earth's surface. There is a very wide difference, however, in the value of water for performing the latter kind of irrigation; some containing much greater quantities of fertilizing matter than others. Thus streams flowing through alluvial sections, always contain more matter that will be deposited by rest, than those running through primitive sections; and it is owing to this cause, that some streams are so much more effective in irrigation than others. Some streams, indeed, are unfit for irrigation in any form, they containing some of the minerals in one form or another, that render them fatal to plants. Ponds that have no outlets for the streams they receive, but depend on evaporation or absorption for the disposal of their waters, always abound in salts or other fertilizing matters, and experience shows that such are the most active on lands. This will appear probable when it is recollected that such bodies of water, by the gradual accumulation of such ingredients, usually become salt, of which there are multitudes of examples on the globe. Slow moving streams are also richer in their deposites than rapid ones; thus the Nile, the Po, and the Mississippi, contain more than the Elbe, the Susquehannah, or the St. Lawrence.

We have known no instances of an analysis of river water in this country to test its properties in this respect; but that many of our streams abound in the qualities most valuable for irrigation, is proved by the abundant deposite from their waters, and the fertilizing results of an annual or even occasional overflow. Many of the waters of Europe have been analyzed, and from them we may in some measure form an estimate of the substances most effective in irrigation. It must be remembered, however, that the quantity of organic, and even mineral substances suspended in river water, differs greatly in different seasons of the year.

Dr. Thomson found in the waters of the Clyde:

"Common salt,......................	0.369
Muriate of magnesia,...............	0.305
Sulphate of soda, (Glauber salt,)	0.114
Carbonate of lime,.................	0.394
Silica, (flint earth,)................	0.118"

or a little more than 1⅞ part.

Dr. Bastock found in the Thames water:

"Organic matters,..................	0.07
Carbonate of lime, ...	1.53
Sulphate of lime,......	0.15
Muriate of soda, ...	0.02"

or about one and three-fourth parts.

The Itchen, in Hampshire in England, has long been celebrated for the fertilizing power of its waters, and on its banks are some of the finest water meadows of the kingdom. Mr. Johnson made an analysis of its waters, and after all the mechanically suspended particles had subsided, the result of the analysis was as follows:—

"Organic matters,....................	0.02
Carbonate of lime, ...	1.89
Sulphate of lime, (Gypsum,)	0.72
Muriate of soda, (Common salt,)	0.01"

A knowledge of the substances contained in water, will materially aid in showing us why they should operate advantageously when applied in irrigation. A large proportion of all our waters are *hard*, that is, they contain some of the salts of lime, and always one of these is gypsum. Every farmer knows the value of this substance spread on his grasses, into which it enters as a component part, particularly in the case of clover. According to Prof. Davy, "calculating that one part of sulphate of lime, (gypsum,) is contained in every 2.000 parts of water, [and the streams of Western New-York far exceed this,] and that every square yard of meadow dry land absorb eight gallons of water, then it will be found that by every flooding, more than one hundred and a half of gypsum per acre is diffused through the soil in the water, a quantity equal to that generally adopted by those who spread gypsum on their clover, lucerne, sainfoin or other crops as manure, in the state of powder."

Every soaking of meadow lands by water containing only 25 parts in a thousand (a very low estimate) will give, according to the same authority, two tons of animal and vegetable remains to the acre, substances of the most fertilizing kind as our river bottoms conclusively show. Too much water, however, is as injurious as too little, and there is no more effectual way of rendering the grasses coarse, sour, and worthless on a meadow or pasture, than to allow the surface to be continually wet, either from springs beneath the surface, or from streams flowing over it. To render flooding or irrigation useful, the soil must be in a condition to absorb the water thrown upon it, and not allow stagnation and the consequent injury of the plants.

SAVING SEEDS.

There is too great remissness among farmers, in making a proper selection of seeds. Much of the success of the crop, not only as regards the quantity and quality, but the early or late maturity, is determined by the choice of seed. Let any farmer carefully examine his fields of wheat, corn, or other grain, and he will find some plants distinguished by their luxuriance, productiveness, or early maturity, above the others. If these plants or seeds are preserved, and the same course followed with them, almost any desired quality may be made permanent, and the most essential benefit conferred on the cultivator. Some remarkable instances of these results are on record.

The early Essex pea was discovered by a friend of Dr. Anderson, who, observing among his early peas, one stem much earlier than any of the others, marked and preserved it carefully for seed. The plants produced the next year were also early, and were saved. From this beginning sprung the celebrated early pea, which in a short time spread over the most of England. In the United States, its qualities remain the same, but the name has been changed, and is now generally known as the Washington Pea, one of the earliest peas yet known.

The celebrated Baden corn is another instance of the effect which care and attention can produce. More than twenty years since, Mr. Baden, of Maryland, commenced a system of using for his seed corn, none except ears from stems producing two or more ears of corn. This practice he followed with the closest punctuality for several years, when he discarded two ears to a stalk, using only three or more, and by patient perseverance succeeded in raising the usual number of ears to five or six, and in some extraordinary cases, to ten or twelve on a single stem. Early maturity was not, however, a quality of this corn, and it is evident that corn of such bulk could not come forward sufficiently early to suit our northern climate. It is now extensively disseminated over the middle and southern states, and on the rich corn producing alluvion of the western rivers, has proved a most important acquisition.

In September, 1805, Dr. Freeman communicated to the Massachusetts Agricultural Society the result of an experiment made by him, to hasten the ripening of beans. The earliest pods were preserved ; the fullest, fairest beans planted, and this course followed for several years. The following table shows how much the ripening was accelerated by the process :

Planted.	*Gathered.*	*No. of days.*
1801, May 10,	Sept. 9,	112
1802, May 11,	Aug. 21,	102
1803, May 10,	Aug. 8,	90
1804, May 8,	Aug. 4,	88
1805, May 6,	July 31,	86

At this point, the beans seemed to have reached the shortest period of their ripening in our climate, as in the two years 1804–5, Dr. Freeman planted some of the beans a week later than the other, to try the effect of the heats of summer and later planting, and the result was a ripening as before, in 85 and 86 days.

These instances, although but a few of the many that might be selected, are sufficient to show that in the selection of seeds, the farmer has in his own hands the means of not only adding to the quality of his crop, but materially accelerating its maturity, a point in some plants, corn for example, of the greatest consequence.

VALUE OF THE ROLLER.

Too many of our farmers dispense with the use of this implement; some from an impression that their lands are not suitable to its use ; and others because its introduction in agriculture is comparatively new, and because their fathers dispensed with it. The farmer, however, whatever may be the character of his soil, if it is fit for cultivation at all, will find it improved and his crops benefited by the roller. Heavy soils that cause plants to freeze out, give an uneven surface in the spring, should be rolled to press the roots of the grasses or grain into the earth, by which many wheat or grass roots that in ordinary cases now perish, would be saved, and all small stones that are lifted up by frost, would, by the passage of a roller over a meadow, be sunk below the contact of the scythe of the mower. On light soils, rolling operates favorably by compressing the soil about newly sown seeds, causing them to vegetate earlier, and succeed better than where not rolled. Light soils rolled, also retain moisture longer than those not so treated, which is an additional advantage on this class of lands.

In sowing or planting on turf land, the roller is indispensable, as by pressing down the turned sward it promotes decomposition, and causes the crop to feel at an early period of its growth the invigorating effect of the manure so produced. A farmer in the New-England Farmer, describing his method of cultivating corn, ascribes much of his success to the use of the roller. Last year, in planting a field of 14 acres, one half was rolled and the other half harrowed. The soil of the harrowed part was the best, the manure the same in both. "On the first day of July the corn where the land was rolled was one quarter heavier than on the harrowed part, and so it continued through the season until the harvest." Numberless instances, where the superiority of rolled crops has been manifested, might be adduced, but the reasons of the benefit are so obvious, that they need only to be mentioned, to commend themselves to the attention of every good farmer, and induce him to provide himself at once with this implement, if it is not already numbered among his tools required for successful farming.

THE NATURAL SCIENCES.

There are few situations in life more favorable to the formation of an acquaintance with the operations of nature, and the manner in which the grand, profound, yet simple laws that govern matter are carried into execution, than that of the farmer. The most that is required of him is only observation. He is constantly abroad with nature, and he has only to open his eyes, and attentively examine what is constantly passing around him. The man who is the student of books merely, who examines nature only second handed, may make great proficiency it is true ; but he labors under great disadvantages, when compared with him who interrogates nature in its own laboratory, and in every stone, or plant, or flower, or insect, or animal, finds himself in immediate contact with its works, and overshadowed by its mighty influence.

No man has so great an interest at stake in the development of the natural sciences as the farmer, and none should feel a deeper interest in the progress they are making. There is not a single step he takes in his labors, in which a knowledge of these laws are not of essential service, in which a correct understanding of them will not be useful, and made available to his own profit. Let the farmer study the stones and the earths under his feet, and he will be able to trace some of the wonderful changes the face of the earth has undergone in the first; and learn the alterations or the additions requisite to make the last productive and fertile. The clay, the sand, the lime, the vegetable matter are before him, and it is for him to ascertain their proportions and the changes which he must make to render each field a source of profit, and ensure for his labor its deserved reward.

He finds in his fields a thousand plants, many of which are valuable, many useless, and many most pernicious. He knows nothing of their habits, whether they propagate mostly by seeds or by roots, or whether they increase by both ; he does not study the time in which they are most exhausted in the process of vegetation, and therefore can be most certainly and easily destroyed ; he does not inform himself whether simply cutting a weed above the surface or below the crown of the plant is the best method of killing the intruder on his fields; from the want of a knowledge of the laws of vegetation he has recourse to the most ridiculous and unfounded notions ; errors, fatal to farming prosperity, cling to him in every part of his progress ; and all because he passed nature by with contempt, and looked on her laws with scorn ; because the name of science was associated in his mind with nothing but hard names and baseless theory, a result owing to his having never inquired and examined for himself.

What a field for observation is opened to the farmer in the insect world; and how imperatively his interest demands that it should be assiduously cultivated. No man has so much at stake as the farmer here ; the professional man, the manufacturer, or the mechanic, can scarcely number insects among their direct enemies. Not so with the farmer ; his fields are filled with them in the various states of larvæ, chrysalis, and perfect insect ; they prey on the roots, the stem, and the leaves of his most useful plants ; he sees them at their depredations year after year, yet he scarcely looks at their operations, only to complain. He sees the cut worm, the black grub, the wheat worm, the Hessian fly, and a multitude of others both above and below ground, carrying on their depredations year after year, and he scarcely knows that at one time they are a worm, at another a fly or a moth ; and if he attempts their destruction at all, he most likely does it at the period when it is most difficult and expensive. He finds a nest of eggs or young worms on his appletrees or his cabbages, but passes them by as unworthy of notice, not reflecting that the nest of eggs or the colony that he can easily crush with a single pressure of his heel, will soon become destroying pests, scattered far and wide, and the prolific progenitors of millions. Science would teach him that the moth he deems so harmless, is a far worse enemy than the grub or the caterpillar he pursues so vindictively ; and that much labor and loss of property would be prevented by directing his operations against them at the proper time.

The natural sciences are no enemies to experience, as many seem to suppose. They both aim at the same end, the development of truth. Experience is a slow, and not always an accurate teacher ; and is therefore anticipated many times by science, which applies the laws of nature to observed facts. For such observation the farmer is more happily situated than any other man ; and he has only to make himself acquainted with a few simple, invariable and unchangeable laws, to derive from them the advantages they so positively afford. The cultivator of the soil who refuses to avail himself of all the aids which science as well as experience places within his reach, errs widely ; his occupation is a noble one, the whole range of nature is before him ; the sources of instruction and consequent pleasures and profit are ample ; and in following them out he is certain of an abundant reward.

WOODEN UNDER DRAINS.

In some districts of our country, or on some farms that require thorough or under drains, stones for laying the water course or filling in the drain may not be convenient, or to be had without much expense. In such cases, wood in some form may advantageously be used as a conductor of the water, or as a filling-in material for the drain. Mr. **Fuller**, of Skaneateles, drained a piece of low wet land very successfully, by using hemlock sticks, made by splitting and laying them in tiers on the bottom, each course lapping the other ; and these sticks covered with turf, and the drain, filled in the usual manner, gave a free passage to the water, and made a very perfect drain. Almost every one is aware of the great durability of hemlock or pine brush, when placed in situations where they are kept wet or covered with water. Advantage has been taken of this quality, and young trees of pine or hemlock, or branches from older trees, have been extensively used as filling for trenches in draining. The drain is first filled with the small poles or brush, the lapping being considerable, in order to prevent the horizontal position of the brush in the drain ; it is then trodden down as closely as possible, so as to be below the action of the plow, and then covered with turf, straw or earth. Such have been efficient for a great number of years, and in some districts where the materials are abundant, can be readily constructed. Where considerable quantities of water are expected to flow, a drain made of more open materials will, however, be preferred. Some two or three years since, we saw on the farm of the Hon. Judge **M'Call**, of Allegany, a drain made of pine stuff, through a piece of slippery clay. The trunk of the drain was made of narrow plank, notched at the edges to admit the entrance of the water from without, the little clay or quicksand that entered being speedily washed away by the current of water that passed the drain. It had been put down a number of years, and was then in good condition.—Where pine could not be had, other wood might be used, and though less durable, the expense of occasionally relaying, should it be necessary, would doubtless be well repaid by the greater productiveness such drains would give a soil. A writer in the Mark Lane Express gives the following description of the English mode of putting in wooden drains :

> "The mode we have adopted, is to put on the bottom a wooden layer, of the width of the drain, and then to rest the other two pieces, (in form like a gutter reversed,) on this bottom, by which means the oozing of the soil from below is prevented, and care should be taken to keep the three pieces well together, which might be done by just tacking them together before they are laid down, and afterwards laying a little straw on to prevent the crumbs of earth from falling in. Alder is the wood we use, and the cost of sawing out, and nailing together, is about 6d. per rod. The width of the wood we use is about five and a half inches ; and of course the laying down and covering is but a small addition to the expense."

We consider it very probable, that in drains so constructed, unless the soils were very loose and friable, which is not apt to be the case with those that require draining, the water way would keep open after the wood had perhaps entirely decayed. In England, the mole plow is extensively used in some clay districts for draining. This implement displaces the clay, leaving a small, smooth, continuous opening for the discharge of the water which leaches through the compact clay, and in ordinary cases, these drains remain effective for a considerable space of time. The pressure above would cause the earth around a wooden trunk to assume such a degree of solidity, when filled in with tolerably tenacious earth, as in all likelihood would cause the opening to remain after the wood had decayed, like those made by the mole drain plow.

MYRTLE SOAP.

The value of the wax or tallow from the bayberry, (*Myricla cerifera*) so abundant through the whole length of the Atlantic coast, for many purposes is generally known, but there is one use for which it seems to be eminently adapted, but to which it has not been commonly applied, and that is conversion into a fine and fragrant soap. A writer in the Southern Agriculturist thus describes the method adopted by him in the manufacture :

> He mixed 3½ bushels of wood ashes with ½ a bushel of unslacked lime, put them into a cask and leached them with water. The lye was strong enough to float an egg. Six or eight gallons of this lye were put into a six pail kettle, and to this was added *four pounds* of myrtle wax. It was kept constantly boiling for six hours, lye being occasionally added, and the whole stirred with a ladle. After six hours boiling two quarts of common coarse salt was thrown into it, and the whole simmered for an hour. The whole was then turned into tubs to cool; after 24 hours the soap was cut out, wiped dry and clean, and weighed. The produce was found to be 49 pounds of good soap. At the end of six weeks the soap had lost only a few pounds from the evaporation of the watery particles it contained.

In those parts of the Atlantic states where the bayberry can be easily collected, there can be no question that many dollars to each family might be saved, and an excellent article of domestic economy provided, by making soap from this natural product.

Work for the Month.

Some of the most important labors of the year, are to be performed in October, and though they relate more to the preservation than to the production of crops, inattention to any of the essential things, will detract much from the comfort as well as the profit of the farmer.

POTATOES.—Good potatoes may be spoiled by carelessness in digging and preserving. The sun should never shine on a potato. A few hours' exposure to the sun, turns the surface more or less green, and gives the root a bitter unpleasant flavor. When put in the cellar, they should be shut out from the light; and if there is earth enough mixed with the roots to prevent any circulation of air, they will be the better. Be not over anxious about a little dirt on your potatoes when housed, if they are dry, and no root should ever be put in the cellar or in a pit when wet, for a covering of earth is one of the best methods of keeping potatoes fresh and in good order, when in the cellar. Some farmers who pride themselves on the quality of their roots, line their potato bins with thick turf, grass side out, and when filled, cover them in the same way. Pitted potatoes are fresher and better in the spring than those put in the cellar, for the reason that light and air are excluded by the covering of earth. All roots pitted early, undergo a slight heating process, which renders it necessary that holes, closed with a wisp of straw, should be made in the top of the heaps to let the heated air escape. This must be thoroughly closed before severe frosts occur. Turneps and carrots require this opening more than potatoes, though the latter are essentially benefited by the precaution.

SEED CORN.—Do not trust to chance for your seed corn. More failures occur in this most valuable crop, from bad seed, than from almost any other cause. Corn, especially all those varieties with large cobs, is rarely so dry, that when cribbed or piled in masses it will not heat to such a degree as seriously injure, if not destroy, its vegetative powers. Experience taught us a lesson in the matter, a few years since, we shall not soon forget. We had a beautiful field of corn which averaged between 70 and 75 bushels of corn to the acre, all apparently sound and dry. In gathering it, when a particularly fine ear was noticed, or more than one such on a stalk, the husks were stripped down, and when the corn was unloaded at the barn, all such ears were thrown into a large tub containing some 15 or 20 barrels, standing on the floor. No danger from any source was apprehended, and when the whole was gathered, this corn intended for seed, was traced up by the husks, and kept dry through the winter. On shelling the corn, some discoloration of the cob was observed, and planting showed to our regret, that while shut from air in the tub, the corn had heat to such a degree as to destroy its value for seed wholly, and a loss of our crop was the consequence. We say, then, gather your seed corn carefully, the ripest and best ears, trace it up at once, and hang it where air circulates freely, and it will dry fully.

WINTER APPLES are to be gathered this month, and on the manner of performing it, very much of their durability is depending. To keep well, apples should be ripe, not bitten by frost, and perfectly dry and clean when gathered. The temperature of the place where they are kept, should be low, and the air dry. Cellars are usually too damp, causing speedy decay. Packed in barrels with clean sand, or powdered charcoal, has been found one of the best methods of preservation; but there are some apples, such as the Roxbury Russet, Baldwin apple, and some of the pippins, that placed in bins, in ordinary cellars, will keep until April or May. A good winter apple, fresh and crisp, is one of the greatest delicacies of our country, and their preservation should receive a corresponding degree of attention. We may add too, that as the use of steam shortens the time of sea voyages, our apples will be in great demand for exportation, and may in time become no trifling item in our shipments to less favored countries.

PLANTING TREES may be performed in this month with success; indeed some distinguished nurserymen, prefer the fall to the spring for this purpose. Trees can be removed in safety after the terminal buds on the main branches are formed, as this is a sure indication that growth, and the circulation of the sap has ceased. In transplanting, trees do better when the ground is moist, than when it is either too wet or too dry. When too wet, the ground becomes stiffly compacted around the roots; when too dry, the young roots become exhausted of their juices, and the tree suffers, if it does not perish.

MANURES.—Farmers who have the means, will find their account in adding to their stock of manures, by carting into their barn yards, muck from swamps or places of deposite in woodlands, or even good common earth, scrapings of ditches or wash of highways, to spread over their yards, to mix with the dung of cattle, and absorb and retain the salts that are too frequently lost by the waste of the liquid manure. In foreign countries, the gathering of leaves to spread over the yards and litter stables, is extensively practiced, for the want of better materials. Here in our deposites of swamp muck, we have the vegetable remains of centuries already decomposed to our hands, and only requiring impregnation with animal salts in our yards, to become the most valuable of manures. To increase his manures by every possible way, is for the interest of the farmer, and experience proves there are few methods more feasible than this.

ROOTS, such as beets, parsnips, carrots, vegetable oysters, &c. are frequently thrown into open bins in the cellar, and soon become wilted, and deprived of their flavor. They should be packed in barrels or bins, and the interstices between the roots filled in with sand, or sandy loam. In this way their freshness is preserved, and they can be kept good throughout the season. When used out, the sand may remain for use another year.

FIRE WOOD.—Is the wood house filled for winter's use? If not, a loss is certain, first of comfort and patience, both of which disappear before a fire of green wood; and secondly of time and money in getting and using such wood. It is bad policy in every respect, not to have wood ready for burning, without being obliged to cut and draw a stick at a time, whenever wanted.

STOCK.—October is a month in which such of the stock of a farm as is not deemed proper to winter upon it, is disposed of; and no little attention is necessary to determine this point advantageously. The price to be obtained, the cost of keeping, the gains of growth, &c. are to be considered; as a farmer not unfrequently finds that he has disposed of animals he should have kept, or wintered such as a moment's consideration would have shown him could give no profit. Animals that are fattening, demand continual care; and an occasional change of diet will be found useful when any disinclination to food is observed. A small quantity of charcoal given weekly to hogs shut in pens, is found to greatly improve their thrift and propensity to fatten.

FALL PLOWING is practiced to a considerable extent in most parts of the country, and is proper on all soils that are heavy and hard to work when wet, as such lands usually are in the spring. It is useless to put seeds into the earth, when the whole is in hard lumps of several pounds weight, and there is no pulverizer of such soils equal to frost. When heavy lands are plowed in autumn, many weeds and insects are destroyed; the work is done when a farmer's teams are usually in better condition for labor than they are in the spring; and advantage can be taken of the first favorable season to put in seeds, a thing frequently of great consequence in securing a good crop.

Inquiries, Correspondence, &c.

Barilla or Soap Boiler's Waste.

"Having purchased lately 200 bushels of Barilla from a soap maker after he was done with it, paying him $20 for the same, or ten cents per bushel—I wish to inquire of you the best way to apply it as a manure. I want to sow six acres of land to wheat, on which I have this year had oats, and which is already once broke up. I had corn on it last year, and it was limed two years ago. You will also oblige me by stating where I can obtain some Mediterranean wheat. JOB SQUIER."

"*Plainfield, N. J.*"

Barilla, or soapers' waste, has never been much used in this country, but in England has for many years been one of their most esteemed manures, and vast quantities of kelp, barilla, and soapers' waste are annually used in the vicinity of large cities. According to Davy, barilla contains of

Calcareous matter or lime, ...	91
Gypsum, ...	5
Common salt, ...	1¼
Carbonate of soda, ...	1¾

And the principal value of soapers' waste may be attributed to the lime present from the use of barilla.

In England, it is principally employed by spreading it over grass lands, and is found to be one of the most valuable dressings so used. When applied to arable or tilled lands, it is considered best made into a compost with earth and dung. Some agriculturists reject the dung in the compost, as they think the mixture of quick lime with the manure has an injurious effect on the latter. When dung is used, that which is fermented is best, and one part of this mixed with four parts of good mold, and four parts of soaper's waste, and the whole incorporated by repeated turnings. When used alone, it has been found most serviceable on lands rather heavy than light; and the quantity used varies greatly, ranging from 50 bushels to 200 per acre. Large quantities of land are, however, manured by direct application of the barilla, or waste, to cultivated crops, or to the lands on which seed is sown. According to the British Husbandry, the value of a wagon load of the soaper's waste, is considered by some about equal to five loads of rotten dung.

In some experiments made by order of the Board of Agriculture, the effect of different manures on the potato crop was as follows:

Plat No. 1, no manure, produced..........	134 lbs.
" 2, stable dung and soap ashes,....	298
" 3, stable dung alone,............	315
" 4, soap ashes alone,.............	383

We are unable to inform Mr. Squier where the Mediterranean wheat can be procured.

The Sugar Beet.

W. S. of Compton, R. I., who makes inquiries respecting the value of the sugar beet, will find numerous testimonies to their utility in feeding cattle, swine, sheep, &c. in the preceding volumes of the Cultivator, and other periodicals of the day. The communication of Mr. GUTHRIE, to which he alludes, is the only case which we recollect where their use had not been satisfactory. We have fed few of them ourselves, but from the extensive cultivation they are now receiving in Europe for sugar and for feeding stock, and the general approbation given them where tried in the United States, we have been induced to think very favorably of them. It is doubtless true, that when fed to animals, they will require a mixture of other food, as is usual when other roots are given; as hay to cattle, or corn to swine. Fed in this way, the constituents of the roots themselves would indicate, that, as experience seems to have proved, they may be profitably grown and fed to stock. Partial failures with all new articles, or in new modes of culture, may be expected; but the skill and perseverance which has enabled the farmer to succeed elsewhere, will not fail us here.

Renovating Grass Lands.

MESSRS. EDITORS—As your valuable paper purports to have particularly in view the instruction of the farmer, and having for a long time been gratified with its many sound articles, I venture to request of yourselves, or some of your contributors, an article upon a theory in farming which has for a long time been supported by the Editor of the Boston Cultivator (Mr. B.) Mr. B. goes on the broad principle that New England cannot raise grains, potatoes, beef and pork to advantage, or rather, that she can do something else to more advantage, for instance, the great staple of hay; and this he thinks, can be done with little or no manure. Mr. B. thinks from experience, that grass lands turned once in three years, in September after having been mowed, and seeded down, will grow richer and better yearly. This is what we wish to be satisfied upon. The principle that grass does not impoverish land, can it be supported on sound reasoning? Can fair lands be made to cut two tons of hay with the simple enriching of the green sward once in three years?

Springfield, Aug. 1840.

REMARKS.

As a general rule, it may be said that the exhaustion of any soil is in proportion to the quantity of vegetable matter taken from it in cropping. The state in which the crop is cut, is however, not without its influence; thus if plants are allowed to ripen their seeds, the exhaustion will be effected sooner than if cut green. Grass lands return to the earth considerable vegetable matter even when mown annually, and generally still more when pastured; and we should have little doubt that a naturally good soil, might, by the process of plowing and reseeding alluded to, be kept in a fine condition for any term of years. We should however question whether such a course would be the most profitable on lands capable of producing grain, or a rotation of crops. We have found that the quality and quantity of grass has been materially improved on meadows that had been "bound out," as the phrase is, so that the grass was poor and light, by turning the sward, giving a slight dressing of compost manure, and putting on with the grass seeds, some spring grain, such as wheat or barley. It has been uniformly found in these cases, that the grasses were more vigorous, and the crop greater after each plowing, and remained so until the clover had disappeared, and the sward had become close and compact. The roots of the perished clover, and the decomposed sward when turned, furnish the best pabulum or food for the new sown grasses, and repeated, as proposed by Mr. B. would doubtless produce the effect anticipated. But we do not advise our New England friends to give up the culture of grain, or roots, or devote their farms to any single crop exclusively; nor have we understood Mr. B. as advising this course. Exclusive farming is admissible in very few cases; while a judicious course of convertible husbandry will be found the most ameliorating to the soil as well as the most profitable.

Cement for Buildings.

"A subscriber inquires what kind of cement is the most durable and best adapted for the outer finish of a building, and also the method of its composition."

If some of our builders, who are in the habit of using such stucco or cement, will give us an account of its preparation and use, we shall consider it a favor, as the subject is one with which we have little acquaintance.

Swarming of Bees, &c.

We have received from Mr. PALMER of New-Marlborough, Mass. a paper on the subject of bees, containing strictures on the article in the July number, on the same insect. Its length and desultory nature prevents our inserting it entire, but the following extracts will show the points on which he differs from ourselves, and most modern apiarians; and first, on the *swarming* of bees. He says:—

"Experience teaches me that a swarm never comes out without a place to go to looked out long before hand; for I have myself seen bees clearing stuff from a hollow tree, when there was no swarm there at the time, but afterwards a swarm occupied the place thus cleared out."

In the matter of queen bees Mr. P. is altogether a disbeliever in their existence; after describing the ancient method of destroying bees with the fumes of sulphur, he says:—

"I have time after time looked over the bees that fell from the hive into the pit, one by one, and then those remaining in the comb, and I never could find but two kinds of bees, the common working bee and the drone; of course I am convinced there is no such bee as the one called the queen. I have heard many people pretend to describe the king bee, as it used to be called, but no two agreed respecting him. One says he is larger than the other, another that he is smaller; one says he is one color, and another that he is of a still different color."

Mr. P.'s opinion respecting the domestic polity of the hive, is as follows: "I believe that bees are so constituted by the Almighty, that one rules as much as another; and that *every one* works as long as there is any thing to be done without compulsion. I believe there is not an idler in the hive; and I furthermore believe, that what we call drones are the breeding bees, for this reason, that when they want no more young, we see them destroying the drones, sparing only just enough to begin the next year."

We have room only to remark, that although we are aware opinions which owe their existence "to a life of seventy years," as Mr. Palmer speaks of his, are rarely changed; yet if he will procure some of the latest practical works on this useful insect, such as Weeks, or Wilson, we presume he will find reason, if not to change, at least to materially modify some of the positions here advanced, particularly those respecting the queen bee, and the character and use of the drones.

The Grasses—Wheat.

Our correspondent "J. D." of Napoleon, Mich. is informed that the specimen of new grass he forwarded to us, appears to be the species called in England *Poa*, and of the variety *Poa pratensis*, although owing to its condition there may be a mistake in the variety.

Orchard grass, or *Dactylis glomerata*, respecting which he inquires, is one of our most valuable grasses either for mowing or for pasture; and particularly so for shaded grounds. Some farmers have complained of its growing too large and coarse; and if sown thin, on rich ground, such will be its character; but when mixed with other seeds, such as timothy and clover, or rye grass, it grows thick and fine, is fed by all animals with avidity, and springs after mowing or feeding with greater quickness and rapidity than any grass with which we are acquainted. We may remark here, there are several kinds of grass known among farmers in different parts of the country, as orchard grass, but widely differing in their qualities from the *dactylis*, or true grass.

J. D. asks the process of converting winter into spring wheat. To do this, nothing more is necessary than that the winter wheat should be allowed to germinate slightly in the fall or winter, but kept from vegetation by a low temperature or freezing, until it can be sown in the spring. This is usually done by soaking and sprouting the seed, and freezing it while in this state and keeping it frozen, until the season for spring sowing arrives. Only two things seem requisite, germination and freezing. Thus it is probable, that winter wheat sown in the fall, so late as only to germinate in the earth, without coming up, would produce a grain which would be a spring wheat if sown in April, instead of September. English spring wheats are here winter wheats, that is they are there sown so much earlier than it is possible to sow here, that put into the earth with our spring wheats, they do not come to maturity. We have for two or three years grown a spring wheat produced by the above process, from the autumn or winter flint wheat, and consider it a very good variety.

Thorn Hedges.

S. D. Fraser, of Fowlerville, has forwarded the following queries, relating to the subject of hedging:

"1. Is the native or exotic thorn, all things considered, best adapted to our soils, and to withstand the frosts of winter?

"2. Is the seed planted on the line intended for the fence?

"3. How is the seed gathered and prepared

"4. Would a mound two feet high and four feet broad, afford nourishment to the plants, and tend to protect them from the mice?"

As Mr. Fraser states that the native thorn thrives well on his lands, it is probable it would succeed as well or better than the English Hawthorn, or any variety of foreign thorn. The much greater heat and dryness of our summers, has appeared unfavorable to hedges of foreign thorns; as they rarely, for any time, have that freshness and vigor so common to hedges in Britain. The value of our several native thorns for hedges, is yet to be determined by experiment; but we are confident, if hedging is ever introduced into this country to any extent, we must rely on our native trees, instead of imported varieties. The common thorn, honey locust, and buckthorn, appear at present the most likely to succeed at the north; the osage orange promises much for the south.

The seed is never sown on the line of the fence. It is first cultivated in beds, and either allowed to stand where the seed is sown till the trees are large enough to set for fence, or transplanted into nurseries from the seed bed, for cultivation. The trees, if well cultivated, grow rapidly, and it will be found better usually to let them attain the diameter of half an inch, two feet from the ground, before they are set for hedges.

The seeds of the thorn vegetate with some difficulty. Mr. Wheeler directs that they be gathered, buried in the ground and suffered to remain until the second spring, when they may be taken up and sown in drills. Other cultivators of the thorn have mixed two parts of earth with one of seed, laid them in a ridge upon the surface in a garden or some secure place, and covered them with about three inches of mould. Overhaul once in the summer, and replace and recover the seeds. In the autumn following they will usually be found to have germinated, and may be sown in drills or beds.

The thorns set on such a mound as is mentioned would be more apt to escape the mice, and would doubtless receive sufficient nourishment; but hedges in this country suffer more from heat and drouth than other causes, and too high a mound might be injurious in that respect. Mice rarely attack trees or hedges which are kept clean from weeds and grass; and hedges must be kept free from such things or a failure must be expected. Beech, it is not probable, could be used successfully as a hedge, as Mr. F. seems to suppose; it would not give a thick bottom.

Mr. Fraser will find all necessary directions for planting and cultivating hedges in the previous volumes of the Cultivator, to which our limits compel us to refer him.

Singular Worm.

H. C. Beardslee of Montville, near New London, requests some information respecting the habits of a worm described by him as making sad ravages with the foliage of apple trees. It is unquestionably the larvæ of some one of the numerous family of Phalæna or moths, and like the ordinary caterpillar, is produced from eggs deposited by the moth on trees or plants suitable for its food. Such worms are always more successfully attacked while young, and clustered together, than when older and scattered in all directions in pursuit of food. If any of our entomological friends, from the description given below by Mr. B. should recognize the kind of worm, and will furnish us some account of its transformations and habits, it will doubtless be welcome to many.

"Length of the body two inches; thickly set in every part with white hairs. Color very dark olive green, with eleven longitudinal stripes of bright yellow. Feet seven pairs; three pairs forward, small, black, and pointed; four pairs about the middle, short, thick, yellowish brown. These last are its means of locomotion. Head black. When irritated it turns up its tail at right angles to the body, and then throws the fore part of its body over, until it is parallel with and nearly touches the back. Its excrement is as large as a kernel of rye cut transversely, and is marked with six deep longitudinal grooves."

The Great West.

We have received an interesting, and in some respects, amusing communication from the well known Pioneer of the West, Thomas S. Hinde, at Mount Carmel, Illinois. Its great length and miscellaneous nature precludes its insertion entire, but we must present a few extracts to show what he, who knows it well, deems the Great West to be. Of himself, he says:

"This is the 43d year of my pilgrimage in the wilderness of the Great West; having been three times a citizen of Kentucky, twice a citizen of Ohio, twice a citizen of Illinois, and have ranged through the west pretty generally. I saw Daniel Boon, the first settler of Kentucky, taking up his line of march from his *Boonsborough* on the Kentucky river, to the then new region of Upper Louisiana (now Missouri) in 1797, accompanied by his venerable spouse, and traveling in the old style with pack horses and *bells*, to his new region of loneliness and buffaloes."

When the west, in 1832, celebrated their first anniversary of 50 years from the first settlement west of the mountains, General Kenton, the associate of Boon, was chief, and Mr. Hinde as *Pioneer junior*, acted as adjutant. Mr. Hinde, who we believe is a preacher of the Baptist order, was instrumental in establishing the first Religious Magazine and newspaper, west of the mountains. After a glowing eulogium on the agricultural capabilities of the west, Mr. Hinde says:

"As a pioneer of the west, for my residence in the decline of life, and with a view of having my family in a desirable part of the west, I chose the central part of the great Ohio and Mississippi Valley as the most desirable part; connecting the advantages of health, climate, soil, agriculture and commerce, together with manufacturing, looking some 20 or 30 years ahead, as experienced farmers usually do. While during this period, the whole western empire has been overrun and settled, it was not until within a very short time past that the pioneer's *choice* began to be duly appreciated. The object of this letter is therefore to inform you, and northern and southern emigrants generally, who can live without slave labor, that we have, 1st, the best tobacco and hemp region west of the mountains; our tobacco bears two per cent premium in the New Orleans market, over all other tobacco. 2d, we have the best grain and grass country combined, to be found in all the west. 3d, we have an excellent fruit country; also well calculated for the raising the mulberry, and in some degree, the vine; our wild grapes are abundant, and the best I have ever seen. I have pears growing here (the Bergamot,) brought originally from England by my grandfather, some 120 or 130 years since. We want men of business and enterprise, and since business of all kinds has been called to a grand halt, to those who would seek a region where speculation has never raged, where the people are prudent and industrious, where they can find an asylum from the fluctuations of the times, our country at the southern termination of the grand prairies, furnishes one of the most desirable places in the west; and to those who think of removing, I would say, 'come and see.'"

Let no one who reads the following extract, doubt hereafter of the *fertility* of the Wabash Valley; taken in connection with the statements of the Cincinnati census-taker, it *almost* establishes the doctrine of spontaneous production. In any event, Mr. Hinde's country must be the very Eldorado of the childless, and where the heart of the once barren sings for joy.

"I feel," says Mr. H., "some degree of hesitancy in detailing some very singular facts, but as they are true, I am not ashamed of doing so. You need not call aloud for *emigrants* [we presume Mr. H. means foreigners,] to come, for of all regions for the bearing of children, this may safely be said to excel. Twins are quite common, sometimes three at a birth; and what is passing strange, old ladies on removing to this region, renew their vigor, and begin again; some whose youngest were 7, 8, or 10 years old, on arriving here, have added to their family; this is quite common. * * * Last year, a gentleman and lady who had been married nine *long* years, and had no offspring, visited the lady's parents in this place. The visiters resided in Philadelphia, and in nine months from the time they left this place, to return to that city, the lady was blessed with a fine son!"

We are pleased to learn from Mr. Hinde's letter, that strenuous efforts are making to furnish this rapidly increasing population with a good education. The great west cannot avoid being a rich country; nature has made it such; the bringing out of its resources must depend on its inhabitants, and the character of these will be governed by the education they receive. Teachers are at present much wanted in that region, and competent ones, will find constant employ. Mr. Hinde himself is about to open a "Log Cabin" college on the manual labor system, for the purpose of giving farmers' boys an education, such as will be useful to them in any station of life. His plan of an agricultural school or college is well conceived, and we trust will succeed; let him "go ahead." We trust Mr. H. will fulfil his intention of allowing us to hear from him again.

The Mulberry—Hessian Fly.

The following queries we have received from R. French, Esq. of Sherman, St. Joseph's Co., Mich:—"1st. What is the best method of keeping the common white mulberry during the winter, after they have been taken out of the ground in the fall. The trees are of two summer's growth, and the object of taking them up is to secure them from the frost, for planting out in the spring, where they are to stand hereafter?—2d. What can the Multicaulis be purchased for, per hundred, at the nurseries in the vicinity of Albany; say trees of one summer's growth?"

Reply.—To preserve the white mulberry, nothing more is necessary than to pack the trees in a cellar with sand or earth. A friend of ours purchased in the fall, some 5,000 trees, removed them to his cellar, packed them in this way, planted them out in the spring, and every tree grew. The multicaulis is kept in the same way, without the least danger or difficulty. The multicaulis is not cultivated to any extent in the vicinity of this city. We have seen nothing indicating the prices, at which the plants are sold at this time.

The grain insect which has been so destructive to wheat crops in some parts of Michigan the past year, is unquestionably the Hessian fly; no other depredator on wheat, with which we are acquainted, answering to the description given by Mr. French. The fly will probably run its course there, and cease its ravages, as it has in other parts of the country; and as the grain worm has already partially done in this state. The advance of agricultural knowledge, and a more skilful cultivation, may enable us to prevent their recurrence.

Mr. Bates' Short Horns.

Mr. Joseph Cope of East Bradford, Chester Co. Pa., informs us that, wishing to procure some of the best Short Horns, he went to England in the summer of 1839 for that purpose. After traveling through several counties, he attended the Oxford Meeting of the English Agricultural Society, and was present at the public sale of stock which closed that splendid spectacle. Thus far he had not been able to procure stock to his liking. On visiting Kirkleavington, however, he found his expectations fully realized in the herd of Mr. Bates, who received four prizes for that number of animals taken by him to Oxford. He purchased a bull calf, Yorkshireman, eleven months old, of Mr. Bates, for which he paid him $525—expense of shipping, $100—freight $50, making $675. Yorkshireman was sired by Short-tail, grandsire Belvidere, who was sire of the famous Duke of Northumberland. S. and D. were both from Dutchess' cows. In the certificate given by Mr. Bates, he states that had Yorkshireman been taken to Oxford, he would have won the prize, as he surpassed the one that took it, more than either of his four surpassed those shown against them. To show the estimate placed on this stock, Mr. Cope states that three fine heifers (one of which was originally from the herd of our correspondent "R." of Butternutts,) belonging to Mr. Collins and the Messrs. Lathrops of Springfield, Mass. recently arrived at his farm to be put to Yorkshireman.

South Downs.—During the same tour, Mr. Cope purchased and brought home with him, seven South Downs—one buck, for which he paid $150, and two ewes, from the flock of Mr. John Ellman, and four ewes from Mr. S. Grantham, steward to the Earl of Liverpool.

FARMING IN GERMANY—SHEEP.

We have received a well written essay on the above subjects, from the pen of J. S. Carr, Esq. an English gentleman, resident in the Duchy of Luxemburg, of which we propose giving an abstract to our readers. The state and progress of agriculture abroad, must always be a subject of interest to the American farmer, for though many of their practices, owing to various circumstances, are not applicable in this country; yet many valuable hints for our conduct may be derived, and multitudes of facts, from which we should be able to profit, are in this way elicited.

The soil of the country, the farming of which is particularly described by Mr. Carr, is elevated and sandy, with districts of rich loams and heavy clays, and cultivated with much "plodding industry." The size of the farms varies from 50 or 60 acres in the hands of the peasantry, to 500 or 2,000 in the hands of the farmer or proprietor. The buildings are about the centre of the estate, and consist of the dwelling house, flanked by rows of very large buildings, often 200 feet long by 60 broad. These contain the stables, cow house and dairy, sheep house, and barns for the whole crops. The threshing floor is immense, admitting a four horse wagon of grain at once, and shelter to a dozen such loads if necessary, at a time. The number of cows depends on the size of the farm, varying from 300 to 400, exclusive of young cattle and oxen. The sheep house is able to contain from 500 to 5,000 sheep; for shelter for the flock, be it large or small, is considered indispensable in Germany, thus corroborating the opinions of our correspondent "L. A. M." on the management of sheep, most fully.

One of the most valuable crops cultivated is rape, which, though somewhat uncertain from the attacks of insects, is much prized for its oil, and for feeding cattle. The crop is frequently worth from £10 to £20 per acre. The straw is generally burned and scattered over the fields. For manuring, the basis of improvement is a dressing of marl, (containing about 60 per cent of lime,) at the rate of 164 cubic feet per acre. The deposites of ponds, marsh mud, peat, and in short, every mode of making manure is practiced with skill and success. These are combined with the large quantities of muck from the stables, sheep yards, pig pens, &c. and all rendered available to the utmost extent.

Within a few years a system of farming, based on the principle of rotation, has been adopted with the best success, and a great improvement of the crops and the soil.

> "The rotation is now generally of ten years, viz:—1st year, allow well dunged; 2d, rape; 3d, wheat; 4th, barley; 5th, (light dunging) peas; 6th, rye; 7th, oats sown with rye or timothy grass seeds and red clover, which as well as the peas, is gypsumed with great effect before the dew has left the plant in a May morning. The clover is mown twice for hay, and left two years longer for pasture."

Good cattle and horses from England are gradually supplanting the native stock; although for the purposes of the dairy, we understand cows of the common breed are still preferred. The farm horse of the north of Germany is described by Mr. Carr, as "a long legged, small bodied, big headed, shapeless animal, bred in Holstein or the Danish islands; his price from £15 to £20, and two tons is a load for four of them, in a wagon over country roads." The cows are not considered as very remunerating, but they are necessary to convert the straw and hay into manure. They are frequently let to the dairy man at £2 to £2 10s. per head.

It is to the sheep, however, and those of the Saxon or Merino breed, that the farmer of the north of Germany looks for his profit, and it is a source that rarely fails him. The greatest pains are taken to keep these breeds pure and separate from all others, as on the fact of all the fleeces of a flock resembling each other in quality, much of the profit is depending. We shall make an extract or two from that part of Mr. Carr's essay particularly relating to sheep, as it is a subject of increasing interest to the northern farmer, and the whole United States:

> "The Merino is a long legged, narrow bodied, ugly animal, with a fleece varying in weight in proportion to its coarseness, (although fine wool is specifically heavier than coarse) from two to three pounds. The staple is very close and thick growing, greasy and oily to the feel, elastic and soft, very tenacious, and formed differently from any other wools, with a number of minute bends or curls in each hair."

In order to improve and render uniform the wool, breeders keep large numbers of rams, the wool of which, carefully cleansed, is submitted to experienced staplers, and among 50 or 100 rams, that to the inexperienced eye would present little difference in appearance, very great differences of quality and general goodness will be found. Those, the wool of which is the most uniform in fineness as well as the best in quantity, are selected for the improvement of the flock, and it is by continued recurrence to this mode that much of the superiority of the German or Saxon wool is owing.

> "There are in the north of Germany two kinds of the Merino, the first the Infantado, or Nigretti; distinguished by its shorter legs, and a stouter make; the head and neck generally short and broad, the nose short and turned up, and the body round like a barrel. The wool is often matted upon the neck, back and thighs, and grows upon the head to the eyes, and upon the legs to the very feet. The grease upon the fleece is almost pitchy, and as the dust becomes incorporated with it, the washing is a matter of difficulty and some risk. * * * The fleece of this species is generally thick, close grown, and abundant. Ewes may average 2½ and even 3½ pounds by careful feeding, (which, however, must never approach to feeding to be fat, else the wool becomes wirey and hard;) and rams and wethers may bring four and even six pounds. This is the animal that came to Austria from Spain."

We may add that this was also the animal first imported into the U. States from Spain, by Messrs. Humphreys & Livingston.

> "The other breed is the distinct one called in Spain the Escurial, and from this was made the Saxon importation in 1765. Their shape differs markedly from the Infantado, longer legged, with a long spare neck and head, with very little wool on the latter, a finer, shorter, softer character in its fleece, but deficient in quantity. 1½ lbs. to 2 lbs. is frequently the amount from ewes, and 2 lbs. to 3 lbs. from rams and wethers. On being presented to the Elector of Saxony, in 1765, they received the appellation of Electorals. A great deal of trouble has been taken to combine the advantages of both breeds by crossing, but with doubtful advantage, and, although the mixed breed has been found suitable for crossing with sheep not thorough bred, (called Mestizen,) yet experience has shown, that to breed with advantage, all the rams, be the ewes what they may, should be thorough-bred Infantadoes or Escurial, and that the same strain of blood should be persevered in. Good rams are of course every year becoming more attainable, but there are examples of breeders in Saxony who still obtain for distinguished rams, as much as 100, 200, or even 300 Louis d'ors."

This coin is worth $4.35, consequently such rams are worth from $450 to $1,300, a price which will well remunerate the extra attention paid them.

The question has been frequently asked, why, when there is such a demand for fine wools in Britain, and so much attention is there paid to the breeding of sheep, that the Merino has not been introduced into that country. The remarks of Mr. Carr on that point, will give a satisfactory answer, and will also show that the climate of the United States is well adapted to the production of fine wool, when reasonable precautions for their comfort in our winters are adopted. We may add, that great efforts are at this time making to acclimate the Nigretti breed of the Merino in England, Lord Western having a flock of very fine English Merinos; but the attention and care paid to his, if absolutely necessary, must render their general introduction impossible. The experience of each succeeding year proves there is nothing to prevent the U. States becoming the greatest wool growing, as it is the greatest cotton growing country on the globe.

> "I am aware that these sheep have been frequently brought to Britain from Spain, but there never was labor more lost, as they cannot thrive in a damp climate; besides, it is quite necessary that they should have a wide range of dry and hilly pasture, of short and not over nutritious grass or herbage. If allowed to feed on swampy or marshy ground, even once or twice in autumn, they are sure to die of liver complaint in the following spring. If they are permitted to eat wet grass, or exposed frequently to rain, they disappear by hundreds, with consumption. In these countries it is found that the higher bred the sheep are, especially the Saxon or Escurial, the more tender. They are always housed at night, even in summer; except in the very finest weather, when they are sometimes folded in the distant fallows; but never taken to pasture till the dew is off the grass. In winter they are kept within doors altogether, and are fed with a small quantity of sound hay, and every variety of straw which has not suffered from wet, and which is varied at every feed; they pick it over carefully, eating the finer parts and any grain that may have been left by the threshers. Abundance of good water to drink, and rock salt in their cribs are indispensable."

Mr. Carr states the wages of active young men per annum, who board in the house, to be from 25 to 30 dollars; exclusive of certain trifling perquisites, called sack money, arising from all grain sold, &c. On the large farms there are always more or less married men employed, and their wives are always included among the farm laborers. "The wages may be averaged for men, from the first of May to the first of November, at 10d. and in winter 8d. per day, [16 to 20 cents per day,] the women always 2d. less. Notwithstanding this low rate of wages, poverty is rare, and wandering beggars are unknown."

Comparative Value of Articles used as Food.

Professor Silliman has given a translation of M. Dombasle's experiments with several articles in feeding animals. Seven lots of seven sheep each were selected, of nearly equal weight, kept in separate divisions of the stable, the weight of each lot ascertained once a week, and the experiment continued five weeks. One of the lots was fed exclusively on lucerne hay, of which each sheep was found to eat 15 pounds per week. Each of the other lots received half the quantity of lucerne, and enough of other kinds of food named to keep them in good health, and of the same weight. The kinds of food used were, *dry lucerne, oil cake, oats and barley, raw potatoes, cooked potatoes, beets* and *carrots;* of these substances, the quantity found necessary to equal the half ration or 7½ pounds of lucerne, withheld from all the lots excepting the first, was as follows:—

Oil cake,..........	4½	lbs.
Barley,...........	3½	"
Oats,.............	3	"
Raw potatoes, ...	14	"
Cooked potatoes,..	13	"
Beets,............	16	"
Carrots, ...	23	"

or in other words, 23 pounds of carrots were only equal to 7½ pounds of lucerne hay, 4 pounds of oil cake, or 3 pounds of oats. It may be remarked that the quantity of water drank by each lot of sheep was also accurately ascertained, and while those fed on grain and oil cake used during the experiment about 200 quarts of water to each lot, those fed on roots did not use 100 quarts; and those on carrots, only 36 quarts.

Nutritive Qualities of Sugar.

All who have paid attention to the subject of nutrition, whether practically or theoretically, are aware that sugar is one of the most nutritive of substances; yet that it is impossible to subsist upon it alone for any considerable length of time. This truth received a melancholy confirmation in the death of Stark, the Vienna experimentalist, who fell a victim in an experiment of this nature. There is but a shade of difference in the elementary atoms of sugar, starch and wood, according to the statements of Berzelius and Prout; and the inference therefore, that it must be nutritive, is found to agree with the fact. An experiment was made in the Indies, of feeding cavalry horses on sugar, and when mixed with a small quantity of cut hay or straw, was pronounced the best of feed; alone, it did not distend the stomach, the action of that organ was impaired, and in the cases persevered in, disease and death followed.

The author of a Year's residence in Cuba, states that though the labor of the sugar making season is the most severe of any to which the slaves are subjected, yet they always grow fat and sleek in that employment; a fact attributed to their making a free use of the cane, and the expressed juice and syrup. It is probably to its containing so much more saccharine matter than other beets, that the white silesian or sugar beet, is so valuable as a food for animals. It has indeed been supposed by some that the nutritive qualities of any substance could be correctly estimated, by a knowledge of the sugar it contained, or of the materials capable of conversion by animal chemistry into that substance.

In the early settlement of all wooded new countries, the article most relied upon for the winter subsistence of cattle, until grass or grain can be grown, is *browse*, or the terminal branches of twigs of trees; and of these, there is none so valuable or nutritive as those of the sugar maple. We well remember with what eagerness, as the tall maples fell before the axe of the woodsman, the cows and oxen would plunge into the snow to be the first at the feast; and we have never known a stock of animals more hearty or in better condition, than when fed in that way, with each a 'nubbin' of corn daily.

A correspondent of the Journal at Syracuse, Onondaga, has furnished another proof that the sap of the maple, or in other words sugar in solution, is of value as food for animals. He says:—

> "A neighbor of mine tapped his sugar bush about the 1st of March last, and from that, to the present time, our hogs have daily run in the woods in which the trees are tapped. Soon after the sap weather commenced, we began to see a change in the condition of our hogs, and remarked upon the impossibility of their thriving so, on what few nuts and roots they could get. In the course of a week or ten days after their thrifty appearance commenced, we happened to be in the bush, when they made their visit to the sap. The mystery was at once explained. From that time we noticed that they made constant visits to the troughs. We could see that our shoats grew plump daily, and even fat, and that too from drinking maple sap. I should think they gained one-fourth in weight, while they had access to the sap. Since the sugar season has passed, they have remained nearly stationary; another proof of what I have said. Next spring, I am mistaken if my slop barrel does not have plenty of this beverage, in readiness for my pigs."

We would hint to the correspondent of the Journal, that although there is no doubt of the nutritive qualities of sugar in bulk or solution, yet if he will make a liberal addition of Indian or barley meal, to his slop barrel of sap, or allow his pigs a good range of wood land, abounding in shack, we will venture to say he will find the thrift of his swine greater than if confined to maple sap alone.

SALT FOR ANIMALS.

The importance of furnishing salt to domestic animals, does not appear to be sufficiently understood. Though all are aware of the avidity with which animals eat it when given them; there are many who scarcely salt their animals through the season. Now it is evident that animals should have it at all times at their command. They will never eat more than is good for them, and it is essential to their health and comfort. The quantity allowed in Spain for 1000 sheep, is 25 quintals, probably twice the amount the same number usually get in this country; and this quantity is consumed by them in about five months, they getting little in the winter or while journeying to and from their mountain pastures. Lord Somerville allowed a ton of salt to a thousand sheep, and found they consumed the most in the spring and fall, and at these seasons it was probably most useful to them as a security against disease. Of its value for animals in a medicinal point of view, the following fact, stated by the celebrated Curwen, must be deemed decisive:—

> "Before I commenced giving my cattle salt, my farrier's bill averaged 58 pounds per annum, (or more than 250 dollars,) and since I have used salt, I have never paid in any one year over five shillings."

Where cattle have access to sheds, troughs with a constant supply of salt in them, should be kept for their use. Where they must be salted in the fields, troughs should be placed, and salt supplied frequently. There will, in exposed troughs, always be more or less loss from rain, but that should not prevent a supply. It has been found an excellent practice where sheep alone come to the troughs, to put a little tar on the bottom, and sprinkle the salt upon it. In this way a small portion of the tar is taken with the salt, and is not only found conducive to health, but, rubbed in this way over the nose, serves to prevent the attacks of the Estrus ovis or sheep fly.

DICTIONARY OF TERMS

USED IN

Agriculture and its Kindred Sciences.

CULTURE. The process by which the soil is prepared, the seed sown, and the plant brought to maturity, is denominated culture. The preparation of the soil, and the sowing of the seeds, are usually called the previous culture; that care and attention which follows the springing of the plant, is known as after culture. In this country no after culture is given to wheat, while in Europe it frequently receives the same careful after culture of weeding and hoeing, that is here given to corn and potatoes. It is probable that an increased attention to the culture of wheat will become necessary here, as the natural fertility of the soil decreases, and the weeds that multiply under an improvident system of agriculture, gain a more extensive and permanent foothold in our soils.

CURCULIO. This is a numerous class of insects belonging to the coleopterous class, (or bugs,) and in various ways, are a severe annoyance to farmers. They prey on grain, on plants, and on fruit, though it is on the first and the last that they most usually fall under our notice. The weevil, *Curculio graniarius*, that at times produces such frightful ravages in our storehouses, and which in some countries renders the preservation of grain for any time impossible, is perhaps one of the most injurious. This insect is of a pitchy red color, only about two lines in length, and when it obtains access to a granary, pierces the kernels with a borer, in which an egg is deposited. This is soon hatched, and becomes a small white, soft worm, which preys on the inside of the kernel, and in time becomes a perfect insect, ready to propagate its species and perpetuate mischief, as long as grain can be found in which to deposite the egg. Degur, the celebrated entomologist, says that a few hundred weevils admitted to a granary, would, in the course of four or five months, destroy between one and two hundred millions of grains. But a single hole is made in a kernel, and but one egg deposited in each. Barley is a favorite grain with the curculio; and small heaps of this placed in granaries, and occasionally removed or subjected to boiling water, are used in some places, as decoys for the insect, and to prevent their settling on the wheat. Another kind of the curculio attacks fruit, particularly plums and cherries. A kind of half moon incision is made in the young fruit by a forceps-like instrument, and under the flap so lifted, an egg is deposited, which speedily becomes a little worm and feeds on the juices and pulp of the fruit. A little attention to the trees, about a week or fortnight after the setting of the fruit, will usually save much of it from their attacks. The curculio during the day lies concealed in the top of the tree, and a sudden and violent jar will dislodge many of them. By spreading cloths on the ground under the trees, the falling curculios are caught, and may be destroyed. The fruit that contains the grub, falls to the ground, the worm takes refuge in the earth, and in the spring emerges the perfect insect, ready to renew its operations on the young fruit. Where swine can come to the trees, they will destroy the worm as it falls in the fruit, and thus render an essential service to the fruit grower. The pea bug is another species of the curculio, and commits great devastations on this valuable plant. The better way to prevent this insect, is to never sow seed under two years old, as in this case the perfect insect has emerged, and will not be at hand to commence operations on the young pea vine or pod.

CURRANT. This is the fruit of a well known shrub, sometimes found wild, but generally cultivated in gardens. There are red, white, and black varieties, and the utility of these fruits in domestic economy is well understood. The fruit of the black is much prized for its medicinal qualities, while that of the red and white is preferred for wine, syrups, and jelly. The white currant, in its largest varieties, when fully ripe, is partially transparent, and is a beautiful and delicious fruit. With white sugar, it makes a colorless wine of fine flavor and keeping well. In cultivating the currant, the best method is to take shoots of one or two years growth, and before inserting them into the earth as cuttings, to carefully cut out with a sharp knife all the buds below, and for a few inches above the surface of the ground; in this way the bushes have a tree form, and the fruit will be far better, than if grown in the close bushy shrubbery where it is usually cultivated. What are called Zante currants, and may be purchased at the shops, are not properly currants, but small kinds of grapes, dried for sale.

DAIRY. Establishments devoted to the preservation of milk, to the making of butter and cheese, are called dairies; and farms on which cows are kept for these purposes, are called dairy farms. If the milk furnished is made into cheese, it is called a cheese dairy; if into butter, it is called a butter dairy, &c. Dairies for furnishing milk for use, are principally found in the vicinity of large cities, and some very large ones are found near all cities of note, in this or other countries. It is supposed that not less than 30,000 cows are kept for the supply of London with milk, and dairies of from 50 to 300 cows may be found in the neighborhood of our principal cities. Such cows are kept in stables, and too frequently fed on materials that render the milk given of an inferior quality, if not positively injurious. None but pure sweet pastures can furnish cows with a food, enabling them to supply the best milk, and it is certain there is not more difference between chalk and water, and the usual milk provided in cities, than there is between the last and that produced by those fed in the rich clover pastures of the country. The dairy business is a healthy and profitable one, not perhaps giving returns so great and quick as grain growing, but requiring less labor of an expensive kind, causing very little loss in the wear and tear of implements, and improving instead of exhausting a farm, as grain growing is apt to do. As to the breed of cows the most suitable for the dairy, it would seem as if public opinion abroad as well as in this country, is much divided on the subject. Some prefer the Ayrshire, some the Hereford, some the Devon, and others the Durham or Short Horns. The truth is, there is no breed uniformly good for the dairy, and great milking qualities have never been fixed in any kind of cattle, as has size and propensity to fatten early, in that of the Short Horn. Good cows may be found in all the breeds and crosses, and many of our native cows have exhibited dairy qualities rarely rivalled, if equalled, by the best of the improved breeds. Mr. Colman's Report on the Agriculture of Berkshire, Mass. will show this. The best dairies in all countries are made of selected cows, and the neater and better they are kept, the greater will be the profits of the dairy. In every thing connected with the management of such an establishment, from the feeding of the cows to the delivery of the milk, butter or cheese in market, the most scrupulous neatness and order should be observed, or the products will be proportionably injured, and their value lessened.

DAISY. This plant, particularly the variety known as the *Chrysanthemum leucanthemum* of the botanist, oxeye or white weed of the farmer, is one of the greatest pests where it is permitted to get possession of the soil. It grows so thick as to preclude the appearance of the grasses, or exterminate them if they already exist. Thorough cultivation is the only remedy where they are present, but the farmer will find if he destroys the plant effectually on its first appearance, even if requiring considerable labor, that the time and exertion are well expended. This plant is readily known by its white blossom, and by its unfortunate prevalence. There is another plant called the yellow daisy by some, by others buttercup or crowfoot, very common in wet meadows; but this plant is a species of Ranunculus, not a daisy. It is, however, of no value, and if its growth and spread is not checked, it injures the other grasses materially. Some have supposed that the crowfoot when made into hay, if eaten to any extent by cattle or sheep, induced disease among them.

DAMPS. Carbonic gas being heavier than common air, has a tendency to accumulate in all low places, such as mines, pits, wells, cisterns, &c., and in situations favorable to its formation, is sometimes found in such quantities as to be instantly fatal to animals. This air or gas is known by the name of damp or *choke-damp.* The Grotto del Cano at Naples, and the valley of the celebrated Upas tree of Java, are instances of the fatal effects of accumulated carbonic gas. Where this gas exists in injurious quantities, it extinguishes flame, hence we are fortunately provided with the means of ascertaining its presence; and no one should venture a descent into any of the places named without first lowering a candle or lamp. Carbonic gas is generated in large quantities in the vats of cider distilleries, where a small quantity of the liquor remains for any time; or in brewers' vats, in which the acetous fermentation is allowed. Numerous deaths occur yearly from the operation of this gas, and farmers and others, who are particularly exposed in clearing wells, should always take proper precautions. There is another kind of damp called the *fire-damp.* This is found in coal mines almost exclusively, and is a mixture of carburetted hydrogen and atmospheric air, constituting a very inflammable body, and exploding with great violence when placed in contact with the flame of a candle. One of the greatest triumphs of science was the discovery of the safety lamp of Sir H. Davy. Previous to the invention of this lamp, the most frightful accidents from explosion were of common occurrence in the coal mines of England; now they are unknown.

DECOMPOSITION. This is a term employed in chemistry to denote the resolution of a compound substance into its constituent parts. In agriculture it is principally used to signify the process by which animal and vegetable bodies pass into a state that renders them serviceable as food for plants. During life, the elements of organic bodies, whether animal or vegetable, are held together by vital affinities, under the influence of which they were at first united. When life ceases, these elements become subject to other laws, those that govern inert matter. The original affinities that were suspended during the vital organization, again operate, other combinations are formed, and the organized structure passes to decay. The rapidity and extent of decomposition are in a great measure depending on the circumstances under which the process takes place. Substances kept perfectly dry and at certain temperatures, decompose very slowly, or not at all. Moisture, unequal temperature, or the presence of certain agents, aid the process materially. It is by decomposition that all manures are formed, and it is by regulating, aiding and combining the action of different substances, that the most valuable of composts and fertilizing powders are prepared. To preserve plants, timber and vegetables from premature decomposition, has occasioned much research, and though in some cases successful, there are others in which all efforts to arrest the original laws of action have proved unavailing.

DEGRADATION is that process by which unorganized bodies are reduced to their primitive elements, and is to them, what decomposition is to vitally organized ones. Plains are composed by the degradation of hills and mountains, and soils by the degradation of coarser and harder materials. Of course a knowledge of the elevated regions of any country, enables the geologist to foretell the character of the plains; and an examination of the soil of the plains unfolds the nature of the mountain ranges above.

DEW. The water which is deposited from the atmosphere upon the surface of the earth, is called dew, and is always most plentiful when the nights are calm and serene, and the sky cloudless. Winds or clouds prevent the formation of dew; and if the surface of the earth is below 32°, the dew as it falls is converted into frost. The formation of dew depends on the radiation of heat, and the radiating surface is always cooled below the surrounding atmosphere, before the deposition of dew takes place upon it. All circumstances that favor radiation favor also the deposition of dew, and any cause that prevents the radiation of caloric, or intercepts its escape, prevents its formation. Glass as radiating freely, is covered with dew sooner than most other substances, and gravel is sooner moistened than grass, though owing to absorption the apparent quantity is not so great on the first as on the last. The quantity of dew deposited is also in some degree depending on the quantity of vapor in the air. Thus every one is aware that on some summer days, of equal temperature with others, and with water of the same degree, tumblers filled with it, will exhibit a much more copious deposite on the outside, than they will on others. This is a proof that the air is filled with vapor, and is one of the most certain *signs* of approaching rain. Dew acts an important part in the processes of agriculture, and in the nutrition and growth of plants. Large quantities of the most active agents escape from the earth during the processes of decomposition and evaporization in the shape of gases, and these combined with the aqueous vapor are deposited with the dew on the earth or on the plants, and in either case are available to nutrition. Hence the advantage of frequently stirring the earth, and keeping the surface in a pulverized and absorbing state. In some parts of the world it rarely rains, but the dews are so copious, that vegetation does not seem to suffer from want of water. Spreading a substance, no matter how flimsy, as a thin cloth, over vegetables, will preserve them from severe frosts, if it is not allowed to touch them; acting by intercepting the heat. Every one has observed that plants liable to destruction by frost remain green much longer under the shade of trees than when exposed. Thus potatoes planted in an orchard, will be unhurt by frost as far as the branches of the trees extend, while the tops in the uncovered spaces will be wholly prostrated.

DIBBER, DIBBLING. In England where the saving of seed grain is a greater object than the lessening of labor, wheat and other grain is frequently sown by the process of dibbling. The implement called a dibble, is formed of two sticks shod with iron, with spade handle tops, and kept separate at the bottom at the distance which it is intended to have the rows apart, by a bar with a joint at each end. The dibbler walks backwards, and with the implement in his hands makes two rows of holes at the proper distances. Two children follow to drop the seed in the holes, and the whole is covered with a light bush harrow. An expert dibbler with two children will put in half an acre a day. Of course the soil has to be put in good order previous to the commencement of putting in the seed. The advantage of dibbling is that three-fourths of the seed is saved, three pecks when well put in being an abundant seeding for an acre. If weeds spring up, they can be pulled by hand, or cut with a narrow hoe; and the wheat standing regularly and without being crowded, produces a finer grain, and gives a better yield. Dibbling has never been practiced in this country, the price of labor, and the comparative cheapness of grain, rendering it useless. We are not in the habit of using the quantity of seed wheat per acre that is considered necessary in Europe, from eleven to fifteen pecks being used there, hence the inducement in the saving of the seed which induces dibbling there, has no existence here. Experiments show that in a good soil, three or four kernels in each hole, gives a greater yield, than when a smaller or a greater number are dropped. Dibbling has been principally practiced in the county of Norfolk, but it is gradually giving way to the practice of drilling.

A WOMAN WORTH HAVING.

In Mr. Morrison's centennial sermon at Peterborough, N. H. he says,—"Early in our history, the hand card, the little spinning wheel, and the loom with the hand shuttle, were almost the only instruments of manufacture in this place. *The grandmother of General Miller paid for four hundred acres of land in fine linen, made entirely (except getting out the flax,) by her own hands."* The Gen. Miller here spoken of, is the hero of the Battle of Niagara or Lundy's Lane, in the last war; and should war again threaten our borders, or our institutions be placed in danger from causes, within or without, it will be the children of such mothers, the free, uncorrupted, hardy sons of the country, that will prove its safeguard. From the feeble, enervated, children of luxurious idleness, *men* cannot be reasonably expected.

Foreign Notices.

The Farmer's Magazine for Sept. received by the British Queen, furnishes us with the portrait on steel, of "*Clementi*," owned by R. M. Jaques, Esq. of St. Trinians, Yorkshire, which took the prize of 15 sovereigns as the best Short Horn bull calved since first of January, 1838, at the Cambridge meeting of the Royal Agricultural Society. Clementi was bred by Mr. Parkinson of South Clifton, Notts. His dam Cassandra, by Miracle, and his sire Cossack, (1880 in the Herd Book.) The bull calf "Collard," sold at the Babworth sale for 200 guineas at 8 months old, is own brother to Clementi.

Yorkshire Agricultural Society.—The annual meeting of this institution, second only to the Royal Society, was held at Northallerton, on the 5th and 6th of August—Earl Spencer, president of the Society, officiating. The attendance was unusually large, and the exhibition is said to have been decidedly superior to any former one. The handsome sum of £645 (nearly $3,000) was awarded in premiums on Short Horn cattle, Leicester sheep, horses, pigs, poultry, implements, draining, grains, &c. "This noble sum was ably contested for in the various classes. In Short Horned cattle there was probably no exhibition ever produced in England equal to it, either for number or beauty of symmetry. This we have the authority of many excellent judges to declare was the case. The display of sheep, although not great, excited the admiration of the agriculturists, and the pigs were remarkably fine animals. The horses attracted great attention; the entire horses were very numerous, and many of them presented many good points. The brood mares and young horses were also greatly admired." The premium of £30 for the best Short Horn bull of any age, was awarded to F. H. Fawkes, Esq. of Farnley Hall, for his "Sir Thomas Fairfax." £20 for the best 2 year old, was awarded to Mr. Wm. Raine for "The Colonel." The premium of £20 for the best Short Horn cow of any age, was awarded to Mr. T. Bates, Kirkleavington, for his cow "Oxford," the dam of the bull calf recently imported by Geo. Vail, Esq. of Troy. Several of the smaller premiums for Short Horns were awarded to the Rev. J. Higginson, of Thormanby, Thirsk, who also had the good fortune to receive a number of other prizes on horses, pigs, extra stock, &c. among which were the premiums "for the best sow, large size," and "for the best boar and sow, small size." The "grand dinner," which forms a part of all such exhibitions in England, was given in a spacious pavillion, capable of accommodating 1,400 persons, and was attended by upwards of 1,200. The speeches, as usual on such occasions, were mostly of a complimentary character, and would afford little interest to our readers, could we copy them at length; it is therefore with less regret that we find ourselves limited to a few brief extracts:—

Agricultural Schools.—"W. Mauleverer, Esq. said he was gald to find that the propriety of forming an agricultural school had engaged the attention of the committee. During his recent absence in France, he had visited the Royal Agricultural Institution, about twenty miles from Paris. This establishment was founded in 1829, by Charles X.; and its results had been a material and positive benefit with regard to agriculture. There was also an experimental farm attached to the institution; it was established in joint-stock shares, and had been the means of enabling many young men to obtain an advantageous livelihood, who would otherwise have been in obscurity and indigence. He then read some extracts from the prospectus to this institute, and observed, that if something of the same nature was attempted in shares of 10*l*. 15*l*. or 20*l*. he had no doubt a sufficient sum would be speedily raised, and that the institution would be supported."

"The chairman, Earl Spencer, said he had some doubts on the advantage of an experimental farm, but he had no doubt whatever of a school of agriculture, providing the difficulties could be overcome in establishing it. With reference to an experimental farm he had a greater doubt, because it could be experimental only for that farm. His own opinion was, that a greater improvement might be effected in agriculture by the assistance of intelligent farmers than by the establishment of experimental farms. He alluded to the importance of the Highland Society and the great improvement which it had produced in the agriculture of Scotland; he then observed that he trusted the principle on which agricultural societies were formed, to combine scientific improvement with the exhibition of stock would be beneficial. With regard to the veterinary art, with the exception of the treatment of horses, every thing was in a most backward state. He was happy, however, to say, that the English Agricultural Society had allied itself to the Veterinary College in London, and secured the delivery of lectures on the treatment of cattle. He could assure them that any gentlemen who had cattle afflicted with any disease which the local farriers could not comprehend, on sending up a statement of the symptoms to London, it would receive every attention."

"Sir R. Bateson observed, that for 13 years they had had a model farm and school in the North of Ireland, which had been attended with very beneficial results. They had now 72 pupils on the books, and between three and four hundred pupils had left the school, from all of whom they had received favorable accounts of their progress in the world. He detailed at some length the satisfactory state of the school, and in conclusion returned thanks for the interest taken in Irish affairs by the Yorkshire Society."

Agricultural Pursuits.—"If I might be allowed to express my own opinions, I should say that the pursuit of agriculture, the cultivation of the land, and the improvement of the fertility of the soil, is one of the most delightful and most instructive, and the most honorable pursuits in which a man can be engaged, and not only leads him to contemplate the wonders of creation and the works of nature, and of nature's God, but it also enables him, by the aid of successful industry, and by the application of science, to effect improvements which, under the blessings of divine Providence, cannot fail to be advantageous both to the age in which he lives and the generations yet to come."—W. Duncombe, M. P.

"You are all aware that in the course of my life—now not a very short one—I have applied myself to many and various pursuits, but I have at last come to that which I believe to be my natural one—I mean the improvement of agriculture—the promoting of agriculture by my own endeavors, and by assisting the endeavors of others. Mr. Duncombe told you it was a pursuit worthy of being followed; I will tell those who are entering upon life that they will find no pursuit which gives more satisfaction—I will say they will find no pursuit which will give so just an occupation of their time with less annoyance and less disturbance to their tempers. No other in which they will feel such full satisfaction that they are doing good in pursuing their own pleasures at the same time that they are improving the cause of agriculture. It is a pursuit to which one and all of us should wish success. It is one of those pursuits which is most delightful to follow; it is a pursuit which may be carried on without time ever hanging heavily; an occupation interesting in the highest degree, and while the agriculturist is promoting his own interest, he also promotes the interest of every one of his neighbors."—Earl Spencer.

Protection of Sheep.—"The point which my very few observations will embrace is the extraordinary increase in the growth and condition of sheep by being fed under cover, in an open yard, with a shed in it. This idea had no doubt occurred to many others besides myself, but I am not aware that any one has so fully examined into the effects attending that inquiry as I happened to do in the course of last winter and the winter before. Gentlemen, the principle is one that we have acknowledged in every practical way, by everything that eats, namely, that if it has plenty to eat, is warm, and has nothing to do, it is very likely to increase. I certainly was not aware, until by repeated experiments I tested the truth of it, namely, that the same animals when placed in the shade and kept warm, not only increased rapidly, very much more rapidly in their condition and weight than when out in the open air, but also that they consumed a much smaller quantity of food. This I have tested, both last year and this. I have not the papers by me to refer to, but as far as my recollection goes, it is this, that the quantity of food consumed was less by at least one-third, and that the increase of weight was fully one-third, taking it in round numbers. At the beginning of the season I built a shed which will contain about eighty hogs (a shed which will serve for cattle as well,) and I merely put down a few rough planks for the cattle, as I have found that it is a great advantage to have boards to lie upon and if they had straw, and it was to get wet, they would be liable to get the rot in their feet. I brought those animals up last Christmas, and I found that before two days had elapsed they did not eat so much as when they were out of the fold, by the proportion of five to three. When in the fields they eat fifty basketsful of turneps, but when brought up they eat only thirty a-day, therefore their improvement was in the inverse rate of their cost. Yet such great progress did they make that you would have thought they had been eating fifty baskets a day when shut up, and only thirty when in the field. I gave them with their turneps a little oilcake, and certainly the size they grew to was so very great, that at thirteen months old I sold them without their wool for 37*s*. a piece—and I really believe that if the turneps be pulled and brought into the shed they will go twice as far as when consumed in the field."—J. W. Childers.

Kentish Sheep.—We saw some specimens of the breed of sheep alluded to in the following extract, at Rochester a year or two since. They were brought from England by Mr. S. W. Shotter, then a resident of Pittsford, but now we believe residing at Stamford, U. C. "A few days since, observing some sheep which displayed a very beautiful symmetry, on board the steamer Tamar, we made some inquiry and found that they belonged to two gentlemen named Denne. These sheep are of an improved Kentish breed, and are from the celebrated flocks of Mr. John Palmer, of Herne, near Canterbury. Great trouble has been expended upon this breed, which has been brought to such perfection that the fleeces weigh upwards of six pounds, and a six months' fleece weighed four pounds and a half. Notwithstanding the great weight of the fleece, the staple is uncommonly fine and strong, so much so that for some years past the whole of the wool has been purchased for the French manufacturers, at prices varying from 2s. to 2s. 3d. per lb." "Messrs. Denne, who were farmers and graziers to a very considerable extent in Kent, have obtained these sheep with a view of crossing them with the Merino and Saxon breeds in this colony, and so highly are they esteemed by competent judges, that ten and twelve guineas have been offered for rams of the first cross with Merino ewes. Lord Western, the celebrated breeder of Merino sheep, has, we are informed, lately turned his attention to this improved breed of sheep, and is now crossing them with Merinos, with the view to the production of a long and strong wool."

Berkshire Hogs.—We copy the following paragraph from a notice of "Low's Illustrations of Domestic Animals," in the London Farmer's Magazine:—"The drawing of the old English sow, and the Berkshire, show admirable specimens of the effect of art, in deriving from these originals our present improved breeds. The aptitude of the hog in receiving alterations is wonderful; so that every county, and almost every parish, has now a separate breed of that animal. The size has been much reduced to suit the taste of large towns, and in doing so, there has been sacrificed, as usual with other animals, the mixture of fat with the muscular fibre, the property of fecundity, and of nursing a numerous progeny. For bacon, a large sized animal is indispensable, and for finer purposes we have now many excellent smaller breeds. The Berkshire breed we have always regarded as our best for general purposes, as combining both useful size and quantity. The drawing here given of the old breed, shows the straight back, round carcass, and square form, broad chest, and short neck, which form the points of excellence at the present day. It would be desirable to get rid of the black color in the present breed, for we think that of all colors, the white is the most agreeable in all animals, as pigs and poultry, where the skin is allowed to remain in cooking." The latter part of this extract would seem to show that notwithstanding what has been said about white Berkshires in this country, in England such a breed of pigs is unknown.

The Crops in England.—According to the monthly Agricultural Report for August, in the Farmer's Magazine, "the grain crops, and particularly wheat and barley, were in many districts, fine almost beyond recollected precedent." "With respect to this year's growth of wheat," says the editor, "we have come to this mature conclusion, viz: that it will come up to a fair average for the kingdom, and prove the fairest as to quality, ever gathered."

Lamb Fairs.—Annual Fairs are held at stated places in various parts of Great Britain, for the sale of stock. We notice reports from several Lamb Fairs held in the month of August, at which the number of sheep present will astonish those unacquainted with these Fairs; for instance, at the Arlesford Fair, 46,000 sheep were present—at Melrose, 70,000, and at Ipswich, 110,000 sheep and lambs were penned.

Agricultural Museums.—"It will be interesting to our readers at a distance to be informed, that the Messrs. Drummond have, in the course of the present year, erected a large new building, and that the Stirling Agricultural Museum is now, in fact, one of the most prominent and elegant edifices in the burgh. It is situated in the lower part of the town, is of an oblong shape, composed of four flats, and adorned in front with a remarkably chaste and elegant portico. The museum is principally contained in the upper part of the building, in two spacious halls, each measuring about 160 feet in length, and 21 in breadth. The eastern windows of the upper hall command an extensive prospect, comprehending the whole carse of Stirling, with its beautiful boundary of the Ochils on the north, and reaching to the distant line of the Pentlands in the extreme southeast. It would be impossible, nor is it necessary, that within our present limits we should attempt to give any details of the contents of these elegant rooms. Few of our readers are unaware that the most prominent objects in the Museum are the agricultural implements, (the collection of which, is probably unequalled in extent and completeness, either in this or any other country,) the collection of seeds, roots, and plants, from all quarters of the globe, and models of almost every object of interest or value to the agriculturist."

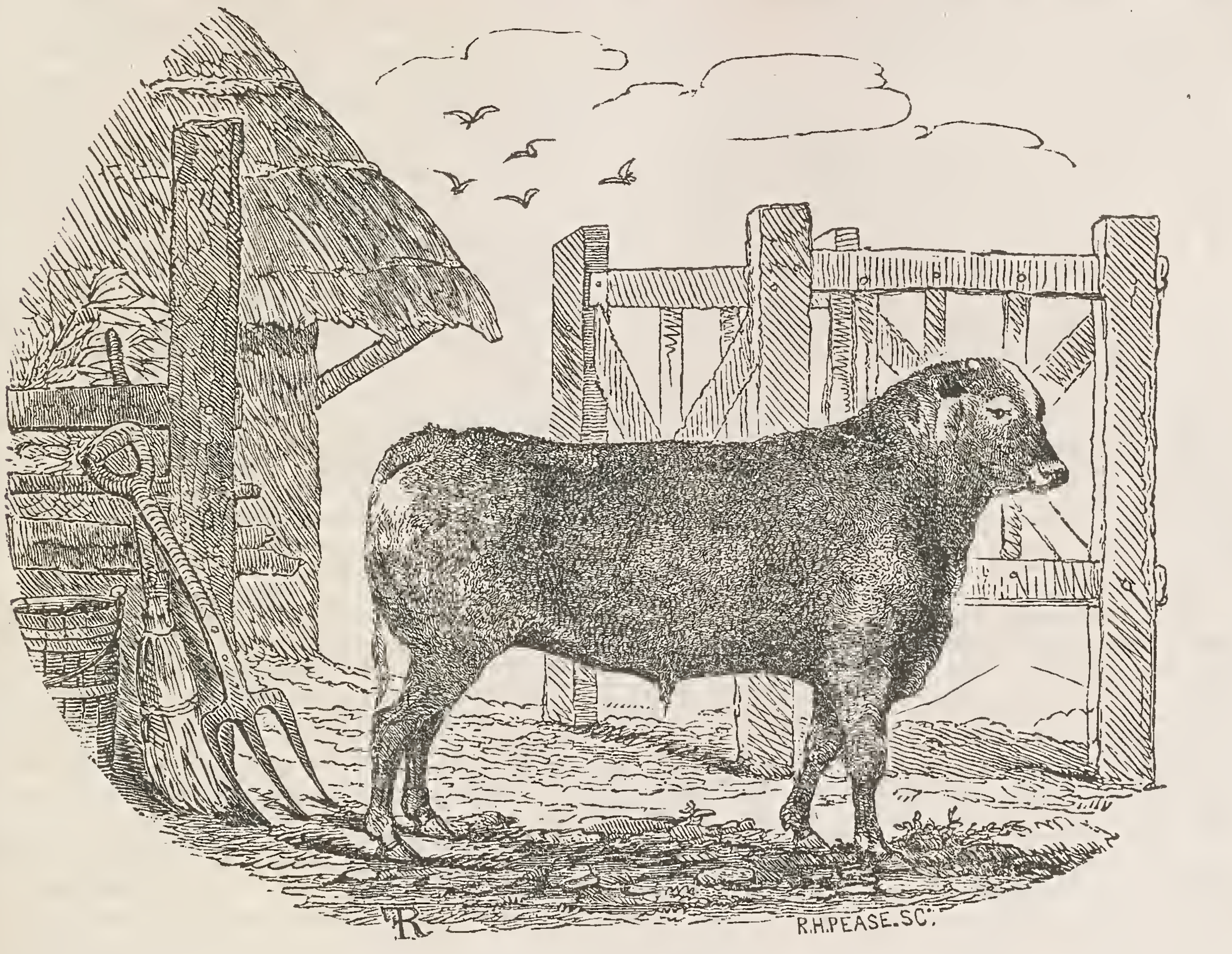
DEATH OF DR. PERRINE.

Extract of a letter from a gentleman at Jacksonville, East Florida, dated 24th August, 1840, to his friend at Lansingburgh:—

"If you have tears to shed, prepare to shed them now! Your Botanic friend Perrine is no more. He was cruelly murdered by the Indians, a few days since, at his residence at Indian Key. The Indians, about 150 in number, effected a landing on the Island, from their canoes. They were fired upon by a Lieutenant from a gun-boat, and would have been beaten off, but after three or four shots, one of his guns burst, and the other went overboard, it is supposed from excessive charging. The Indians proceeded to the work of destruction. Perrine, after concealing his family, armed himself, and went out to assist in the defence, but was immediately killed.

"As a man of useful science, of ardent patriotism, with equal talents to effect his country's good, with a commensurate desire to apply them to that purpose, he has not left his equal behind him. He has struggled through more obstacles, and overcome more opposition to effect his benevolent designs, than would have discouraged any other man; and he had overcome every impediment but the Seminole war. He had his wonderful collection of exotic plants, flourishing in high luxuriance; and was waiting with calm solicitude for the time when he could take possession of the land which Congress had granted him, to mature and display the result of his long and painful labors."

Communications.



"BEAT THIS IF YOU CAN."—Fig. 83.

Messrs. Gaylord & Tucker—I concluded the few remarks I appended to the portrait of the heifer "*Oneida*," by reference to a sketch in my portfolio, made some time since from a large lubberly animal, whose owner considered him the "ne plus ultra" of calves. I now send you the portrait on the block, ready for Mr. Pease, and if he does me as much justice as he did in cutting the bull "Dallimore," I shall be satisfied. I was originally induced to make the drawing to oblige the gentleman who bred this young giant, and afterwards preserved it, because it so well illustrated a *particular* "*point*," which I considered almost inseparable from certain other general form and qualities, of all which this calf was an excellent illustration.

His head was round, short and vulgar; the neck heavy, and shanks coarse; the points of the shoulders large and projecting; the blade bone thick and laying out full; the crops low, with a deep hollow behind the shoulder; the body very long, and, as is then too commonly the case, not ribbed-up close; the hind quarters short, the rumps low, the buttocks large and round, the flank thin, and the hind leg rather crooked; joints big, and hair harsh, but it was *red*, with but few white marks about him. Here was size enough, and he claimed to weigh 614 lbs. at six months old; still I considered it in an unprofitable shape, for with that particular form I had usually found the following qualities:—an iron constitution, a hard muscular covering of flesh interspersed with very little fat, a thick hide, poor handling, slow feeding and no proof.* Such animals preserve a certain amount of muscle under the hardest usage, and add but little of value to it with the most generous feeding; you find them "always fleshy but never fat;" it may therefore be readily conceived, that in the starved herd of the niggard, who calculates, as a matter of course, to "*tail up*" his cattle in the spring, that such a description of beast would be invaluable from the mere fact that he can "get up alone;" but in the yard of the farmer, who from both humanity and interest, feeds a sufficiency of hay to his stock, he will be found a most greedy and profitless consumer.

I will now ask the attention of the Short Horn breeders to *this said point*, before alluded to—which, meet it where I will, my experience and observation has led me to view with much jealousy, nor is my distrust laid to rest, by either pedigree or pretension, however high or however conclusive these may appear to the minds of others. I allude to the "os-sacrum" when it forms an *uneven* line, in continuation of the back and loin, just before the setting on of the tail; for with this peculiarity, small as it may seem, most or all of the other characteristics, as seen in the drawing, will be combined in a greater or lesser degree. On examination, this bone in the present instance, will be found to be somewhat rising as well as uneven and short, which obliges the tail to spring from a point nearer the loin, thus shortening the hind quarter; the bone at the point of the rump will also be found large, round and bare of flesh, as though the skin were stretched tightly over it; and when in ordinary condition, it is without a particle of that soft interposing fatty substance, so indicative of a kindly feeder and good handler; and yet I must confess I have seen it in American animals claiming to be of the purest Herd Book family, and for which liberal prices have been paid. I am, however, inclined to believe that this particular form, together with the big buttocks, resulted from the earlier crosses of the Yorkshire and Holderness blood, and does not belong to the more improved animal of the present day.

But to return to the question of sizes. I am aware that the prejudice in favor of great productions is very strong with the agriculturist, and that numerous instances may arise at once to his mind, where great excellence and great size are combined; these I must beg leave to consider as the exceptions; the rule being, in my opinion, that a monstrous calf makes a coarse, unprofitable animal, long in arriving at maturity, slow in feeding, and carrying great offal. In these views I am the more confirmed by the experience of others, as I observe that in nearly every case of improvements, the size of the original breed has been reduced; it would therefore seem as though early maturity, beauty of symmetry, reduction of offal, and rapid growth has only been attained by diminution of superficial size.

Bakewell, in producing his celebrated breed of sheep, diminished the size of the Leicesters; and I believe the subsequent improvements made on the Lincoln, Cotswold, and other long woolled sheep, by the Dishley cross, resulted in a more compact animal, though often times more reduced in apparent size than in the actual weight of *meat*. The improvement of the "long horns," by the same breeder resulted in the same attendant circumstances; and the "New Leceister or Cravens" occupied less space than the old breed. Colling did likewise when he made improvements on the Teeswater and produced the "Alloy." And I have been informed by a very intelligent observer, who is well acquainted with the subject, that, when lately on a visit to Thomas Bates, Esq. of Kirkleavington, (who has perhaps more fully carried out Mr. Colling's principles of breeding than any other individual,) he found nothing at *first* particularly striking in Mr. Bates' herd of Short Horns! —on the contrary he even thought them deficient in size and wanting in attraction! but on a closer examination, their excellencies grew upon him; they were just in all their proportions, their symmetry so perfect, their substance so great, with such compactness of form, and shortness of leg, that they proved to be *large animals in a small compass*; and my friend's eye, soon becoming corrected as to their *true* size, rested with increasing admiration on the herd before him; nor did he longer wonder at the successful exhibition of this stock at the great Oxford meeting in 1839, when it beat the best short horn herds in England.

In speaking of the course of Mr. Bates' breeding, I would not be misunderstood; for that gentleman was not the copyist but the contemporary of Mr. Colling, with whom he lived on terms of friendly intercourse; and as breeders, they indulged a free interchange of views and opinions. It was not, therefore, surprising that they arrived at the same conclusions, pursued the same means, and aimed at the same results. Those who feel an interest in these subjects will find much that is curious and instructive in a close examination of Mr. Bates' course of breeding; which may be done by reference to the Herd Book, and by a little subsequent arrangement of the materials he will there find—such an investigation is the better worth pursuing since the awards of the Royal Agricultural Society in 1839, have borne such ample testimony to its success. Those who make this analysis may have to ackowledge that "*close breeding*," in competent hands is the acme of the science, whereas it is the ruin of the novice, or indeed of any but the most experienced and skillful. R.

Butternuts, Otsego co. Aug. 19, 1840.

ADVANTAGES OF DRAINING.

W. Gaylord, Esq.—Dear Sir—Yours of the 23d ult. is received, and in answer to your inquiries* respecting the piece of land to which you allude, I would say, that the field contains seven and a half acres, which previous to the year 1837, was never plowed, and was so wet as to be useless, except for pasturage, and on almost one-half of it the grass was wild, coarse water grass, which no animal would eat, except for a short time in the spring. The soil, a sandy loam, resting on a stratum of gravel and pebbles, cemented together by clay, the whole being impervious to water. The ground springy so much so, that in the early part of the year, a little exertion of a man when standing on it, would shake the ground for yards around. To reclaim this ground, in the summer of 1837, I caused about two hundred rods of stone underdrain to be made on it, at an expense of about fifty cents per rod. The drains were made too wide, consequently it cost more to dig and fill them, than it otherwise would. The drains were so placed as to cut off the springs before they broke out on the surface, or as an Englishman would say, "they were cut between the wet and the dry." The drains were dug from two to three feet deep, and stoned by laying first a row on each side of the bottom of the ditch, leaving a space of about four inches between them, for the passage of water; then capped by laying a larger stone on the top, and for these cap stones I prefer cobbles, as they prevent the side stones from being pressed or falling together; then filled in with smaller stones, until the top of the stones were within twelve inches of the top of the ground; then put on a small sprinkling of straw, just sufficient to prevent the earth falling among the stones—more than this I consider injurious, as it furnishes a harbor for mice; then filled in the earth until it was raised somewhat higher than the original or adjoining surface.

In the spring of 1838, I gave the field one plowing, sowed four acres with barley, (it should have been planted,) planted two acres with potatoes, one-half acre with corn, and one acre with ruta baga, (this acre plowed twice,) all without manure. The produce of this first year was about 100 bushels of barley, 600 bushels of potatoes, 20 bushels of corn, and 600 bushels of ruta baga.

In the spring of 1839, I gave it one plowing, and sowed seven acres with Italian Spring Wheat, and the remaining half acre with Whitington Wheat. The latter proved a total failure, from the fact that the Whitington, in this country at least, proves to be a variety of winter, and not a variety of spring wheat, as was supposed. The Italian grew very large, was lodged badly, and consequently was somewhat shrunk. The part sown after barley was much inferior to that sown after the planted crops. The wheat was deposited in my barn with the produce of other fields, consequently I cannot give the quantity except by estimation, but I should not greatly err in rating the product at fifteen bushels per acre.

Last spring, (1840,) I covered the ground with wheat straw, and plowed it under; a man following the plow, and with a fork placing the straw in the furrow—harrowed thoroughly, and planted with corn, (except three rows of potatoes around the field,) three and a half feet each way. The corn and potatoes have been hoed twice, and the crop you have seen. I will only add, it has gained much in appearance since you saw it.

Underdraining, I consider one of the greatest improvements in modern farming; for without it, wet land cannot be cultivated profitably, because tillage crops cannot be obtained; consequently a rotation of crops cannot be practiced; and clover, that great fertilizer of the earth, that which fills the fields of the farmer with fat cattle and his barns with hay, and the earth with manure, will not flourish. But in order that underdraining may have the desired effect, it must be properly performed. And the greatest skill is required to know where to dig the ditch, for one drain properly placed, is of more service than many improperly situated. On this point, I know of no better general rule "than to *dig between the wet and the dry*;" by which I mean, cut off the springs before they break out on the surface of the earth. Where the wild uncultivated grasses spring up, there is an excess of moisture, which needs an underdrain to correct the humidity and consequent coldness.

As to the depth, I would never have them less than two feet, and would generally prefer to have them deeper. The width should be graduated to the size of the stones used for filling, as large stones require a wider drain cut than smaller ones. The width of the drains I have cut this season, is fourteen inches at the surface, and just broad enough at the bottom to permit the free use of the common farm shovel. They should be filled as soon after being dug as circumstances will permit, as the falling of rain causes the sides of the ditch to fall in. All loose earth at the time of stoneing, should be carefully removed. In no case should the ditch be left open through the winter.

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* Proof is a butcher's term used to express the amount of tallow obtained from an animal.

* The nature of the inquiries will be understood from the reply of Mr. M. They related to the mode and expense of reclaiming, the nature of the ground, the course of cropping adopted, and the results. The original character of this piece of land may be still farther seen in an article, page 138 headed "Among the Farmers." Mr. Marks assures us that this piece of ground is now fit to plow, either in the spring, or after heavy rains, sooner than any other part of his farm.

After the drains are completed, occasional attention will be necessary to keep the mouths of the drains clear, and free from obstructions, so that the water may pass off freely. It will also be necessary to close all holes made by mice, or in other ways, which would let in water directly from the surface, as water running in through openings in the upper part of the drain, carries in much earth, which by filling the drain, or partially obstructing the free passage of the water, has a tendency to destroy it, or much impair its utility. As the drains become older, the earth used for filling becomes more compact, and the danger of breaks or holes from the surface is consequently diminished.

I have thus endeavored to reply to your inquiries, and if in doing so I shall be the means of calling the attention of my brother farmers to the subject of draining, and they should be induced to reap the advantages attendant on skillful and thorough underdraining, I shall be amply compensated for the trouble of penning the foregoing statement.

With respect, your friend, E. MARKS.
Navarino, Onondaga county, August 6, 1840.

NOTES OF A TRAVELER.

MESSRS. GAYLORD & TUCKER—I last year and this, made an excursion to the eastward of the state, in the month of July respectively, and was somewhat surprised to find that although we are nearly one degree farther north than Albany, and all of another by the height of land, (the level of Lake Erie being just 550 feet above the level of tide water on the Hudson,) still I saw comparatively no difference between the field crops of small grains, roots, grass, and even corn, as far as it had advanced in these respective neighborhoods, viz., the shores of Lake Erie in this town, and the flats and hills of the Hudson river, in Albany; and yet the soil of the latter place is generally sand and gravel, with alluvial, whereas here it is loam and alluvial, more often than otherwise resting on a hard tenacious clay, but the top soil, partaking, probably, somewhat more of vegetable matter here, than at the east of us. I should really like to see a disquisition from yourselves, or some of your scientific correspondents, why the dry hot sands of Albany, are not more forward in the common field crops, than the clays and loams of Buffalo. In fruits I noticed a decided difference, probably nearly a fortnight in some particular kinds; in others about a week. This cannot be wholly explained, by saying that those of Albany are of an earlier variety, because the Isabella grape does not ripen here in the open air, scarcely once in six years, whereas in Albany, I believe it is pretty sure to usually do so every season. The most forward county in general crops, I found to be in both years that of Onondaga. Here, even on the canal, the wheat was quite as ready for the harvest as the rye of Albany, and yet the latter grain is considered all of ten days in advance as a crop. Corn also, was more forward here than I saw it elsewhere, and I will add of a stouter and more even growth, and yet, this is farther north, even, than Erie, though the canal level is not so high by about 150 feet. I think the dry porous limestone of Onondaga, will account for the precocity of its crops. Last year I noticed that the corn here and on the rich Mohawk flats about Utica and below, were nearly the same, but this year Onondaga is much in advance, principally I suspect, in consequence of the heavy spring rains and high waters of the Mohawk, which must have delayed planting. Below the mountain ridge at Lewiston, and on the Niagara river to Lake Ontario, though by situation and height of land, it must be full equal to two degrees of latitude north of Albany, yet there I suspect fruits are even quite as forward, but their top and subsoil, is lighter there than here, and they are also better shielded from the cold western winds, and also 300 feet below us.

Of the crops generally, I found them very promising; grass and grains heavy, and of a first rate quality—the only fear was of roots. I suspect that the late rains must have wholly dispelled this, and have no doubt but the harvest of 1840 will be remembered as a very bountiful one throughout the land, for which may all have grateful hearts to the kind Providence that sends it.

The great question three years ago was, where shall we find food to fill our mouths? The most general one I suspect this year will be, where shall we find mouths to eat the food? The statesman would answer at once, multiply manufactures, * * * * * * ; but this is a political theme, the discussion of which would probably be considered more appropriate to the columns of other periodicals. I will therefore drop it, and merely advert to that which is strictly agricultural. Here then, are improvements wanted, that have been long and loudly called for, the most important of which is in the department of stock. Never was a nation with a greater abundance beforehand, or more eligibly placed for experiments in this line than ours, and it will be an everlasting shame and disgrace to us, now at the very low prices of all sorts of subsistence, that we do not generally enter upon them. There is not a race of domestic animals, or a kind of birds, from the noble horse, down to the timid rabbit, and the strutting turkey to the busy scratching hen, that does not want improving and regenerating, and now is the time to set about it. Look at England and her great excellence and advance in this particular. Her improved stock is not only a source of great wealth, power, happiness and comfort to her own citizens individually, but it is now entering largely into her amount of exports, and the whole world is constantly going to her for that which, with a little previous enterprise, might have been furnished at home. However, this is necessary to begin with, and it is better to commence it late than never.

Among the recent importations for improvement that have taken place in this state, is that of Hereford cattle and Cotswold sheep, by Mr. CORNING of Albany. Attracted by the letter of Mr. SOTHAM, that appeared in the July number of the Cultivator, when down last month, I made an inspection of these superb animals, that gave me a very different opinion than I have heretofore entertained of these breeds. All other Herefords that I had previously examined, in comparison with these, though noble in appearance, had large heads, thick necks, narrow hips, and thin loins, compared with the best Short Horns, but these nearly approach them now in all such particulars, especially in the great width of the hip bones, showing a capacity when well fed, to place their meat in those parts where it is most valuable, and I cannot but coincide in the remark of one of our most distinguished breeders of Durhams, "that on the right soil, they would give the Short Horns enough to do to maintain their present high position." But how are they enabled to accomplish this? Why only by approaching Short Horn perfection in these particulars. Yet at present they are only the graziers' and butchers' stock; for though Mr. Sotham talks of their good milking qualities, I must confess that though I eyed them sharply, and handled them closely, I was not favored by any such discoveries in their veins, nor did the appearance of their udders make up at all for this deficiency, and I should require some proof of the fact, before I could be convinced that even in comparison with our good native dairy cows, they could be called even fair milkers.* It is apparent, therefore, that in the general purposes of improving our native stock, that the Herefords cannot be rivals to the Durhams, at least till they are still farther advanced to good milkers, which will then make them but in fact another race of improved Short Horns. Yet if the Herefords yield to the Durhams at the dairy, in the yoke they must be far superior to any other of the ox kind, for they have nearly the quick step, the fine bone, the sinew and muscle of the Devon, with a much greater weight and size. I could not but admire the great length and rotundity of the barrel, the smooth, powerful structure of their frames, and clean elastic limbs. In fact as workers, they seem to me to be that happy medium in the race of oxen, that I am so desirous of seeing cultivated more generally in horses; neither the light mettlesome racer on the one hand, nor the slow, fleshy cart horse on the other, but the superior and more happily mixed general utilitarian. To those who are breeding working oxen, or stock expressly for the butcher, I would strongly recommend these Herefords. I should think them particularly well adapted to the rich interior of the Western States, where cattle must be driven a great distance to market. In that case the blood of the Devons, to which the Herefords are so nearly allied, could not but tell like that of the thorough-bred racer on the course.

The Cotswold sheep, I found much finer in the head and other points, than I expected to see them; they are also very large, and the amount of wool they are said to shear, is almost incredible. I cannot, however, but think their mutton would be too gross; and I doubt whether they will ever find the general favor in the American market, that South Down does. There is this difference between the consumers of English and American mutton; in the former country, being cheaper than pork, it is salted down by the poorer classes, to be eaten instead of it; here we rarely salt mutton, but eat it fresh; it is therefore desirable to have it as tender and lean as possible, qualities in which the South Downs are far superior to any other breed of sheep that I know of. I should like to see a show between Mr. CORNING's Cotswolds, and Messrs. DUNN's and ADCOCK's Leicesters. Are we never to have a State Agricultural Meeting and Fair for these and other purposes, in the pleasant month of September? Nothing in the world could be so beneficial to the agriculture of New-York, as this; or more surely aid its stock improvements. It is a crying shame that we should be so far behind our younger sisters, Ohio and Kentucky, in these respects.

An excellent correspondent of the Tennessee Southern Cultivator, makes the following remarks—"A few years ago, if a farmer, dressed in his jean clothes, happened, in what was called genteel society, to speak of his bullocks, his lambs, or his pigs, noses were turned up at him, and he was considered vulgar and insipid. But a reaction has taken place in public sentiment, and now it is the common conversation of fashionable circles; and you will hear fluent discourses on Durham cattle, Leicester and South Down sheep, and Berkshire and Irish Grazier hogs." This change, I am glad to say, is pervading the north as well as the south, and is even found to have inoculated the softer sex; and as evidence thereof, I shall quote two instances. A party of gentlemen was recently looking over a herd of Short Horns, when the name of an individual cow was asked for; the owner himself could not tell without going to the house to appeal to his books, when turning to his daughter near by, she replied, "Oh, that is Moss Rose;" and in answer to a letter on the subject of stock, that I addressed to a correspondent not long since, in his absence, his wife, in a beautiful Italian hand, replied quite as satisfactorily as I could have expected of the gentleman himself. But to the subject in hand.

Perhaps one of the most attractive objects in Albany to the stock grower and agriculturist, is Mr. LOSSING's piggery, in the upper part of Washington-street. I always visit it with pleasure, not only to have a Berkshire talk with the owner, but to gratify my eye with a view of the noble grunters that are so comfortably provided for. The animals here, are really choice, and each in its style, a capital study to any one the least desirous of forming his taste, or improving his breed of swine.

The readers of the Cultivator are pretty well acquainted with the queen of the *harem*, the renowned Maxima, from the faithful portrait given of her in the May number, and it may be sufficient for me to add, that she is all that is there represented. Indeed it is quite impossible for any engraver to flatter a well bred Berkshire, for no portrait can do justice to the harmony of their fine points, the sleek rotundity of the barrel, and the depth and massive thickness of the ham; yet if Maxima excels, as her classic name intimates, in size, the gentle Peggy may be said to do the same in symmetry of form; and Mr. Lossing tells me that the produce of the latter, very often approaches the former in weight and dimensions. This I can readily believe, for with the right kind of male, I have several sows in my piggery of a medium size only, that will breed up to any thing I ever saw, and their stock is as fine and as finished as a piece of statuary.

The Teal sow, as well as the boars brought over from England to Mr. L. in the fall of 1838, I found greatly improved as they had grown up. Reading is the longest, and perhaps the largest, but Newbury excels in fine point, carries great weight for his inches, and is remarkable in his hams; but out of a number of pigs that I have had of their stock this season, I do not discover much difference; either are good enough and large, and doubtless both boars will best suit the respective localities, where they are now flourishing in glory, the former having been sold to Mr. BEACH of Ohio, and the latter remaining with Mr. Lossing. I consider them as great acquisitions to the stock of the country, and certainly the public ought to feel under many obligations to Mr. HAWES for first introducing this king of his species to America.

But will it be believed, that during Mr. H.'s stay in Albany, which was for two years or more, these animals were but slightly appreciated, and he had in fact, when disposing of them, to accept prices but a trifle above that of common hogs? The superb Jack of Newbury, that will hereafter stand in the annals of blooded hogs, as high in the United States as the Godolphin Arabian does in that of horses in Great Britain, was sold for hardly what his pork was worth, viz., *twenty-five dollars;* and Mr. Lossing very humorously tells the story of being literally mobbed, hooted at, and almost stoned, for paying Mr. Hawes, at the Albany fair in 1834, the enormous sum of *three dollars* for the pig that grew up to his magnificent old Superior! Why I know a spirited breeder in Kentucky, that would now gladly give three hundred dollars for either of these noble animals, when full grown and in their prime, and think that he had them at a bargain. No wonder that Mr. Hawes should have returned to his country in disgust, at his failure in endeavoring to arouse the American public to the value of an improved race of swine. But Rome was not built in a day, nor could Berkshires be appreciated throughout the country in the same space of time; yet thanks now to the spirit of improvement, that your own and kindred journals have aroused in the land, they are at length getting their name up, and others will reap where Mr. Hawes so discouragingly sowed; and Mr. Lossing can now turn the tables upon the hooters, since he has had the pride and pleasure of refusing this summer, just ten times what he first paid for a sucking sow pig, for I was told by the gentleman from Ohio himself, that he had offered thirty dollars in vain for a single choice out of one of his litters.

Some may sneer at these prices, and call it a Multicaulis fever revived under another name, but will they allow me to state a case. Suppose a farmer among the rich corn fields of the west, that annually turns off, as many single persons do there, from twenty to fifty thousand pounds of pork per annum, which is worth, say in the first quantity, $800, and in the second, $2,000. Now by using an improved race of males to his breeding sows, in two years he gets stock that on the same food will give him twenty-five per cent more pork, or in effect in the first instance, adds $200 to his profits, and in the second, $500. Is he not justified, nay, absolutely forced to avail himself of this improvement, or suffer greatly in his interest, notwithstanding he may pay comparatively dear for it to begin with. Why we might just as well object to building a rail-road at an expense of $5,000 to $20,000 per mile, or make any other improvement that the genius of the age has invented. But the case is so palpably plain, and has been so often and ably argued, that I will not dwell upon it, and leave every person to adopt an improved stock, or not, as suits his inclination; and will only add, that in this vicinity, even among what is called poor and hard laboring people, three to five dollars is not unfrequently paid for half and three-fourths blooded pigs, just to keep a single season for their own fatting, rather than accept common animals as a gift. They assert that they much more than save the first cost in the food consumed during the fatting process, and besides they have the gratification of a decent animal to look at while it is going on, and a good quality of pork in the end for their tables.

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* Since penning the above, this month's No. of the Cultivator has come to hand, containing Mr. BEMENT's excellent article on Herefords; in which their merits, as well as Devons and Durhams, are very candidly stated. He seems, however, to be of the opinion, that the Herefords may be "*fair*" milkers; but what is "*fair?*" I hardly think seven quarts per day for a good sized animal, even though a heifer six months after calving would be so considered in a dairy district, unless the milk should prove of a particularly rich quality. I have a cross of the Devon and Durham, half and half, three years old in May, and rather small of her age, and that dropped her first calf last March. She gives now on rather poor pasture, seven quarts per day, of milk almost as rich as cream; but three-fourths, or seven-eighths Durham, of milking families, I think would double this quantity of milk from the cows, and of such a cross I am greatly in favor, and am of opinion, it will eventually be the most popular animal in the northern states. As I understand it, Col. Jacques thus got his famous Cream-pot breed, for he put a Short Horn bull of a milking family, to a red native cow, that undoubtedly descended from the Devons, originally imported into Massachusetts. When I had got the cross three-fourths or seven-eighths Durham, I should then breed them together. There are crosses of Mr. Rotch's Durham bulls on the native stock in Otsego county, that give over thirty quarts each, per day, of a most excellent quality of milk.

I now come to another kind of improvement, which though not strictly agricultural, is akin to it, and that is the Park and its embellishments in front of the State House, and the superb architecture and dimensions of some of the private and public buildings recently erected in its vicinity and elsewhere. Among the first is the Exchange, in a suit of airy rooms of which I found you, Messrs. Editors, so well accommodated. This is a building of clear gray granite, plain in its style of architecture and occupying an entire square, and made imposing from its large dimensions and massive material. What a different aspect would our cities present, if the several owners of lots in every square, could but agree on some general plan of building, and instead of having the *façades* present as many ill-contrived and irregular fronts to the street, as there were different owners of the lots, each square would be an entire building after some particular order of architecture, looking beautiful and imposing, on whichever of its four sides it might be contemplated, thus making every American town, in time, what Prince Leopold pronounced Edinburgh to be, "a city of palaces."

The replacing the old wooden fence around the park with a high strong iron one, is a great embellishment, and the new arrangement of the walks, and planting of trees more thickly, gives it a charming grove-like aspect, making an oasis in a desert of buildings, gladdening to the eye and refreshing to the town. What a relief to escape from the pent up atmosphere of the lower part of the city, to refresh one's self here, and it is a thousand times to be regretted, that in planning towns, more open squares and parks are not left. To say nothing of the rural beauty of them, they are absolutely necessary in our hot summers for the health of the inhabitants. The City Hall and new State House are noble buildings of marble, and the former standing alone, shows to great advantage. I don't know when I have been so forcibly struck with the imposing beauty of any thing, as I was one clear bright night in walking down Washington-street; overtopping the trees of the park, the mellow beams of the moon falling on the rich gilded dome, gave it the appearance of a golden orb suspended in mid-air, while the white walls and pillars shone out so soft and clear from the dark shadowy back ground, as to make one quite enchanted with the reign of Madam Luna, and brought those never too oft repeated lines of the minstrel to memory:

"If thou would'st view fair Melrose aright,
Go visit it by the pale moonlight,
When buttress and buttress, alternately
Seem framed of ebon and ivory,
And silver edges the imagery."

Buffalo, August, 1840. A. B. A.

ROHAN POTATOES, STRIPED BUG, &c.

Messrs. Editors—In your Aug. number, page 131, I have observed a communication on the above topics, in which some information is requested; and should nothing else offer, you are at liberty to insert the following. In the first place, the Rohan is not the old Merino potato. Any person acquainted with both, or who could compare them, would see that though alike in some points, there is a wide difference in the whole. As to the black grub, I have cultivated the Rohan this two years, and never to my knowledge, have had a stem cut by the grub. Where grown on an extensive scale, the grub could hardly do essential injury; where the plants are few, I should protect them as I would beans, cabbages, or other garden plants; that is, daily examine the plants, and if a stem was cut, hunt up the grub and destroy him; a thing easily done. As to the striped bug, I never adopt any half way measures with them; the war is always one of extermination. A few minutes twice a day, spent in a plat of melon, cucumber, or pumpkin vines, during the few days the bug is most active, will not only save the present vines, but do much towards securing those of the next year. This spring, I had half a dozen hills of Valparaiso squashes, at some distance from my garden. The plants were large and thrifty, and I began to flatter myself as the bug did not show itself on them, that danger from that source was over. Two days they remained unvisited, and the third I found them almost literally devoured. The bugs were upon them in multitudes, and the broad leaves had become a net work. I instantly rolled up my sleeves, and went at them, killed till my thumb and finger ached, and till I had gone over the vines. I repeated the operation two or three days longer, and the bugs were scarce. They are now fine vines, and promise an abundant crop. Of all preventive of the striped bug, there is none so easy and sure as a pinch of the thumb and finger; the remedy is radical. I used to suffer much, but now I rarely lose a plant of any kind from this pest. Such is also my experience with the black grub. When they do mischief, hunt them out, and exact the "pound of flesh" instanter. They cannot be made to understand parleying. W. WILSON.

THE SCIENCE OF AGRICULTURE.

Editors of Cultivator—The state of Rhode-Island, like the rest of her New-England sisters, has recently procured a Geological and Agricultural Survey of her territory. Dr. Charles T. Jackson, the gentleman employed for the purpose of making the survey, has just published his Report, which is now before me. It contains much matter which is valuable to the farmer, and interesting to the general reader; and I have thought that a few extracts might not be unacceptable to the readers of the Cultivator. Notwithstanding so much has been said and written on the theory and practice of agriculture, we cannot conceal from ourselves that we are still *very* far from possessing a knowledge of the truth in relation to these important subjects, or that agriculture is still far in the rear of her sister sciences. The cause of our ignorance is partly attributable to the want of mutual intercourse among farmers, which would enable them to compare their experience and correct their practices; partly to the fact that until recently there has been no medium through which the results of successful practice could be recorded and disseminated; but it is chiefly owing to the want of scientific knowledge among our farmers, that our modes of cultivation are so empyrical, and that our results are so uncertain. For want of this knowledge, they are unable to avail themselves of those helps to *correct* observation, which have so powerfully accelerated the onward march of collateral sciences, or to appreciate the full value of those facts which their limited and imperfect means of observation have revealed to them. Within the last few years, however, brighter prospects have dawned on agricultural science; the establishment of numerous Agricultural Journals, and the Reports of those who have been entrusted with the Agricultural Surveys of the several states, have furnished permanent repositories for a vast amount of valuable facts; many of which were before unknown; and many, which, though they were known to a few individuals, or in limited districts, were unknown to the great body of agriculturists. Should these inquiries be prosecuted with zeal and assiduty for a few years more, we shall probably be in possession of a sufficient number of facts to enable some second Newton, to seize on the grand key fact, which will unlock the arcanum of agriculture, and lead us as triumphantly through all its labyrinths and recesses as the discovery of gravity did through those of astronomy and physics. In looking through the mass of facts already collected, it is almost impossible to avoid the conjecture that this key fact, when discovered, will be found to be in some way connected with electricity. Modern researches have revealed to us that water is, under certain circumstances, an excitant of the galvanic current, and that the particles of a finely pulverized soil furnish suitable plates on which its electric energies may be exerted; that alkaline substances are electro-positive, and acid substances are electro-negative; that soils which are absolutely positive, or absolutely negative, are barren; and that those soils are most propitious to vegetable growth and nutrition in proportion as these properties are equalized or balanced in them. It is, therefore, a well established agricultural maxim, that we must bring our soils to a perfectly natural state, especially if acid.

Silex is considered as an electro-negative; lime, clay, iron, &c. are alkaline, or electro-positive in relation to it. Vegetable acids, where they exist in a soil, are electro-negative, and indicate the application of lime, or some electro-positive substance.

But electricity exerts another influence, recently discovered, and powerful in its operation, which I believe is less known to farmers than the preceding, and shows more conclusively its power in the production of plants than any other with which I am acquainted. Dr. Jackson states the doctrine with great clearness and beauty, and I have transcribed his account of it, verbatim, except that I have paraphrased some of the phrases which he makes use of, for the benefit of those who are unaccustomed to the technicalities of science. I quote from the "Report," p. 133:

> "The movements effected by the different electrical properties of the component ingredients of soils, both of mineral and organic nature, must have a powerful influence on the growth of plants, since electricity is well known to be a most efficient promoter of *endosmose* or absorption, and the power, although not visible or perceptible by the other senses, where it acts in a gentle and diffused manner, yet slowly effects great changes, and is always the moving power in all chemical reactions where combinations take place. Endosmose is a name given by Mons. Dutrochet, to a peculiar power which he discovered while experimenting on the capacity of very thin skins (such as those which are seen rising up like bubbles on an animal after the skin has been removed,) for allowing the passage of particles of matter through their pores. Its name is from the Greek, and signifies internal impulse. By stating the principles of one or two experiments, the reader will be enabled to understand this curious property, which is possessed by all thin skinny substances, when liquids of different densities and electro-motive power are placed on each side of the skin, employed in the experiment. If we take a cupping glass with a tube attached to it, and tie over its mouth a thin piece of bladder, or other thin skin, fastening it firmly to the rim of the glass by means of waxed thread, so as to render the apparatus tight, and then fix a plate of metal with holes in it so as to support the bladder, we have an instrument that will serve for an endosmometer. Having bored a hole through a cork that will fit the upper hole, a glass tube, open at both ends, is to be inserted. Fill the cupping glass with sugar and water, or any other undecomposed solution denser than water, and then plunge the cup into a vessel filled with water, so that it comes just up to the liquid inside the endosmometer at zero on the tube, it is evident that no pressure can be exerted on either side. Now place a scale of paper or make marks with black paint on the tube, indicating inches and half inches, so as to be able to note what follows.
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> "Very soon it will be seen that the liquid rises in the tube, and it will continue to do so until it flows out at the open orifice, provided the membrane does not yield or decay. Generally I have found the ascent to be from half to two inches per hour, the rate of progression diminishing with the height, though not regularly, for there are some peculiar states of dilution in which the action is most rapid, and the rise will be found to vary accordingly. Dutrochet determined the ascensional force in such an instrument, to be equal to the pressure of a column of twenty-eight French inches of mercury, or about the weight of the atmosphere. It should here be noted that the pressure of the air is equally exerted on both sides of the instrument, and has nothing to do with the phenomenon.
>
> "Mirbel, by experiment, found the ascensional power of the sap in a grape vine to be the same as was discovered by Dutrochet, in his new instrument. That is, the ascent of mercury in a tube, produced by the outpouring of the sap from the top of the grape vine which was cut off while the sap was flowing, and sealed up over the mercury, raised the mercurial column twenty-eight inches in the tube. If electricity be employed in the experiment with the endosmometer, immerse the negative wire in the endosmometer, and the positive wire is placed in the water outside, then the water will pass into the instrument and the fluid will rise in the tube. This instrument is here mentioned as a mechanical illustration of the absorbent system of plants, which have an infinity of such endosmometers in their structure, for every rootlet has its spongeoles, which are little bladders that stand out from the imbibing portions of the roots, and every cell has its thin skin, in which the endosmetric action is produced. We should also remark that the fluids constituting the common juice, or ascending sap of plants, are denser than water; and hence are a proper excitant of endosmose. There is another peculiarity about the instrument, which is, if any putrid substance is placed within it, or if any sulphuretted hydrogen be mingled with syrup, it becomes instantly paralyzed; and the moment the skin begins to putrify, the fluid that had ascended in the tube passes down and filters out; and this is not owing to any opening being formed, for the skin is found to be perfect when examined.
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> "I shall also remark that an opposite movement of much less magnitude takes place in this experiment, and it will be found that the fluid passes out in smaller quantities than the water enters. This external impulse is called exosmose.
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> "I have repeated nearly all the experiments described by M. Dutrochet, and can vouch for the correctness of his results so far as here stated."

The theory of Decandolle, that a poisonous matter is excreted from the roots of plants, which prevents the successive reproduction of the same species on the same ground, receives a striking confirmation (though not full demonstration) from what has been stated in relation to exosmose. L. F. Allen, of Buffalo, combatted the theory of Decandolle in the 2nd vol. of the Cultivator, with an ability which renders it a matter of regret that he does not write oftener. His principal objection was drawn from the fact, that some of the lands in the counties of Livingston, Genesee and Monroe, had been cropped with wheat for forty consecutive years, and now produce as large crops as they did at first. The same he asserted was true in relation to raising Indian corn on the alluvial bottoms of the Tonnewanda and Buffalo creeks. Judge Buel also took the same ground, and in addition, urged the absence of direct proof that there was any excretion such as Decandolle had supposed.

The doctrine of exosmose solidly confutes the last objection, and the first may be answered by an hypothesis of the existence of an *antidote* to the poisonous matter existing naturally in the soil. But as I fear my letter is growing tedious from its length, if not from its lack of interest, I conclude your assured friend.

Stockport, 8th mo. 28, 1840. N. N. D.

Clover Seed Machine.

Messrs. Gaylord & Tucker—Having received several letters from different states about Rittenhouse and Blackwell's Clover Machine, and wishing to give all the information I am able to, I take this method of informing those that have addressed me on the subject, that since my communication to you I have seen Mr. Blackwell, and he informs me that he has commenced making machines at Waterloo, Seneca co., N. Y., with Mr. Halbert, and that he has made some and sent them to the state of Kentucky, for individuals, with the right to use them within a certain territory; and will make and send them, if requested, to New-York city, with the right to use them, or he will sell the rights of states or territories to individuals, and furnish as many machines as they may want. Yours, &c H. BREWER.

P. S. There is a mistake in the published letter from me to you in the price of cleaning; the price has always been one-eighth of all the quantity cleaned, in this vicinity, or the price of it. So the price of cleaning, ranges with the price of seed.

Enfield, N. Y. Aug. 22, 1840.

"THE FULL-BRED BERKSHIRES."

Messrs. Gaylord & Tucker—I have looked on with much amusement, at the quackery attempted to be practiced on the public, relative to Berkshire swine; and have been not a little surprised at the assumed dictation of individuals, whose knowledge of this breed, its changes and varieties, has been limited to a few imported animals and their descendants; and who have undertaken to determine, from the color of some half dozen hogs brought to this country by Mr. Hawes, how many white hairs constitute a full blood, and how many black feet betray a grade; to say nothing of the twist in the tail, and the bunch of hairs at its end. Now really, gentlemen, you must not wonder that there are scoffers at "book farming," and those among us who set lightly by the scribbling of self-love; and while there are many who highly appreciate the much that is useful and instructive in your columns, we must beg leave to laugh at the ridiculous, as its best cure.

It is truly astonishing, that any one should display such woful ignorance as to the real origin and history of the hogs which now fill his stye, as is exhibited by an Albany breeder, in a late number of the Cultivator. He calls them "the full-bred Berkshires." Let us examine this matter a little, and see what are the characteristics of the Berkshires, as given by English writers. Loudon, Culley, "The Complete Grazier," Parkinson, and Low, all agree, with some little differences of expression, in assigning to the original Berkshires, a tawney or reddish brown color, with dark spots. To this, I would add my own testimony, having formerly been myself a resident in the county of Berkshire. The pure-bred native hog at that time, was spotted, black and white, in nearly equal proportions, with a greater or less intermixture of reddish hairs, giving a ferruginous hue to the whole coat. They were a long, large, heavy hog; rather flat in the side, always full, and meaty in the ham; somewhat slope rumped, a little heavy in the bone, something straight in the face, but with a tolerable fullness in the jole, and a drooping ear; their hair was inclined to coarseness, and often curly. On the farm where I lived, they were seldom put up to fatten till three years old; and when fit to kill, would average from twenty-five to thirty-five score. We used them for bacon, considering they made better hams and flitches, than any other breed. These were the hogs universally found in Berkshire, in my day. Mr. Astley of Oldstone-hall, has, I believe, the merit of having improved this breed as above described, by a judicious introduction of the eastern blood; and the hog thus formed, has been crossed upon almost every race in England, in all cases with the most advantageous results. It is a cross of this improved Berkshire with the Chinese, which we have in this country, under the name of full-bred Berkshires. As to color, had that come under the consideration of the breeder, he might have varied it from pure white to jet black, by making use of the white or black Chinese, with strict reference to such a result. I shall not pretend to decide which color has claims to superiority, although the black China is considered the most hardy and prolific, while the white is perhaps the better formed. Whether these differences are sensible in their crosses on the Berkshire, I am not prepared to decide. Again—there is of course, great variety of size, and some of form, according to the number and character of the crosses taken from the various races. Many of the smaller Berkshires, so desirable as porkers, are without doubt descended from a cross of the Axfords, in which there is a dash of the Barbadoes blood, strongly tending to confirm the reddish tinge of the old breed. But, without entering farther into detail, I think I have said enough to expose the utter absurdity of these critical distinctions of color, even to the "emblems" of three white toes, &c., which have been held up to just ridicule in some of our late agricultural papers. And who shall say now that he alone has *The* improved Berkshires? What is to become of the "*Rudgwick*" cross, the "*Hampshire*" of the present day, in which the Berkshire blood strongly predominates; the fine boned and delicate "*Diskley*," said to lay on a larger quantity of meat in proportion to bone and offal, than any other kind; Lord Western's celebrated breed of "*the Essex half blacks*," considered by many to be the finest in England? What is to become of these and many others, all of them crosses of the Berkshire family? I would ask, then, on what grounds the Albany importation claim to be the standard of "*The* Improved Berkshires?"

In the extra accompanying the May number of the "Cultivator," I saw an advertisement of "Pure Berkshires, without any *alloy* of black Siamese or common white hogs." I should really be glad to see one of the animals, for an improved Berkshire, without any of the eastern blood in him, cannot probably be found in England.

I was much gratified to see in the last "Cultivator," an article relative to "true size." The writer indeed lays down the golden rule on that subject. "The greatest weight in the smallest relative compass; *weight for inches, not for superfice.*" Now, this is just as true with regard to swine, as to cattle. What is it that our breeders are doing, urged by the mania for size, but breeding back again as fast as possible to the old *unimproved* Berkshire, thus undoing in their wisdom, all that the science of England has accomplished in so many years? But, say our western friends, we must have size, to fill the pork barrel. Fill it with what? Heads and shanks? They will indeed fill the barrel, but not the *consumer*, which is a far more important consideration. If the Berkshires can be forced to an increased size, and still retain their light offal, well and good—provided they do not degenerate into the coarse animal, of which there may be no little danger. But I would not be understood as advocating the paltry, short-sighted policy of those from whom we expected better things; who have sent away such "riff-raff," to meet the pressing demand for Berkshires, as would induce one to suppose the very scourings of a city suburb had been collected for the purpose. How much more conducive to their own true interests, has been the course pursued by that shrewd, far-seeing people, the Shakers of Watervliet, in carefully preserving the size of their animals, to which I presume they are mainly indebted for the late sale of their whole stock to Mr. A. B. Allen, of Buffalo, under whose judicious and careful management, their excellence will undoubtedly be preserved, and the public expectation with regard to them, fully met. They will neither be stuffed to plethory, nor starved to pigmies; and considering Mr. Allen to possess the pride and feelings of a breeder, we may hope to escape the "culls and runts" of his litters, although we may not always be able to command his best; for it is not to be supposed that any "established breeder of reputation," would sell the refuse of his stock at any price, which would be the infraction of a rule well known to the *true* breeder—although it has not been picked up with other matters of the craft by the *dealers* in Berkshire pigs, who it seems sell all they can raise, at one price or another—if not $20, why then 20*s*.

As the intent of your paper is to elicit truth, and serve the farmer, I presume you will not object to giving the above an insertion. I am not now a breeder of the Berkshire, having given my attention to other departments, but I would lend my feeble aid to the maintenance of science, against quackery in every shape.

Cambridge, Mass., Aug. 31, 1840. D.

WHEAT vs. CHESS.

To the Editors of the Cultivator—In your August number, I find an article from your correspondent L. Hulett, approbative of the doctrine that wheat degenerates to chess, and your accompanying strictures, declaring your uncompromising hostility against such "agricultural heterodoxy." Now, Messrs. Editors, as you profess to deal in "facts" more than "theory," I will endeavor, in a plain unvarnished style, to furnish you with a few "facts," which you must admit are stubborn things, and which, in my very humble conception, cannot be fairly controverted. What I have to say will be in vindication of that, as you opine, diabolical and exploded doctrine that there is a change of wheat into cheat or chess. The summer and first of the fall of 1838, was an unusually dry season. The corn corp did not produce more than one-fourth the average quantity, but the wheat of that year was very fine and the yield never better. In consequence of having no fall of rain from July to September, the wheat which was scattered and shattered out by reaping at harvest, remained upon the fields in a perfect state. The fall rains commenced, and by a continuation of several weeks of moist warm weather, the wheat that escaped the scythe came up and clad the fields in green. Several individuals, myself among the rest, came to the conclusion that we would try an experiment, and that we would make a fair trial to ascertain whether our luxuriant fields of *volunteer wheat*, would reproduce wheat or degenerate into cheat. We did not therefore permit our fields to be grazed during the fall, winter or spring.

I propose to introduce to your especial notice three separate and distinct fields, one owned by Dr. M. one by Col. B. and the last by myself. Dr. M. had within his enclosure, and from which he reaped his wheat, some 70 or 80 acres of land. As soon as his shocks of wheat were moved, he put 80 or 100 head of hogs into his field for the purpose of gleaning it. They gave the land a thorough *nose cultivation* by rooting over nearly the whole surface of the field. The result was that the wheat came up very handsomely, whereupon the hogs where taken to other fields and the experiment, for such it was, was left to develop itself. Col. B. had within his enclosure from 80 to 100 acres, from which he had abstracted a very bountiful crop of wheat. That portion which had *cheated* the scythe, scattered on the ground and came up at the same time with Dr. M's; and during the fall, winter and spring, promised an abundant crop. This field had very few if any swine running upon it, and consequently had no advantage from their *nose culture*. Within my own enclosure of 50 acres, after harvesting and the removal of my wheat, I put in my stock of hogs, but they were not numerous enough to give it a good cultivation. While some of it was well tilled, other parts were but slightly rooted. When the wheat came up after the autumn rains, the hogs were taken to another field. I will now disclose to you the results. Dr. M. in June, 1839, from his field of *volunteer* wheat before described, saved about 400 bushels of excellent wheat. A considerable portion of his field was almost exempt from chess, while in some parts less cultivated by the hogs that article abounded. Col. B's. field, to the astonishment of all beholders, was out and out every inch of it a splendid field of chess. A few spears of wheat, few and far between, could only be seen. I think 6 or 800 bushels of chess could have been harvested. From my own field I obtained a pretty good supply of excellent wheat, but more mixed with chess than Dr. M's for want of the same cultivation. Now, why all this discrepancy between the several fields above described is obvious to my own mind, and to that of every person in this region.

Is it not as plain as the nose on a man's face, that the extraordinary yield from Dr. M's field should be ascribed exclusively to its superior cultivation by his 100 hogs; and that the greater mixture of chess with my own should be ascribed to less or a more inferior culture, and that the total degeneration of Col. B's. field into chess, may properly be attributed to the entire want of tillage. Let metaphysicians canvass it as they may, a single fact is worth a thousand abstract theories.

I will also remark that Dr. M., Col. B. and myself, invariably riddle the chess and small grains of wheat from our seed wheat. If all the chess seed had been procured in 20 miles square, it would not have sufficed for seeding so large a field as Col. B's. Chess cannot be found on our lands except after the growing of wheat, and then it is but rarely suffered to come to maturity as our stock are premitted to graze it sufficiently to keep it down. I could enumerate a number of herbs, plants, &c. from the vegetable kingdom, and that since the hand of man has cultivated them, has rendered them entirely dissimilar in *appearance and taste* to their pristine state when plucked from the wilderness. I am, until I find something more conclusive on the subject, "a sturdy, staunch believer" in the transmutation of wheat into chess. I suppose this hasty sketch, should you think it worthy of an insertion in your invaluable paper, will draw down upon me, the animadversions of many anti-chess men, but it will be to me no cause of regret, as the best method to come to right conclusions is by sifting every topic to the bottom.

Your agricultural friend,

R. E. MOSELEY.

North River, Buckingham, Va. Aug. 1840.

NOTE BY THE EDITORS.

Defective as we may seem in courtesy not to be influenced by Mr. M.'s argument, we are compelled, while we yield an affirmative answer to each of the queries he has made, to draw from them an inference totally averse to his; and we go farther and state that, when all the circumstances of the cases adduced, and the nature of the two plants are taken into consideration, the communication furnishes a most decisive proof of the fallacy of the doctrine of transmutation.

That there was chess in the wheat fields, and that it was scattered at harvest, as well as wheat, is clear from the paper, as we may be assured that no "riddling" will entirely clean foul seed, and that where chess ripens in wheat, enough will be left in the field to seed it plentifully. Some seeds will grow and come to maturity if left on the surface; others require covering, and perish without. Chess is of the first kind, wheat of the last. Where the hogs rooted, the wheat was covered, and of course grew, and in proportion to the "nose cultivation" was the crop. Where the surface was undisturbed, the wheat either did not vegetate at all, or perished; while the chess occupied the whole space and gave a luxuriant crop.

Our correspondent has begged the very question in dispute, by assuming that the chess could not have grown from seed, and then endeavoring to trace it to the degeneration of the wheat. The exceeding loose manner in which he has stated the impossibility of procuring chess to seed Col. B.'s field, will give an air of hyperbole, (wrongfully perhaps,) to the other "facts" of the statement. Let it once be proved that chess has grown where no chess could possibly have been; and where nothing but *pure* wheat was sown, and the question will be settled, not before. All the suppositious "facts" in the case weigh not a feather in the argument.

We can readily conceive that Mr. M. has known plants change their "appearance and taste" by cultivation; the production of the pippin from the crab-apple is a familiar instance; but has he known one species of plant, having marked and uniform characters, change to another well marked and distinct species? Has he known the apple change to the pear, or timothy grass to orchard grass? That is the question; and until it is answered in the affirmative, change in appearance and taste will not be apt to go far with the farmer, or the careful observer of nature. The reader is referred to "Popular Errors," No. 3, in another column, for a farther exposition of this, as we confidently believe, heterodox notion.

RULES IN SOWING WHEAT.

Messrs. Editors—As the time for wheat sowing is near at hand, I wish to give a few short rules, which, if strictly followed, will convert every believer in the doctrine of transmutation of wheat into chess, from that absurd opinion.

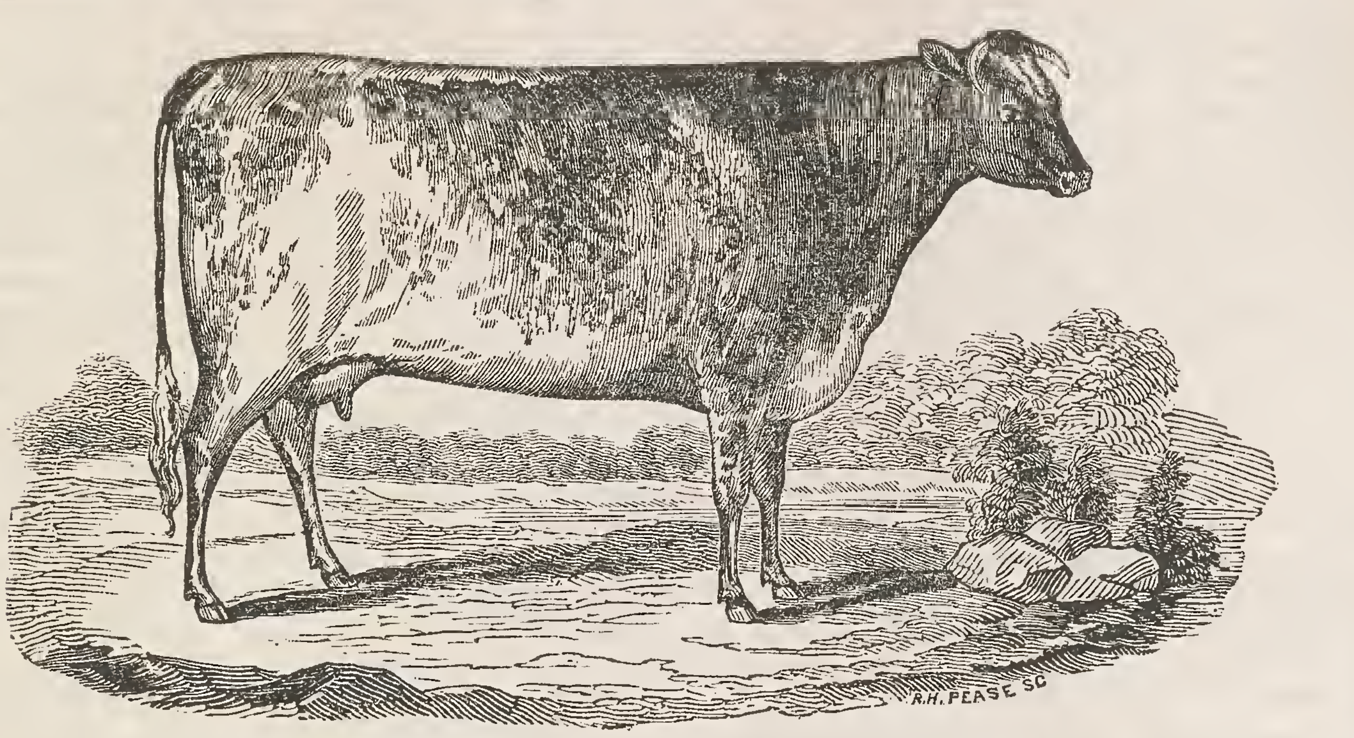
1. Harvest and draw into your barn all the chess you find growing in your wheat.
2. At no time scatter or feed out any chess, until it is ground fine.
3. *Sow no chess with your wheat.*

Follow the above rules a few years, and you will be disposed to laugh at the credulity of the man who ventures the assertion, that wheat turns to chess. But remember the third rule. E. MARKS

Navarino, Onondaga county, August 6, 1840.

INQUIRY.

Messrs. Editors—If your correspondent, signing "J. R. B.," who so highly recommends Robinson's Works on Rural Architecture, in the June number, will state the cost of each, he will confer a favor on a mechanic, and constant reader of your paper.



Portrait of "Julia," an Improved S. Horn Cow, owned by J. W. Kendall, Esq., Elkton, Ky. 84.

MESSRS. GAYLORD & TUCKER—I see in all of the late numbers of your most excellent paper, specimens of fine stock of different kinds, which I am pleased to see, believing that it will be the means of exciting a still greater interest in the western and southern states, in procuring fine stock of all kinds. We have some very fine cattle and hogs in this section of Kentucky, but they are few in number, and many of our good farmers have none, and are still hesitating; I hope that your paper may soon be read by all of our farmers, and will do all I can to aid in promoting its circulation.

Believing you will feel disposed to let some western stock be seen through the Cultivator, I have this day mailed to you an engraving, and a most excellent likeness it is, of my cow *Julia*, a beautiful roan, seven years old, said by the best judges to be a very fine specimen of the Durham stock. I purchased her from the herd of Col. BENJAMIN P. GRAY of Woodford county, Kentucky.

Very respectfully,
J. W. KENDALL.
Elkton, Todd co. Ky. August 9th, 1840.

LETTER FROM ENGLAND.

MESSRS. GAYLORD & TUCKER—I am so far on my journey, with the best lot of stock ever seen together. They consist of the following:

One cart colt, one year old, allowed by the best judges to be as good as England can produce.

One cart mare, six years old, equally good.

One Hereford cow, that won the first prize at Oxford, 1839, against all England; and a young bull from her, eleven months old.

Two five year old Hereford cows.

Five yearling Hereford heifers. These Herefords are all in calf by Dangerous, a yearling bull that is to be shown against all England, next year.

One half bred between the Hereford and Durham, to show the cross, which I think is an excellent one, probably better than the pure breed of either, and from what I saw of Mr. Cother's stock of Middle Aston, it may be extended much farther than generally supposed, for his fourth cross was equal to the first—not the least sign of degeneration. Of this I will say more, when I have more time, for it is now precious.

I have twenty shearling Cotswold rams from Mr. Hewer. I send you an English paper* to show the average price of each sheep, which was £17 16*s.* 10*d.* $85.63. The Messrs. Hewers were offered 150 guineas ($756,) for one shearling, by a noted ram breeder in Lincolnshire; this offer and sale was bona fide, no *humbug* or reservation; this I know positively, for the Messrs. Hewers do not allow any thing of the kind. I will give you my ideas on sheep next time.

I have a quantity of pigs of various descriptions; the best that could be procured in England. I have one sow and eight pigs that cannot be beaten in any country, either for fattening qualities or weight. You can judge for yourself when you see them.

We shall show a number of our cattle at the show at Niblo's in October, where we invite the owners of the best cattle in America to appear against us, (with the best of feeling,) for it is oppositon and competition that spurs us on to superiority, but prejudice must be out of the question. Let reality be our helmsman, and perseverance our motto, and then our country can be equal in stock to any on the globe. It all depends on the people.

We shall have twenty-four rams for sale, such that cannot be beaten even in England. This is positive.

Mr. Hewer has numerous backers if he will allow it, to show from one sheep to a hundred, against any person in the world, either ewes or rams. He has been very careless about showing his sheep and cattle, having met with a ready sale without it.

I am, dear sirs, yours sincerely.
WM. H'Y SOTHAM.
Portsmouth, August 24. 1840.

MESSRS. HARLANDS' SWINE.

TO THE EDITORS OF THE CULTIVATOR—Some months ago you obligingly inserted for us in your excellent publication, a very brief notice of a superior breed of hogs recently imported from England. In consequence of that notice, we have unexpectedly received numerous letters from the United States, requesting a more particular description of the animals alluded to; we have as a matter of course replied to every letter that has been sent us, and by that means have involved ourselves in a rather inconvenient expenditure in postage. It would save us any farther useless expenditure, and consequently oblige us, and probably some others of your numerous subscribers, if you would insert the following answers to the questions that have been put to us, some of which you will infer from the answers given relate to very minute and critical points.

The hogs are perfectly white; skin thin; ears by no means large, but remarkably thin and transparent, and somewhat pendulous; nose short and straight; hair thin and straight; they have neither wool nor bristles; body long; back broad; ham very large; tail so small that a gentleman remarked to us a few days ago, that it bears about the same proportion to their carcase as a piece of thread does to a woolsack; their disposition is excellent; they will bear a Canadian winter as well as any other hogs if they are well fed, but we have not yet thought it necessary to make an experiment upon the starvation system, nor would we recommend any one to try it upon them. When we stated that they would arrive at the weight of four hundred pounds at the age of one year, we of course meant dressed; but we never intended to convey the idea that they would arrive at that weight if stinted to the allowance of a single cob of corn per day, and without being allowed the privilege of shelter during the nights of winter. Their appearance when dressed is beautiful, so much so that in this market they readily command a dollar per cwt. more than any other description of hog. Our breeding stock at present consists of three sows and two boars. We have been very unfortunate in losing young ones this season, and we have only three boars and two sows for sale; they are of the respective ages of eleven, nine and two weeks. Our price for a single pig, delivered free on board steamer at Hamilton, at the head of Lake Ontario, is fifteen dollars, but as we consider that it will cost us five dollars to remove them from hence to Hamilton, and that the removal of a pair will cost no more than a single one, we will sell a pair for twenty-five dollars.

Can you or any of your numerous and very intelligent correspondents, give us any advice under the following circumstances:—Our very best sow, now about two and a half years old, generally loses nearly if not all of her pigs in a few days after farrowing, for which we know no cause, unless it is that she is too fat. We have feared that that might be the case, and we have endeavored to reduce her by keeping her in a paddock where the herbage was very scanty, but it had not the effect of lowering her condition. Would it be advisable to confine her to the cob of corn per day system? She has always an immense quantity of milk at the time of farrowing, but when a few of her pigs have dropped off, she loses her milk and appears to have scarcely sufficient to support the few that remain. At present she has but four pigs left alive; they are two weeks old, and two of them are as beautiful and as fat as it is possible for pigs to be, and the other two are not worth a penny a piece. Yours very respectfully,

JOHN & E. A. HARLAND.
Guelph, Upper Canada, 10th 9mo. 1840.

LATE SOWN WHEAT.

MESSRS. EDITORS—In your September number, you request farther information in relation to late sown wheat, which from experiments some suppose will yield as well as that which has been sown at an earlier period. In reply, I would state that I sowed a small field of wheat on the 14th day of October last, with the exception of about an eighth of an acre, which at the time was covered with young mulberry trees. The trees were dug up after the frost had destroyed the leaves, and the ground which they had occupied was sown on the 13th of November, but the cold weather set in so soon after, that the grain had only an apportunity to vegetate, and could with difficulty be seen above the surface. The whole field was in good order and received a sufficient coat of manure. The soil is loam and sand, the latter predominating, and is of such a nature that frosts is not apt to injure grain growing in it. The whole of the wheat was injured by the Hessian fly, and the larvae were found in the stalks of the late sown in as great abundance as in the early, from which it is evident that late sowing is not always a preventive of this pest, and that the fly deposites its eggs in the spring as well as in the fall. The late sown did not grow as luxuriant as the early, and from appearances, (the quantity was not measured,) would not yield half as much. I have known instances of late sown wheat yielding nearly as well as early sown, but as a general practice on soil in which sand predominates, believe early sowing to be preferable. Yours, &c.

T. G. BERGEN
Narrows, L. I. Sept. 10, 1840.

CARPENTER'S HARVESTING MACHINE.

MESSRS. EDITORS—I wish to answer, through your paper many of the inquiries relating to the Harvesting Machine. It seemed the best medium, for every wheat grower should take one. We can now emphatically say, the harvesting machine has been in successful operation, and the present adds another season of experience in confirmation of theory, and when experience and theory agree, they go far to establish truth. We find none of the difficulty apprehended by some in preserving the early threshed grain, and have proved it to waste much less grain than is wasted in the common way of harvesting, and to save more than three-fourths of the expense in cutting, gathering and threshing grain. And farther, that the machines are far from being difficult or expensive to keep in order; for any ingenious teamster may learn in one day to take the entire charge of the team and machine, and will need help only to empty out the grain. Respectfully,

G. G. CARPENTER.
Caledonia, N. Y, August, 1840.

Description of a Cotswold Buck.

MESSRS. GAYLORD & TUCKER—I saw in the June number of the Cultivator, a description of a Lincolnshire Buck, owned by L. D. CLIFT, Esq. After seeing that statement, I was induced to take the measurement and weight of a full-blooded Cotswold Buck, raised and owned by STEPHEN HAIGHT, Esq. of this town. The Buck was three years old last April, and weighs at this time 240 pounds, and measures as follows:

Across the shoulders,............	1	ft.	6	inches
Across the loin,..................	1	"	5½	"
Across the back,.................	1	"	7½	"
Height on the rump,.............	2	"	6¾	"
Height of fore shoulders,.........	2	"	5	"
Length from nose to root of tail,..	5	"	3	"
Girth round brisket,.............	4	"	5	"

The weight of his fleece I am unable to give, as it was not kept from the rest of his flock. This sheep has had no better keeping than the other sheep in his flock.

ISAAC HAIGHT, Jr.
Washington, Dutchess co. 25th Aug. 1840.

Save your Peach Trees from Grubs.

Never having seen the following in print, I send it to you to publish, if you see fit; after twelve years experience, I am convinced of its efficacy. Pour boiling or scalding water, for I am not very particular which, around, and on the body of the tree, as near the ground as possible, as often as your trees show any symptoms of decay. Indeed, I do not always wait for the symptoms to appear. I have not lost a peach tree for twelve years, having practiced the above method for their preservation. I have not failed of having good peaches but one year during the whole time. C. S. PHELPS.
Oswego, June 1, 1840.

ALL THE LUCK.—We find in one of our foreign journals, the following instance of rapid increase:—"On Thursday the wife of Mr. W. Clanvis, a farmer near Caistor, presented him with a fine boy and girl. Shortly after, his cow produced two calves; and in the course of the day, the sow farrowed 11 pigs, a ewe yeaned him 3 lambs, and his hen came off with 15 chickens. The gude mon was at home during this increase, and properly rejoices in the gifts of Providence." The elements of reproduction, as Walker would say, must have been uncommonly active in that vicinity.

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* Mr. Hewer's long established and well known annual sale of Tups, took place at Northleach on Wednesday, and was, as it has always been, most numerously attended by all the gentlemen and farmers round about, as well as from distant parts of the kingdom. There were sixty sheep for sale, several of which were bought up for the purpose of being exported to the United States of America. The sixty were sold at the average price of £18 10s. 4d., a circumstance which demonstrates the superior value of Mr. Hewer's sheep, and the decided preference which is always shown to them. As an evidence of the vast superiority of Mr. Hewer's sheep, we can state as a fact, that for one remarkably fine tup, the high price of £150 was offered and refused, Mr. Hewer wishing to keep the animal for his own ewes.—*Wilts and Gloucestershire Standard of August* 1, 1840.

TO WESTERN EMIGRANTS.

Messrs. Editors—If many of the intelligent persons who emigrate from the Eastern States to the "Great West," could look a few years only into futurity, they would greatly profit by it, not only to themselves, but to the country. Will any of those who intend in future to emigrate, profit by the kind hint of a friend?

Instead, then, of bringing with you many cumbrous articles of furniture that will be almost useless in such a residence as you must necessarily inhabit in a new country; or at any rate, such as you can well dispense with in a "log cabin;" let me honestly advise you to bring the worth of it in "Berkshire pigs," "Durham bulls," "Leicester sheep," and *other improved machinery*, that will add much more to your wealth and comfort, than mahogany side-boards, tables and chairs, and gilt looking glasses. I do not object to these things in their proper places—but the place for them, is not in a house composed of rough logs, having the cracks between them "chinked" with rails, and "daubed" with mud; having a floor made of "puncheons," that is, plank split out of logs, the roof covered with "shakes," or "clapboards," about four feet long, laid upon round poles; the chimney built without stone, brick, or mason, composed of sticks and clay—the door of split boards, with wooden hinges and latch—for such are some of the "fixins" of a log cabin—and in such a dwelling-place has many a good family lived comfortably, contented, and happy, while earning the means to provide a better one—and in such an one has been many a good piece of furniture spoiled by an exposure, which such articles are not calculated to endure. Besides, such articles run much more risk of loss and damage on the passage than a cage of Berkshire pigs.

Let me earnestly advise every person intending to emigrate to the west, particularly the northern parts of Indiana and Illinois, to which water communication is so cheap, safe, and convenient. to dispose of all articles of luxury, that are unsuitable to the situations they will be likely to be placed in, for a few of the first years of their new habitation, and invest the proceeds in valuable stock, and improved farming implements, with a variety of the best seeds; and my word for it, they will find their account in it.

A word more, honestly spoken. Although the inhabitants of all new countries are anxious to see it settle fast, and urge their friends and acquaintance to "come west," without distinction, there are many that come who are entirely unfit for "new settlers." An able general selects a *small* portion of a large army for pioneers, because of the peculiar fitness of that small part for that arduous and important service. It is my opinion, that a much smaller portion of the community are fit for pioneers in settling a new country. Too little heed has been paid to this important fact, in the great rush for the west, a few years past. Thousands have rushed forward with the bright vision of an "*el Dorado*" before them, to find nothing but disappointment, loss of property, vexation of mind, and consequent loss of health, and sometimes loss of life; all attributable to their own heedlessness, rushing headlong into a situation that nature, education, and habit, had totally unfitted them to occupy. Let not my western readers say, that I would discourage the settlement of the country; I always have, and always will, encourage the thousands who have, and who would better their situations, by emigrating from the old states to the west. But let every person disposed to emigrate, first seriously inquire whether he would better his situation or not. Let him lay open to himself, and more particularly to his wife and children, if such he have, a complete picture of the case; and don't let him forget to point out all the shades as well as bright spots in the picture. To a large portion of the new settlers of a new country, there is an indefinable charm in "making a beginning" in an uncultivated wilderness, and causing it to "blossom like the rose," that lends life a pleasure, and overbalances all difficulties.

Happiness, and not wealth, should be the aim of all; though no man should allow himself to be happy. without he is doing some good in the world—promoting the happiness of his fellow creatures, as well as himself. And to such dispositions only, will my present advice be availing; but to such, I hope it will avail so far as to make them inquire, when they are preparing to emigrate, whether they will not be likely to contribute to their own wealth and happiness, and that of their fellow creatures, by following some of my present advice.

I believe I could advise who would be likely to benefit themselves by emigration, but that would be advice thrown away. But I hope the advice to all emigrants, to bring with them some choice selections of stock, as the most profitable investment of money that they could make, will not be entirely lost.

Here is a vast country of the richest soil, not one-tenth part cultivated, forming a pasture for stock equal to your eastern clover fields, and susceptible of supporting immense herds, making tons of beef, butter, cheese, and pork, with small labor, and no interest upon the cost of valuable land. But we are lamentably deficient in stock; in half a dozen counties, there are not half a dozen pairs of Berkshire hogs. In fact, hereabouts is the *worst* breed of hogs I ever saw in any country. Sheep are of the coarse common kind, with no means of improving them; and although it is supposed by many, that sheep require a hilly country, I never saw sheep do better in any place than in this prairie country. But with a good breed, we also need a good breed of shepherd's dogs, for the prairie wolves are very troublesome. These are a species between the wolf and fox. They are somewhat larger than the largest kind of fox, and "bold as the devil." At this season of the year, the sheep need constant watching in the day time, and close yard at night. There are none or very few big wolves, or other troublesome animals. Sheep and cattle are easily wintered on native grass, and the country is entirely free from disease among flocks. If, then, men grow wealthy upon stock farms that are worth $100 an acre, what would we do here with the same kind of stock, where a man may get 80 acres for $100; with an unbounded range of common for pasturage? For dairy farms, a prairie country is remarkably fine; the native grass producing the richest kind of milk, and the fattest and richest beef I ever saw on grass alone. But of pork, I will only say that it cannot be made of the animals common to this country. Come, then, old and young, rich and poor, male and female, all who sincerely believe after mature reflection, that you can better your condition by emigration, and you shall find a wide and fertile country; but be sure you bring every one of you, an improved pig, or sheep, or cattle, or plow, or other implement, and that you cultivate the soil in an improved manner, and you will improve yourselves and neighbors.

And now I hope you may improve by the advice of your old friend, SOLON ROBINSON.

Lake C. H. Ia., Aug. 20, 1840.

THE SHORT HORNS AND HEREFORDS.

I have been for some years a subscriber to the Cultivator, and have been much instructed by the frequent notices of fine specimens of stock that have from time to time appeared in different numbers. Of late those notices, generally accompanied by a beautiful portrait, have become more frequent, and so far as I have had an opportunity of forming a judgment upon the plan, it is a good one—the youth particularly, are attracted by the picture, and are anxious to read about it, and see what it is. This generally creates a taste, and often enlarges it where it has been already created, and the results in both cases are highly beneficial.

The only objection I see to the present strife about cattle is, that the object mainly appears to be, who shall produce the *largest* specimen of the species. Other considerations appear to be generally merged in this. Whether or not this will be productive of good to the country, is a question it would be well for the community to examine closely. The opinion that the domestic animals of a country should be well suited to the usual and ordinary accommodations that can be conveniently had for them, meets with universal approbation. Now, if the great strife is, who shall produce the most extraordinary animal, of course extra food and accomodation of every kind must be provided for all the stock intended for competition, often to the manifest injury of the other stock of the same farmer—a very few "brag beasts" are kept, and often a large number of cattle that are not worthy of commendation.

Another matter of surprise, not only to me but to many others who derive their book knowledge of these matters from your paper, is the effort now apparently making both in England and America to elevate a different breed of cattle over the heads of the Durhams. I have particularly examined the account of the recently imported Herefords in the few last numbers of the Cultivator, and read the appended recommendations. I have never seen a sample of the Herefords, but have been familiar with their history as recorded by Mr. Youatt, in his work on "British Cattle;" and taking the text as laid down by him minutely, the recent discoveries of excellencies in these cattle, calculated to place *them before* the Durhams or Short Horns, have been matters of considerable surprise. This, to some of the advocates of the Herefords, may sound strange; but the strangeness of the observation will disapear, if they examine fully the chapters devoted by Mr. Youatt to the different breeds of cattle, in what may be now, strictly speaking, called their native country. If I understand the work referred to, the engravings in it are calculated for correct representations of the living animals; and, independent of the writings, they alone will be sufficient to satisfy any breeder that some of the allegations made of the superiorities of the recent importations of Herefords, if they resemble their progenitors, cannot be correct. If these statements are correct, and the appearance and test of the animals will prove it, then "improvement has been extended to them." If they have now properties that the breed in the time of Youatt's writings had not, it is a very important question to know how they have acquired those properties. Mr. Youatt says, "the Hereford cow is apparently a very inferior animal. Not only is she *no milker*, but even her *form* has been sacrificed by the breeder." These observations, or these assertions of positive facts, for such we must take them to be when from a standard work, do not read well, with the recent assertions of Mr. Sotham and Mr. Bement—the first of whom holds out the idea that they are *equal* to the Short Horn or Durham, and the latter that they are very good milkers and large. The latter gentleman, however, states that he has understood their qualities for milk have been "*recently improved.*" How have they been improved in their quality for milk? Not certainly by breeding among themselves, for the trite and true axiom is settled, I believe, that "like will beget like." If then the Herefords in the time of Youatt, and for years before that, were "no milkers," how has the present improvement in that quality been effected? It must have been by the aid of some other breed, celebrated for their possession of that quality, and by whose aid also the *form* of the Hereford cow has been so materially improved; for Mr. Sotham says, his are fine looking animals, and so says Mr. R. L. Allen, if I recollect right, who states that he saw them near Albany.

Now, Messrs. Editors, may it not be possible that we are at the commencement of another "stock mania," by which John Bull is about to realize thousands from the farmers of America, by selling them a compound breed of beautiful cattle, the essential qualities of which have been derived, and that very recently, from the Short Horns, that we have been making heavy importations of, for years back? Let any candid man answer the question to his own satisfaction. See what the Herefords were—hear what they are now, and then say if there is any impropriety in charging their admitted "recent improvement" in points in which the Short Horns excel, to an admixture with them. If such is the fact, and we have a number of the finest specimens of the Short Horns, cannot *we*, by judicious crossings and attention to these matters, form for ourselves, if I may be allowed the expression, a breed of grade cattle, without expending enormous sums to pay our transatlantic neighbors for doing work that we ought *now* to do for ourselves? The state of the times is such as to call loudly upon every man in every station of society to do his duty to himself and to his country; and I state it boldly, without fear of contradiction, that there is now abundant material in our own country, to retain by judicious breeding, the purity of the full bred Durham, and to commingle their perfections with the stock of our own country, in such a manner as to produce a race of animals equal to that of any other country under the sun, for dairy properties as well as for the butcher.

It appears to me that the community—for there in part the fault lies—lay too much stress upon the fact of "recent importation." The breed is then said not to have deteriorated, &c. &c. &c. Now we all know that the importation of stock has been carried on ever since the settlement of the country more or less, and we also know, if there is any truth in certificates, that we have hundreds of the best samples of horses, cattle and hogs, now in America, of different breeds and different families of the same breed, and admittedly enough to start with. Now let us see a little American spirit displayed, and a large amount of determination diffused among our farmers and others, to foster and encourage those who have expended their money and spent their time in procuring and rearing a superior breed of cattle and swine. The idea of deterioration, where proper attention is paid, is all ideal; the race of man, all will readily admit, has not deteriorated. Why then should cattle? Let our character as agriculturists and stock breeders be stamped with more *nationality*, and let us foster our own enterprising breeders. Let an *American Herd Book* be opened, and breeders be fully assured of the quality of the animals they purchase, and let them prefer purchasing from American breeders, and the race of cattle and swine will be no worse than those we are paying large prices for, and running the risk of carrying across the Atlantic. Respectfully yours,

J. H. HEPBURN

Jersey Shore, Lycoming co. Pa. August 12, 1840.

Queries for the Best Methods of Cultivating Clay Land.

Messrs. Editors—The intelligent and experienced cultivators of clay land, will confer an incalculable benefit on our agriculturists, by communicating through the columns of the Cultivator, the best method of preparing and managing this description of soil, for the different kinds of crops. The experience of England, Scotland, Ireland, New-England, New-York, and sections of the south and west, in this matter, collected from judicious and observing practical farmers, properly condensed and arranged, would be invaluable to the mass of our community. For my own part, though I have seen clay land worked more or less these two years, yet not having participated to any extent in the practical operations of the different modes, I am as much at a loss for *the most approved methods*, as if their cultivation had never come under my eye, and it is to solve these doubts, which I believe are nearly universal, that these queries are submitted.

1. When should green sward (each query applying solely and exclusively to hard clay land,) be plowed for wheat, barley, oats, peas, and roots, and *how?* Specify the time of year and condition as to moisture.
2. Should it be plowed a second or third time, *and how and when?* Specify the direction of plowing, if a second time or more; whether across the old furrows, *and what depth* at each plowing?
3. How many times should it be harrowed, and when?
4. Should the roller be used in all cases, and how?
5. At what time should the different crops be put in?
6. What is a proper rotation for clay land?
7. In a rotation, can *clover alone* be made a good crop, and how much seed should be sown to the acre?
8. Can *good crops* be got *from stiff clay, without manure*, for any or all the above mentioned grains and roots.
9. In laying down a permanent meadow, what grasses should be used, and what quantity of each kind?
10. Is plaster good for stiff clay—when should it be applied, how, and in what quantities, and how often?
11. Can corn ever be raised at a profit in clay, north of 42° 45', and how?
12. Should meadow lands ever be disturbed or broken up; and to sustain and renew their vigor, what are the best modes of treatment? Erie.

"POPULAR ERRORS," No. 3.—CHESS.

Messrs. Editors—I perceive in your August number, a letter from Mr. Hulett, of Byron, controverting the position assumed by me in a former communication, that the belief in the transmutation of grain was an error. I cannot say, since Mr. H. is a believer in the doctrine of the change of wheat into chess, that I regret the appearance of his paper in the Cultivator; as it may have occurred to some, that such an error is too palpable to be either common or "popular." His letter, however, will show there are yet some individuals who prefer relying on former prejudices, to thinking and observing for themselves, and consider ancient errors to be preferable to new truths.

As your remarks showed the fallacy of the "facts" of Mr. H., my object now is not so much a reply to that letter, as to show that the "notorious unbeliever, M. S. D." and those who think with him, are not without some reasons for their belief. As there is reason to imagine a renewal of the "chess controversy," would not be interesting to the majority of your readers, I think I may promise not to occupy your columns again in this way.

What is the question at issue? It is whether wheat can by any cause become so injured, and have its nature so changed, as to produce a plant in every respect dissimilar and unlike the parent seed. Opinion, prejudice, and appearances are in the affirmative; common sense, the law of nature, and fact, in the negative.

The advocates of transmutation are not agreed among themselves, as to the precise cause of this change, some attributing it to one thing, and some to another. The wheat shelled at harvesting and afterwards allowed to lie and germinate; the heads exposed on the outsides of stacks to repeated sproutings and subsequent drying; plants trampled upon and mutilated by animals; plants with the tap root cut off, or broken off by freezing, and feeding off the tops of the wheat plant, have all been supposed capable of effecting this transmutation of wheat into chess.

It would be a curious and instructive chapter in the history of ignorance and credulity, to trace this and its kindred superstitions to their source; but for the task, I have at present neither time or inclination. It is enough to know that the doctrine of transmutation of grain, is doubtless as old as that of the transmutation of metals, and probably as well based and as rational. But the particular form in which it now appears, of the change of wheat into *chess*, seems comparatively modern. Almost every other grain has in former times been charged with this freak; it remained for the wiser moderns to discover that wheat was capable of this degeneracy.

What are the facts with regard to wheat and chess, irrespective of the question of transmutation, and respecting which all intelligent men are agreed? Wheat is known to the naturalist as belonging to a genus of plants named *Triticum*, and the species, *Triticum sativum*. There are many varieties, as the red, white, bearded, awnless, Egyptian, &c. &c., which occasionally run into each other, and thus originate new varieties, as the experiments of Le Conteur demonstrate. It has remained a distinct plant, as we have the most conclusive evidence, for about 3,000 years, as kernels of this grain, taken from the folds of a mummy brought from Thebes to Paris, have germinated, and produced a beautiful wheat. Its grain is always produced on ears or spikes, and a deviation from this order of nature is unknown.

Chess is also known to the naturalist as a genus of plants called *Bromus*; and that species which is found in wheat, is named *Bromus secalinus*. Botanists enumerate between sixty and seventy species, several of which, the wheat chess as it is called being one of them, have been introduced from Europe, and naturalized in this country. It is a perfect plant, ripening its seeds, and producing true chess plants from those seeds; and consequently no hybrid or monstrosity, as some formerly contended. The head of chess is panicled or spreading like oats, or some of the grasses. and this invariably. No one has ever seen chess in spikes, or wheat panicled.

In all the controversy respecting chess, the burden of proof evidently lies with those who affirm the transmutation. It is enough for those who are the opponents of the theory, simply to deny the possibility of such a change, and wait for the proof. This has been done, and premiums have been offered for an instance of conversion of wheat into chess, or for a method that would effect such a transformation; but though there were enough to assert their ability to perform either, no instance of conversion, or method of transformation that would bear the test of a close investigation, has been discovered. The facts relied upon, have all turned out like those alluded to by you in your last number; and it may safely be averred, that as yet there is not an iota of evidence that a kernel of chess has ever grown on a wheat ear; that stalks of chess have grown from a kernel of wheat sown; or that wheat and chess have both grown from the same root. Here, opinions and appearances are both discredited; facts, those that will bear the most rigid examination and the closest scrutiny, are alone admissible.

Common sense pronounces that whatever is contrary to the known and established laws of nature, is necessarily absurd and false; nothing but a direct interposition of the Deity can alone prevent the justness of such a conclusion. How will the theory of transmutation endure such a test? To answer this so that all shall understand it, a few comparisons as illustrations of the principle may be necessary, and I will endeavor the subjects shall be such as are familiar to most.

The genus *Quercus* or oak, and the genus *Pyrus* to which belong the apple and pear, are not more dissimilar in every respect than wheat and chess; yet who has ever deemed it probable that an injury, or any possible treatment of the white oak could convert it into a crab apple? The genus *Bos* or ox, and the genus *Equii* or horse, are not more strongly marked by nature's invariable stamp than wheat and chess; and we have just as good reason to believe that the freezing of a calf's tail in January or March, would effect such a change in its constitution as to transmute it into a magnificent donkey in August; or that because a colt is infested with lice and horse distemper in the spring, that he will turn out a full blood Short Horn in September, as that wheat in consequence of any injury can change to chess. The genus *Homo* or man, and the genus *Simia* or monkey, are certainly not more different in their characters than those of Triticum and Bromus. The man who believes in the transmutation of wheat into chess, has no right to laugh at the opinion of Lord Monboddo, that mankind were originally monkeys, some tribes having at this late period but just parted with their tails; for this opinion is in perfect accordance with his avowed belief; nor should he be surprised, if after a fit of sickness, or the amputation of a limb, he should find himself a veritable Ourang Outang, since such a result is a legitimate inference from his theory.

The doctrine of transmutation is as irreconcilable with facts, as it is repugnant to common sense. I have before alluded to the experiments made to change wheat into chess, made in consequence of the chess controverssy in 1832–3, recorded in the 2d and 3d volumes of the Genesee Farmer, and the 14th volume of the American Farmer, and not a single instance could be given, where the experiments were properly conducted, in which chess was grown; and in no case whatever was there the slightest evidence furnished of transmutation. In Ruffin's Farmers' Register for 1833, is the result of an experiment commenced in the previous year, and designed by the experimenters, gentlemen of the first respectability, (including the editor of that Journal,) partly for, and partly against the theory, to fully and fairly test the doctrine. They say in their report—"Our design in the experiment was to bring into operation, every cause to which this change is usually ascribed by different persons, namely—1. Imperfect seed—2, thick sowing—3, a wet soil—4, a hard or unbroken soil—5, grazing or mowing." The whole series of experiments from beginning to end, were made with the greatest nicety, and the result may be told in a single line of the report: "Not a single head of cheat (chess) or spelt was produced." Defective, or mutilated, or frozen, and in all soils, the result was *wheat and nothing else*, and so it will always be.

The matter is apparently a plain one. The advocates of transmutation assert that proofs of the fact are as plenty as blackberries; they are invited to produce them; the attempt is made, and one after another they disappear before the Ithuriel touch of truth. Is there any difficulty in demonstrating that wheat grows from wheat, or chess from chess? Not in the least; or would there be any in showing that chess grows from wheat, if such was the fact, which every farmer is justified in asserting *is not* the case. I will add here, what is a most incontrovertible argument, that numerous instances are on record in which skillful and careful farmers by continued attention to weeding out chess, and sowing none in their seed, have freed their farms from this pest. This, according to the doctrine of transmutation, on a grain growing farm, would be an impossibility; but if, as I have shown, chess is a perfect plant, separate in character from all others, it can be exterminated, as charlock, or steinkrout, or any weed that grows from its seeds alone, certainly may be.

There is another argument which may with propriety be here adduced, the force of which cannot be denied or evaded by any one who admits the authenticity of its source; and this argument is derived from the scriptures. It may be said the scriptures were not given to teach men farming or philosophy. Admitted: yet every one is aware that the inspired penmen in illustrating and enforcing the great moral truths of their mission, frequently referred to natural truths, and particularly those connected with agriculture, and built their argument on these. If these natural facts to which they so undoubtingly refer, are false, then their argument is defective and good for nothing; a result which few will allow.

Of the many passages which would be to my purpose I select three; and the first is from the first chapter of Genesis. "And the earth brought forth *grass and herbs yielding seed after his kind*; and the tree yielding fruit, whose seed is in itself after his kind." That is, grass yielding grass, corn yielding corn, wheat yielding wheat, chess yielding chess, oaks producing oaks, and apples producing apples, and that invariably; for "*yielding seed after his kind*," cannot possibly mean after any other kind. The next quotation may be found in 1st Corinthians, XV. chap.—"Thou fool, that which thou sowest is not quickened except it die. And that which thou sowest, thou sowest not that body which shall be, but bare grain; it may chance of wheat or some other grain. But God giveth it a body as it hath pleased him, *and to every seed its own body*." No man can read this passage in its connection, and not see, that if the doctrine of transmutation is true, Paul's argument for the resurrection is false. The third instance is from Galatians VI. "Be not deceived, God is not mocked; *for what a man soweth, that he shall also reap*." This declaration affords the most perfect example of inconclusive reasoning in the English language, if transmutation is possible. How easy it would have been in this case for a Galatian to have retorted,—"Ah, Paul, your argument is specious, but unsound. We *know* that wheat turns to chess after sowing, and therefore we do not reap what we sow; your argument, then based on this illustration respecting the consequences of our conduct, falls to the ground of itself." With what propriety could the man who sowed *good seed* in his field, and found *tares* had grown, assert that an enemy had been at work in his field, if the change of one grain or plant to another was possible? How could he know the result was not that of transmutation? If the doctrine of transmutation is true, Belsham might justly assert, as he has, that the Evangelists and Apostles were most illogical reasoners.

I still think that the consequence of this belief is most injurious to the farmer. No error is harmless; certainly not one like this. How often do we hear it said when farmers are urged to free their seed wheat from chess—"it does no good, chess never grows, and wheat turns to chess, so that nothing is gained by sowing clean seed." An error like this, and a popular one too, according to L. H.'s own showing, in a wheat growing district, must be productive of immense mischief. Conscious from my own observation in this country, that such is the case, has induced me to extend these remarks to a greater length than I intended, or you may think advisable.
M. S. D.

Genesee, August 18, 1840.

RUST IN WHEAT, &c.

Messrs. Editors of Cultivator—In my hasty note of July 13th, published in the Cultivator this month, I gave no particulars—I had even forgot that I had written, until I read it in the paper, and also the excellent article upon the subject of rust in wheat. At the same time my attention was drawn to a new and singular theory of the *cause* of rust, published in the Laporte paper, which I have cut out and enclosed.* You will see by that what an immense crop was on the ground in that single county; in a county too, that the land was purchased of the Indians in 1832.

Some of the best fields have been cut, but the grain is poor stuff. Some of it does not weigh more than 30 lbs. to the bushel. I have correct information 150 miles south and 100 miles wide, east and west, all of which is a most fertile wheat soil, and immense crops were on the ground, and almost entirely blasted. There are, however, some good crops of spring wheat, though very little of it *improved* kinds.

This is certainly the greatest loss by rust that I was ever acquainted with. And in all this vast extent, I don't think there is a barberry bush. So that is not the cause. That the fly is the cause, as advanced by the Laporte writer is something new, and I must doubt the correctness of the theory.

But what is the cause? There is one fact worth noticing, that fields situated in places sheltered by woodland suffered least. And even by the side of fences, where in the fore part of summer the wheat was the most rank and luxuriant, it was much better than in the middle of the field. Why was it so? Was it not owing to the more rapid growth in June, of that which was the most backward in May? The weather was very "*muggy*," and the wheat grew uncommonly fast, so much so that the common expression among those not well acquainted with the theory of rust, said that "the stalks grew so fast that they bursted and let out the juice and that turned to a red mould," &c.—and the same thing appears to be advanced by the writer of the enclosed article.

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* Our Wheat Crop.—This year is without a precedent in regard to the failure of our *wheat crop*. The committee which was selected to ascertain the probable number of acres of wheat growing in this county, reported that there were not less than 25,000. This estimate in my opinion, was not an exaggerated one. Now had this come in as well as we had anticipated or hoped, we should have had 500,000 bushels of wheat in our county; 100,000 bushels of this would have been sufficient for our seed and consumption, and the residue we might have disposed of. This at 50 cents per bushel, would have brought into our county $200,000. This sum would have liquidated an immense amount of debt; but owing to the *fly*, *army-worm* and *rust*, our wheat has been measurably destroyed; and in lieu of our having five hundred thousand bushels, we shall not have one hundred thousand, and this will be of a very inferior quality. So it will readily be perceived that we have sustained a very considerable loss. It is *natural* for us to inquire into the *cause* of this stupendous failure. *My* views on this subject were published in the Laporte "Herald" last summer. I shall therefore merely *reiterate* them. That the fly was the *cause* of the rust in our wheat this year, I do not entertain a doubt. I have examined my own, and divers of my neighbors' stubble fields very faithfully, and the conclusion to which I have come is, that every spear of wheat in which the fly deposited its nit, last fall, was killed. They survived until the warm weather ensued in the spring, when they died. From this bunch of dead wheat, there sprang up *new* shoots or stalks, in like manner as they would come up around the trunk of a sapling which had been girdled. I have enumerated as many as 20 dead spears in one bunch. Now, for the wherefores of the rust. These new shoots came forward with amazing rapidity; consequently they accumulate an undue quantity of sap; and the stalks having more juice than it was possible for them to retain, and the extension became so great, that the sap was forced out at the spiricle or pores; the premature death of the stalk ensued and a consequent shrinking of the berry. This juice or sap being of a glutinous substance, adhered to the surface of the stalk and became a kind of rust.—*Laporte Whig*.

It is an important inquiry, "what is the *cause* of rust in wheat?" But a much more important inquiry, "what can be done to prevent it?"

More than a million of dollars is lost to the cultivators in this rusty district, by this calamity. If you or your correspondents can offer advice as to how to guard against a future loss, it will be highly acceptable.

Most respectfully your friend,
SOLON ROBINSON.

NOTE.—My young Berkshires continue to improve and excite as much curiosity as ever. It is a good evidence of a disposition among the people toward improvement, to see their curiosity excited by good stock when introduced to their notice.

Lake Court House, Ia. Aug. 20, 1840.

Notes for the Month.

ARRIVAL.—The ship Philadelphia, arrived at New-York Sept. 25, having on board our correspondent, Mr. SOTHAM, and the importation of stock mentioned in Mr. S.'s letter in another part of this paper. The animals will remain at New-York for exhibition at the Fair of the American Institute, after which they will be brought up to this city.

MR. VAIL'S IMPORTATION.—It is due to the beautiful animal, and to the breeder from whom she was procured, to say that in the portrait given in the last Cultivator of Mr. Vail's heifer "*Dutchess*," the artist has by no means done her justice—an error which we hope to remedy, by giving a correct likeness hereafter.

FAIR AT ROCHESTER.—The Genesee Agricultural Society will hold their first fair at Rochester, on the 7th and 8th of this month—the exhibition, &c. on the first day, and a public sale of stock, &c. on the last day. The Mechanic's Association of Western New-York, will hold their 2d fair at Rochester on the same day. This union of effort by the Farmers and Mechanics of the Genesee Valley, can hardly fail to bring forth an exhibition of the products of the soil and the shop, creditable alike to the city and the skill of her artizans, and the husbandmen of Monroe. The notice sent for the last Cultivator, was received too late for insertion.

CATTLE SHOW AND FAIR AT CLEVELAND.—The annual Cattle Show and Fair of the Cuyahoga Agricultural Society will be held at Cleveland on the 21st and 22d days of the present month. It would afford us great pleasure to accept the polite invitation of the Society to attend its exhibition, but circumstances are such as not to permit the indulgence of the hope that we shall be able to enjoy that pleasure. The Society respectfully invite patentees and manufacturers of Agricultural implements, to send specimens of their articles to be exhibited at the Fair. All such articles will be examined and reported on, by a committee appointed for that purpose.

AMERICAN INSTITUTE.—The Agricultural Committee of this institution have given notice that a *Plowing Exhibition* will take place at Newark, N. J. on the afternoon of the 9th inst. Plows sent to the Fair for competition, will be sent to the plowing ground free of expense. The best plow will receive as a premium, a silver cup. An exhibition of pure blooded cattle, horses, sheep and swine, will be held at Niblo's Garden in New York, on the 14th; and a public sale at Tattersall's on the 15th instant, for the disposal of all stock which may be sent to the Fair for sale. Premiums of a gold medal or silver cup of the value of $15, will be awarded for the best stud horse, best mare, best colt, best bull, best cow, best bull calf or heifer—for the best jack, a cup of the value of $10—for the best ram, ewe, and lamb, and for the best boar, sow and shoat, each a cup of the value of $8. The Horticultural Exhibition will be open on the 13th, 14th, and 15th.

ANOTHER SALE OF BERKSHIRES.—Our neighbor Mr. C. N. BEMENT, of the Three Hills Farm, has lately sold some of his breeding stock of Berkshires, among which was the imported boar "Duke of Leeds," alias "Sam Slick," to H. S. KELLOGG, Esq. of Cincinnatti. This boar was imported in 1838, when a pig of only five weeks old, and weighed when he left this city, over 500 pounds, and only in ordinary condition. He has great length of body, short legs, fine hams, deep and thick in the shoulders, and small head and ears in comparison with his body.

SILK CULTURE.—We make the following extract from a letter lately received from Mr. R. SINCLAIR, Sen. the well known proprietor of the "Clairmont Nurseries," near Baltimore, Md—"I have raised seventy-five bushels of cocoons this summer, by way of first trial, and hope to do better next season, although what few worms I had did very well. I think I have about seventy ounces of good eggs to start with next year. It is a new business, but quite encouraging. I think the Rev. Mr. McLean's estimate, of cost of making a pound of silk, will prove to be about correct."

A PLOW FOR THE PRAIRIES.—A letter from E. W. BREWSTER, Esq. Elgin, (Ill.) says—"The plow used on the broad plains of our fertile west, is a clumsy, unmanageable utensil; the light graceful screw is by a few moment's use, converted into a heavy cumbrous wedge. I wish to direct the attention of our ingenious mechanics to this subject, and to ask if any of them can furnish the Valley of the Mississippi with a plow which will, in operation, free itself from the adhesive particles of our too rich prairies? And in the name of the Far West, I promise him a rich pecuniary reward and a high rank on the list of public benefactors."

HARPER'S SCHOOL DISTRICT LIBRARY.—The publishers have given notice that the 3d series of the District School Library, consisting of fifty volumes, will be issued in a few weeks—in season to be forwarded to those who may order it before the close of navigation.

☞ There will be a trial of PLOWS at Worcester, Mass., on the 13th inst. $100 will be awarded for the best plow which turns the furrow slice flat, and $75 for the best plow which lays it at an angle of 45 degrees—open to all parts of the country.

LARGE SHEEP.—Thos. Carpenter of Hull Farm, Oxfordshire, England, recently slaughtered a Cotswold ewe, which weighed 59 lbs. per quarter.

CROPS IN KENTUCKY.—"The corn crop in Jefferson county," says a letter from Mr. D. S. CHAMBERS, of Sept. 2, "is unusually promising, which I understand is generally the case throughout the state. I have cultivated this year five or six acres of the sugar beet, which look very fine, and should they equal my expectations, I will give you the result."

THE ARMY WORM.—This pest is making frightful ravages in the cotton fields of the lower Mississippi. To-day a plantation will be free from them; to-morrow the crop is totally destroyed. Their origin and their end appears alike a mystery to the planter; but the destruction they cause is as complete as it is sudden.

EGGS.—Two thousand years ago it was well known that long eggs when hatched produced males, and round eggs females. We see the same thing has been re-discovered, and claimed as an important addition to modern facts. Solomon was not far from right when he said there was nothing new under the sun.

SAVE YOUR FIRE WOOD.—Mr. Madison, in his notices of agriculture, says—"Of all the errors in our rural economy, none perhaps is so much to be regretted, because none so difficult to be repaired as the excessive and injudicious destruction of fire wood. It seems never to have occurred, that the fund was exhaustible, and that a crop of trees could not be raised as quick as one of wheat or corn."

A TRUTH.—The farmer who consumes all he raises, and runs in debt for what he buys, is certainly in a bad way; and a nation that pursues the same course must expect to arrive at the same result, namely, bankruptcy.

INTRODUCTION OF THE LITTLE SPINNING WHEEL AND POTATO.—The Rev. Mr. Morrison of Peterborough, N. H. has lately delivered a centennial sermon at that place; it being now 100 years since the Scotch-Irish settlers of that town, Londonderry, Antrim, &c. commenced the settlement on their arrival from Europe. It contains many interesting particulars of that strong minded, able bodied race of men, and their descendants, who still people that fertile district of New-Hampshire. According to Dr. Belknap, these emigrants brought with them the first foot spinning wheels that were used in this country, and the first potatoes ever grown in New-England, which were thence called Irish potatoes. The potato has triumphed over all opposition and prejudice, and as an article of food, has taken place next to the cereal plants; but the little wheel, we are sorry to say, has become too unfashionable among our fair country-women, and has been compelled to give way to the piano, a change in general most injudicious.

MICE.—Mr. McDonald of the Hebrides, has found that wild or common mint, put in places frequented by mice, such as mows of grain, granaries, &c. or the leaves laid over cheese in daires, is an effectual preventive against the attacks of mice.

A GOOD CUSTOM.—In the Duchy of Gotha in Germany, a rule prevails by which every new married couple is bound to plant two fruit trees, and the inhabitants of the parish are made answerable for their preservation. This Duchy is noted for the abundance and excellence of its fruit.

SAW DUST.—According to Gov. HILL, the Shakers at Canterbury "make much use of saw dust as litter for hogs, horses, cows, &c. It is very fine for horse bedding; half a bushel thrown at night under a horse will give him an easy bed, and leave him in the morning in a situation to be cleaned with little trouble. The saw dust is an excellent foundation for compost manure."

GOOD HENS.—Mr. E. A. Colman of Chelsea, Mass. had from eight hens, from July 9, to August 29, seven weeks, 293 eggs.

PROLIFIC.—The wife of Mr. G. K. Norris, of Monmouth, Maine, was safely delivered of FOUR living children, 3 girls and a boy, on the 5th of Sept. 1840. So says the Maine Cultivator.

DRAINING.—In answer to the inquiry of Mr. GOODELL in our last number, Mr. JAMES PURCELL of New-Lebanon, informs us that from an experience of 30 years in ditching and draining, both in this country and Ireland, he is convinced that he can drain Mr. G.'s land "to his liking." He says he has just "brushed and ditched a swamp of ten acres for Mr. Wm. Sherman of New-Lebanon, which was so wet and mirey that cattle sunk into it so deep as to require assistance to get out, and I could put down a pole 10 or 12 feet with ease. I brushed it first, and then cut ditches four feet wide and three feet deep. It was finished in the fall, and in the spring following he could take a yoke of cattle and loaded cart through any part of it, and he intends to plow and put a crop in it next spring." Mr. Purcell may be addressed at New-Lebanon, Col. co. N. Y.

TO AGENTS.

In the Cultivator of the last and present month, bills have been enclosed to all our agents, to which we respectfully solicit their immediate attention, as it is highly necessary, and of great importance to us, that all accounts for the current volume should be closed up before the end of the year.

☞ Subscribers in Monroe county, who are still indebted, will please make payment to SAMUEL HAMILTON, No. 8 Buffalo-st. Rochester.

TO CORRESPONDENTS.

"VERMONT BEE HIVE."—Mr. WEEKS, the inventor of this bee hive, and author of the excellent "Manual on the management of Bees," has sent us one of his hives of the full size, which we shall keep at the Cultivator office for public inspection. His letter accompanying the hive, will be published next month.

NEW WORKS.—Among the matter in type for this No. but omitted for want of room, are notices of Dr. JACKSON's Geological Report of Rhode Island, and Mr. PEDDER's "Frank, or Dialogues between Father and Son," on agricultural subjects.

THE CHESS CONTROVERSY.—Perhaps we owe an apology to our readers for occupying so much space with this question; and to prevent a continuance of the discussion, we give this early notice that after the publication of some two or three articles now on hand, we must decline farther occupying our columns with it, at least until such times as some new proofs, and more cogent ones, of the doctrine of transmutation are discovered.

THE BARBERRY.—We have received several articles in relation to the disputed question of the effects of the barberry on wheat and other grains. We shall make room for one or two more, after which we trust our friends will excuse us if we close the discussion.

☞ Several communications, already in type, are omitted for want of room.

Back Volumes of the Cultivator.

All the published volumes of the Cultivator can be furnished to new subscribers. The price is, for vols. 1, 2, 3 and 4, 50 cents each—vols. 5 and 6, $1.00 each. They are handsomely done up in printed covers, and can be sent by mail at the expense of newspaper postage.

The Market—New-York, Sept. 25.

FLOUR.—Since the arrival of the Queen, Flour in this market has declined. Sales are now made at $4.75 a $4.87½ a barrel. Flour has also declined in the principal markets on the sea coast, though prices at the last accounts were much higher, say twenty-five per cent, than in July last. We give the rate current this week :—

Georgetown,	Sept. 21,	$5 00	Baltimore,	Sept. 21,	$5 12
Richmond,	Sept. 22,	5 25	Alexandria,	Sept. 22,	5 00
Charleston,	Sept. 19,	6 00	Savannah,	Sept. 18,	6 62

WOOL.—The demand for American Fleece, continues good and prices are more firm. Am. Sax. 40 a 42, Am. Mer. fl. 30 a 35, Am. ½ ¾ blood, 27 a 30, Com. to ¼ bd. 23 a 25.

COTTON.—There has been no material movement in this market; buyers seek a reduction from present rates. Sales have been made at 8 a 10¼ for Upland and Florida, 9 a 11¼ for Mobile, 9 a 11 for New-Orleans.

ASHES.—There is a fair demand for both descriptions of this article at $5 for Pots, and $5.25 for Pears.

HEMP.—The stock of Russia has been increased, demand limited, and prices falling.

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THE CULTIVATOR:

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

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THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

THE CROPS OF 1840.

That the crops have been bountiful, almost beyond any former precedent, appears to be granted by all who have taken pains to inform themselves on the subject. The season has been peculiarly favorable, and the growth, ripening, and gathering of grain, has been performed, with but few exceptions, in the best manner. On the ripening and safe gathering of a crop of grain, scarcely less is depending than on its growth, of which the harvest in England for 1839, furnishes a striking instance. The crop was large, but the weather at harvesting, and a short time previous, was so unfavorable, that the grain was unfit for the better qualities of bread when ground alone; and wheat from this country and Germany to the amount of five or six millions of bushels, was imported by the millers for the purpose of mixing with their damaged grain. The greater heat, and almost invariably fine weather of our summers, if it ripens the wheat more rapidly, and prevents the berry from obtaining the size and fairness of British wheat, prevents also the great danger of loss in harvesting, to which they are exposed.

The experience of the last few years has shown that the great danger to be apprehended to the wheat crop in this country, arises from the blight, or rust, and in some section or other of the country this disease appears each year, to the great damage or destruction of the entire crop. The grain worm and the Hessian fly are more limited in their depredations; while the mildew this year appears in New-York, the next in Pennsylvania, or Ohio, or perhaps Indiana, or, as is sometimes the case, more or less in all of them. No method of preventing the mildew has yet been discovered; indeed the cause of it is still a matter of doubt and discussion. Some contend that as the rust is a fungus or plant, it fixes itself on the surface of the wheat leaf or stem, without any preparation, and its roots at once penetrate into and feed on the juices of the interior, to the great injury of the plant. Others maintain that owing to peculiar causes, such as too great quantities of heat and moisture, the vessels of the plant become gorged, the epidermis or outer covering of the plants, unable to resist the pressure, cracks, and the juices exuding, furnish a nidus or place where the minute sporules, or seed of the fungus floating in the air, find a place to grow and flourish, shooting their roots through the crevices already made into the interior. Whichever of these theories are adopted, (or if they are united the supposition would, perhaps, be as near the truth as any,) one thing is certain, the juices that should go to the forming of the berry and the perfection of the straws are lost, and both remain immature and worthless. As a general rule, it is found that wheat sown on good conditioned land, not freshly manured, and free from any excess of moisture, is less liable to be injured than that in which those conditions are not observed. It is found also, that wheat coming to maturity early, before the great heats and frequent showers of the summer come on, is much less liable to injury than that which from any cause is later in arriving at maturity. This is particularly observable in spring sown wheat, in which of two adjoining fields the one sown early will wholly escape, while the late sown will be injured. Heavy manuring with fresh manures, by giving a too rapid and vigorous growth to the plant, renders it liable to fall, or rust. The true method of manuring, then, would be to apply it to crops, such as corn or roots, where high manuring is always useful.

On the *Wheat* crop of the year, we have little to add to the remarks made on the subject in a previous number. All the information since received, and it has been most ample, goes conclusively to prove that our estimates of the amount of the crop were well founded. From the south, west, north, and east, with few exceptions, the accounts concur in giving the quantity of wheat grown as very great, and of this fact the prices in the interior are perhaps the strongest proof. The quantity exported the present year will be large, and its beneficial effects on the exchanges and trade of the country are already sensibly felt. The amount which will yet arrive on the sea-board is very great, and the very extraordinary crop of corn grown this season will furnish a bread to millions preferred to wheat, and thus add essentially to the stock which can be spared for exportation. Partial failures in the crop of wheat have indeed occurred, and it would be little short of a miracle, if in a country as wide spread, and with such varieties of cultivation and climate, such instances should not occur. With the exception, however, of some small part of Indiana, Illinois, and Michigan, no failure worthy of notice has occurred; and the crop has been almost universally fine as well as ample.

For a great number of years there has not been a finer season for *Corn* than the past. Every where the eye is greeted with the cheering sight of fields of golden ears, a prospect, than which there is none more gladdening to the heart of the husbandman, or speaking more conclusively of abundance for man and beast. Some apprehensions were entertained, in a few places, that the corn would suffer from drouth; but we are convinced such instances will be rare. The proportion in which corn suffers from wet and cold, compared with injury from heat and drouth, is as ninety-nine to one hundred. Corn is a plant that without great heat never arrives at maturity, and clouds and rains are invariably productive of low temperature and soft corn. The third week in August, averaged a greater degree of heat than any week since we commenced our tables, and corn ripened with a rapidity that demonstrated how congenial such a temperature was found. Nearly all kinds of corn have ripened here at the north, and the earlier kinds gave ears for roasting and boiling by the time in which they have been generally received from Delaware or Long Island. Unless we are much mistaken very great yields of this fine grain will be this year reported. The seasons for two or three years have been rather unpropitious to the large eared corns, such as the Dutton and large white, but never have we witnessed finer specimens of corn than the former now exhibits in many fields of this section of the United States. Of all the crops cultivated by the American farmer, there is not a richer looking one than the well cultivated corn field presents, when during the dry and balmy air of the Indian summer, the husks fall from the ear, and the thick standing corn gives the semblance of fields of waving gold.

Last spring we procured from Gov. HILL of New-Hampshire, a bushel of the celebrated Brown corn, which is such a deserved favorite in that region, and of which such large crops have been there frequently, within a few years, grown. This corn we divided with two of our farming friends, and we are gratified to state that with all it has fully sustained its high reputation. It is a capital corn and no mistake. Owing to some delay in the transmission, the corn did not reach us until so late a period that many fields planted with the common varieties of corn were fit for the first hoeing. Under those circumstances, the corn had the best chance that could be given at a period too late for any extra preparation. In forty days from planting, some had showed its tassels; in fifty it had silked, and it came forward to maturity with such rapidity, that notwithstanding the lateness of the planting, the corn will be of excellent quality. Our experience the present year has convinced us, had additional proof been required, that there is little use in planting corn on ground not thoroughly manured, or that is not in a good state of dryness and pulverization. Much is depending on the start which corn gets at its first germination. If the ground is rich, dry, and warm, the corn springs quick and vigorous, the roots strike quickly, and it escapes many dangers to which it is exposed, when it germinates slowly, comes up weak and sickly, and appears as if hesitating between life and death.

We have again seen the value of manure from the hog-pen, tested in comparison with others, and its superiority is as apparent as heretofore. The man who wastes the manure of his pig-pen, or who does not, by giving them weeds, stable straw, or fresh earth, furnish the means of increasing it as much as possible, is sadly neglectful of his own interest. Attention to this point will materially add to the gains of fattening pigs.

Considered in reference to the whole United States, it will be found that the corn crop is very little, if any, inferior in importance and value, to the wheat crop. It furnishes to New-England a large part of its bread, and the entire south relies upon it almost wholly. In the former, the culture of wheat is considered too uncertain to be profitable; and in the south, the weevil destroys the berry after harvest, or the heat sours flour so quickly, that corn alone can be depended upon for bread. As food for animals, it is unrivalled; and though good pork can be made without corn, every farmer knows that with it, it can be made much quicker, and of a superior quality, than without it. Such a crop, then, of Indian corn as we are favored with the present season, furnishes abundant cause for gratulation in many respects.

Of the *Barley* and *Oat* crop, we spoke in a former number. The large quantities of the former grain, that have already appeared in market, and its fine quality, have demonstrated the correctness of the opinion we expressed of the excellence of the crop. There is little question, but that it is at least equal to that of any former year; and as the demand has been brisk, at favorable rates for the farmer, a large part of the crop has already passed from his hands. But little, comparatively, will this year be required for making pork, the corn crop having rendered its use unnecessary with many farmers, consequently the greater part will find its way to the markets. The oat crop is good; has been harvested in fine condition; and the demand, as well as the price, is already fair. Oats are raised with more certainty and less trouble than any other crop; indeed this very certainty has a tendency to give their culture a more slovenly and careless aspect, than that of any other grain. We think that better culture, and more attention to the condition of the soil allotted to oats, would be to the advantage of the farmer. Oats are not unfrequently put up in such a state, that heating ensues to an extent seriously injuring their value for seed; yet there is no grain grown in which so little inquiry or care, about seed, is used as about the oat.

Rye and *Buckwheat* have given fair yields, and materially contributed to the stock of materials from which the country derives its bread. Rye is more extensively used in the New-England states than in any other part of the country, and when of good quality, and mixed with Indian corn, it affords a bread which for nutritive properties is inferior to none. During our winter months, buckwheat cakes, hot and light, may be considered ever welcome on the farmer's table, and no one who has enjoyed the luxury for one season, will willingly consent to its absence the next.

Of the root crops, the *Potato* is decidedly the most important to the country; and as a whole may be pronounced good. In some limited districts, the drouth has affected the crop injuriously; in other cases, some few farmers have complained of the curl and the black rust; but such occasional appearances of disease can have but a limited effect on the whole crop. The potato as an article of food is second only to wheat and corn; and if, as many experimental farmers assert, two bushels of potatoes are equal to a bushel of corn, the potato will be a formidable rival in contesting the place of the latter grain, as the quantity grown is incontestibly much larger. For ourselves we are inclined to the belief that the formidable disease known as the curl, is the natural result of the old age of the variety, and indicates the failure of its vegetative powers. That it is not caused by an insect, and is not the result of any peculiar qualities of the soil in which the roots are planted, is evident from the numerous experiments made in Scotland and Ireland, where the curl has occasioned great damage, as well as those instituted in this country by Mr. BEMENT and others, in which some kinds planted side by side with others, were wholly destroyed, while the rest escaped. The new varieties of this valuable root, those lately originated from seeds, of which the Rohan may be given as an instance, have not to our knowledge been affected by the curl in the least. The inference, then, seems to be a fair one, that in the production of the potato, as in many other plants, a recurrence to the fundamental law of propagation, that from seeds must be occasionally resorted to, in order to prevent deterioration. The new varieties of the potato that have been introduced into culture in England and in the United States, from the seeds, exhibit a vigor and strength which none of the long cultivated kinds show. Thus the Rohan gives out vines of six or seven feet in length, and the Sommeiller, a still later seedling, of which a very few reached this country last year, shows the same appearance. The introduction of new varieties from seed, is, moreover, the surest way to improvement, as the production of such potatoes as the Rohan, Downton white, Sommeiller, and others incontestibly prove. It is worthy of remark, that by this law of nature which so easily intermixes through their seeds the peculiar qualities of different varieties of the same species of plants, a means of progressive improvement, apparently *ad infinitum*, is produced; and to the action of this law, managed by skilful hands, or, perhaps, in some instances by accident, are we owing some of our most valuable roots and fruits.

The *Ruta Baga* has this year been cultivated to a considerable extent; and where too dry weather has not injured the young plant, or the insect, which such high temperature is apt to produce, has not appeared, the roots appear well and the crop is heavy. The turnep is a most valuable root, and it is to be regretted that experience seems to indicate, that in some sections of our country, it is not adapted to the soil and the climate. A temperature too low to grow Indian corn has been found the best for the turnep, and a moist atmosphere and a soil light and free from all stagnant water, seems to be essential to their growth and perfection. A single failure should deter no farmer from farther efforts at turnep culture, and where the soil is of the right kind, and the proper time of sowing and good culture is adopted, we are confident the failures will be few.

Large quantities of the *Sugar Beet* have been sown the present season, and we have noticed some fine looking fields, which when gathered have produced handsomely. Some of our best farmers anticipate in this root, which seems more congenial to our climate, a substitute for the turnep, should that root eventually fail us. The statement of Mr. Guthrie of its little value for feeding stock, or rather the failure of his experiments with it, appears to have alarmed some who had entered upon its culture. A farmer who has for several years cultivated the root extensively, and made great use of it in feeding a large stock of animals, in conversation with us the other day, remarked that he attributed the failure of Mr. Guthrie to his feeding the roots to his animals alone, or with very small quantities of dry food, which he has found essential to the proper use of the roots. It is undoubtedly true that roots containing as much water as beets or turneps should have a quantity of cut hay or straw fed with them; and this is the course adopted by the best English farmers with all their roots, excepting such as are fed off upon the ground. We do not expect at present, that the making of beet root sugar will progress to any considerable extent, but it may hereafter become an object of much greater consequence; and we are confident that American ingenuity will yet discover some method of simplifying the tedious processes now necessary in extracting the sugar.

The field culture of the *Carrot* has this year been much extended, and so far as we have observed, or can learn, the failures have been very few. Respecting the value of this root, there seems to be but one opinion, and that is decidedly in its favor. We have fed it to all animals, sheep excepted, with the best success. Horses are exceedingly fond of them; cattle and hogs eat them greedily; and for milch cows, or fattening cattle, the carrot has few superiors. The labor of cultivating the carrot is greater than that of the turnep or beet, and such is its slow growth, that unless the ground is very clean, the weeds will get the start of the young plant and greatly add to the toil of cultivation, if not endanger the life of the plant. As with the beet, the grower of the carrot frequently experiences no little difficulty in securing their germination. To do this some of the best cultivators mix their seed with rich clean mold properly moistened, which is kept at a suitable temperature, until the seeds sprout, when they are sown. There is this advantage attending this method, that the usual delay in the germinating process is avoided, and the plants coming quickly forward, are better able to struggle with the enemies most young plants are obliged to encounter.

On a review of the whole crop of 1840, we are convinced that a more abundant one has never been gathered in the United States. The supply for both man and beast will be ample; and after supplying the wants of the country a large surplus will be remaining for exportation. This cannot fail of having a most beneficial effect on exchanges and the money market; relieving the pressure of the times, and giving the laborer an ample reward for his toil. Cold must be the heart that does not find in the abundance with which we are blessed, and the cheering prospect before us, new cause of gratitude and thankfulness.

MISTAKEN NOTIONS RESPECTING LABOR.

If there is one subject more than another, upon which the opinions of the American public require to be set right, it appears to us to be the great one of labor. We do not pretend to assign any cause other than such as exist every where,—the natural tendencies of mankind to separate into castes, in which freedom from labor is considered the great good, and where the necessity of submitting to it is associated with the ideas of degradation and dependence. In European countries, where the ancient forms of society tolerate such artificial distinctions, they may be expected to prevail; where one man is born with a golden spoon in his mouth, and another with an iron chain about his neck, freedom from which is impossible, we should not be surprised to find such erroneous ideas of labor; but here, in republican America, where every man makes or mars his own fortunes, and is the architect of his own destiny, to dream of any other distinctions than such as merit confers is preposterous, or to talk of labor being disgraceful or degrading, is a gross perversion of terms. Still with such facts staring them in the face, there are multitudes in our country who have yet to learn, "that any condition of life is honorable, which shall permit them to be independent, and preserve them from dishonor."

If the opinion that labor is degrading, personal labor with the hands we mean, was a harmless error, (if any error can be considered such;) if it did not have a blighting and pestiferous influence on the prospects of thousands in our country, it might be allowed to pass without notice, but such is not the case. Let this notion become instilled into the head of any individual, man or woman, and unless they muster philosophy sufficient to shake it off, they become useless to society, a curse to themselves, and not unfrequently a burden their friends would willingly shake off but cannot.

We see the influence of this feeling in the anxiety shown by parents to crowd their sons into what are called the learned professions, in preference to giving them a sound practical education, and fitting them for usefulness as farmers or mechanics. Is the acquisition of wealth more general with professional men, than with well informed, industrious farmers or mechanics?—It is believed not, but the boy and the man is flattered with the idea that he is going to escape the primal curse, and that when mixing with his fellow men, he shall not be classed with the common mass that toil for their daily bread. Poor fool! if such are his reasons for spending so many years of his life, and so much money in obtaining what is too frequently misnamed an education, he had better been a slave at the oar, for of one it may be said he is useful in one way at least, while the other is not only useless to the world, but by his example serves to perpetuate error. Educate the young as much as you please; but do not educate them for places where they are not wanted; nor in such a way as to render them worthless members of the community, incapable of getting a direct living in any honorable way, if a change of circumstances or unavoidable necessity, throw them upon their own resources. That is not education, at least not such as we require in this country, which only accumulates abstract knowledge, without regard to utility or condition, or that physical and mental training so indispensable in a country like ours.

If the pernicious influence of this notion of the degradation of labor is thus perceptible on our young men, it is still more fearfully marked on the conduct and condition of our females. In all parts of the world, the female of pure morals, good habits, and sound constitution—females in short, fit to become the mothers of *men*, such men as are to control the destinies of our republic, have been found in the domestic sanctuaries of rural life. Trained up under the eye of a judicious mother; taught that to be useful in whatever sphere they are placed, is one of the first duties of woman; free from the contagious examples of splendid vice, and the poisonous influence of the moral atmosphere of the city, the daughters of the country should remain the noble and pure hearted women their mothers were, uninfected by the prevalent absurdities of the day. There is every reason to fear that such is not the case; that the feelings which emanate from the atmosphere of wealth, idleness, and vice, are insensibly spreading over the country, and penetrating bosoms that should be sacred to nobler aspirations. A father may be worth his hundreds of thousands, but is that any reason why his daughters should not be so instructed and trained as to be able properly to sustain the high obligation which is expected to rest on them as women and as mothers, in any of the situations in which an honorable woman may be placed? A thousand examples may be shown where wealth has glided away, and those who have been educated, improperly educated we say, with expectations that they were always to abound in riches, have found themselves cast on the wide world, and its cold charities, without the disposition or the power to help or provide in any honorable way, for themselves. The fault is in their education. It has been instilled into them, that to be qualified for usefulness was a disgrace; that the more helpless, and we may add worthless, a woman was, the more she was to be prized; that to inquire what were the duties and the probable destiny of an American woman, were an infringement of her high prerogative; and that if the teacher had pronounced her finished, and the fashionable world accomplished, the great end of education had been gained. She gets married, and then what does the world, what does her husband care for such things, as the most valuable portion of her life has been spent in acquiring? Will playing on the piano, or dancing, or singing, make a shirt for the husband or a dress for the babe? Will an acquaintance with all the ologies construct a pudding or a loaf of bread? Will years spent in the study of rhetoric or metaphysics, qualify her to do her own marketing, or make her skillful in the selection of cabbages or potatoes? If a rich man wishes a doll, he buys a china one and places it on his mantle; he certainly, if he is a man of sense, does not wish his wife to be one; and on nine-tenths of the females who spend their years in these studies, the money and time is as really thrown away, as if spent in gilding the edge of the domestic dinner pot. No person who looks at things as they are, can wonder at the increasing numbers of unmarried women in our country. The man who marries, in every case, (or if there are exceptions, they are so few as not to be worth notice,) wishes a wife that will take care of his property as well as himself; that is competent to take charge of his house in every respect, and see that every thing is managed and cared for as it should be; and when so many of our females receive an education for directly the reverse of these things, it is not to be wondered at, that the industrious young man who has his fortune to make, and wishes to rise in the world, stands aloof and lets them pass on in single blessedness. The ability to make a good wife and mother does not come instinctively. The duties must be learned, an apprenticeship must be served, and she who declines this must fail when she comes to the trial. The ambition of woman should be to beautify and adorn the domestic circle; her proper place is the bosom of the family; and it is only there she can be qualified to fulfil her high destiny. For a poor girl, or one in moderate circumstances, the very best place is a situation in an orderly well conducted family; yet how often do we see them declining to labor in a family, and preferring the quasi slavery of a cotton factory, the last place in the world, a fashionable female academy excepted, to fit a woman for domestic society and usefulness.

A poor boy commences his life in the country; and there he gains vigor of constitution and energy of will. He goes to the city and amasses a large property. His wife was selected for the qualities he admired, thrift and good housewifery. His sons and his daughters are educated with all the fashionable additions of the age, and the consequent cordial dislike of labor in any form. Misfortune overtakes the family, and from the heights of gentility they are plunged to the abyss of destitution. How many of these sons and daughters will have energy and decision of character enough to accommodate themselves to their new condition; to set about in earnest learning the art of being useful, of being able by honest industry to provide for themselves? We wish we could say there was any probability that a single one would do so. On the contrary, it is almost certain they will cling to former associations, still strive for the former *good* society, and gradually sink down into a kind of shabby gentility, the principal ingredients of which are poverty and pride. Too often, however, to keep up appearances, resort is had to courses which debase the mind, and are sure precursors to infamy, degradation and ruin. Let it be fully impressed on the mind of every one that labor, personal labor, in itself is never disgraceful; and that the ability to provide for themselves, is a duty enjoined by God himself on every individual.

OFFICERS OF AGRICULTURAL SOCIETIES.

The question has been asked in this country, in reference to the appointment of officers of Agricultural Societies, whether the officers of such societies should invariably be farmers? We are perfectly aware that some of the most efficient and zealous friends of agriculture are not farmers; we know that to such men our societies must look for a large portion of their income and their encouragement; we know that many of these men, should they see fit to leave their present professional or mechanical pursuits, would make first rate farmers; yet the question, without any disparagement to these men, presents itself in this way,—shall societies for the advancement and promotion of agriculture, select men who are personally and practically acquainted with the details of the business, for their officers, or such, as, while they are the most active and cordial friends of the farmer, have other pursuits to which their attention is necessarily directed, and are not in the practice of agriculture?

For ourselves, while we should have no objection to the advice and assistance of other men than farmers, in the management of such societies, we must still believe that the *business* of such associations must of necessity be left principally in the hands of working men, if we would expect their prosperity. In judging thus, we only act as all other classes of men act, when selecting individuals to manage a trust for them, and that is, to prefer men who have a practical acquaintance with the business under consideration. This is a necessary and a safe rule, and in no case is it more proper than in the choice of men to superintend the concerns of an Agricultural Society. In looking over the minutes of the proceedings of the Royal Agricultural Society of England, at their late meeting for the choice of officers for the ensuing year, we observed the following opinion expressed by Earl Spencer, well known as the able and fast friend of agriculture, in relation to this matter, "The question is," said his lordship, "whether you will look to rank and station only, or whether the working capabilities of the individual should not also be estimated; my opinion is, that the President of the Society should be a *working man.*" As a consequence of this feeling, Philip Pusey, Esq., was elected to the office unanimously; taking the place held last year by the Duke of Richmond. Mr. Pusey is well known as an excellent writer as well as farmer; the introduction to that Society's Journal, and the able article on the draught of plows in the third number, being from his pen.

VEGETABLE MATTER IN SOILS.

Few farmers are aware of the quantity of vegetable matter contained in common soils, within the depth to which it is usually plowed, or six inches. It has been calculated that every acre of ground, excluding stones, contains 800 tons of soil, within a depth of six inches. Common soils contain from 8 to 12 per cent of vegetable matter, part soluble, and part insoluble, but of course all available when the proper agents are applied to render it so. If we take the medium of ten per cent as the quantity, it will be seen that every acre of ground contains in the surface depth of six inches 80 tons of vegetable matter. The fertility of soils is not so much depending on the whole quantity of vegetable matter it contains, as on the proportion of soluble matter it affords, as it is this last only that is immediately available. We may extend this computation to the mineral manures, salts of lime, &c., a soil contains. If on analysis, a soil is found to contain two or three per cent of the carbonate of lime we may be assured that the farther application of lime on such a soil will not without other aid render it fertile. If a soil should be found to contain the same or a greater proportion of sulphate or phosphate of lime, we may feel certain that the application of plaster or bone dust, would be of very little use, as where tons of any material are already present, the application of a bushel or two extra, can produce but very little effect. The alluvial soils of the Nile or the Mississippi do not contain more than three per cent of carbonate of lime; but they abound in other matters that give them the greatest fertility. It cannot be too often impressed on the mind of the farmer, that no one ingredient in a soil can give or perpetuate fertility. There must be the presence of many; and the better they are proportioned, the more beneficial the result.

MAKING PORK.

Making pork is one of the most essential interests of the farmer, and may be made one of the most profitable. We question, however, whether, as generally conducted, much money is made by feeding swine, and the reasons are sufficiently plain. In the first place, but little attention, if any, is paid to the kind of hog used for feeding. It is enough, if the animal, caught and caged in the pen, is a hog; the fact that a given quantity of food fed to some breeds will make nearly or quite as much again pork as when fed to some other breeds, is overlooked; and an astonishing quantity of roots and grain is thus annually wasted. In the second place, the mode of feeding is very defective. The food may be good, but if given to the hog unprepared, or uncooked, much of its efficiency is lost. To feed hogs profitably, they should from the first, be kept in a thriving state. Not half fattened at one time, and then allowed to fall away until they are miserably poor; but kept constantly improving from the time they leave the sow until they are ready for slaughtering. It takes a much larger amount of food to raise an animal of any kind allowed to become poor, than to keep one constantly thriving. Again, the time allotted to feeding, is usually too limited; good firm heavy pork cannot be made, no matter what may be the feed used, short of three or four months. Hogs may be puffed out, and made to look pretty fair, but their meat will not be hard and firm, and will be affected with the complaint called shrinking in the pot. Hogs fatten much faster in moderate weather, than in severe cold weather; and hence the process of fattening should commence as early as the food to be used can be had. After the process of feeding begins, see that the hogs have enough; to suppose a squealing, ravening hog will fat, is a mistake, but unfortunately a common one.

Farmers in general miss a large part of the profits that might be made from feeding pork, by not paying attention to the making of manure from the swine. For corn, a variety of experiments has convinced us there is no manure that can be compared with that of the pig; and the farmer who permits any of this to be wasted, or does not give the animal an opportunity of converting as much mold, vegetable matter, &c. into manure as can be done, is a great loser in the end. Some able farmers have estimated that the manure made by a lot of pigs, where the proper materials are provided, will fully pay the expense of feeding; but there is no doubt if they do not do this, they will, by fermenting the most enriching compost for crops, add essentially to the ultimate profits of the farmer. To make good pork, a hog should not be less than fifteen months old, kept constantly thriving, not have a yard as large as the farm or the highway, and be fed on good food not less than three months.

COOKING FOOD FOR ANIMALS.

All are aware that grain of almost every kind greatly increases in bulk by steaming or boiling, and this bulk is greatest at the moment the grain is swelled so as to crack or burst its skin. It is also known that cooked food is far more nutritious to animals, than that which is uncooked; and many have gone on the supposition that its increase in value for food was equal to its increase in bulk in cooking. This is doubtless a mistake, as the nutritive power of articles is rarely in proportion to their size, and never perhaps exactly in proportion to their increase of bulk in cooking.

Reaumur instituted a series of experiments to determine the rate of increase in different articles of feed most commonly used for animals, and found the result of some of them as follows:

4	pints of	oats	after boiling,	filled	7	pints.
4	"	barley	"	"	10	"
4	"	buckwheat	"	"	14	"
4	"	Indian corn	"	"	15	"
4	"	Wheat	"	"	10	"
4	"	Rye	"	"	15	"

In the continuation of his experiments to ascertain the effect of such food on animals, he found that with some of these articles, though the bulk was much increased, the total of food required to satisfy the animal, was the same as if no cooking had taken place; or that an animal that would eat half a bushel of oats dry, would eat a bushel cooked with the same ease. The nutritive power was, however, apparently increased, or the whole of it contained in the grain made available; which, when grain is fed whole or raw is rarely the case. On the whole, he came to the conclusion that when wheat, barley, or Indian corn, is used for feeding, it is far more economical to boil or cook these grains, than to feed them in a raw state; but that little is gained on the score of economy, when time, fuel, &c., are taken into consideration, in cooking oats, rye and buckwheat.

In determining the question of economy, much we think is depending on the manner in which the cooking of the grain is performed, whether alone, or with other substances, such as roots. Alone, corn is the most improved by cooking of any of the grains, and the value of corn meal for making pork, it has been shown by experiment, is almost doubled when made into pudding. We have long been in the habit of boiling and steaming potatoes for feeding pigs or making pork. With them, in the early part of the feeding, we incorporate apples, squashes, pumpkins, or indeed almost any vegetables of which swine are fond. The grain we use, is ground, and either steamed with the roots, or mixed with the hot mass in the vats, as it is taken from the steamer. As the feeding progresses, the quantity of meal is increased, until towards the last, that material alone is used. Corn is decidedly the best grain for making pork; peas and barley are next; with the others, we have had little experience, though what we have had with buckwheat has impressed us favorably of its value.

EXTRAORDINARY SECRETION OF MILK.

Milk is one of the most important substances in nature, and the only one that can be named intended for food and for nothing else. The laws which govern its secretion are very well understood, and their general regularity well established; yet there are some singular aberrations from these laws which are worthy of notice. One of these aberrations is the furnishing of milk by males; of which several well authenticated instances are on record. Every general reader is acquainted with the history given by Humboldt of the Indian at the missions on the Apure, in South America, who after the death of his wife, nourished her young babe from his own breast, and succeeded in rearing it a strong and healthy child. A similar case has occurred in the vicinity of Sebastapol, in Russia, as given in one of the London Medical Journals, in which a father who lost his wife, succeeded in rearing his child with milk derived, most unexpectedly at first, from his own breast. The child was applied to the breast in both these cases for the purpose of quieting it, at first, and a secretion of milk soon took place sufficient to satisfy their wants.

Another instance of this unnatural secretion, as it may be termed, occurred not long since in Prussia, in the case of a grandmother of 73 years of age, who had borne no children for some fifteen years, but whose daughter dying, left a little child, which she took it upon herself to rear, and to quiet during the night, allowed the child to place its lips to her shrivelled and shrunken breast. To her surprise, the milk soon appeared, and the child found nourishment until old enough to wean.

This singular deviation from the ordinary course of nature in the production of milk has been observed in animals. A few years since a farmer in western New-York wishing to wean some calves, turned them from the cows into a distant field where were several young cattle among which was a two year old heifer, that had never borne a calf. Going to look at them in a few days he found the heifer and one of the calves by themselves, and to his surprise discovered that the heifer's udder had become much enlarged, and exhibited every sign of containing milk. That such was the case, was demonstrated by the calf's sucking soon after, and by the heifer's continuing to give milk for some time after she and her adopted protegee were separated.

In a late number of a foreign agricultural paper we find the following singular instance of this deviation, in the case of the sheep. "Mr. Seaman Beale, of Tenterden, has a wether hog [a two years old] which has for some time past suckled a lamb. The lamb was often seen apparently sucking the sheep, but it was not supposed that it derived any nourishment from its efforts. However, on shearing the wether, it was found to be otherwise, and that a stream of milk could be produced from him equal to that from a ewe."

A wag at our elbow has hinted that if this power of producing milk from the breast is universal in man, old bachelors, whom all must admit are now useless, might, by administering to the necessities of the unfortunates in our orphan asylums, in this way do the state some service.

ENGLISH BEER.

Some little controversy has arisen in England between the farmers and the brewers, in the course of which the following facts have been established:

1. That the number of beer shops in 1834, was 37,381; in 1835, 39,654; in 1836, 44,144; in 1837, 45,394.
2. That the number of licensed public houses at which beer was sold, was, in 1834, 53,714; and in 1835, 55,751.
3. That the quantity of malt on which duty was paid in 1836, was 44,387,719 quarters; in 1837, 40,551,149 quarters; in 1838, 40,505,556 quarters.

From this decrease in the malt, and the great increase in the quantity of beer made and vended, it was conjectured that the practice of drugging beer, or trimming it as it is called by the brewers, was also on the increase. A resort to the table of imports showed this to be the fact; especially as one of the great brewers, Mr. Child, furnished the following formidable list of articles, of which more or less was used in the various kinds of brewing:—"Treacle, liquorice, cocculus indicus, salt of tartar, heading, ginger, lime slaked, linseed, cinnamon, hops, malt, opium, belladonna, hyoscamus, cunio cuacus, nux vomica, and grains of Paradise." Of these articles, many of them, it is well known, are most active poisons; yet taking three of the most prominent, the increase is as follows:—Cocculus indicus in 1831, 3,541 lbs.; in 1834, 4,559 lbs.—increase 1,018 lbs. Nux vomica in 1831, 2,547 lbs.; in 1833, 4,124 lbs.—increase 1,577 lbs. Grains of Paradise in 1831, 8,722 lbs.; in 1833, 40,411 lbs.—increase 31,689 lbs. Thus it appears that while the use of malt, the article that gave to beer its greatest value, has decreased, the use of noxious drugs has increased to a very great extent, and her Majesty's subjects are not only cheated, but in addition poisoned.

The above facts are gathered from some papers on the subject in the English periodicals, and we imagine are worthy of notice in this country as well as in that.

Inquiries, Correspondence, &c.

Culture of the Beet.

The following description of the culture of the sugar beet is from a correspondent in Virginia. With him the root has been very successful, and it promises to be of the greatest value to the south, where green food for milch cows, sheep, &c. is obtained with difficulty. At the north where labor is higher, the necessity of using a drill for planting the seeds instead of the hand would be apparent, although we have found the seeds sown by the drill rarely germinate as well and evenly as when sown by hand, owing probably to the difference in covering; the drill not performing it in common soils as evenly as the hand. The time of sowing named is doubtless the most proper in the latitude of the writer, but this is a point to be determined by the soil, climate, &c.

"Early in May is, I think, the best time for planting. Have your ground plowed and in good order. Take a two horse plow, and begin in the left of your ground, proceeding to the right, draw a furrow, turn to the right and double it; turn to the left, your near horse walking in the last furrow; turn to the right and come up, and you have two ridges, and so proceed. Take a rake and rake off all clods from the top of the ridge, and at the same time flatten it down so as to leave it about three inches wide on the top. Take a plow line or other cord, tie a stake to each end of it, and stretch it out. Take a stick of the length you wish the distance between the plants to be, (I think ten inches the best,) and with a piece of coal, chalk, or any thing of that kind, make a mark on the line, as often as the seeds are to be put in. Draw the line tight on the top of the ridge, and direct your planters to put a beet seed at each mark, and about an inch and a half deep. In this way they go on almost as fast as in planting potatoes. When the beet is well up, if any are missing, plant another seed; when the weeds make their appearance, a boy with a sharp hoe can go very fast and cut the weeds on the top of the ridges, as he has but a smooth surface to clear. When the beet has grown about the size of your little finger, then thin them. Good seed generally produces three or four plants. Transplanting the young root has not been successful with me. Soon after thinning you must take a shovel plow and run between the rows; this will cut up all the weeds; and then draw the dirt to the plants with a hoe. If your roots become weedy, use the shovel plow again, and another hoeing is all that is necessary. When you gather them, take a plow and throw a furrow from the beet on one side, take hold of the beet with one hand, and it will come up very easy; twist off the top with the other and throw them in the wagon or the basket. By throwing up ridges, you have double the depth of soil for your root; you have but about three inches surface to hoe, instead of three feet; and in harvesting you can go as fast as you please."

Inquiry—Beet Sugar.

"Messrs. Editors—I want to know, not me alone, but the agricultural community generally, of some cheap and easy manner in which sugar may be extracted from the beet. I have seen a little work on the subject by Mr. Church, of Northampton, good theoretically doubtless, but not sufficiently plain and practical for a farmer to take hold of in a small way. For the process of defecation, or the separation of the juice from the substances it contains in its first state, he recommends sulphuric acid, a mixture of lime water and blood, and animal carbon. These things may be used where a person is convenient to a large city, or a laboratory, but they will not do for us. We want some simple process to bring the juice of the beet into the consistency of sugar. It is not at all necessary to go into a process by which double refined loaf sugar is made, but a good brown sugar suitable for family use. If you can give us this, you add at once at least one-fourth to the supplies of every family who can produce it. Most of us have a plenty of milk, meat, eggs and butter, and the sugar with them will be a substitute for fresh provision, and make the most agreeable of nutritive diet. This is a subject on which we farmers and the country have a deep interest, and I hope some of our scientific or practical men will respond, and show us a cheap, simple and easy process, for such I doubt not exists. Permit me to add, there is a general impression, that Prof. Silliman *can*, if *he will*, give us such a process; and whoever does this, will find his name as indissolubly connected with the prosperity of the country as is that of Watts with the steam engine, or Whitney with the production of cotton. B——, Cabell co. Va."

Remarks by the Editors.—We have had no experience in the making of beet sugar, but we cannot think the production of an article for common use would be at all difficult. If the root was dried and then pulverized, the sugar would be dissolved, and the extraneous matters left with the mass at once; or if the juice was pressed from fresh roots, the defecation could be performed as with maple sap, though it might require a more immediate action, to avoid souring. The most simple process we have yet noticed is the following, as described by a farmer of Genesee: He took about five bushels of white and yellow sugar beets to a cider mill, ground and pressed from them a barrel of juice. This he treated as so much maple sap, by boiling and cleansing, and it yielded about twenty pounds of good sugar. Milk and the white of an egg was used for the clarifying; but the sugar was dark, and would be better by some more skilful method in purifying. He believes that beet sugar can be made by any farmer, and that all the apparatus required for the production of a common article, is a common cider press and kettle for boiling. Experience we doubt not will instruct in the clarifying process; to hesitate, would be to libel American ingenuity and skill in surmounting obstacles.

Diseases and Management of Sheep.

Messrs. Editors—I have seen in your paper a request made by Mr. Grant, for some remedy to cure cattle that have taken too freely of new corn. Taking it for granted that the digestive organs, stomach, &c. of a sheep is like that of the ox, I will tell him what proved useful to my sheep under the same circumstances. My sheep had taken too freely of new corn, they became perfectly debilitated, violent purging ensued, and several of them died. One I found very low, it could not stand, and appeared to be blind. Three doses of tar and salt a day, say half a table spoonful of tar, and a little salt, repeated for two or three days cured it.

In the management of sheep I find tar of great benefit. If placed in a situation that is easy of access, they will eat it very readily. I like to have the troughs well plastered with tar, and the salt thrown in, and they will use it freely at all seasons. I find that sheep in this section of the country require moist or green food in the winter, and the turnep crop is so precarious, that I was induced to try the winter radish; this I found to answer every good purpose; they grow large, and they are not apt to be troubled by the flea or bug. The sheep I found would eat them as well, and appeared as healthy as when fed on turneps.

I observed a writer in your paper recommended littering sheep pens with straw, feeding on oats and hay. The littering with straw I found to be injurious, the urine and manure of the sheep soon fermenting, and produced a suffocating heat and offensive odor; this was the cause of disease. Feeding on oats and hay produced costiveness and fever, and in the month of February they began to eat their wool. Hay is an enemy to wool; you always find the manufacturer complaining of it. I prefer feeding on corn stalks and corn fodder, (the corn cut up by the roots and the husk left on the stocks,) the stock keeps the sheep from the ground, and the pen will not be hot or offensive. A hundred hills of corn and a bushel and a half of turneps or radishes, I found sufficient for 125 head of sheep at a time. I feed morning and evening, letting them run out through the middle of the day on my wheat, so as to destroy the insects that would otherwise harbor under its foliage and rise in the spring and destroy the grain, and to prevent the snow from suffocating it, as some of your correspondents complain.

A Virginian.

Hoof Ail—Inquiry.

Gentlemen—I have been troubled very much in the last twelve months with the disease among my cows, known by the name of hoof ail; and have tried every remedy I can hear of, to effect a cure, but without success. If you know of any certain cure, you will confer a favor on me, and perhaps on others, by giving it a place in your paper.

R. L. WRIGHT.

Wheatland, Va., 1840.

We know no certain cure for the hoof ail, after the disease has fixed itself on the animal; and when the feet have suppurated, the instances of cure are so rare as to be hardly worth taking into account. Prevention seems the only course. When the disease shows itself the first appearances should be watched, and if the animal is thoroughly bled in the foot at that time before matter is formed, or the inflammation has progressed far, there is rarely much danger or trouble afterwards. But if the inflammation is not checked at once, and matter forms within the hoof, in nine cases out of ten the creature had better be dead than alive, at least so far as we have seen that is the case. Blood may be drawn by paring the sole to the quick near the toe, or by cutting off the point with a chisel, until the blood flows. After bleeding, tar should be applied, and the foot kept dry for a few days.

Disease of Swine.

" Messrs. Editors—I wish you to draw the attention of some of your able correspondents, to a disease which prevails among swine in this part of Virginia, and is called among us an infection of the kidneys, or a weakness of the loins. Such is the weakness of the hinder parts of the animal thus affected, that they are unable to rise, or stand on their hind legs at all. There is a fine hog that is diseased in my neighborhood, and if you can point out a remedy you will not only much oblige you correspondent, but confer a favor on the public.

J. M. HUDSON.

" *Waylandsburg, Va.*, 1840."

With the disease here alluded to, we have had no experience; but it is common in the western states, and is there attributed to the collection of worms in the intestines, of the kind called the kidney worm. The writer of the American Swine Breeder, after remarking that "large doses of arsenic" have sometimes effected a cure, but that its use is not to be recommended, adds: " Probably the best remedy, is to drench the hog with tolerably strong portions of ley from wood ashes, mixed with tar. If this is not successful, from twenty to thirty grains of calomel may be resorted to, and should be given mixed with half a pound of meal dough."

By occasionally feeding pigs with sulphur, or wood ashes mixed with their food, this disease and others that attack swine would doubtless be prevented. If any of our subscribers can furnish a cure for this disease it shall have a place.

Bloody Milk—Inquiry.

" Gentlemen—I should be glad to obtain a remedy for a disease in the udder of cows like the following: On Sunday evening I discovered that bloody milk was drawn from one teat, accompanied with a slight swelling behind it. On Monday morning one half of the udder was so badly swollen as to render it nearly impossible to milk the two teats affected; the other two teats remained unaffected. It has continued until this time, (Saturday;) there is no appearance of external injury; though I should state that some time previous to my purchasing her, three months since, she had had a back rib broken.

M. R. GRISWOLD.

" *Middletown, Ct.*, 1840."

Bloody milk may be occasioned by external injuries; by garget, in which case it is usually combined with swelling, and the discharge of stringy matter; or by pressing the udder or teat in milking so unskilfully as to rupture some of the fine blood vessels within, and cause the blood to be discharged with the milk. When it arises from garget, the best remedy we have known used, is to cut the scoke, or garget root, as it is sometimes called, into fine pieces and feed a handful or two to the cow with a mess of bran or cut vegetables. Where the bleeding arises from external injuries, or a rupture of vessels, washing the bag or udder, by preventing inflammation, will produce a good effect. Salt and water has been recommended for this purpose. Giving bloody milk is, however, at times a fault from which a cow cannot be freed, and that part of her udder must be lost, or the animal fed for the butcher.

Mr. Kendall's Cow Julia.

We received a farther notice of this cow, intended to accompany the portrait published in our last paper, but as it came too late for that purpose, we give it an insertion in this place. Mr. Kendall says: "The portrait, which is a most excellent likeness, was taken when the cow was in milk, giving six gallons per day of very rich milk, and of course she was not in very high condition. She was descended from the importation of Sanders, Tegorden & Smith, who imported both long and short horns. Julia is three-fourths short horn and one-fourth long horn Durham, though her appearance would indicate that she was a thorough bred Short Horn. Her weight last fall was 1,600 pounds. By reference to her portrait, it will be seen that she takes on flesh at the most valuable points. She is very heavy in the hind quarters, broad in the loin, of great width across the hips, straight on the back, splendid in the rib, small head and neck, and deep in the brisket, her legs small but tapering to her body. Julia takes on flesh more rapidly than any animal I ever knew; she has been running on grass with my stock, and has become so very fat that I have some fears of her breeding. By the application of the tape, Julia measures round girt seven feet two inches; round brisket and shoulders seven feet eleven inches; round the arm two feet two inches; round leg below the knee eight inches; round neck two feet eleven inches; cross the hips two feet; and from the center of horns to root of tail seven feet four inches; and is four feet nine inches high. In conclusion I would remark that she has taken Five Silver Cups at different fairs in this state. P. S. I add the measure of Lady Washington, a yearling heifer: round girt six feet; from center of horns to root of tail six feet three inches; round brisket and shoulders six feet six inches; round arm one foot nine inches; leg seven and a half inches."

Great Crop of Corn.

Mr. W. W. Bridgman of Belchertown, Mass. informs us that he has this year raised *one hundred and sixty bushels of corn*, weighing 41 lbs. 2 oz. per bushel, and twenty-four bushels of Rohan potatoes, on one acre of land. Of the culture of this crop, Mr. B. says—"The manner in which I prepared my land for this abundant harvest, was as follows: I put on it 22 loads of long manure, made in an unfloored stable. I planted the corn the first week in May, and hoed it the first time the last week of the same month, when I found that the wire worm was making great ravages among it. I slaked a bushel of stone lime and put on the corn. In a few days I perceived that it had changed its color. In ten days, I put on six bushels of ashes, which is all the process which I pursued."

Milking.—Mr. B. says farther, in answer to the inquiry for a remedy for kicking cows, that if the milker will keep his nails short, not one cow in a hundred will kick; and that the use of an ointment made of linseed oil and white lead twice, will cure cracked teats.

To destroy the Striped Bug.

Mr. Wm. Youngs of Lyons, informs us of a more feasible method of destroying the striped bug which infests melons, cucumbers, &c., than that described by Mr. Wilson in the last Cultivator. It is to place a turkey with her brood of young, in a coop in the garden, just as the plants appear above ground. The young ones will live on the bugs, which they eat with great avidity; but the old one in the coop, must be fed her usual meals. The turkeys must, after destroying the bugs, be removed from the garden before they become so old as to prey upon the setting fruit.

Notes for the Month.

☞ Subscribers and Agents should bear in mind, that at the close of the current vol., which terminates with the next No., all subscriptions, except those paid in advance for the next year, will cease; and that all those who wish to receive the next vol. of the Cultivator must renew their subscriptions. ☞ With this No. we send out Prospectuses for vol. 8, to all our Agents. There may, however, be some omissions; and if any of our Agents fail to receive a Prospectus, we shall be glad to be informed, that copies may be sent.

Trial of Plows.—The great trial of plows for the premiums of the Massachusetts Agricultural Society, came off at Worcester, on the 14th October. Nine plows, three of which were from this State, were entered for trial. " There has never been," says the Boston Cultivator, " so important a trial of this most important implement of the farmer, since the country was settled, as the judges were very minute and exact in their examination and inquiries, and measured not only the width and depth of furrow, but the *power* which was required to move forward the instruments. This was done by a Dynamometer which measures exactly the strength required in the draft." The premium of $100, for the plow that will turn the sod over and lay it flat, was awarded to Prouty & Mears, Boston—and the premium of $75 for the best plow to lay the sod on edge or obliquely, was awarded to Charles Howard, Hingham, Mass.

Large Calves.—Mr. Wm. Heyser, of Springdale, near Chambersburg, Pa. has furnished the Farmer's Cabinet with the names, ages and weights of nine, full bred Short Horn calves, sired by his imported bull Colossus, and from cows selected from the fold of Mr. Whittaker, as follows:

Lady Franklin,	at 19 days old,	250 lbs.
Napoleon,	21 "	262 "
Flora,	9 weeks	450 "
Belina,	3 months	460 "
Dahlia,	11 "	880 "
Franklin Comet,	10 " and 11 days	936 "

Three calves at one hour old, weighed 115, 120, and 125 lbs. A splendid lot truly, for one farm.

Sales.—Wm. Weddle of Greece, near Rochester, recently sold to J. C. Hathaway of Farmington, " Lady Bower," an imported Short Horn cow, with her bull calf, 7½ months old, for $1,000. At a sale in Ontario, a Durham bull from Mr. W.'s stock, was sold for $580; and a cow with her two calves, for $890.

Death.—The Rev. L. F. Clark, Editor of the Tennessee Farmer, and Professor of Chemistry and Natural History in East Tennessee University, died at Knoxville on the 25th of August, aged 40 years. The paper is continued by the publishers, J. C. Moses & Co.

Large Sheep.—A Leicester buck was exhibited in Nashville, (Tenn.) August 19, by M. R. Cockrill, Esq. which measured 4 feet 4 inches from ears to tail, 4 feet round the girth with the strap drawn tight, 2 feet 8 inches in height, and 1 foot from brisket to the ground. Fine specimens of the Bakewells and South Downs were at the same time exhibited by Maj. Clarkson.

Weight of Grain.—The legislature of Indiana has passed a law fixing the weight of a bushel of Wheat at 60 lbs.—Rye 56 lbs.—Corn 56 lbs.—Barley 48 lbs.—Oats 33 lbs.

Pigs.—Wm. Elliott of Sumner, (Tenn.) has two Berkshires, which weighed at four months, the boar 141 lbs. and the sow 136 lbs.

Ontario Ag. Society.—The officers of this Society, are, John Greig, Esq. President; Gideon Lee, Heman Chapin, Peter Mitchell, Lyman Hawes, Wm Otley, and Irving Metcalf, Vice Presidents; W. W. Gorham, Rec. Sec'y; Oliver Phelps, Cor. Sec'y; J. D. Bemis Treasurer; and a committee of three for each town—embracing together a list of gentlemen abundantly qualified by their intelligence and their wealth to make the Ontario Ag. Society, the first of its class in the Union.

Sheep.—A correspondent in western New-York wishes us to caution the farmers of that section, against selling their sheep to the butchers at a low rate, in the expectation that they will be able another season to replenish their flocks at a similarly low price. He says wool is advancing, and that the demand for woolen goods is increasing.

The Cultivator's Almanac.—We are glad to see that this work for 1841, (the first number of which for 1840, was issued last winter,) has already appeared. It is got up in good style, 124 pages duodecimo, and contains a great variety of agricultural knowledge, appropriately arranged under each month, by Mr. Buckminster, the editor of the Boston Cultivator. It is a truly useful work, one which we should rejoice to see take the place of the many worse than useless almanacs now issued from the press.

Scratching Hens.—We never allow our hens to run in the garden, and they are taught from the egg, that the dinner pot would be as safe a place for scratching operations as the garden. But if hens *will* scratch, a down-east farmer says the way to prevent it, is to tie the two outside toes of one foot together, over the middle one. This so narrows her understanding, that scratching is impossible.

"WALKER ON INTERMARRIAGE."

A thorough bred man! An improved woman! (is there not a savor of blasphemy in this last implied possibility?) are expressions to which the public ear has not yet become accustomed; yet from present indications, they will ere long become familiar as household words. The human races will be classified in "Herd Books;" volumes will be written to develop the principles of physical perfectibility in men and women; and itinerant lecturers will find in it a source of gain, equalled only by the high mysteries of Phrenology and Animal Magnetism. Unlike these sciences, however, the branch of natural science under discussion, has something in it directly tangible; and as the means of improvement, of which it is proposed that men shall avail themselves, are shared in common with the domesticated races of animals, the influence of the projected system has been, or may be, readily submitted to the test of actual experiment.

There can be no doubt that so far as his physical properties are concerned, in his modes of propagation, nutrition, growth, and the general formation of physical character, man is strictly and purely an animal. With that which constitutes his peculiar glory and excellence, the immortal mind,—the subject under discussion has nothing to do farther than the reflex influence of the body on the mind is to be taken into consideration. In the development of his bodily powers; in the obviating the tendency to deterioration; in counteracting the causes that promote hereditary debility and disease; in short, on all the points that strengthen, develop, improve and perfect the physical man, and give beauty of form and goodness of constitution, man is to be treated as an animal.

We indeed imagine it will be found rather more difficult to carry out the system of improving the race in man, than it has been in animals; passions and preferences, inclinations and volitions, in the first case are to be encountered, which do not exist, or are more manageable, in the last; still this cannot furnish an argument against the improvement of animals, or the animal part of man. Lawrence long since observed, that "if men, in the affair of perpetuating the race, were as much under management as some animals are in the exercise of their procreative functions, an absolute ruler might accomplish in his dominions almost any idea of the human form." No monarch has, however, dared so far to interfere with the natural rights of man, as the above supposition would imply; yet accident has furnished the strongest of evidence that the physical conformation or personal qualities of the human race, are governed by the same laws that predominate in the animal. As this subject is only incidental to the main object of this paper, a single instance in proof must suffice. It is well known that the Fredericks of Prussia, have had a mania for tall men, and that the regiments of guards have for years been selected with reference to this point. In the favorite regiment, there is not a man under seven feet in height. These regiments are quartered in the city of Potsdam, and have been for fifty years. Forster, an accurate observer, speaking of this fact says:

> "A great number of the present inhabitants of that place, are of a very high stature, which is more especially striking in the numerous gigantic women. This certainly is owing to the connexions and intermarriages of these tall men with the females of that city."

We have said that volumes would be written on this topic; and one that may be considered the first of the multitude to be called forth, is now lying before us, in the book the title of which is placed at the head of this article. It is idle to deny that Dr. Walker has here given to the public an interesting volume, and one which will find an extensive perusal. Some of the views he has presented are novel, both in their announcement and application, and should they be eventually sustained, will prove of great service. We think, however, there is too much charlatanry for a book of science; too much quackery for a university bred M. D.; and, notwithstanding the care of the American editor, who has evidently expunged some of the most offensive passages, and clothed others in less exceptionable language, too many passages bordering on indelicacy for a book intended for popular reading. This latter defect is, however, probably unintentional, and rather belonging to the nature of the subjects treated, than arising from any disposition to offend the feelings of any.

In his development of the laws that govern the increase of the human race, and in establishing his principles for the physical improvement of mankind, Dr. Walker has drawn largely from well established facts in the breeding of domestic animals; and in return has applied what he considers a new view of an original and fundamental law of organization, to the explanation of many difficulties inherent in the commonly received systems of breeding. For ourselves, though we do not consider the Dr.'s "philosophy of crosses" perfectly satisfactory; yet such is the importance of a correct understanding of the matter to every breeder of animals, and such the extent of application that may be given to his primary laws, should they be found consonant with fact, that we propose giving them a pretty full statement and examination in our columns for the benefit of those who may not happen to obtain the volume itself.

In the first place, Dr. Walker maintains that the phraseology adopted by breeders, as well as the hypothesis on which it is founded, is both false and absurd. We hear breeders talk of half, three-fourths, or full-blooded animals, but Dr. Walker says this is all an error.

> "According to this hypothesis, the sire and dam equally impart blood to their progeny: the filly produced by an Arabian horse and a cart mare has one half Arabian blood; the filly produced by the first one and an Arabian, has three-fourths blood," &c. * * * "Blood is certainly very easily divided; and it serves the purpose of this hypothesis very well. But why is the blood the material pitched upon? Chyle or urine would have answered the purpose just as well." * * "The fact is, that blood is a groom's term, invented by ignorant fellows who wanted to look knowing, and from these high authorities it has been borrowed, to the end of obscuring the whole history and truth of breeding."

In contradistinction of this theory of the sire and dam imparting their qualities to the progeny in the manner understood by the terms full, half, or three-fourths blood, Dr. Walker introduces the new theory that the organization of the progeny is by halves, one parent giving the locomotive, and the other the nutritive or vital system, and this *invariably*, where the breeds or races are of the same variety. As on this asserted fact, the Dr.'s whole theory is based, we shall give his enunciation of it in full:

> "I. *Law of selection, where both parents are of the same variety.*
>
> "1. Organs communicated by one Parent; the Anterior Series.
>
> "In this case, ONE PARENT COMMUNICATES THE ANTERIOR PART OF THE HEAD, THE OSSEOUS OR BONY PART OF THE FACE, THE FORMS OF THE ORGANS OF SENSE, (the external ear, under lip, lower part of the nose, and eye-brows being often modified,) AND THE WHOLE OF THE INTERNAL NUTRITIVE SYSTEM, (the contents of the trunk or the thoraic and abdominal viscera, and consequently the form of the trunk itself, in so far as that depends upon its contents. The resemblance to that parent is consequently found in the forehead and bony parts of the face, as the orbits, cheek-bones, jaws, chin and teeth, as well as the shape of the organs of sense, and the tone of the voice.
>
> "2. Organs communicated by the other Parent—the Posterior Series.
>
> "THE OTHER PARENT COMMUNICATES THE POSTERIOR PART OF THE HEAD, THE CEREBEL, SITUATED WITHIN THE SKULL, IMMEDIATELY ABOVE ITS JUNCTION WITH THE BACK OF THE NECK, AND THE WHOLE OF THE LOCOMOTIVE SYSTEM, (the bones, ligaments, and muscles or fleshy parts.)
>
> "The resemblance to that parent is consequently found in the back head, the few more movable parts of the face, as the external ear, under lip, lower part of the nose, eye-brows, and the external forms of the body, in so far as they depend on the muscles, as well as the form of the limbs, even to the fingers, toes, nails.
>
> "Explanation of the accompaniment of particular organs, in each of these two series:
>
> "It is clear that the whole *nutritive system*, chiefly contained within the trunk, is naturally connected with the *senses of taste and smell*, which are the guides to the supply of its wants as to food and drink; and therefore the senses [organs of sense?] contained in the face and (consequently the observing faculties dependent on those faculties and contained in the forehead,) ought to accompany the nutritive system.
>
> "It is equally clear, that the whole *locomotive system* is naturally connected with the *cerebel, or organ of will*, on impulses from which all the motions of that system depend; and therefore the back head containing both the organ of will, and the posterior masses of the brain—the seats of aversion or desire by which will is excited, ought to accompany the locomotive system, not merely in the greater masses of the figure, but even in the muscles of the face."

On this basis, Dr. Walker has constructed his theory of Anthropology, or the physical improvement of the human race; and to illustrating and establishing it, both by reference to man and animals, and showing its agreement with undisputed facts, is the Doctor's book devoted. We leave its physiological and phrenological notions, to those whose business it is to settle such matters, and shall only consider it as relating to the breeding or crossing of animals; as it is clear, if animals are propagated by *halves*, and that *invariably*, our notions and practice on the subject of improving animals must undergo essential modifications.

One of Dr. Walker's illustrations of the fact that the organization is by halves, is derived from the Ancon or Otter breed of sheep. This breed was derived as follows:—An ewe produced a male lamb of singular proportions and appearance. His offspring by other ewes had in many instances the same characters as himself, viz: short crooked legs and great length of body. Some few of this breed have been introduced into this country, and were valued as unable to jump over any fence. The Doctor says:—

> "When both parents are of the Otter breed, their descendants inherit their peculiar appearance and proportion of form. When an Ancon ewe is impregnated by a common ram, the increase resembles wholly *either* the ewe *or* the ram. The increase of a common ewe by an Ancon ram follows entirely the one or the other without blending any of the distinguishing peculiarities of each. Where common ewes have had twins by Ancon rams, one sometimes exhibits the complete marks and features of the ewe, the other those of the ram. The contrast has been rendered singularly striking, when one short legged and one long legged lamb, produced at a birth, have been seen sucking the dam at the same time. As the short and crooked legs, or those of opposite form here indicate the parent giving the locomotive system, it is evident that one of the twins derived it from one parent, and the other twin from the other parent—the parent not giving it, doubtless communicating in each case, the vital or nutritive system."

As a proof that the horse, in a cross, communicates his skeleton, or the locomotive system, Dr. Walker gives the following from Mr. Knight, the President of the London Institution:

> "I have obtained offspring," says Mr. K. "from Norwegian pony mares, and the London dray horse, of which the legs are perternaturally *short*, and the *shoulders* and *body* perternaturally deep, and the animal of course perternaturally *strong*. I felt my way cautiously in making such experiments, fearing I might subject the females to a very painful death; but I found the size of the fœtus to be governed by the size and breed of the female parent."

An instance of a similar cross is found in the history of the Virginia horse, though in this case the male parent was a poney. It may be seen at the 22d page of the 13th volume of the American Farmer. The writer says:

> "In breeding, if the male is smaller than the female, the progeny will be compact, heavy bodied animals, with well proportioned extremities, not the most beautiful, but beyond doubt the heartiest and toughest animals in the world. It is to be observed that this kind of stock is produced only when the difference between the size of the parents is not excessive. I knew an instance of a very small, heavy made Canadian poney, which was brought into this region, that ruined much stock. The poney paced very well, and became celebrated in consequence of having been ridden by a young lady of good family, who fell into a rage of love with an old man of some consequence among us, and eloped with him to his majesty's North American possessions. The girl was pursued and came back on this pacing steed, whereby he became as notorious as the feat of his former owner. He was about 13 hands high, and was let to many of the largest mares in the country—many exceeding 16 hands in height. In the stock thus produced, all the peculiarities indicated above, were aggravated in a most unsightly and absurd degree. They were long bodied, lizzard legged, and squat, with diminutive extremities and immense frames (trunks?) resembling nothing so much as the kind of dog called a bull-fiste."

In the case of Mr. Knight's experiment, the legs were short like those of the female poney but large and thick like those of the male dray horse. In the Virginia experiment, the legs resembled those of the male; but in both cases the body or trunk was long and capacious. We imagine it would perplex Dr. Walker to bring both these cases to harmonize with his theory that organization goes by halves invariably.

Dr. Walker maintains that the point whether the male gives the locomotive or the vital halves of the organization, depends on the comparative vigor and ardor of the two animals; if the male is young and vigorous, he generally stamps his character on the offspring; if the reverse, and the vigor and volition is on the part of the female, she gives that part of the organization depending on the will, or that which belongs to the cerebel, or the motive half. There is some plausibility, and perhaps some truth in this theory; though those who doubt the principle of organization by halves, will doubtless be able to explain it satisfactorily on the commonly received system. We shall give some of the instances collected in support of this position, as valuable in themselves, and affording useful hints to the breeder.

> "Mr. Charles Colling put a short horn bull to a hornless Galloway cow; the cross was successful, and exists at present in most of the improved short horned cattle. I never heard of any of the produce being without horns, and I never saw one that could be distinguished from a pure short horned beast. Mr. Vansittart used a well bred short horn bull to well bred Hereford cows; and the produce had all the appearance of short horned cattle. I used a well bred Hereford bull to common short horned cows; all the produce had the appearance of Herefords." "If a hornless ram be put to horned ewes, almost all the lambs will be hornless, partaking of the character of the male more than the female parent."

As in Dr. Walker's theory, the skin, nails, horns, wool, &c. go with the locomotive part, these facts agree very well with his system. On this point, Dr. W. gives a great variety of interesting facts, derived from crosses between asses and mares, between different varieties of dogs, birds, and even fishes.

It will now appear clear to the reader, that if the theory propounded by Dr. Walker is true, our common system of breeding is absurd, since there can be no such thing as a division other than by halves, and that the breeding from crosses is mischievous. We prefer, however, to give the opinions of men who have paid great attention to the subject, rather than the theory of any man, merely remarking that the impropriety of going beyond a first cross, is now generally admitted by the best breeders in England and Scotland.

> "If I were to breed," says Mr. Knight, "from a female of this kind with a male of similar origin, (cross breeds from a Hereford bull and Alderney cow) neither of them of course possessing permanent hereditary character, the offspring would of course be extremely dissimilar to each other; some would appear nearly pure Herefords, and some nearly pure Alderneys, and if such mixed breed were to become the stock of a farm, some apparently perfect Herefords, and some perfect Alderneys would be produced during a long succeeding period."

Sir John Sebright, one of the most skillful and experienced breeders, says he does not approve of the mixing two distinct breeds, and thinks that the efforts so made to secure the valuable properties of each, have never succeeded.

> "The first cross frequently produces a tolerable animal, but it is a breed that cannot be continued. If it were possible, by a cross between the New Licestershire and Merino breeds of sheep to produce an animal uniting the excellencies of each or both, that is the carcass of the one with the fleece of the other, even such an animal so produced, would be of little value to the breeder; a race of the same description could not be perpetuated, and no dependance could be placed upon the produce of such animals. They would be mongrels, some like the New Leicestershire, and some like the Merinos, while the most of them would have the faults of both."

We are inclined to believe this is a pretty correct statement of the results which have ensued from the efforts made in the United States by crossing imported animals with the native stock, and breeding from the progeny of these crosses. So far as our observation has gone, the produce from the first cross, say of a short horn, and a native cow, has been to give a valuable animal, but the going beyond this has been beneficial only in a very few cases. These facts would seem to point out the true theory of breeding, viz. one cross and then selection.

Dr. Walker's chapter on breeding in-and-in, is full of instructive matter, and the range of examples adduced is great. In considering the consequences of in-and-in breeding he uses the term in its narrowest sense; for instance where a bull is put to a cow, and the progeny being a heifer, the same bull is put to her, and so in succession, the connexion being the closest possible. Where this is the case, according to the Dr.'s theory, the nutritive organization falls to the lot of the male, the female gives the locomotive organs, and the deterioration of the breed certainly ensues. On this subject, Sir John Sebright says:

> "I have no doubt but that, by this process long continued, animals would in the course of time degenerate to such a degree as to become incapable of breeding at all. I have tried many experiments, by breeding in-and-in, upon dogs, fowls and pigeons; the dogs became from strong spaniels, weak and diminutive lap-dogs, the fowls became long in the legs, small in the body and bad breeders."

> "Close breeding," says Mr. Berry, "impairs the constitution, and affects the procreative powers. In in-and-in breeding I believe that the generative power fails *first* or *chiefly* on the part of the male."

Some of Mr. Berry's closest bred animals became entirely impotent, and he was hence compelled to throw in a strong cross which at once remedied the defect.

Mr. Robinson purchased a stock of pure short horns for his estate in Scotland, and pursued strictly the course of in-and-in breeding; the consequence was, his cattle soon became feeble and delicate, very bad breeders, and many died with consumption; by resorting to Mr. Collings' stock and the use of one of his bulls for a few years, his stock was renovated and assumed their former beauty and vigor.

To breeding in-and-in, says Mr. Youatt, must be traced the absolute degeneracy—the speedy disappearance of the New Leicester cattle; and, in the hands of many an agriculturist, the impairment of the constitution and decreased value of the New Leicester sheep, and the short horn cattle.

The general opinion among the Arabs is, "that colts bred in-and-in (even though not strictly so) show more blood in their heads, are of better form, and fit to start with fewer sweats than others; but when the breed is continued incestuous for three or four crosses, the animal degenerates."

So far as the human race is concerned the testimony adduced by Dr. Walker, is decisive against in-and-in breeding. The absolute fatuity and imbecility of the races of long established sovereigns and families of Europe, the Bourbons, Guelphs, Leons, &c. for instance, is well known to every one; and the fact is not less conspicuous that the illegitmate branches of these families are superior in every respect to the pure blooded ones. This fact did not escape the notice of Byron, who says, in his sarcastic manner, of these noble families:

——— "They bred in-and-in, as might be known,
Marrying their cousins—nay their aunts and neices,
Which always spoils the breed, if it increases."

The higher order of the Turkish nation are probably the finest looking men in the world. This admitted fact we have been inclined to attribute to their being generally the children of Georgian or Circassian women, and therefore the result of what may be considered a first cross, which is always favorable. Dr. Walker says, "that this improvement is not merely the result of marriages with the women of Circassia and Georgia, but of the fact that polygamy by weakening and enfeebling the male, permits the female to stamp her form upon her progeny more generally." Will not this effect of polygamy account for the great number of females that are produced in all countries where polygamy is practiced, over the males?

Dr. Walker differs from many physiologists, in admitting that impressions produced on the mind of the female during her pregnancy may leave an indelible mark on the progeny. Medical men, who deny this fact, consider all such results as monstrosities, or the result of accident; but the marking of animals by impressions through the senses of the female parent, has such strong evidence in its favor that to us there seems no room for doubt in the matter. An instance is related of its occurrence in the case of animals, which shows that the patriarch Jacob was not less a philosopher than a Yankee in his management of Laban's cattle, and that the influence of the striped and speckled rods was one perfectly legitimate, and what was to be expected. Mr. Boswell, in the Quarterly Journal of Agriculture, says:

> "One of the most intelligent breeders I ever met with in Scotland, Mr. Mustard, of Angus, told me that one of his cows chanced to come in season while pasturing in a field, which was bounded by that of one of his neighbors, out of which an ox jumped, and went with the cow, until she was brought home to the bull. The ox was white, with black spots and horned. Mr. Mustard had not a horned beast in his possession, nor one with any white on it. Nevertheless, the produce of the following spring was a black and white calf with horns."

The effect of intimacy and observation in modifying the features, and eventually giving them peculiar qualities, is noticed by Dr. Walker, and a number of instances adduced in proof, and among others the following testimony of a medical man who had long resided in the east, and for several years in New Holland. The latter part of the extract, we recommend particularly to the attention of the sons of the Pilgrims, as stating a fact of which they are not probably aware:

> "The same gentleman stated that the second generation of European descent at Botany Bay, partook of the ugly visages of the aboriginal inhabitants. I rather suspect that the present descendents of the old North American settlers, begin to resemble in figure the original Indians."

We rather imagine the likeness of the Botany Bay children to the original New Hollanders, can be traced to a cause more likely to stamp such character, than the mere observation by the female; a cause which has given the mestizo and creole character to so large a proportion of the population in the West Indians and Spanish Main.

It is the opinion of Dr. Walker that the intermixture of races seems to improve the intellectual powers, as much as it does the bodily proportions; and the examples which he has given, or which readily suggest themselves to the intelligent reader, would seem to be decisive of the fact. The cross produced by the connection of the Dutch with the Hottentots; the English or French with the Indian; the Spaniard with the Indian or Negro; the English and the Hindostanee; and on a larger scale, the nations that sprung up from the irruptions of the northern barbarians on the fertile plains of Asia or Europe, have always been, or are superior in most respects to either race taken separately. "It is an important truth that most of the great nations of the earth have arisen from great migrations or immigrations of the human race."

We shall close this somewhat extended notice by an extract from a late publication of Dr. Hancocks, which is worthy the consideration of every citizen of this country; coming as it does from the pen of an able English writer:

> "I do not know if the progress of the American Republic may not be, in some measure, attributable to the circumstances here considered, (the effect ot crosses on the human family. The Americans—a melange of all the different nations of Europe, though mostly of English, Scotch, and Irish descent, are noted for activity and enterprise; and their march of improvement in practical science, the mechanical arts, and commerce, has surpassed what could have been anticipated in a people cast into a wilderness so distant from the civilized world. Their rapid increase and improvement has attracted the admiration of all Europe; and they are offering to the world a splendid example of justice and national freedom."

We have of course merely touched on the most prominent points of Dr. Walker's book, and those that appear to be of the most interest to the breeder. As yet, we consider the propositions of the writer little more than mere plausible theory; but one which fortunately can be tested by any individual who will take the pains to enter upon such an investigation of the animals, or even the children around him. We think the evidences against the doctrine of *organization*, will at least be found equal to those in favor of it, from such observation. On some points we dissent from Dr. W. decidedly. That an accidental injury, such as the breaking the leg of a horse, should render him an imperfect foal getter, is absurd. Constitutional, not accidental disabilities, effect the progeny; for every one's observation will convince him that the children of parents, *minus* a leg or an arm, or with club feet, are as active and vigorous as those of parents not so affected; but where the constitution is enfeebled, and there is a tendency to particular classes of diseases, such as consumption or scrofula, the progeny are very sure to suffer; and this, no matter which of the parents are so disposed.

We think too, the fact that breeding from crosses, (that is for example, from stock produced from a short horn bull and a native cow) will not succeed, is about as well accounted for by the theory of "blood," as by "organization" by halves. The first or half bloods are fine animals; there is no certainty the progeny from these will be so, as their condition is unnatural, and the natural tendency in all cases is to recede to the original starting point. Thus in all the improved breeds of animals continual care is requisite to prevent deterioration.

We should have a still more serious protest to enter against the books of Dr. W. (were this the place to urge them) and that would be on the ground of their moral influence. A French gentleman, attached to the old regime, and who was with the Marquis Fayette, in this country during the revolution, asserted not long since, that at that time he found by inquiry (probably he inquired in French) the girls of fourteen, in the republic, actually did not know whether they were girls or boys! There is no such ignorance to be apprehended now, if such books as Dr. Walker's "Intermarriage" and "Woman," are to become fashionable reading books. No knowledge, however profound, can compensate in woman the loss of that delicacy of feeling, that innate modesty, that constitutes her greatest charm, and these things would be endangered by familiarity with such themes and discussions as are found in these volumes.

Still the theories they broach will excite attention, will prompt investigation; and if they are truths, will be added to the general stock of human knowledge; if errors, they will be thrown aside and forgotten in that limbo of baseless theory, the purgatory of eccentric philosophers.

DOCKING HORSES.

We are sorry to perceive that the barbarous, cruel, and injurious practice of docking and nicking horses is again beginning to be looked upon with favor, after some years of merited disuse. We wish to enter a decided protest against the system, as injurious to the horse, and offensive to good taste. A handsome flowing mane and tail constitute the most graceful and useful appendages to this noble animal, and are essential both to his strength and comfort. None but a narrow minded ignorant man, would have in the first place ventured on such a violation of vested rights; and none but blockheads or jockeys, destitute of the better human feelings, could have perpetrated or tolerated the innovation. We are not in the habit of indulging in unkind feelings against our fellow men, however useless or ridiculous their conduct may be, but when we have seen a docked horse turned out to grass, and obliged, between every mouthful of food, to employ at least as much time in biting off flies, as he uses in eating; a loss of time and labor, that a tail, in its natural state, would have entirely prevented, we have almost wished that the perpetrator of the outrage, in a state of nudity and his hands tied, could be placed in some of our swamps, for half an hour, in order to realize the pleasure an unprotected animal must experience when exposed to the assaults of mosquitoes, ox, horse & gad flies.

It is impossible that a docked horse should be as vigorous and strong as he would have been had this operation never been performed. A division of the strong tenons and muscles that have their termination in the tail, must of necessity inflict an irreparable injury. A few years since, an English gentleman had a fine hunting horse, that would carry his rider over a five barred gate with ease; but the tail was not in fashion, it was not carried to suit him, and he had him nicked; the result was, that when he got well, he could scarcely carry him over two bars. "Thus," said he, "I spoiled a good horse, and no wonder; for the operation weakened his loins, a result that might have been reasonably expected from the severing of two such essential muscles."

Race horses, we believe, are never docked or nicked. Their muscular powers are all wanted, and that too, where nature has placed them. The hair of their tails is cropped, as any one may see in the fine prints that accompany the English sporting journals; but the man who should undertake by the use of the knife, and the division of tendons, to improve nature, would justly be deemed insane. The same argument that prevents the mutilation of the race horse, should prevent that of the carriage or farm horse. The trifling inconvenience the tail occasions when in the harness, should be tolerated for the sake of the greater beauty it gives the animal, and the additional strength and comfort it confers. We do not believe nature has made that beautiful and useful animal, the horse, so bunglingly, as to render it necessary for us to cut off a large piece of bone here, or divide a pair of muscles there, to confer symmetry or strength. Let who will prefer jockey horses, we shall still consider those the best upon which the axe or knife has never passed.

QUALITIES OF WHEAT.

It is supposed that the superior nutritive qualities of wheat over any other grain, arise from the great quantities of that peculiar half animalized substance gluten, which it contains. It also seems to be very well ascertained, that the quality of the bread made from it, as well as the quantity, is much influenced by this ingredient. The combination of the gluten with the starch and water, in making bread, renders wheat bread more light, and except when new, more digestible than any other. Sir H. Davy's analysis of several kinds of wheat, gave the following proportions of nutritive matter, or starch and gluten, in 1000 parts of each:

	Starch or Mucillage.	*Gluten.*
Middlesex wheat of good quality,	765	190
Polish,	750	200
North American	730	225
Thick Skinned Sicilian,	725	230
Thin Skinned do.	722	239
English Spring Wheat,	700	240

Writers on this subject, have concluded that spring wheat must be more nutritious than winter wheat. Owing to the greater quantity of gluten, it may be more easily digested; but we think the power of nutrition cannot vary essentially. Winter wheat makes a whiter flour, cut before it is quite ripe, than if left till quite mature, and in any state, whiter than spring wheat; and hence the rule should be, when intended for flour, cut early; when for seed, as late as can be done, and the crop be secured. A bushel of wheat is said (British Hus. vol. 2, page 155,) to yield when ground, the following weight of flour, &c.

Fine flour,	25½ lbs.
Household do.	22½ lbs.
Pollards	8 lbs.
Bran,	3 lbs.

The first and second kinds mixed, constitute the quality of flour used for bread in this country and in England; and hence, a bushel of wheat gives 48 lbs. of flour suitable for bread of good quality. To ascertain the quantity of bread the several kinds of wheat, as well as of other grains would make, a series of experiments was instituted by the French government, which resulted in the average of the experiments, as follows:

Wheat, if weighing	60 lbs.	of flour	48,	made of bread	64 lbs.
Rye,	"	54	"	42	"	56 "
Barley,	"	48	"	37½	"	50 "
Oats,	"	40	"	22½	"	30 "

Thus a bushel of oats for instance, weighing two-thirds as much as a bushel of wheat, made not half as much bread; a fact doubtless to be attributed to the power of combining with water, given to the wheat by the gluten it contains. The advantages of cooking grain for food, are strikingly shown in the fact, that by making flour into bread, one-third of nutritive power is gained, as few will contend that bread is not more nourishing than raw flour; and the gain in the others, is not far below that of wheat.

DICTIONARY OF TERMS
USED IN
Agriculture and its Kindred Sciences.

DIGESTION. In order that the substances used by man and animals as food may become nutritive, they must first undergo the process of digestion. When the articles of food, properly masticated and prepared by the saliva, are taken into the stomach, they are subjected to an action by which they are mechanically separated into their smallest parts, saturated with the gastric juices, and converted into a pulpy or half-fluid mass. This mass on leaving the stomach is called *chyme*, and that part of the large intestines called the duodenum, is mixed with the pancreatic juices and the bile. By the action of these substances a new product called *chyle*, is produced, of a milk-like consistence, which is absorbed and taken up for circulation, and the nourishment of the system, by the vessels called the *lacteals*. The function of digestion is one of the most important in the animal system, since when this is deranged, none of the rest can go right; and by far the largest amount of disease known to man or animals arises from this source. Digestion may be impaired by the want of proper food to excite the stomach to action, or it may be impeded or fatally obstructed, by overtaxing its capabilities, or loading that organ with substances difficult of reduction or assimilation. Those substances that afford the most nutriment, are not always the most easy of digestion, and are not of themselves the best adapted for food. It seems necessary there should be a considerable quantity of material not decidedly nutritive, mixed with the positive nourishment, in order to prevent the stomach's receiving too much of this, and becoming clogged and inactive. Some of the substances that are composed of concentrated nutritive matter, such as pemmican, (essence of beef,) or sugar, will support life but a short time, and are injurious in large quantities. Pure wheat flour is objectionable as containing too much nutriment in proportion to its bulk; and animals fed entirely on wheat or barley, without coarser food to distend and excite the stomach to action, are very sure to suffer. It seems essential to a healthy state of the digestive organs, that the food should be of good quality, abundant; the nutritive and coarser parts properly proportioned; that it should be received at regular times, and so often as to prevent an inclination to overload the stomach; that eating should not be followed at once by severe exertion, and that no substance should be taken into the stomach till properly masticated.

DILUVIUM. Over the surface of almost every country on the globe are scattered beds of gravel, sand, and boulders, evidently once subjected to the action of water, and deposited in their present position by powerful, and as it would sometimes seem, conflicting currents. The boulders mingled with diluvium, or rather constituting a part of the mass, form one of the surest means of determining the course of such currents, as they may usually be traced back to their original deposite or strata. It is obvious that the currents, whatever caused them, which have deposited the diluvium of the United States, flowed from the northward. In Massachusetts, New-York, and Ohio, this evidence is incontestible, and in passing from Boston to Buffalo, and thence to St. Louis, one is continually meeting with boulders, which could only have had their origin from 20 to 100 miles northward of the route traveled. The feldspar, sienite, graywacke, lime, and sandstones of the several districts, are so well known, that it is not possible for an experienced observer to mistake or confound them; the only wonder is, how such masses of granite and sienite as are sometimes found one hundred or more miles from their original location and weighing from ten pounds to as many tons, should have been placed in their present positions. Diluvium exercises an important influence on agriculture, and by knowing the particular location of any kind of rock, we are able to trace the direction of its influence, and the effects produced by its partial breaking up and degradation.

DIP. This is a term applied to the direction of the layers of rock that constitute the crust of the globe. It is very various in the same strata and in the same country; the layers sometimes exhibiting the most remarkable bendings and contortions. The dip of the transition or secondary rocks furnishes the best opportunity for observing its effects. A knowledge of the dip of the strata, may be of essential service in determining the place in the series of any particular rock. Thus much money has been in former years expended in Middle and Western New-York, in boring for coal, under the supposition that as that section of country was higher than the coal fields of Pennsylvania, boring to that supposed level would reach similar deposites, when an examination of the strata and a calculation of the dip, has shown that these beds of coal are geologically some three or four thousand feet *higher* than the place where the borings were attempted.

DISEASES. In all animals, as well as in man, there is a tendency in the young to follow the type of the parent in general appearance and internal conformation, and this disposition causes the diseases of the parent to exercise a decided influence on the health and vigor of their offspring In man this tendency to hereditary disease is more noticed than in the animal, but it is as active in one case as the other, and if it does not as often show itself in the last as in the first, it is because the counteracting energies of nature, when left unfettered by conventional rules or absurd modes, are sufficient to modify, if not to prevent, the injurious consequences of such tendency. Diseased or malconformed animals should, however, always be avoided for propagation, especially those in which the chest is defective, since an animal with a narrow chest, cannot have the room for the free circulation of blood and action of the lungs required in a perfectly healthy state.

DISTILLATION—is a process in which certain substances existing in, or combined with others, are separated, by first being converted into vapor by heat, and then condensed by cold. Volatile oils, essences, alcohol, spirits, brandy, &c. are the products of distillation, and the products so obtained are exceeding useful in the arts and sometimes when exhibited as medicines. The great use of distillation is, however, to produce intoxicating liquids from the various substances capable of furnishing them, and the cheapness and consequently general use of these products, has caused the most frightful demoralization in almost every country. All the small grains, corn, potatoes, cider, wine, yield the intoxicating material, and most of those nations in which the regular process of distillation is unknown, have the means of producing inebriating drinks by simpler, yet scarcely less effectual, if not equally common means. Alcohol, and the oils prepared by distillation, are found of great use as solvents, and subserve many useful purposes in the arts.

DISTRIBUTION OF PLANTS. While there is scarcely any part of the globe on which plants are not found, many of the most important ones are confined by certain causes to particular zones or locations, and attempts to produce them in other situations must of necessity be abortive. Thus, the palm of the tropics and the maple, of the arctic circle cannot be made to change places; and the same law applies to the apple and the orange, the Irish potato and the yam. The grand modifying agent in the distribution of plants, is temperature; and this cause divides the vegetable productions of the globe into zones, north and south of the equator, regularly marked, unless influenced by causes local in their nature and action. There are some general rules applicable to the investigation of the laws that govern distribution, which cannot be overlooked; and these are difference in latitude and difference in elevation. It has been found that the average difference in temperature on any given degree of longitude is about equal to a degree of Fahrenheit for every degree of latitude; and that in elevation, there is on an average, a decrease of temperature equal to a degree, for every five hundred feet of ascent. The result of these laws is, that plants of the temperate zones, which will not grow on the plains of the tropics, flourish on the sides of the mountains or the elevated plains, the temperature resembling that of their favorite clime. Thus wheat and barley which cannot be grown on the plains of the tropics, produce abundantly on the table lands, some eight or ten thousand feet above the sea. The effect of these laws of distribution are sensibly felt in the United States, in the production of fruits and of grain. Thus the apple which finds its favorite clime in the northern states, does not grow in the southern ones; and the peach of the north is so inferior to that of the south, as scarcely to be considered the same fruit. The proper wheat zone of the United States may be said to extend only from the 38th to the 43d degree of latitude. It is indeed cultivated both to the north and the south of these limits, but experience proves that the crop is less certain and the grain less perfect without than within them. In the northern states corn is not as certain a crop as it is in the south, but as far north as it succeeds the produce is usually more abundant, and the grain of a far better quality than that grown farther south. In the United States the zone best suited to the production of wheat and maize may be said to be coincident, or occupying the same degrees of latitude. In England and on the Continent, the temperature produces a different result, the wheat and the maize zone being distinct; and it being impossible to grow corn as far north as the best wheats are produced.

DOCK. This plant is the *Rumex* of the the botanists, and several have been introduced from abroad for cultivation in our gardens, that have become most troublesome weeds. Although some sixty species of this plant is known, only five or six are natives of the United States. The dock is familiarly known by the names of broad leaved and narrow leaved, and these two plants give the most annoyance to the farmer. Fortunately the dock does not, like the Canada thistle, spring from the lower roots when the crown of the plant is cut off; and all that is necessary, therefore, to eradicate it, is to strike it off below the surface. If this is done cleanly and at once, the plant is destroyed.

DRAINING. The reasons for draining exist in the nature of the soil itself, and that of the earths of which it is constituted. The object of draining is to free the soil from superabundant moisture, render it more permeable to atmospheric action, and thus give it friability and productiveness to a greater degree. Thorough draining is one of the greatest of modern improvements in agriculture, and has already redeemed millions of acres from a worthless state, and converted it into soil of the most valuable kind. Draining has been practiced from the earliest ages, but it was confined to freeing lands from their surplus water, and beneficial as this must have been, it could be considered as nothing more than a preparatory step for further operations. A very large proportion of the cultivatable lands of all countries is based on a sub-soil more or less retentive of water, generally hard and tenacious, and allowing water to pass off very slowly, or by the process of evaporation. If near the surface or within eight to twelve inches, the effect on the crops grown is very injurious; if from twenty to thirty inches below the surface, the effect in the retention of water is much less. To furnish additional means for the escape of water so retained, and which becoming stagnant is prejudicial to plants, is the great object of the modern system of draining. In thorough draining, the depth of the drains and their frequency must depend on the nature of the soil, and the quantity of water to be thrown off. The best method, or rule, appears to be, to have them so placed that no water shall be permanently retained nearer the surface than thirty inches. Ditches or drains are dug at the requisite distances, so planned that the water shall flow freely to some given point of discharge, to the depth of from thirty inches to three feet, as circumstances require; width at the top some eighteen inches, at the bottom ten or twelve. The filling of the drains is performed variously. The most common is to place stones against the sides of the drain, at the bottom, and on these place others, so as to form a covering to an open space, for the passage of the water. On these, others are thrown in loosely till the drain is filled a foot or more. On this, the turfs thrown out, are placed inverted, or else straw is thrown upon the stones and then the drain is filled in with earth. The straw or the turf, must be below any depth that will be reached by the plow, or the covering of the drain will be disturbed, and the passage of the water obstructed. In some parts of England and Scotland, what are called draining tiles are made of clay, so constructed as to be placed in the bottom of the drain, forming a permanent passage for water, and when well made very durable. Land, when thoroughly drained, speedily loses its tenacious hardpan character, and becomes suitable for all kinds of grain grown on the most favored soils of the district; manures produce their proper action, the roots of plants have room to expand in search of food, and sour worthless lands are effectually cured. Open drains are important for carrying water from low lands on which it is apt to accumulate in quantity, but are inadmissible on cultivated lands, as obstructing the plow. A large quantity of the richest land in all countries, exists in the shape of swamps and morasses, and draining, open or thorough, is fast bringing these into an available state. There are very few farms in the country on which draining would not be more or less useful, and on which it must be sooner or later employed.

DRILL. In agriculture a machine employed in sowing seeds is termed a drill, and the process of sowing seeds with such an implement, drilling. The drill barrow is comparatively a modern invention, and it has been adapted to sowing or planting nearly or quite all the small seeds cultivated in the garden or the field. The advantages of drilling over the common method of planting, are, the business is performed more expeditiously, the seeds are more evenly distributed, and they are covered at the depth most suitable for their vegetation. The drill is used, in some districts of England, extensively for sowing wheat, and on the Holkham farm in Norfolk, (Mr. Coke's, now Earl of Leicester,) four hundred acres in a season are sometimes put in by this implement. Where the drill is used, the soil must be fine, free from stones or other obstructions, and then drill sowing is performed with the greatest accuracy and benefit. The Norfolk drill, sows from twelve to sixteen rows of wheat at a time, at a distance of eight inches. The sowing of wheat by this mode gives opportunity for hoeing and weeding it, both of which are practiced when necessary, on the Holkham estate. The corn planter, which is coming into use in this country, is a drill of a valuable kind, and where corn is cultivated extensively will be one of the most important labor saving machines. The root culture has aided much in diffusing a knowledge of drilling, and on suitable soils, the practice promises soon to become general.

DRY ROT. This is the name of a disease in timber, produced by a fungi, which, fixing on the timber penetrates by the pores, producing a rapid decay or decomposition of the wood, and rendering it worthless. It is called the dry rot, because if it does not attack timber when dry, yet it continues, when once it has obtained a foothold, unlike other funguses, to spread, no matter how dry or secure from atmospheric action the timber may be placed. The rapid decay of timber used in modern structures, particularly in ship building, when compared with its former durability, proves that it is comparatively an evil of recent date. It occasions the most serious losses to all governments that find it necessary to keep extensive navies in existence; since examples have occurred in Europe, and we believe in this country also, in which ships have been launched, and before being sent to sea at all, when a delay of a year or two occurred in their fitting out, had become so damaged by the dry rot, as to be condemned as unseaworthy. By order of the British government, extensive experiments have been made to test the various remedies that have been at different times proposed as preventives of the dry rot; but though impregnating the wood with some of the mineral poisons, as corrosive sublimate, or strong solutions of copper or zinc, have in some cases been found of advantage in preventing the disease, it is declared that no means of checking the evil, can be depended upon, except that of removing the infected wood from the sound part and giving a free circulation of pure dry air. Moist, warm situations are most productive of dry rot, and it may be artificially produced by extracting from the wood its oxygen, which leaves it in a state resembling the dry rot—unaltered in form, but breaking on the slightest resistance. Numerous shipwrecks occur, and many lives are annually lost, by the unsuspected ravages of this formidable foe.

Work for the Month.

Some good natured Frenchman has spoken of this month, as "the gloomy month of November, in which the people of England hang and drown themselves;" and surely, if there is any month that deserves the appellation of "gloomy," it is usually November. The bright sunny days of summer, the clear calm mellow weeks of autumn, the golden days of our peerless Indian summer, have departed; and the falling leaves and the moaning winds are sighing the requiem of the year's foliage and flowers, and ushering in the storms of winter. Such is the law of nature; and the change which is ceaselessly going on with us and around us, is a wise and beautiful provision, which is admirably adapted to our comfort, and of which the man who understands his true interests, will be sure in many respects to profit.

No great amount of out door work belongs to November; what has not already been done, with few exceptions, must be left to another year. Still there will be found many things to which the attention may be well directed, and deserving the notice of the husbandman.

In traveling about the country, on many farms we see the plow standing in the furrow where it was used a month ago; the horse rake exposed to weather and storms in the meadow; the harrow at the last turn of the fall sown wheat, and the other farm implements scattered in about the same condition. We can assure our farming friends, that this is a very bad practice. Exposed to the weather, no tool or implement will last near as long as when properly housed; and a tool house or place where they can be safely deposited, is one of the most necessary of out buildings. When an implement is done with for the season, put it where it can be found when wanted; and much time and expense will be eventually saved.

In taking care of a farm, all repairs should be made at the time; but there are some things that require attention at the approach of winter; to neglect which, would be to incur a serious loss. The cellar in particular, should be well looked to, and the most remote danger of freezing, prevented by suitable precaution. Frozen potatoes may make tolerable "*schnap*," but they are certainly wretched eating. Many farmers bury a few pits or holes of potatoes or other roots, as they are far superior in the spring to those kept in cellars. These pits should be examined; the holes which are sometimes necessary to let off the heated air at the top of the pit should be closed, and additional mold thrown upon them if required.

Draining is one of the most decided improvements in modern agriculture, but we apprehend the expense incurred by many farmers is nearly or quite lost, by neglecting to secure them against the access of surface water, or by not seeing that the outlets of the drains have a clear and unobstructed flow. If the drains are obstructed the wash of them is deposited, and this increases until the throat is choked, and the work rendered useless. One of the last things therefore the farmer should do, before the setting in of winter, is to see to his drains, as on their effectiveness, much of the comfort of his spring's work and the profit of the crop is depending.

There are some operations of gardening, which are better performed as late as the season will admit. Thus cabbages should stand until there is danger of hard freezing; light frosts producing no injurious effect. They may be set in trenches, and covered in such a manner as to be kept dry, or set in cellars connected with their roots, in which case they will keep well. Those who have no beds for forcing plants early in the season, will find an advantage in preparing beds of clean rich earth, as late as the frost will permit, and sowing in them such seeds as give plants capable of resisting those frosts of spring, that will be liable to occur after their germination. Lettuce, spinage, tomatoes, and in general, all those seeds that self sow, as it is called, in the garden, may be sown in the fall, if so late as not to germinate before the spring, and if the soil is good, will usually come forward earlier, and arrive at maturity sooner than spring sown seeds. The seeds of the apple, pear and quince, and the stones of the peach, plum, &c., may now be put in the earth, if it has not been done before; and the planting of almost any of the hardy trees may now be performed. The raspberry, currant, filbert and gooseberry shrubs, may be set with safety, if the roots while out of the ground are protected from frost.

There are some men who never have any wood at their houses, except such as is drawn a "drag" at a time from the wood lot, through the gravel and dirt. Such men generally grind their axes on their neighbor's grindstone, and think him unreasonable if he does not furnish a mug of cider and a boy to turn. This mode of getting fire wood, they deem saving; but reader, be not ye one of this class of saving men.

There is still an important duty remaining, after all the implements, fields, buildings and flocks and herds of the farmer have been cared for, and that belongs to the making provision for the mind. There must be knowledge, there must be intelligence, or the farmer of this country is but illy qualified for the responsible station he holds in society. He must see that books, papers, and such works as are calculated to interest, instruct, and give an elevated, healthy moral tone to his own mind, or those of his children, are provided. There are long winter evenings coming, and if they are not well employed, the seeds of mischief will most assuredly be sown. Idleness of either body or mind, is incompatible with their health or prosperity.

Nearly allied to this subject of providing the means of instruction for the family, is the one of a proper organization and support of the common school. The foundation laid by many of the States, New-York in particular, for the education of every child, is a noble one, and which will, if any thing can, with the blessing of Heaven, transmit unimpaired to other generations, our social and civil institutions. It is to the district school that we must look for the means and measures that determine the character of the young; and through them, the destinies of the country. If the instruction is of the right kind, if the instructor understands his business, if correct principles, such as are consonant with the doctrines of republican equity and sound moral feeling are inculcated, then the district school becomes the nursery of freemen; and men and women worthy of the name of Americans will be the result. Experience shows that in no place is penuriousness more to be deprecated, or the policy of using the cheapest things more injurious, than in the employment of school teachers. The man or woman who understands the business of instructing the young, can always command a good price for their labor, and they always deserve it. In employing a teacher, the price should always be a secondary object; the qualifications are the main thing, and where these exist, the less that is said about price the better. The proprietors of the district school are generally in fault in not giving it as much attention as it deserves. Parents should visit it frequently; it encourages both the children and the teacher, and is found in many ways, productive of the best effects. We say to every lover of the country, look well to your district schools.

AGRICULTURAL MEETINGS IN OCTOBER.

One of the most encouraging signs of the times, so far as agriculture is concerned, is shown in the determined efforts made for advancement and improvement, as exhibited in the increase of number and the spirit and energy of agricultural associations. October this year, has been the sabbath of the months to the farmer, and its holydays have been celebrated in all parts of our country with a becoming enthusiasm. Circumstances which render it necessary for us to go to press earlier this month than usual will prevent our giving to the proceedings of these societies now, the attention they deserve, and we intend shall hereafter receive. We have only time to say here, that the meetings of the agricultural societies, the cattle fairs, the plowing matches, mechanics' fairs, and fairs of the institute, have all gone off well, and the articles and animals exhibited have shown a decided improvement over former years. Emulation has been more general, greater numbers have attended, and as a matter of course the influence such gatherings of farmers and practical men are calculated to exert, has been much more widely diffused. From the east, west, north, and south, notices of these farmer's and mechanic's meetings have reached us, in places where such occurrences have been before unknown; and we cannot doubt the result will be most beneficial. England finds much of her agricultural prosperity connected with her annual fairs; and there seems to be no reason why the same laudable influence will not produce the same results here. Let farmers meet, let them become acquainted with each other, let them compare the processes adopted by others with their own; and we are confident many of the difficulties which now form so serious obstacles in the way of improvement in agriculture, would be done away. Let then these meetings and associations increase, until every county and every district shall be banded together in the good work of promoting their individual as well as general good.

SILK AND SILK WORM EGGS.

The quantity of American silk this year produced, is very great; and appearances would indicate that it may be made a business of profit to many small farmers, who have children able to gather the leaves and feed the worms. Our climate is so well adapted to the worm, that wherever the mulberry can be found, there is no more difficulty in raising a crop of silk than a crop of potatoes. From ten to sixty or one hundred bushels of cocoons have been this year produced by many in the United States, and many who were, from inability to procure eggs at the proper time or other causes, the past season, prevented from growing silk, will enter upon the business next spring with spirit, and we trust with success.

Where the Multicaulis is used for feeding, as we think it will be, or some of the kindred varieties, one of the most serious obstacles has been found in the difficulty of keeping the eggs from hatching, until the foliage has so far advanced as to furnish a supply for the worms. To do this, the hatching must be retarded by artificial means; and G. B. Smith, the best authority on the subject, has in a late number of the Journal of the American Silk Society, given an interesting paper on the keeping of eggs, from which we gather the following particulars.

It is indispensable that the eggs be kept *dry and cool.* If they are on papers or cloth, they may be folded into a convenient form, and placed in a tin box, with a cover merely sufficiently tight to exclude insects and vermin. Occasional examination is necessary during the summer, and if signs of mold or mildew appear, they may be exposed to the wind in the shade for an hour or two, and then replaced. If not on cloths or papers, they may be placed in layers in the box of half an inch in thickness, with a few folds or sheets of tin between them. In January, or on the approach of severe cold weather, the box may be removed to the ice house or a refrigerator. Mr. Smith prefers the last. The temperature in which the eggs are kept should never rise above 45°, for though they will generally bear 50° without injury, it is not always the case, and 45° is always safe. A thermometer is necessary to prevent any mistake. Mr. Smith gives the following directions for the making of a refrigerator:

"A large square box may be made of common plank; and another twelve inches smaller every way. Put pulverized charcoal in the bottom of the large box, six inches deep; set the small box on it, at equal distances from each side and each end; then fill in all around between the small box and the large one, with pulverized charcoal, to the top of the small box. Then make a box six inches deep, and large enough to fit exactly in the large box; fill this with the powdered charcoal; the latter box will serve as a cover for the refrigerator. The inner box should be large enough to hold all the eggs required to be kept, and a tin bucket or other metallic vessel, that contains half a bushel of ice; for the ice must not be put on the floor of the box, or it will wet the eggs as it melts. The ice vessels must be kept constantly supplied with ice. The box cover may have a couple of handles to enable the attendant to remove it easily. The cover should not shut in so close as to exclude air entirely, nor so as to injure the eggs. The refrigerator may be kept in any part of the house, the cooler its situation, the less ice it will require; but half a bushel of ice will keep it at a proper temperature for twenty-four hours in any situation not exposed to the sun or to fire heat.

GEOLOGICAL REPORT.

We have received from the author, and from the Rhode Island Society for the Promotion of Domestic Industry, by O. Mason, Esq., Dr. JACKSON'S Report of the Geological review of that State, just completed by himself. Of Dr. Jackson's qualifications for the duty of Geological Surveyor, we have already expressed a favorable opinion, founded on his Maine Reports, and the present volume will still farther establish his claim to the high character already acquired.

The volume before us is composed of an Introduction, the Geological Report, the Origin of Soils, Agricultural Statistics, Agricultural Observations, Analysis of Soils, and Farm Reports; all the subjects introduced, are ably treated, and calculated to afford much interest and instruction, and the whole making up a neat 8 vo. volume of more than 300 pages. We shall have occasion doubtless, frequently to draw on the rich store of information in the volume, for the benefit of our readers; and though on some points of a theoretical nature, we might dissent from the author, on all the great practical questions involved, there would be little or no difference of opinion. Such examinations and reports are calculated to be eminently useful; and those completed or now going on, promise to add much to our knowledge of the agricultural as well as mineral resources of our country. Dr. Jackson is now engaged in a survey of New Hampshire, and we doubt not will be as successful in illustrating the capabilities of the granite State, as he has those of Maine and Rhode Island.

"Frank, or Dialogues between a Father and Son."

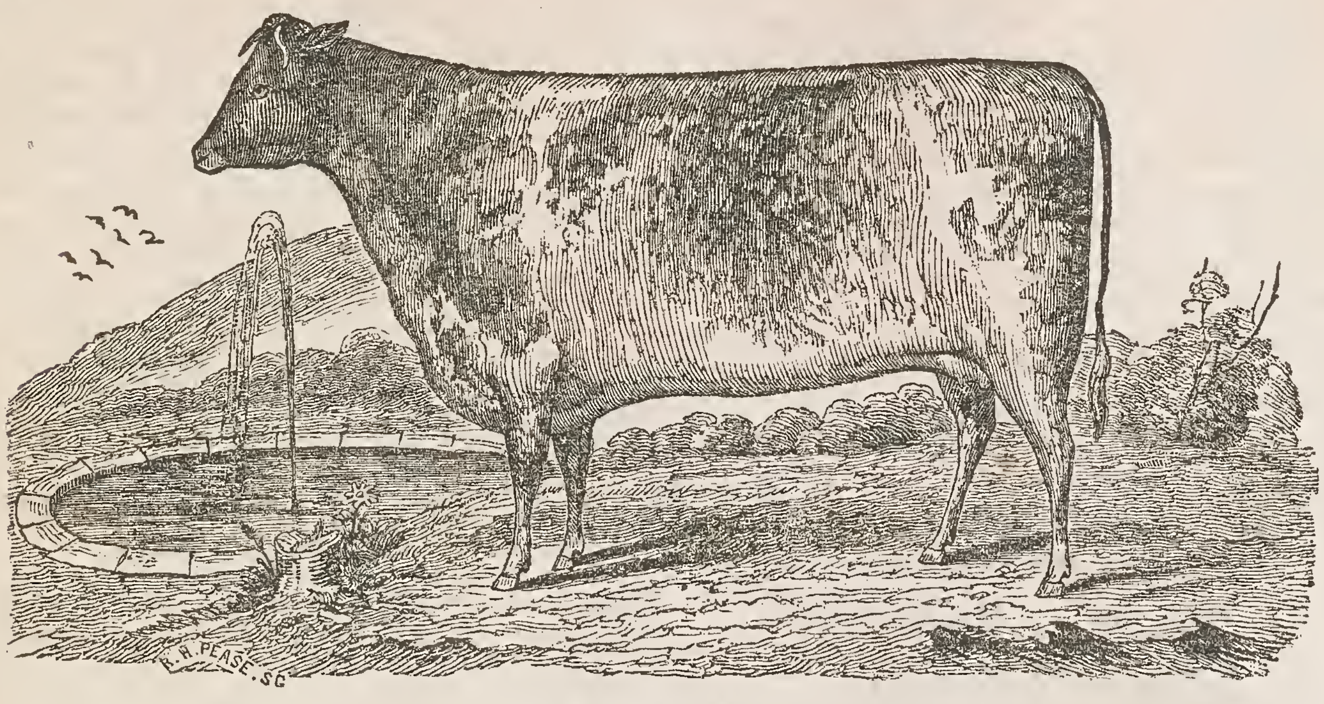
We have received from the author, this neat little volume, and can most cordially recommend it to the notice of all engaged in agriculture, particularly that portion who are young. In these Dialogues, which have already had an extensive circulation in the farming periodicals of the day, Mr. PEDDER has condensed a great amount of useful and pleasing matter, in a form at once attractive and instructive. The portraits of individual character drawn in the volume, are such as will be recognized in every neighborhood; and the lessons inculcated from such examples, such as will be every where useful. In the language of the author, these Dialogues may be considered as "the reminiscences of a long life, devoted to the pursuits of agriculture, husbandry, and rural affairs, and in which the characters are real, not fictitious, for there is a Frank, and a sister Susan, a Grabb and a Sykes; the circumstances also having a local habitation and a name, and the observations and reflections, being the result of much experience and reflection." We doubt not that in the dwelling of the American farmer, "Frank" will be a far more beneficial book, than the most celebrated novel Bulwer has ever written, and as such we trust it will have a circulation commensurate with its merits.

OSWEGO AG. SOCIETY.—This Society held its first Exhibition at Oswego, Oct. 7. The display of stock was creditable to the county. Premiums were awarded, among others, to Wm. Ingell for the best acre of corn, being 154½ bushels of 53 lbs. to the bushel, per acre. Best 2 acres of oats, 72 bushels per acre, to Jackson Rice—best ¼th acre of carrots to David Carson, 703 bushels per acre. Premiums were also awarded on crops of broom corn, ruta baga, 596 bushels to the acre—potatoes 405 bushels per acre—sugar beet and beet sugar, to a variety of domestic manufactures, and to horses, cattle, sheep, swine, &c. The company dined together, and the Exhibition passed off much to the credit of the Society, considering that it was its first effort.

☞ ADVERTISEMENTS.

We shall issue an extra sheet with the next No. of the Cultivator, four to six pages of which will be devoted to advertisements. Those who wish to avail themselves of this opportunity, should send in their advertisements immediately. Terms—$2 per square of 12 lines.

Communications.



MR. PRENTICE'S SHORT HORN HEIFER "DAISY"—[Fig. 85.]

MESSRS. GAYLORD & TUCKER—The engraving herewith handed you, is a good likeness of my two year old heifer "Daisy," to which the first premium (a gold medal,) was awarded at the late Fair of the American Institute in New-York. She was bred at Mount Hope, near this city, and is a daughter of Matilda, by my bull Leopard. Matilda was from the imported cow Majesty, by White Jacket; and White Jacket was got by Young Regent, whose sire was imported Regent by Favorite, the sire of Comet. Leopard was out of the Patroon's Beauty, by his Ajax, and Ajax out of Upright by his Washington, and Upright out of Panzy, imported with Washington, by the Patroon.

I had hoped before now to have had drawings prepared for your very valuable paper, of several Short Horned cattle, South Down sheep, and Berkshire hogs, selected with great care by my brother, myself, and others, from some of the best herds and stocks in England, but Mr. Pease, who is making the cuts, has not yet been enabled to get them completed. They will, however, probably be in season for the subsequent numbers; when, if you will so far indulge me, I shall be much your debtor, and I trust the agricultural community will not be less so. I am, gentleman, yours truly,

E. P. PRENTICE.

Albany, October 20, 1840.

BERKSHIRE CATTLE SHOW.

MESSRS. GAYLORD & TUCKER—I attended the cattle show and fair held at Pittsfield, on the 7th and 8th of October, being the 30th anniversary of that valuable institution.

The weather was very favorable, and the show of animals took place on the first day, and that for domestic manufactures on the second day. The great crowd of farmers and citizens, on both days, afforded abundant evidence of the interest taken in the objects and exhibitions of the society.

The exhibition of fat and working oxen were less than I have ever known at any previous meeting; but that of three and four year olds was very respectable in numbers and superior in quality. The two year olds and yearlings were not so good.

The show of bulls and heifers was very respectable indeed; the former were principally of the Durham Short Horns, and grades of that breed. Among them I noticed a very fine two year old bull owned and exhibited by Henry Colt, Esq. of Pittsfield. The yearling heifers were principally a cross of the Ayrshire and native breeds of the country; and finer specimens I have seldom witnessed—especially a red and white heifer exhibited by Jason Clapp, Esq., which very justly took the first prize for that class. If the owner has not already given her a name, I would suggest that she should be called "Nonesopretty." I also noticed a large and beautiful yearling heifer, a cross of the Ayrshire and Polled cow, exhibited by Mr. Silas Colt, which I thought entitled to the second premium; the committee gave her the third.

There were some fine cows as well as calves exhibited—the latter principally of Durham blood. This valuable variety of cattle are gradually working their way into favor. The greatest objection heretofore to this breed was their color—they could not endure a white or a red and white animal; nothing but *red, red,* would answer. I recollect very well the obstinacy of one of the committee with myself, some four or five years ago, when the choice lay between a beautiful roan calf and a large fat meaty headed, leather necked, big horned "*red*" bull calf, very similar to the one figured in the last number of the Cultivator, *and all for size and color;* but I succeeded in carrying my point and got the premium for the "speckled calf."

The show of stocks of cattle was very limited, only two having been entered, one of which the committee did not deem of sufficient importance to be entitled to a premium.

The exhibition of sheep was not so numerous as heretofore, but were choice of their kind. They were principally of the Saxony and Merino breed. A small lot of grade and one full blooded South Down sheep were exhibited, and excited considerable interest to the lovers of *good mutton.*

Of swine, the Berkshires seem "to stand alone in all their glory," and have driven every other variety off the ground. This, to me, was a source of gratification, for when I first exhibited this very excellent breed at one of their fairs, some five years ago, the same objection was made to them as to the Durham cattle—the color *a black hog could not be endured.* Now not a white hog was to be seen in the pens; showing most conclusively that the intelligent farmers of Berkshire are open to conviction.

In the evening, as usual, the Ladies' Benevolent Society, held its annual fair and sale in the lecture room, giving an opportunity of a social *jam* or *squeeze,* for a few hours, to a very large company from every part of the county and abroad. The avails of this fair are to be appropriated, as I understand, for the support of one of its former members, now a missionary at Smyrna.

On the morning of the second day the animating exhibition of the "Plowing Match" took place, about two miles south-east of the village. Ten teams of oxen and ten of horses started. The ground selected for the trial was in fine order and well situated, being nearly level and perfectly smooth. The borders were lined with spectators and the ladies formed no small part and seemed to take a lively interest in the event. Some thought the "red oxen," and others were sure the "moolies" would take the first prize.

Good order was manifested throughout the trial, and the plowing was executed in good time, and in a workmanlike manner, and I think the committee must have found some difficulty in making their decisions.

While the teams were resting, "Speed the Plow" was well performed by the Berkshire Brass Band, which much enlivened and animated the scene.

After the plowing match the exhibition of Domestic Manufactures in the Town Hall, claimed our attention. The "home made" fabrics presented, were evidence that the daughters of Berkshire have not laid by the useful spinning wheel for the piano. Flannels, soft and fine enough for a queen. Blankets, the very sight of which start perspiration. Plaid shawls that would vie, and not suffer by the comparison, with the imported, and defy a real northwester. Linens and diapers as white as the "driven snow." Carpets of various descriptions. Cloths of many textures. Ottomans and foot benches, of beautiful embroidery. Stockings, and many other articles "too numerous to mention."

The show of the products of the farm and agricultural implements was very limited; a few hay forks, hand rakes, and axe helves, were all that were presented—they were highly finished and reflect great credit on the manufacturers.

At 11 o'clock the procession was formed, preceded by the brass band, under the direction of the marshals, and proceeded to the Congregational meeting-house. The house was soon filled to overflowing; the ladies occupying the wall pews below, and one side of the gallery above.

The annual address was pronounced by H. A. S. Dearborn, Esq. of Roxbury. It was well composed, and well delivered, but altogether too lengthy, too historical and statistical for the occasion. The farmer wants and expects something more practical, something more nearly relating to his immediate business. Their works show that they profited by, and have not forgotten, the excellent practical lessons taught them by the late much lamented Judge Buel, in his address three years ago.

After the address the reports of the different committees were read by the secretary, and the awards handed over by the worthy treasurer, Mr. Colt, to the successful competitors, consisting of silver cups, spoons, cash, &c., &c.

Now, with all due deference, I would suggest the propriety of awarding bound volumes of the "Cultivator" or "New-England Farmer," for small premiums in the place of cash. I am aware that many would object to this; but in awarding premiums, if they consist of plate or books, they are carefully preserved as mementoes of their achievements, and handed down to their children, when if in cash, "presto," it is gone, and never thought of afterwards. CALEB N. BEMENT.

Three Hills Farm, Oct. 13, 1840.

ODDS AND ENDS.

BERKSHIRE VS. COMMON HOGS.—It is often asserted that the difference in breed is more in the difference of keeping than any thing else; in fact I believe I have tried hard to make myself believe this doctrine; but experience, that good old teacher, has entirely eradicated that error. The Berkshire pigs that I procured this summer from A. B. ALLEN, Buffalo, which cost me delivered in my yard, $32, I would not give for 32 common pigs of the same age; and yet I will give them freely to any believer in the popular error, "that the difference is all in keeping," if he will produce a pair of the common kind of equal age and equal keeping, that equal these in any particular. The fact is, the point must be given up, that there is "a proper site of odds" in the breeds of hogs. "*A hog is a hog,*" is the end of argument with some hoggish argufiers. So is a sheep a sheep; but I defy any and all men to make a coarse wool sheep fine by feeding or breeding, until all the coarse wool blood is bred out. A dog is a dog too, yet I suppose no one will attempt to argue that there is no difference in them. He might just as well argue that, as that there is little or no difference in the breed of hogs. In this case "seeing is believing," and and feeding is knowing. It is a fact that speaks loudly in favor of the Berkshires, that all who buy them are satisfied with the *improvement.* So much for Berkshires. Though I do not mean to exclude every other variety, because I fully believe that in some respects, the Irish Graziers, Woburn, China, &c. are equal to the Berkshires; but I would earnestly advise every owner of alligators and landpikes to procure "an *improved* breed of hogs" immediately.

PORK MAY BE SALTED, PARTICULARLY FOR BACON, WITHOUT BARRELS.—Nearly all the western pork is salted in bulk, that is, piled up in one corner of a room like a pile of brick, and sprinkled with dry salt. It is well to overhaul it once, to see that the salt touches all parts. I never eat better bacon than that made in this way, without a drop of pickle.

TO KEEP BACON HAMS IN SUMMER.—Pack them in a flour barrel, in clean dry ashes or charcoal; head up the barrel and put it up stairs, where it is dry, and as cool as possible.

PICKLED BEEF AND PORK, in the south and west, is apt to sour. Take it out and smoke it dry—throw away the old pickle, or cleanse it by boiling. Smoke the barrel thoroughly and repack the meat.

Don't throw away the UDDER of your beef cow. Salted, smoked and dried, it is rich, delicious eating. Boil and eat it cold like tongue. Try it.

LARD never spoils in warm weather if it is *cooked* enough in trying out.

WASH YOUR BUTTER thoroughly in cold water, and work out all the buttermilk; pack it in a stone jar and stop the mouth *air tight,* and it will keep sweet forever.

TOMATOES make an excellent preserve.

SWEET OR OLIVE OIL is a *certain* cure for the bite of a rattlesnake. Apply it internally and externally.

TO CURE SCRATCHES ON A HORSE.—Wash the legs with warm strong soap suds, and then with beef brine. Two applications will cure the worst case.

A lump of Saleratus or Pearlash, crowded into the pipe of a poll evil or thistleows, two or three times, will cure this *incurable* disease.

CORN MEAL should never be ground very fine. It injures the richness of it. Try it coarse. This is the secret why western "dodgers" are so good.

RICE is often over-boiled. It never should be boiled in more water than it will absorb while boiling. Put two cups of rice in three cups of water, and in eight minutes after it commences boiling it is done.

If you like such "odds and ends" as these, at some other odd time I shall give you some more.

Your old friend, SOLON ROBINSON.

Lake C. H., Ia., September 2, 1840.

[We like them, and ask for "some more.—EDS.]

SILK.

MESSRS. GAYLORD & TUCKER—In May, I hatched a lot of silk worms, numbering about 6,000; fed them on the White and Black mulberry; after the last moulting, I lost about half of them by crowding them too thick upon the shelves and being unable to ventilate the room in three as hot days as we have had this summer; but the remainder wound about one bushel of cocoons of a fine quality, which at the present price would pay at least $4 per day, including all the time in feeding the whole. C. M. L. A.

"MILKING."

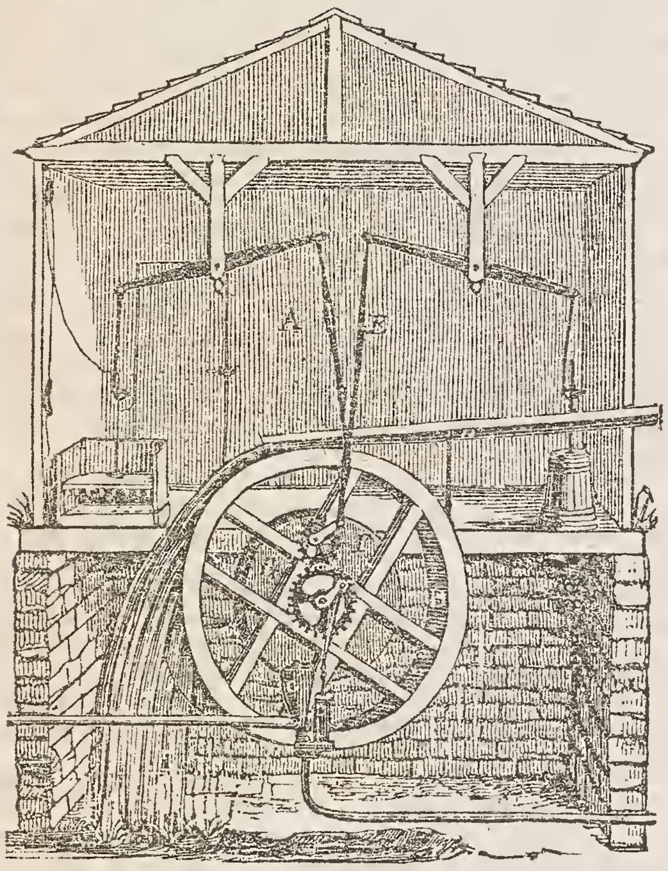
Messrs. Gaylord & Tucker—In answer to Mr. **Freeman**, your Indiana correspondent, who asks, "is there any remedy to keep a cow from holding up her milk?" I beg leave to say, I think there is a very simple and sure remedy. I have for many years occasionally used it, and have in no instance known it to fail. When a child, I noticed with surprise, that a calf, when beginning to suck, would frequently change from one teat to another, and butt with considerable force the udder of its dam; and I inquired of a person near me, why the calf did this? The answer I received was, "to make the cow give down her milk." This answer was undoubtedly correct. Since then, when milking, and the cow retained her milk, by imitating with my hand, this action of the calf, she would immediately cease to withhold it, and the milk would flow freely.

In every instances that has fallen under my observation of a cow's retaining her milk, I have noticed circumstances that convinced me that it was not wholly an involuntary act, as for instance, the strong contraction of the abdominal muscles, and her ceasing to chew the cud. Under these circumstances, by imitating with the hand the butting of the calf, the careful observer will not fail to notice an immediate relaxation of these muscles; and when the milk is permitted by the cow to flow unrestrained, she will rarely fail to immediately recommence the chewing her cud.

These hints are intended merely as a supplement to the directions you have appended to Mr. Freeman's communication, which should never be neglected; and should any one fail to treat with deserved gentleness and kindness, that most useful animal the cow, the better part of your readers would not be anxious to lavish their sympathy upon him should he, in return, fail to receive the rich reward due only to the deserving.

I am respectfully yours, N. IVES.
Wallingford, Vt., Sept. 10, 1840.

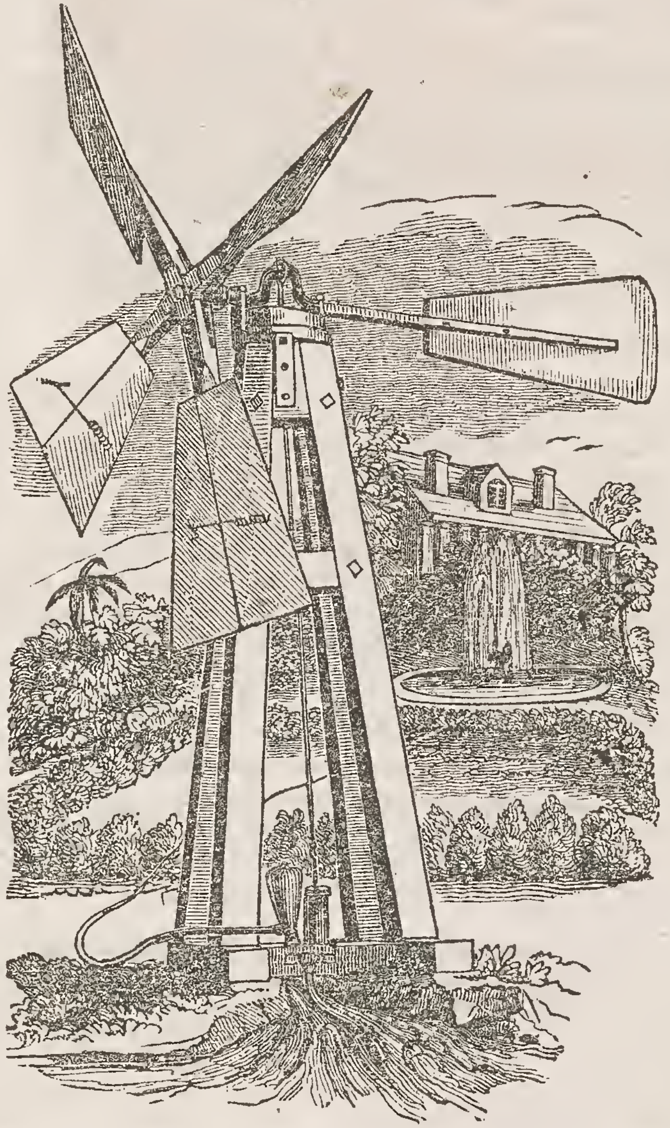
IMPLEMENTS FOR RAISING WATER.



[*Water Wheel*—Fig. 86.]

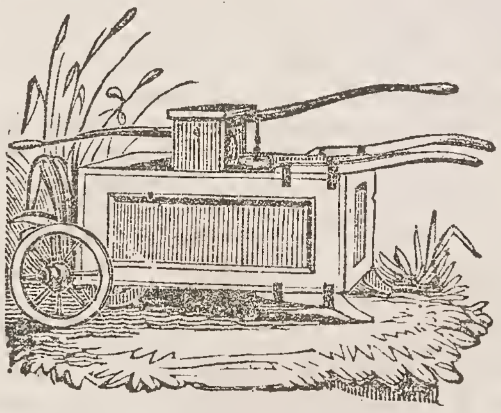
For the benefit of those farmers and others situated as I have been, without the convenience of good water near my premises, I would state that in November, 1839, I engaged Mr. D. L. **Farnam** of 247 Water-street, New-York, to put up an apparatus that should enable me to have water at my house, barn, &c. I had a spring of excellent water, 400 feet from my kitchen, that discharged 30 feet lower than the level of my house. I had in my meadow above my house, several small springs that discharged together, a small but constant stream during the year. The plan was to make use of the last to drive up the water of the first, to those places where I wanted it. For this purpose, I put up a building 12 feet square, standing on a stone wall about 5 feet high. This building was placed about 200 feet from my house, on the low ground between my house and spring. In this I put a water wheel, 9 feet in diameter, and 12 inches wide. The water was brought along the side hill from the upper springs, and by a spout carried on to the wheel. An inch lead pipe was laid from the spring to a small double action pump, attached to the wheel shaft by a crank, as seen in the drawing, (fig. 86.) thence leading under ground to a reservoir adjoining my milk house, within twenty feet of my kitchen door; from this reservoir a pipe leads into my kitchen, and discharges into my sink by a cock. From the reservoir, I conveyed water on to the shelves in my milk room, they having a raised edge, so that at pleasure I have water running one inch deep on each shelf, to keep milk cool in hot weather. Likewise from the reservoir, I have a two and a half inch pipe laid to my barn yards, 15 rods farther, and I contemplate laying a pipe, to have water running constantly in my hog pens. Attached to the water wheel is my grind-stone; likewise machinery to do our churning, which we have used through the season. The apparatus marked A, is the plan I intended for pounding clothes; with the addition of a steamer, it would save much labor to the women; and the same steamer might be used to steam hay, potatoes, corn, &c., for cattle and hogs. My water works continued to work well all last winter, without being in the least affected with frost. The quantity of water thrown up, is about six gallons per minute, and has required since put in operation, but a few moment's attention once a month to tighten the packing around the piston rod, and oiling. To those situated as to water similar to myself, I would say that the cost of my water works, is a small consideration compared to the advantages. I shall be happy to give any information that may be wanted, or to show my water works to any disposed to call and examine them.

WINTHROP PHELPS.
Chatham Center, Columbia Co. N. Y. Sept. 23.



[*Wind Mill*—Fig. 87.]

To those not situated so as to take advantage of water power, it may be added that Mr. Farnam accomplishes the same object by a pump attached or worked by a wind-mill, as may be seen by the drawing (fig. 87) All that is requisite, is to have the reservoir large enough to contain three day's supply.



[*Garden Engine*—Fig. 88.]

Mr Farnum likewise manufactures a Garden Engine (fig. 88) which may be made valuable to the farmer, by being used to free fruit trees from worms. Last spring a large grape vine became covered with worms, who soon made havoc of the leaves. By putting sulphur in water and ejecting it on the vines, the worms were destroyed, and the vines soon recovered, and now present a beautiful appearance, being loaded with fruit, which in all probability would have been among the missing, but for the engine and sulphur water.

A HEN HOUSE.

Messrs. Gaylord & Tucker—In looking over the Cultivator for July, I noticed the inquiry of N. S. as to the best method of building a hen-house, &c., which has induced me to undertake what I have long meditated, but have deferred for two reasons; first, because I had always rather receive than impart instruction, and second, because I had never wrtten for the public eye. But feeling myself now called upon for information, I will give the result of my own experience and observation, not saying that my plan is the best that can be devised, although I can fearlessly say that it is a great improvement on the too frequent careless manner of providing for a very useful, (and if well managed, profitable) class of our dependants, as well as its being the best plan that has come under my observation.

A hen-house should be a building for that purpose exclusively; and for the accommodation of fifty hens and their progeny, in size about 10 by 12 feet, and 7 to 8 feet height of walls; with a door in the center of the south or east end, made to shut as close as the doors of our dwellings; and a small aperture near the door, about 8 by 10 inches, and 2 feet from the ground, for the admission of the fowls. In each gable end, a window hole 18 by 30 inches, with a lattice so as to exclude ravenous birds, and a shutter inside to be closed tight in winter, but to be kept open in the summer for the purpose of ventilation. The inside of the house should be plastered and white-washed as thoroughly as a farmer's kitchen. There must be no ground floor, but a tight floor on three sides 3 feet wide, and well joined to the wall, about 4 feet from the ground. Above the floor place the roosts, two on each side, the outer one 12 inches from the wall, the other 15 inches from that. The roosts, if practicable, should be sassafras poles with the bark on, as this wood is found to be a slow conductor of heat, and is thought to be less liable to be infested with lice than most other kinds of timber, owing to its peculiar aromatic smell. Under the floor, place a row of boxes for nests 2½ feet from the ground. The boxes to be 10 by 12 inches, and 6 or 7 inches deep. In the bottom of the boxes put ¼ of an inch of fine lime or wood ashes, then fill nearly full with fine straw. The interior of the house should be thoroughly cleaned and white-washed early in the spring, and the ground well covered with slacked lime or ashes. In cold weather, put a little fine straw on the ground. If at any time the house becomes infested with lice, clean and white-wash as before directed. On the ground place your feed boxes which should be not very deep, but of sufficient capacity to hold half a bushel each, and keep them well supplied the year round with corn, buckwheat, and oats, or other kinds of grain, having one box for lime and gravel in the winter. I am satisfied that whoever will adopt the above plan and regulations, will soon find themselves well paid for the expense.

Yours respectfully, P. of N.
Elba, Mich., Aug. 15, 1840.

FALL PLOWING FOR SPRING CROPS.

In the cultivation of oats and barley, I have, from several years experience, found fall plowing very advantageous and successful, even on the toughest swarded land. I have the land well plowed in October or November, and in the spring, as soon as the land is dry enough to be moved, I sow the seed upon the furrow and thoroughly harrow it in. In this way, the crop can be got in early; the grain fills well, ripens early, and leaves the ground in a good condition for a future crop. I have not, in any instance, failed of getting a good crop, and better than I could get from the same land any other way.

WINTER SOWING OF WHEAT.

A correspondent of the Cultivator has requested information respecting the sowing of wheat late in the autumn, so that it may just vegetate and come up in the spring?

I will state what my experiments on this subject have been. Having seen this practice recommended in some agricultural publication, I ventured on the experiment. January, 1838. was a very warm month, and on the 8th of the month I sowed about three bushels of wheat, on land plowed the November before. The weather continued for some time warm; and the seed vegetated, and before the ground froze some roots began to appear above ground.

In the spring a good proportion of the seed come up, but the growth was feeble and sickly; a small proportion of the plants shot up heads, which ripened late and filled poorly, and the crop would hardly pay for harvesting. The remaining part of the field was in the spring sowed with oats and produced an abundant crop.

I doubt not, that in other circumstances and with a more favorable season, a good crop of wheat might sometimes be obtained in this way. But the inference I have made from my experiment, is, that the seed, when it has but just vegetated, has not sufficient hold of the earth to sustain life; it is still dependant on its own vital principle for support, and in this delicate state is liable to be destroyed by long continuance in a wet soil, and by the action of frost and drouth in the spring.

APPLES FOOD FOR STOCK.

From twenty-five years experience I am more and more convinced of the value of apples as food for hogs and other farm stock. When I began to feed my hogs on apples, in 1815, it was generally said that there was no nourishment in an apple; at length it was admitted that there might be some in a *sweet* apple. Now there are some that go to the opposite extreme, and attribute too much to them, and expect too much from them. The object of these remarks is to set the business in its true light. There is scarcely any food, of which hogs are more fond, than apples; but it is obvious that they are not a rich food, and it is in vain to think of shutting up a *land shark*, and in six or eight weeks making good pork of him; you must do as you would do in fatting an ox on grass; take a longer time for it, than if you fat him on grain and provender.

I have never failed of making my hogs very fat, and my pork of the first quality on apples. I will state how I manage. I lay up in the fall two or three hundred bushels of apples. I store them in a room in my barn with eight or ten inches of chaff under them, and a foot or more of chaff over them. Thus secured, they freeze very little. I feed them to my hogs and milch cows very freely; I give my hogs all they will eat, and keep them in good flesh till spring. Through the summer I feed them so as not to lose flesh. After harvest they are turned into my wheat stubble, where they live very well for a few weeks till the apples begin to fall; by this time I design to have them half fatted. From the first of September to December they run in my orchard, or are full fed with apples in the pen. I prefer their running at large in the orchard unless the apples are so abundant that they will waste and destroy them, for they will then never go hungry; they will lie very quiet and never run so as to waste their flesh.

I am aware that most of those who have written upon the subject, recommend picking up the apples and boiling them; but this costs too much in labor and fuel, and I have doubts whether there is much benefit derived from it. The stomach of the hog was made to digest the raw material, and no doubt is adequate to that purpose. I see no more need of boiling the apples for the hog, than the grass for the ox; I have in a few cases boiled them, but found the animals preferred them uncooked, and I suppose they were the most suitable judges of what was best for them; at any rate, in the way I have recommended, I made very good pork, with very little trouble; and I am certain that to pick the fruit and boil it for 15 or 20 hogs, for three months, would be a very serious deduction from the profits of the concern. E. D. ANDREWS.

Pittsford, N. Y

LETTER FROM N. CRAWFORD.

Messrs. Gaylord & Tucker—The Cultivator furnishes much interest and amusement, and may bind us more to our homestead, instead of "kill and runaway." I wish sincerely a premium was offered for the best method of keeping up a farm of 100 bales growth, by manuring from animals, plowing in green crops, and other practical means. I hope some of the seedsmen will send before spring the China tree corn and the Rohan potato; but above all, we need a grass for hay. The clover, Lucerne, and all other grasses, have failed, and thence the expense and loss on the cultivator's hands.

In this number, Mr. Hulett's remarks on wheat turning to chess, (here called cheat,) recalls to my recollection a phenomenon that occurred some years past near me, and confirmed me in the opinion that such a change was clear and palpable. Mr. Marshall had sown down five acres of wheat on a thin silicious soil that would not likely yield a harvest of more than eight or ten bushels to the acre. The wheat grew apace, and for fear it should head before it was safe from frosts in April, (common to early wheat here,) as well as to benefit his lambs, he turned some ten or twenty sheep thereon. After the frosty season was past, grazing was forbid. Vegetation resumed its vigor, the heads protruded, but to the astonished owner, they were chess! I went into and examined the field, and the difference was between the heads as great as between wheat and oats. Such was the degeneration of the original grain, that I believed a majority of the heads bore the baseness of the degeneration, and not half the straw bore wheat. It is common here, to believe geese and sheep have something deleterious from their grazing, and the crop never thrives well after them. The detection of chess in the glumes of wheat, is a new idea to me, and such as would have escaped any less acute observers; but in Mr. Marshall's case the whole of the stalks bore the degenerated grain. I do not remember of seeing one stalk bearing wheat and another chess from the original grain; but where one head was wheat, those heads that originated from that grain, bore wheat. An account was published in the American Farmer, and never seemed to be controverted. But we will make some experiments to convince its unbelievers, or to disabuse us from the error. If we can only learn from you the best kind of seed we can use to make us hay, with its preference of soil, manuring, management, &c. &c. From March until July, it is the worst county for dairies in christendom. The wheat crop is a fair one; oats, a full one, and maize better than any reared these half dozen years. The rains are showering incessantly, and the fodder in danger of rotting before the sun dries it for the barn. I remain yours,

N. CRAWFORD.

NOTE BY THE EDITORS.

We think the recollection of two facts will do much towards solving the above case of Mr. C. In the first place, chess does not vegetate as quickly as wheat, thus giving wheat when the seeds are sown together, an advantage not lost during the whole growth, unless some accident happens to the wheat. Thus when wheat is thick and good, the chess is proportionably feeble, and vice versa. In the second place, chess is a more hardy plant than wheat, and when once rooted, suffers less from injuries of freezing or feeding, than the wheat plant. Thus when the wheat was fed off, the vigorous nature of the chess gave the plants the ascendancy which they afterwards maintained. As there was doubtless chess in the seed sown, there is no wonder that when the wheat was fed off, which had kept down the chess, that the latter should have become the principal crop. A familiar example will illustrate our views on the subject. In our fields we have timothy and orchard grass sown together. Some parts in meadow are mown twice a year; and so much quicker and more vigorously does the orchard grass shoot up after mowing, that where at least one half the roots are timothy, it does not show its heads at all, and the whole appears orchard grass. There is no more reason to suppose that the feeding off or freezing out of wheat, changes the plant to chess, because that weed assumes its place, than there is to suppose that timothy changes to cock's-tail, because the latter takes the place of the former, after mowing. We are glad to perceive that Mr. C. does not endorse the absurdity of having one half the ear, or one half the stems from a root chess and the other wheat; we hope his good sense will lead to the abandonment of the other part of the error.

THE BARBERRY.

Messrs. Gaylord & Tucker—Having read with much satisfaction in the Cultivator for August, your answer to inquiries from Skaneateles, with respect to the effects of the barberry bush on wheat and other grain, I am induced to give you some account of what has taken place in this vicinity on this subject. Some ten or twelve years past, there was for some years in succession a failure of the wheat crop by blight; and many farmers near this village were led to believe the barberry bushes in the gardens in our place were the cause of this failure. They therefore, with the consent of the owners, destroyed many, and as they supposed, all of those bushes, although there were many left untouched in the neighborhood, and the seasons being more favorable, or from some other cause, they usually had good wheat; and they imagined they had eradicated the evil. But last season there was a great deficiency in the wheat crop by reason of blast, and this excited anew the feelings and prejudices against the barberry as the cause. At the meeting of the Agricultural Society last April, a number of respectable farmers attended, to call up this question; and it was there stated as a fact, that neither winter or summer wheat, rye, barley, or oats, could be raised in the vicinity of the barberries without suffering blight. The meeting therefore appointed three respectable farmers as a committee to effect, with the consent of the owners, the destruction of all those bushes in the neighborhood. At the meeting, being unable to arrive at the same conclusion, I opposed their opinions and the resolutions, for I knew that sufficient barberries had been growing in this village to produce the same effect as at other times, if they were the cause; and besides, the blight was not local, but general in the country where there were no barberries near; furthermore myself and others had raised good wheat within seventy or eighty rods of those bushes, while they pretended to suffer by their influence from one to four miles distance from them. After leaving the meeting, I examined the Genesee Farmer, and I found in vol. 3, page 124, a communication signed D. T., and in page 276, one signed Barberries, and also vol. 4 page 157, signed D. T. The arguments and facts in these communications fully convinced me that the opinions respecting the injurious effects of the barberry originated in ignorance and incredulity, and were supported by tradition, rather than truth or fact. This brought me to the conclusion to do as I did, in taking up one of my barberries of eight years growth, and set it out in the center of my field of summer wheat of the Tea kind. When the committee called on me, I read the above communications cited in the Genesee Farmer, but it did not appear to produce the same effect on their minds as it had on mine. I stated to them that I had transplanted one of my barberries into my wheat field, for the purpose of ascertaining the fact whether they were injurious or not to the wheat and other crops, and that they might destroy the rest of my barberries in my yard, on this condition that if I by this experiment convinced them and the public that their effects were not what they supposed, then they must pay me five dollars a piece for each bush destroyed; but if myself and others were convinced that they were as injurious as they had stated, in that case they were to pay nothing. Their reply was, that this was fair, and they would see what others said; since which, I have not heard from them, supposing they were waiting the result of the experiment. On my wheat ripening, it proved a good crop of plump wheat, and no way injured by barberry in any part; the heads of wheat which shot up in the top and among the branches, some of which rested or lay reclined on the leaves of the bushes, were equally plump and good as any in the field. The bush was green and thrifty. Some of the branches or limbs had grown ten or twelve inches; there was a sprinkling of oats in the wheat, some within five feet of the barberry, as plump and good as ever I saw. There was an acre of barley in the same field, twelve or fifteen rods distant, as good and plump as any I ever had. My neighbor's field of winter wheat, only twenty-five rods distant, not at all affected or injured, but plump and good. On the 31st of July last, I put a notice in each of the papers published in this place, requesting all who wished to see and judge for themselves, to call and see the effect that the barberry bushes had on wheat, as I had set one in my wheat for the purpose of satisfying myself and others of the fact, whether they had a tendency to blast wheat or not. But you, gentlemen, may be surprised that not one individual who believed in the injurious effects of the barberry, nor even one of the committee whose special appointment one would have supposed would induce them to embrace every opportunity to ascertain all the circumstances and facts in the case, for their own and other's information,—I say not one of those took the trouble to visit the field, though many of them were within ninety or a hundred rods of it, once or twice a week all this season; but the above facts have convinced me and many others that barberry bushes are no more injurious to wheat, or any other grains, than the currant, raspberry, or any other shrub or bush.

Yours, with much respect,

WARREN HECOX.

Skaneateles, August 28, 1840.

CULTURE OF THE STRAWBERRY.

Messrs. Gaylord & Tucker—In my last I promised to give you my plan of cultivating the strawberry, which having succeeded for seven or eight years, producing a full supply of fruit with much less labor, is, I conceive, worthy of being made public. The duration of a bed cultivated after my plan, is also a matter of great consequence.

I have never grown any of the choicest varieties except Keene's seedling, nor have produced fruit so large as I have seen figured or described, but as to the amount produced on a given space, I think I can compete with the most fortunate or skilful.

For soil I choose that between the extremes of dry and moist, a little gravelly I prefer, which I prepare by mixing well rotted leaves, rotten wood and cow yard manure in about equal quantities, which I have well mixed with the soil, by spading or plowing in deep, if with the plow, some two or three times. I then level the ground, but do not raise it above the walks, so that it will receive and retain all the water which falls upon it. Thus prepared, I proceed with my plantation, either in autumn or spring. The former is preferable, provided the weather is favorable for transplanting in August or September, so that the young plants can take root sufficient to endure the winter. In planting I arrange my beds about six feet wide, putting in the plants about a foot asunder each way. At or near the approach of winter, I give a slight covering of tan bark, say the first year, the second of wet or rotting leaves, and the third of some light mold or well rotted manure, and so on alternately. The tan or leaves are best the first year, as either of them better protect the plants. If the plantation was made in autumn, by the next July or August the whole surface should be well covered with the vines, which will spring up through the top dressing without difficulty; at which time I pass through the plantation with a spade, cutting through, say lengthwise about one spit wide, and turning under the plants, then leaving about the same width, and so on alternately through the whole bed. Top dress as above for the winter, and next spring as soon as the frost is out and the ground sufficiently dry to leave the earth or soil light and mellow, I cut through the bed cross-wise with the spade in the same manner as before. If the plantation was made in the spring, the first spading should be performed the next spring, and so on semi-annually from year to year. In an old bed I take care to turn under the old plants, so as always to keep up a succession of new and vigorous plants—I never disturb the manures, and do not know but the best time to perform the second spading of the season would be immediately after gathering the fruit, so as to give the runners a light open soil to take root in. From the success I have met with by this process, I am inclined to think that a bed or plantation will last twenty years, or perhaps even a century—I had a bed seven years old, in a garden I abandoned, without any care last spring or even last year after the March working, which produced its usual quantity of fruit this season.

During the blooming season, unless in wet weather, I always give a slight watering from a pot with a rose every evening to set the fruit. This must never be omitted if fruit be an object.

Another circumstance must not be overlooked, that you have bearing or fertile plants. A little observation or skill on the part of the cultivator will enable him to distinguish the barren from the fertile plants, from the large showy flowers, with long stamens, red or black anthers of the former, while the latter are almost destitute of stamens or anthers and the petals of the flowers are very small. It is said to be necessary to plant both kinds together in order to success. Of the truth of this I have some doubts, but I have not experimented sufficiently on the matter to determine.

As to the produce, I believe, without difficulty by my plan of culture I can grow *one hundred and sixty bushels* of this delicious fruit to the acre, per annum, or one bushel to every square rod. Indeed, I have by actual measurement greatly exceeded this.

I. DILLE.

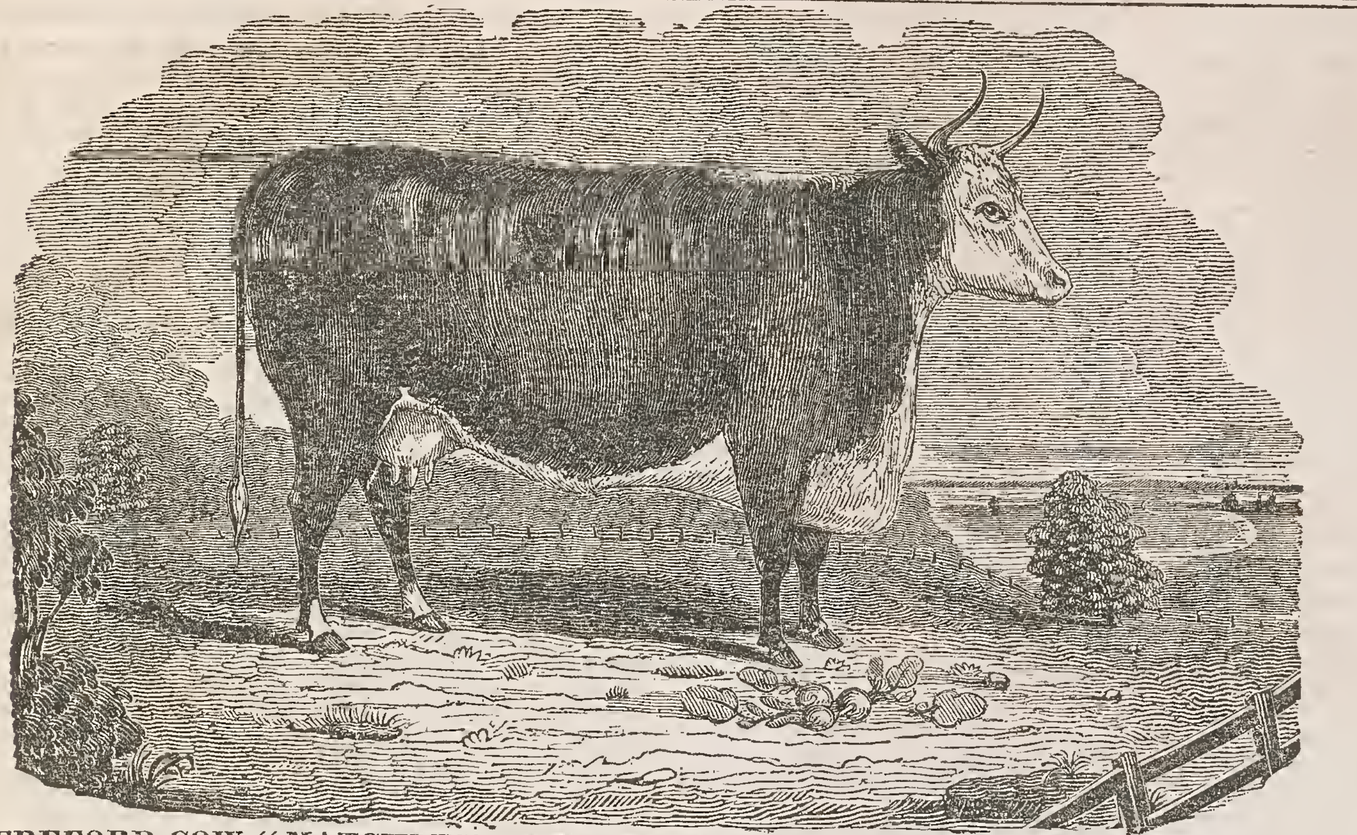
HESSIAN FLY.

Our wheat in this country has been greatly injured by this destructive insect. Indeed from 50 acres I shall not have 200 bushels of wheat. Its depredations, contrary to all former experience, were committed in the spring, on late sown and spring wheat. I think you will do the public a service by publishing what may be known of the habits of this destructive pest, and give us the most approved methods of avoiding its ravages. I have noticed that it preyed least or was less injurious on rich lands.

I may however remark, that notwithstanding the ruin of many crops, we have an abundance, nay a large surplus of wheat in this country.

Newark, Ohio, Aug. 25, 1840. I. DILLE.

Will some of your correspondents inform me through the Cultivator, whether they have tried budding the plumb, peach, apricot or cherry on the wild cherry, *Prunus Virginiana*, and with what success?



HEREFORD COW "MATCHLESS," IMPORTED BY Messrs. CORNING & SOTHAM—[Fig. 89.]

Messrs. Gaylord & Tucker—It is with reluctance that I again address you, on account of my inability of language to support the desire I have for the advancement of agriculture in all its branches. This I hope is an apology for my errors and defects, as what I advance is from my own practice, experience and observation. I shall always be open to correction; without prejudice yield to conviction, and will thank the more enlightened and intelligent, with the best feelings of a man, for the improvement they render me. Every person must be perfectly aware that his interest depends on the flourishing state of agriculture. No branch of the human family can live happily or comfortably when the farmer is depressed, for he is their parent and support; and it is a received opinion with me, that the farmer whose mind, soil and stock is improving daily by his own good management and skill in *good breeding*, keeping his eye on *perfection*, and copying from it, is a station that cannot be surpassed.

I will now endeavor to give you a description of our second importation, which I hope will have the desired effect, and afford equal assistance to the country, as my most sanguine anticipations. The following are the names of horses, cattle, sheep and pigs:

Stallion, cart colt, one year old, Samson.

Cart mare, six years old, Flower.

Matchless, (fig. 89.) formerly Spot, six years old, Here ford. This cow won the first prize at the Royal Agricultural Society at Oxford, 1839, against all England.

Young Prize, son of Matchless, one year old, Hereford.
Martha, four years old, Hereford.
Ellen, five do. do.
Lucy, one do. do.
Primrose, one do. do.
Rarity, one do. do.
Perfection, one do. do.
Catharine, one do. do.
Eliza, one do. half-bred, between the Hereford and Durham.
Cherry, six years old, Durham.
Mary, two do. do.
Neapolitan sow, Mrs. Trollope, and her family of eight.
Berkshire boar, Capt. Marryat.
Berkshire sow, Molly, in pig.
Do. Betty, do.
Do. Susan, do.
Do. Sally, do.
Neapolitan sow, Hannah, do.

Nineteen Cotswold shearling rams, all from the flock of Messrs. Wm. and Joseph Hewer, Northleach, Gloucestershire, England. The horses and three heifers (Hereford) from Mr. John Hewer, Northleach.

Two Hereford cows and bull from Mr. James Walker, Northleach.

One Hereford heifer, Mr. George Hewer, Northleach.

One Hereford cow and yearling heifer from Mr. Joseph Hewer, Northleach.

One half-bred Hereford and Durham, from Mr. Wm. Cother, Middle Aston, Oxfordshire.

One Durham cow and heifer from Mr. Lovell, Edgcott Lodge, Warwickshire—imported expressly for J. & B. Knower of Albany.

The pedigrees of these animals are as good as can be procured in England, and may be referred to whenever necessary. I will not fill your paper up with it, as my lengthened account will take more of it than its merit deserves. The horses look like substantial, durable and useful animals; strength and steadiness is shown in their shape and movements; they denote business on a good foundation, sufficient activity for heavy loads, and a *moderate* spirit to endure. I firmly believe we cannot get a better cross for farm horses, than the largest kind of American mares crossed with this kind of cart horse; it will produce the right kind for utility and profit; they have short legs, much bone, with a very heavy carcass. I feel assured they will be a welcome addition to improved stock.

In perusing your valuable paper, I noticed an article from Mr. Randall on cattle, which differed widely from my opinion in many instances. I cannot say I agree with him or his quotations on Herefords. I am sorry to dispute a person who has so much zeal for his country; but I know his good sense will hark back to a fault if caught on a bad scent; when he catches me running the same course, I will hail his correction with pleasure, and profit from his good intention. He says: "They are larger bone, usually of a darker red, or browner color, than the Devon, and even worse milkers; indeed, a Hereford cow is rarely seen in an English dairy." Probably he might have made these assertions twenty or thirty years ago without fear of contradiction, but no practical man of the present day will allow them to pass with impunity unnoticed; the Herefords, like every thing else that is looking toward perfection, have met many unjust accusations, and I may say that breed, and the Cotswold sheep have had to contend against prejudice and abuse in England, more than any other breeds ever exhibited; but they have fought their up-hill course with great credit; their good qualities have triumphed even over the most prejudicial, and have won a permanent standing in the estimation of the first breeders, that will not be easily forestalled. The Hereford oxen have taken the first prizes in each class at the Smithfield shows for the last two years. Good judges, that aim at reputation, must now make thorough examination, and render a true account to their conscience, before they decide on any breed, for the generality of farmers are better capable of judging for themselves than formerly. Herefords and Durhams are contending fairly for the ascendancy, and I trust the perseverance of each owner will continue, for they are both very valuable breeds, and we shall reap much benefit from their crosses.

I must say to Mr. Randall, that the pure Herefords are not larger and heavier in their bone; there is as much good breeding shown in their limbs as any breed in existence; the working oxen are as docile and as good as any, and I think I can bring forward a Hereford cow that will fill the pail as high as most Durhams or Devons, and if Mr. Randall will take an occular survey of English dairies, he will find in them more Herefords and crosses from them than any other breed, though the best breeds of cattle are far between, even in England. This condemnation has arisen more from theory and heresay than practice; the best proof of this is to refer Mr. Randall to class five of of the Royal Agricultural Society at Oxford, 1839, and he will there find that the Hereford cow won the first prize, against all England, in the opinion of the judges, as the best calculated for dairy purposes; the Durham obtained the second. This is a quotation that cannot be disputed, and one much calculated to retrieve the injured character of the Herefords as milkers, though an animal that can be fattened with facility is sufficient recommendation, as the steer, the ox, and the cow must ultimately come to the shambles. A full bred Hereford bull will cross well with any breed, and I shall be much disappointed if they do not afford more actual benefit to the United States than any other breed ever imported; it was this impression that induced me to give them the decided preference. The female Durham is thought to be a better cross with other breeds than the bull. Mr. Randall, in extolling the Durhams, quotes from the Farmers' Series the following: "In early maturity they have, confessedly, no rivals, being ready for the butcher from two to four years earlier than the other English breeds." I should imagine his author meant Herefords when he advanced this; if not, practice and experience will admit them to have one year in advance of all others; beyond this would look too much like fiction, for it must be deemed unprofitable to keep steers over three years old, unless for the use of the yoke. Herefords decidedly hold the first place in England for early maturity and a tendency to the secretion of fat; they often go to market at two years old. Though our opinions clash on this subject, I hope Mr. Randall will continue to bring forward the Durhams in their brighest coloring, for they deserve the praise of approved ability. The following prices will uphold him: 150 guineas, 150 do. 320 do. 415 do. 110 do. were obtained at the Earl of Carlisle's sale last Sept., Short Horns; 170 guineas, 105 do. 150 do. 300 do. 135 do. at Mr. Henry Edward's Short Horns; and at John Colling's, Esq., Sept. 12, 105 guineas, 100 do. 170 do. 200 do. 140 do. is sufficient proof that Short Horns are valuable. I shall read with much pleasure any article he may insert, and shall glory in seeing them defended whenever abused, and will assist him in his efforts with my utmost ability. I shall also be most happy to consult with him personally on both breeds, and make friendly comparisons with each under the eye and hand. I do not praise the Herefords with an interested design to depreciate the Durhams; we have four of the latter to one of the former, near one hundred head, of a very good quality, and we hope in a few years to be able to supply the wants of those who may wish them, and will do them justice. We have a five years old cow and two years old heifer of the improved Short Horn, that I think would not have disgraced the breeder, (Mr. R. Lovell,) had they appeared at the Royal Agricultural show at Cambridge, nor do I think his Durhams far behind the best of them.

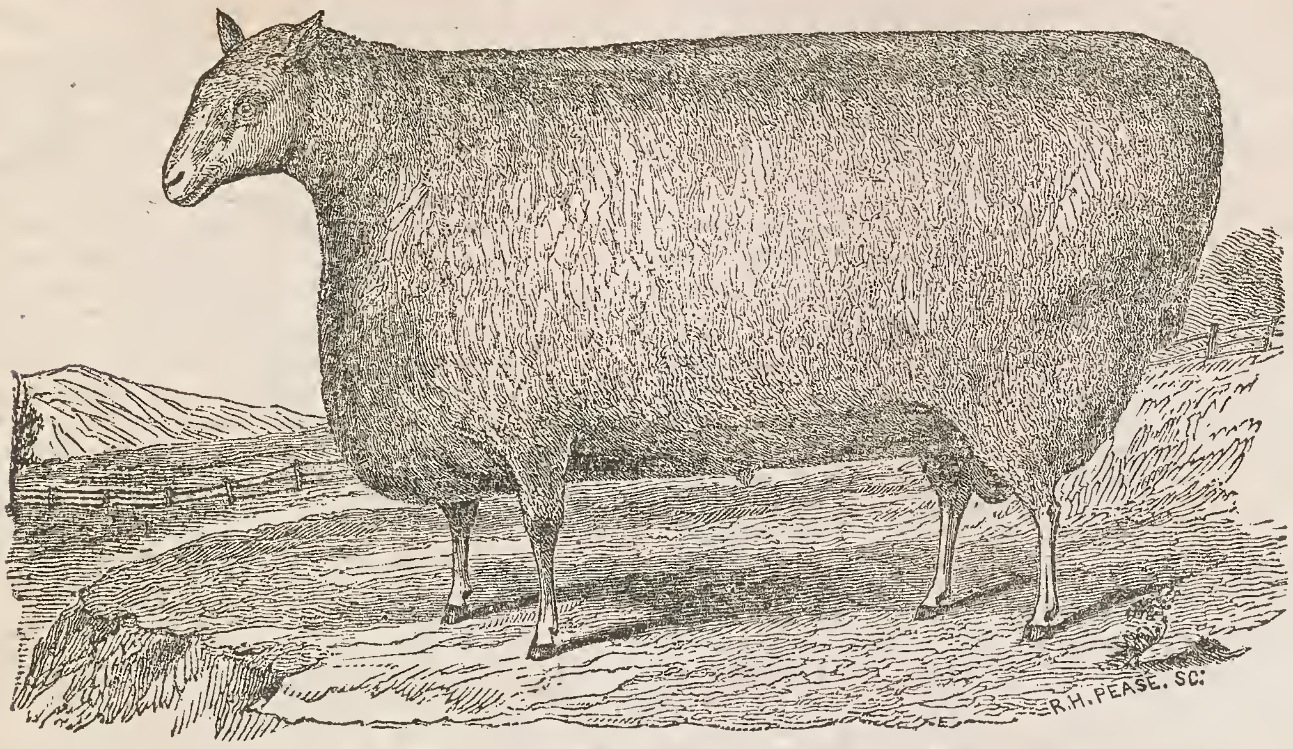
We have a cross bred yearling heifer by young Sovereign, a superior Hereford bull, from a very superior Durham cow; probably she may be considered one of the best animals we have, when recovered from her voyage; she is in calf by young Cotmore, a son of the bull that won the first prize at Oxford, 1839, as the best bull of any age. It is my opinion that this cross cannot fail to be good, both for the dairy and shambles, and may be pursued and attended with many beneficial results. Mr. Cother has promised to report to me his success in continuing this cross. I had the satisfaction to see in London, six beautiful Here fords, three splendid Durhams and ten good Cotswold sheep, bound for Australia, and was much gratified to find it a similar importation to the one I had selected. It is no small matter to take cattle and sheep 13,000 miles. America must look at this, and proceed; there are more than double the quantity of cattle and sheep exported to that country than America.

I shall now change the subject to that of our sheep. I am at a loss what name to call them; English breeders are so frequently changing it, as they improve by crossing. Such as New Cotswolds, New Leicesters, New Gloucesters, New Oxfords, New Lincolns, &c. &c. as if the word new could add value to a beast. This I do know, that new things have often led farmers into errors. These breeds are so much mixed together, that it is difficult to know which breed they are mostly descended from; nor do I care, as long as I approve of the sheep. My idea of name and color of any animal is, that it weighs but light in the scale of profit, therefore on consideration, shall call them the Old Northleach Cotswolds. I cannot answer for Mr. Hewer's crosses with other breeds, as I did not inquire; the sheep spoke for themselves, and drew numerous purchasers from all parts of the world; the superior quality induced good breeders to give high prices, which is a sufficient criterion of their goodness. We have purchased fifty ewes in lamb from Mr. Hewer, and twenty from Mr. Cother, of Middle Aston; Capt. Morgan will bring them in January next.

I perused with much pleasure a communication from Mr. Clift on Lincolns, though I cannot say I agree with him, as being the best sheep for the country, or can I believe that length, height, breadth, or girth, denotes a good animal; they do not strike me as any criterion to goodness, though the novelty induced Captain Morgan to measure the length of one of our sheep, eighteen months old: from nose to root of tail was five feet two inches, while that of Mr. Clift's, at four years old, measured four feet seven and a half inches; and I have no hesitation in saying this sheep weighed, when put on the vessel in London, 45 pounds per quarter. He has a good face and ears, well filled behind the shoulders, a level fat back, an excellent rump, a good leg of mutton, and I have no doubt, when he is sheared next June, that he will cut twelve pounds of wool; these are essential points, though I do not think him deficient in many; and I will cheerfully sell him to Mr. Clift at a reasonable profit, should he approve of his good qualities. I am thoroughly convinced there are no sheep in the world with more hardy constitutions or aptness to fatten.

Mr. Clift again remarks: "That his wether sheep are fit for the stall, if you choose, at two, and at the farthest, three years old." The Messrs. Hewers never think of keeping their wethers over one year; they go to Smithfield market, 95 miles, from turneps, bare shorn, about the same time the lambs begin to drop, and weigh from eighteen to twenty pounds per quarter; these are culls his rams are taken from. I saw a lot of them sold in April last at £2 3s. 6d. each, and the butcher told me the mutton was almost equal to the best South Down. If sheep are kept beyond two years, the necks, loins and breasts are excellent to salt, and as economical and palatable food as the best bacon or pork. English farmers and laborers consume a great quantity of two and three years old wethers and old ewe mutton, and prefer it to many other kinds of meat. The general average of tegs fleeces shorn at this time are from eight to eleven pounds.

It is totally impossible for any person to seek eminence in ram breeding, unless he is a *first-rate* judge. In the first place he must be able to distinguish each ewe in his flock; there is as much difference in feature, as in the human family, and as easily known by it, by constant examination; he remembers accurately the deficient points of each, and his memory serves him to select a sire to improve them, though it is extremely difficult to obtain exactly the sheep required; in that case he must embrace as many good points as possible in which the majority of his ewes fail. England has a wide field for selection, and has the decided advantage over America in this respect; they



COTSWOLD BUCK, 18 MONTHS OLD, IMPORTED BY Messrs. CORNING & SOTHAM—[Fig. 90.]

may almost go to perfection in sheep. This, I hope, will soon be the case with America, if we continue to import from first breeders only. All that is wanted is study, science and enterprise; and if farmers could meet bodily, with feelings directed toward them, she would expand in improvement like flowers in the sunshine.

Now for our pigs. I have carefully selected sows in pig by different boars, so that we have sufficient crosses for a whole generation; some of them are descended from the well-known herd of Richard Smallbones, Esq. Hordly, Oxfordshire. Others from R. Lovell, Esq. Edgcot, Warwickshire, and others from the first markets in Berkshire. The former has won as many prizes as any other swine breeder.

I shall not make any remarks on these animals farther than this, that color in Berkshires is not hereditary; they vary in many instances; I have seen pure bred of all colors among the best prize herds in England. To discard good animals for their color only, are quibbles that seem to me profitless discussions, too much like quackery to be noticed. I believe color varies with age and sometimes with climate in swine; it varies in cattle of all breeds; erroneous quotations deter the practical man from reading, and do much injury. Matchless has a black spot on her off side, but it was unnoticed by judgment.

Having been favored so far with a safe arrival of valuable horses, cattle, sheep and pigs, the next consideration is, to impress on the minds of the American farmers, those who are fortunate enough to possess them, the important item of protecting them from injury; not only from the *evil of low breeding* and degeneration, but from the inclemency of weather and careless feeding. This knowledge must be sought with unflinching zeal, and supported with manly firmness; the farmer's care must be devoted to his animals; they must be wedded to their continued superiority, success, comfort, and a judicious, economical disposal of provender, or the introduction of splendid stock will be a useless operation.

In my opinion, good hips and rumps, with an expanded chest in a cow or bull, are very prominent points. A kind chop, a straight chine, well lined with a good quantity of flesh, backed up by good round sides, straight with the shoulder, are valuable acquisitions when you cannot get perfection. There are more cattle fail behind the shoulder than any other point, and when this is the case they are apt to show much paunch, which, to me, is a very great objection; reason seems to say, an exorbitant belly consumes much food very unprofitably, and are not so apt to fatten; this I have frequently noticed minutely, and invariably found it so. Flesh hides a multiplicity of faults, but will never hide this, which I consider a very important one.

There is also much to be learnt in feeding cattle, and it is very essential to discover the daily consumption of each beast, so as to give them just as much as they will eat, leaving a clear manger to sleep over; if they have hay before them to blow on, it weakens the appetite almost equal to satiety. If a beast is cloyed with any kind of food, he does not relish it again in many days. Cattle, when feeding, require much water, and it is very essential. A person who has a thorough knowledge of feeding, sees immediately he enters the stalls, whether his cattle have been regularly and sufficiently fed and watered; if they are at all restless, they are not satisfied, and it is a certain omen of something wrong. They should not be disturbed more than absolutely necessary; the more quiet they are kept the better they thrive. Much has been said on feeding raw potatoes to cattle; I think them valuable, given in a limited degree; the generality of farmers give too many, which loosen the bowels without aiding the body. They can be well applied with meal, once a day, so as not to effect the quietness of the stomach. The Swede (or better known in America as ruta baga) may be fed more extensively; they suit both pallet and constitution, and is a very profitable root to the farmer; England would be lost without it; it is fed to advantage to many kinds of animals.

The breeders of stock and tillers of soil ought to be intimately united, or the anticipated improvement in husbandry will end in disappointment. Could we establish agricultural societies, and combine in friendship, the more we met together, and the oftener we discussed subjects connected with agricultural matters, the greater would be the advantages that would ensue. I hope this feeling will be established in Jefferson county, and that we shall be able to meet together to awaken the farming interest and promote the public good.

I am, dear sirs, yours most sincerely,
WM. H. SOTHAM.
Perch Lake Farm, Jefferson County, N. Y. 1840.

N. B. I have met with the three last numbers of your valuable paper since writing the above, and will answer all references to my communications in your next.

LETTERS FROM THE WEST—No. 2.

Circleville, Ohio, Oct. 8, 1840.

Editors Cultivator—The Ohio State Agricultural Society held its annual Meeting and Fair, here yesterday. About one hundred head of Durhams alone, were on the ground, and I must confess that they presented one of the most gratifying sights that my eyes ever beheld, this being my first step on the borders of the great plain of the almost immeasurable and fertile west, that is said in truth, from beginning to end, to be the home of the lordly Short Horns. Notwithstanding the rage of politics, and the extreme pressure of the times upon the agricultural interest, the show was numerously attended, and went off very spiritedly. Felix Renick, Esq. President of the Society, was present, and took his seat; and I was heartily glad to see the principal originator of the Ohio Cattle Importing Company, still so active and efficient in the noble cause of stock improvement. He has now the gratification of seeing his efforts crowned with complete success, and his country vastly benefited by his liberal and praiseworthy exertions; it was him who visited England, and to whose good taste and judgment, principally, was confided the selection of the best importations that have graced this fertile valley.

I was very happily disappointed in the appearance of the animals brought on to the stand, as I had expected to see size and condition exhibited, as commanding more merit than we of the north are in the habit of allowing them. But I am assured that quite a revolution has taken place in these matters within a few years, and a great, overgrown, coarse, or high fleshed beast, has no chance at all with the fine taste and critical judgment of the gentlemen who now compose the awarding committees. A reasonable size to be sure, is requisite—18 to 22 hundred for a full grown bull, and 14 to 16 hundred for a cow in good show condition, are perhaps the most desirable weights now sought for here, and these are about such as are more generally cultivated with us at the north; nor are they behind us in regard to deep pedigree, mellow handling, quick feeding, dairy qualities, fine points, and general harmony of shape. The most fashionable color at present, is a rich full roan; but taste in that respect fluctuates, and the pure white, and full red, have their numerous advocates, and upon the whole, the different shades known to exist in the pure Short Horn are not stood upon, provided other things are right.

I had a very good opportunity, yesterday and to-day, of comparing those animals that were bred here, with the several imported ones, and I am free to say, that if this was a fair exhibition, that there is a very decided improvement in the natives, showing skill and taste in their breeders, and I have little to add derogatory to their splendid forms, except that I do not think sufficient regard is yet paid to the set of the tail and a small dropping over the rump from the hip bones. This, however, is by no means a general fault, and if they continue to use the bulls that I hear are most in request, this in a few years, will almost entirely disappear.

I did not hear of any sales, though several gentlemen were present from abroad. Prices at present may be said to be nominal; choice animals however, are held quite as high as formerly, but middling or inferior, may be purchased somewhat lower than usual. Choice grades are very reasonable, and I am glad to see them spreading; and to those that cannot afford to buy a thorough-bred, I have only to say, get as near it as you can possibly afford; that man ought not to sleep nights, that has grass and hay to feed, and no Durham blood in his cattle.

The first prizes for the bulls and calves, were taken by Messrs. Watts, Van Meter, Faux and Walker; of cows, heifers, and calves, by Messrs. and Mrs. Renick. It may seem odd at the north, for a lady to enter stock for a premium at an Agricultural Fair, but it is a matter of business here, and I believe is the same in England. Mrs. R. also took a 3d premium on Aurora, a heifer calf, and I am not sure, had I been on the committee of awards, that my gallantry would have got the better of my judgment, and that I should have placed it first. At any rate it was a pretty affair, and might be addressed without flattery in the same language as her namesake of old—

> "Now come fair daughter of the dewy lawn."

The display of swine was much less than I had expected in a country where so many are annually fattened, for single farmers here keep their 500 head or more, large and small. But the improved breeds have not gained much general ground here yet, and gentlemen seem to be rather shy of showing any thing else. The Berkshires and crosses of them, had it all their own way. Of the grown boars, Mr. Thomas Huston won the first premium, on a thorough bred Berkshire I sold him a year ago; and of the male pigs, Mr. C. L. Scott, took the prize on a cross of the Berkshire and Russia. To Doct. Watts, was awarded the premiums on sows of all ages, and to Mr. Hasley, that of the best fat barrow, which was a three parts cross of the Berkshire on the Russia. He was a noble hog, and so full and round, that like a ball, he might be rolled any way. I have never yet seen a cross of the Berkshire in any other breed of swine, however small, that did not immediately tell in huge messes of pork, soon after the commencing of feeding for fatting. In looking over a field of several hundred head of Mr. Huston's hogs to-day, the Berkshire crosses might be picked out as far as they could be seen, and by their form too, more than the color, for many of the pigs had retained the complexion of their dams, and were pure white or sandy.

The influence of the State Agricultural Society has thus far been very beneficial; it is proposed now, to organize it next year, and render it still more extensive if possible. In order to do this, it is proposed to make the premiums more various, giving them to horses, asses, mules and sheep, as well as cattle and swine, and also to the best cultivated farms, and different crops of grains, grasses, roots, &c. It is also proposed to widen the range of its meetings, and stretch them alternately from the center of the State, to the north, east, south, and west. This I have no doubt, will interest a much larger portion of the citizens of Ohio in its doings, and as all these extremes are now in the broad road of improvement, it is probably no more than just and liberal, that the meetings should have a wider circuit. That the Society may continue to flourish, and go on increasing in influence and interest, is the ardent wish and desire of

Your ob't servant, A. B. A.

REMEDY FOR THE BOTS.

Messrs. Gaylord & Tucker—In my early days, my father, being fond of good horses, paid great attention to their health, and whenever he apprehended that his horse was affected with the bots, had recourse to strong salt water, generally brine in which beef had been salted, and it appeared to have a favorable effect on the animal. The brine was given first without any thing preceding it; but after my neighbor made the following experiments, we changed our course of practice. A two years old horse having died of the disease, our neighbor opened him, and taking the œsophagus (or ozen, as it is perhaps more generally called,) from the stomach, split it open, and exposed the grub to fair view—he found their heads deeply embedded in the cellular substance; he then dropped a few drops of brine on some of them, which induced those that it touched to contract and adhere with greater tenacity—he then dropped on some others some molasses, which instantly produced a different effect; they appeared to expand and slacken their hold; on to these he then dropped some beef brine as at first, which caused them immediately to let go their hold and fly off from their former station. He found that by this course, he could dislodge them whenever he pleased; hence the expediency of administering something sweet and agreeable before the brine is given, is clearly suggested. As there is no doubt that the insect which is called the bot bee, depositing the egg or nit on the hair of the horse, produces the grub in the stomach by being taken in at the mouth, it is very desirable to prevent their continuance on the horse where he would be likely to take them into his mouth by biting himself, which I have seen one horse show great reluctance to do; he deliberately viewed the part thickly covered with nits, and after some hesitation contracting his lips, with his teeth, bit the part, and then as if to avoid all adhesion of the nits, he gave a very sudden motion to his lips. These little eggs or nits are easily removed and destroyed, by rubbing on them almost any kind of oil or greasy substance. An Agriculturist.

East Greenwich, R. I. Sept. 1840.

VALUABLE TABLE.

Messrs. Gaylord & Tucker—A few days ago I was much in want of some dry measures of capacity, as I had often been before; but this circumstance had never led me until then, to think of the vast numbers of house keepers, especially farmers, who suffer inconvenience from the same cause; in fact, I do not believe I should err, in rating them at 99 in every hundred. Why they continue to do so, they themselves can best tell; but it occurred to me that I might perhaps render them an acceptable service by publishing a list of boxes in a square form, which I made out for my own use, to contain the following quantities, to wit: a barrel, half barrel, bushel, half bushel, peck, half peck, gallon, half gallon and quart. The square shape was preferred, as being far easier both to make and to calculate, and the list was immediately sent to my friend Mr. Ruffin, editor of the Farmer's Register. But as many read your Cultivator who never see his paper, I now send the same statement to you, that you also may publish it, if you think it may be useful. A similar table is not to be found in any book that I have ever seen; although it is perfectly obvious to every body that it is much wanted. The advantage to buyers especially, would be considerable; for they could always ascertain whether they received their proper quantity of any thing sold by dry measure, if they would only carry the table in their memories, or on a memorandum, together with a small rule in their pockets.

Table.

A box 24 inches by 16 in. square, and 28 in. deep will contain a barrel, or 10,752 cubic inches.

A box 24 inches by 16 in. square, and 14 in. deep will contain a half barrel, or 5,376 cubic inches.

A box 16 inches by 16 8-10 in. square, and 8 in. deep will contain a bushel, or 2,150 4-10 cubic inches.

A box 12 inches by 11 2-10 in. square, and 8 in. deep will contain a half bushel, 1,075 2-10 cubic inches.

A box 8 inches by 8 4-10 in. square, and 8 in. deep will contain one peck, or 537 6-10 cubic inches.

A box 8 inches by 8 in. square, and 4 2-10 in. deep will contain one half peck, or 268 8-10 cubic inches.

A box 7 inches by 4 in. square, and 4 8-10 in. deep will contain a half gallon, or 134 4-10 cubic inches.

A box 4 inches by 4 in. square, and 4 2-10 in. deep will contain one quart, 67 2-10 cubic inches.

These measures all come within a small fraction of a cubic inch of being perfectly accurate, as near, indeed, as any measures of capacity have ever yet been made for common use; the difficulty of making them with absolute exactness, has never yet been overcome.

In addition, gentlemen, to the motive already stated, for making this communication to you, I offer it as some small return for the instruction and entertainment which I have already received from your highly useful paper; and beg you to accept my very sincere wishes for its future prosperity. I remain, gentlemen, very respectfully, your ob't serv't.

Sept. 22, 1840. JAMES M. GARNETT.

VERMONT BEE HIVE.

Luther Tucker, Esq.—Dear Sir:—I send you a box containing a glass bee hive. It is of full size and is the same shape, and contains all the principles of my patent. The common hives are made of boards only; some people make them rough. Glass drawers may be used in either.

There are three very important principles brought into use in this hive.—1st. The suspended bottom board facilitates ventilation, affords opportunity for the bees to keep any web from being formed by the moth worm between the edge of the hive and board, and at the same time aids very much in expelling the pent heat in the drawers, by admitting a more pure air through the apertures into that apartment, which is occasioned by the buzz of the bees in the lower part of the hive, and which greatly facilitates that secretion in the stomach of the working bee, so necessary to the growth of wax; but little air is necessary in the drawer, yet all there is should be good, otherwise a sufficient number of bees cannot embody themselves together in the drawer so as to weld the wax on to their cells, for a perfect uniformity of animal heat must be formed in the drawer before any comb can be made—3d. Drawers being placed in a chamber, a nonconductor of heat and cold is formed between the outer and inner boards. There are other advantages too numerous here to mention.

Mr. Nutt, of England, one of the greatest apiarians of the present age, became aware of the importance of a ventilation which would expel the pent air from the glass bell, when used on similar principles with my drawers, and contrived a perforated tin tube, so as to convey air direct to the center of the bell; but this did not answer a good purpose: for, as the air was so direct upon their work, without being softened by their animal heat, the bees glued up every hole so as to stop every particle of air coming from that direction, before they would make any comb in the bell. Mr. Nutt then constructed another tin ventilating tube on somewhat different principles, for the purpose of reducing the heat in the main hive below swarming temperature, and thus prevent swarming; but, as the whole object is not effected by the contrivance, I will not describe it. Col. H. K. Oliver, of Salem, Massachusetts, who uses Mr. Nutt's hive to good advantage, says it is a *good city hive*, it being a non-swarmer, and as he lives in the heart of the city, it would be difficult, as he thinks, to manage the swarming hives. Col. Oliver has discontinued the use of the tin ventilating tubes, and has adopted a better plan, as he thinks, for a hive of that kind. The bottom board and ventilator of the Vermont Hive affords the means of proper ventilation of both the upper and lower apartments at all seasons of the year; for at the time when the lower apartment should be closed, the upper needs no air, except what is admitted through the apertures. It seems hardly necessary for me to express an opinion in regard to the advantages of the Vermont Hive over all other swarming hives. The public, so far as they have been used, appreciate their value, and manifest it by the various certificates and orders for hives. There are now more than four hundred persons who bought the right to make and use this hive in the county of Addison, Vermont, within 4 years, most of whom have their apiaries in successful operation. I think there are now more than twice as many hives in this country than were kept four years ago, and nearly three times as many bee owners. *Pure box honey* in the *drawers* is the principal honey that is offered for sale in our towns and villages, and is fast becoming an article of diet for invalids, as well as a luxury for visitors, villagers and other citizens. But after all, I cannot recommend the Vermont Hive to any person who will not take any care of their bees, nor any other hive. Bees require a little *care*, and this *care* should be of the right kind and in its appropriate time; otherwise, his success in their cultivation will be likely to turn out like the farmer who plants and sows his seed out of season, and leaves his gate open and his bars down. The system of preserving the lives of these industrious little insects is fast gaining ground in our country, and I cannot but hope that the *murderous* practice of destroying the lives of bees will so far cease, that millions of dollars worth of the purest sweet in the world yearly will be saved, that is now lost by being washed away by the rains and dried up by the sun, for want of bees to save it, and skill to manage the bees. Respectfully yours,

JOHN M. WEEKS.

West Farms, Salisbury. Vt. Sept. 18, 1840.

☞ The hive sent us by Mr. Weeks, is kept at the Cultivator office, and is worthy the examination of apiarians. Rights for the use of the hive may be obtained of Wm. Thorburn, seedsman, of this city—price $5. Mr. Thorburn also has for sale, Mr. Weeks' Treatise on the Management of Bees, an excellent work which should be read by all who keep bees—price 37½ cents.

SOWING GRASS SEEDS.

Editors of the Cultivator—A correspondent in the August number of the Cultivator, asks to be informed the quantity of clover seed necessary to sow on the acre, and whether it may be best sown in the autumn or spring?

Many years ago when I began to cultivate my farm, I inquired of numerous farmers what quantity of seed was necessary to sow on the acre, and found every answer at variance with the others.

I told my farmer to measure four acres separately in the same field, and sow one quart of clover on the first acre, two quarts on the second, three quarts on the third, and four quarts on the fourth acre. The land being in the same condition and adjoining, and sown the same time, we should find by practice what we could not learn by inquiries. He did so, and sowed timothy or herds grass or foxtail, as it is known by these several names with it. The seed succeeded well, and the crop of clover was bountiful. It was not to be discovered which acre was the best covered, for all was thick and very large on all the ground sown. This sowing was in the spring, oats or barley the protecting crop; I suppose, however, that it is best generally to sow plenty of seed. The manner of sowing and the season are much concerned in the success.

If foxtail is sown in the autumn, on wheat or rye, it will vegetate in September and October, and being protected by the grain, it will survive the winter. It being more forward than when sown in the spring, it will produce a good mowing crop soon after the wheat is harvested, if a wet season. If sown in the spring, it would not produce a good mowing crop the same season, unless every relative circumstance should be very favorable.

Clover would probably not survive the winter if sown in autumn; both these small seeds require a protecting crop when sown. When the seeds vegetate, the roots of the small plants are so very small the sun dries them and they perish, if sown on raw or naked ground.

Wheat and rye are good protecting crops to grass seeds; but barley is better because it shades less when grown, and oats the next best according to my observation. If those seeds are sown with grain of any sort, they are buried too deep or left uncovered, and may vegetate before protected by the grain, or too deep to grow, and much of them will be lost.

I found it best to let the grain, whether wheat, barley or oats, grow five or six inches high, and then sow the clover or foxtail, (which I think the better name, for it resembles the tail of the fox, and needs not the name of the man who sowed it, as *Timothy* or *Hurd.*) If you have a good roller, fix small bushes behind the roller, and roll over the land immediately after sowing the grass seeds; the roller will press the seeds deep enough into the ground, the light bushes will cover them, and the grain protect them. This is the mode I sowed in the above trial, and probably every seed vegetated. Those not acquainted with this mode of rolling; suppose you have injured the grain by rolling it flat on the ground, but one week after they will see it all as erect as before rolling it, and do better for having been rolled.

If the seed is good and vegetates, it will be so protected by advance of the crop of grain, that you will be certain of its successful growth. This mode is intended equally for fall or spring sowing.

If the field has too many surface stones, or prominent rocks, the roller could not be profitably employed. I would then cover the seed by a bush harrow, on such land, after the grain had grown six inches high.

My farm is three quarters of a mile from this city, on the alluvial grounds, and contains sixty acres. I stocked it with horses, cows of the improved Durham breed, and every animal and utensil necessary for good farming, and gave my farmer half the produce and increase, and he was not satisfied. After trying several persons, with equal ill success, I sold all the animals and utensils, and leased the farm, three years ago, to the Shakers for ten years, at six hundred and sixty dollars per annum, for growing broom corn, and they are well pleased, and I have no farther trouble with discontented partners. Respectfully,

Schenectady, Sept. 25. DAVID TOMLINSON.

LETTER FROM NOVA-SCOTIA.

Messrs. Gaylord & Tucker—I have derived much pleasure as well as profit from the pages of the Cultivator, having been one of its earliest subscribers. Its character in this province is justly appreciated, and the intelligence of the death of its late lamented Editor, was received with deep regret. Fears were entertained that we should be deprived of a work, the best calculated of any modern publication in America, to awaken and improve the mind upon the most important of sciences, that of agriculture. Your announcement of its continuance, with the prospect of increased support, will, I hope, encourage former subscribers and induce others to avail themselves of the extensive and varied information with which it has always abounded; and under its present favorable auspices, will, probably, be increased. Although not a farmer by profession, many of my leisure hours are devoted to this interesting subject, and not unfrequently I attempt a practical application of the hints which are conveyed by your valuable journal.

At present, the chief field of my experiments is upon an extensive salt marsh, from which the sea has been effectually excluded, and the fresh water brought under such control as to prevent its doing injury by remaining too long upon the surface. You will not, I hope, take it amiss, if I should claim the privilege of an old friend, and inquire into the treatment of similar tracts of land upon your coast, for I presume that such are to be found extending far to the south, and have been the subject of experiment by many of your enterprizing citizens. A brief description of the property will not be uninteresting—it consists of about four hundred acres of marsh and flats, protected from the sea by a wall of sand forty feet in height, upon which grow to the summit the Sedge grass and Wild Pear, exhibiting at this season, when the latter is in bloom, a very beautiful picture. The marsh, which runs to very considerable depth, is composed of vegetable fibres, the roots of the numerous aquatic plants which cover the surface in its natural state, and this intermixed with a large portion of sand. The flats are a composition of sand and earthy deposite, and until the shutting off the salt water, abounded with clams, all of which are now destroyed. The white clover is found in considerable quantity, but of a dwarfish description. Timothy has been sown, and where the marsh was the highest, attained a liberal growth. The red clover has hardly been tested, but some few roots have grown luxuriantly, and encourage the hope that that as well as to the white, the soil may prove congenial to it. The timothy was sown the last year, without plowing or harrowting; it came up pretty generally, but partially failed in consequence of a neglect of the sluices and of the water resting upon it during the winter.

The following inquiries may perhaps receive a friendly notice from some of your correspondents, if your own experience has not brought you acquainted with this description of land:

What kind of grass seed is best adapted for such species of marsh and flats; and in what proportion to the acre?

Would it be prudent to ditch?

Is it customary to plow or harrow, or what system is pursued preparatory to seeding?

Will such soil produce grain; and what kind of manure is the best?

Has lime been tried, and with what effect?

Has sea manure been found advantageous?

Have such lands continued to yield for any length of time, or do they become exhausted, and from what cause?

Information upon these, with the general results which have followed the various modes of cultivation, would lay me under additional obligations to the Cultivator, if it be possible to increase the estimation in which it is now held by your ob'd. serv't

SAMUEL G. FAIRBANKS.

Liverpool, N. Scotia, 14*th August*, 1840.

NOTE BY THE EDITORS.

We fully reciprocate the friendly sentiments expressed by Mr. F. and willingly give a place to his communication and inquiries. We have, ourselves, had no experience in the reclamation of salt marshes; but if some of our numerous subscribers on the Atlantic coast, many of whom have had much acquaintance in the treatment of such lands, will give us a statement of their mode of bringing such reclaimed lands into profitable cropping, they will confer a favor on many.

LETTERS FROM THE WEST—No. 1.

I think a Buffalonian may well be proud of what is certainly destined to be the great city of the Lakes, as he rounds the beautiful light-house at the end of the long stone pier, and finds himself fairly launched on the blue waters of Erie, on board of any one of the magnificent steamboats that daily leave the harbor. How the long ranges of buildings loom in the distance, rising somewhat amphitheatrically to the eye, as the noble boat swiftly plows her watery furrow from the land! How picturesquely group the spires and minarets of the churches, and how resplendant are the tinned domes of the hotels and public buildings in the bright sun and there loftily waves the star spangled banner, over the extensive barracks of the highly disciplined regiment of U. S. Artillery, containing in its officers, brave hearts and accomplished men,—palace-like houses in the midst of forest trees and garden shrubbery intervene, and all alone on the quarry heights, stands the beautiful gothic villa of Col. McK., with its turreted walls and donjon keep, giving it the air of a tiny castle erected to guard our line from Canadian invasion. Now the river opens, and Black Rock with its numerous mills and wheat warehouses lately erected, begin to show an earnest of what can be done in the way of manufacturing the great staple of the west; while opposite, stretches the Canada shore, with its tall forests, the village of Waterloo, and the frowning ruins of old Fort Erie, where some years ago many a gallant fellow bit the dust in the desperate assault and bloody sortie.

A lake steamboat contains about as pretty an assortment of freight as heart might desire to see. Pigs and poultry, dogs and cats, horses and asses, cattle and sheep, with now and then a sprinkling of monkies, bearded goats and caged singing birds. Men, women and children from all quarters of the globe, jabbering as many different languages as nations they represent, and with complexions varying in all the gradations of color, from the sooty African up through the bronzed Indian to the rose and lilly of the fair beings of some northern clime. There is such a lumbering up too of the hold, the between and the upper decks, boxes, bales, barrels, hogsheads, crates, wagons, carts, and curious farming and other implements, spinning wheels and baby's cradles, as if the interesting little innocents would not get rocked enough, in case of a gale of wind on the voyage, and so on, and so forth, that a body had better be cautious how he takes his tramps fore and aft, especially after the going down of the sun and before the rising again of the same, or he will meet adventures by no means agreeable to him, perhaps. "Oh, I've broke my leg and barked my shins all black and blue," sings out one at the top of his voice, from somewhere in the lower regions, a gawky bumpkin, who looking up in his walk instead of down, has suddenly stepped through the wood hatchway, some dozen feet below into the fire pit; and "murther Judy, ar'nt I killed?" roars a son of Erin's green isle, as his head has come thoughtlessly in contact with some part of the machinery of the engine; "and if here b'aint a baby, what's rolled down de kitchen stairway into my pot of soup, and broke it's head, as mebbe I had'nt fresh meat enough derectly," bawls the greasy cook, under an agony of perspiration; but puff, puff, keeps the steampipe, and swash, swash, roll the paddle wheels, and every thing is soon made well again; and it is a thousand wonders that one hundred accidents don't take place where there is one, on board a fast moving and crowded boat.

Cleveland is certainly a handsome place, even in comparison with the beautiful towns of Western New-York; and that is saying much for it. It stands on an almost perpendicular sandy bluff, about 90 feet high from the level of the lake, and presents with its twin sister, Ohio City, on the opposite side of the Cuyahoga, rather an imposing appearance, as you enter the harbor. All the world knows that the Erie and Ohio canal ends here, connecting the waters of the lake with that noble river, and of course making Cleveland a place of considerable annual transhipments, and of an extensive lake and inland commerce. Saving the rich bottoms of the Cuyahoga, the country for some two or three miles round, is of a character of the bluff, on which the town is built; the soil then gradually changes, and soon becomes a rich gravelly or sandy loam, not unfrequently resting on a clayey bottom, forming excellent grass and root, and even corn lands.

The country about being somewhat new, very little attention was paid to the improvement of stock and an enlightened cultivation of the soil, till a few individuals took up the business some three or four years since, with the same liberality and enlightened views that had characterized their former pursuits in life. Among the foremost of these with whom I have the pleasure of a personal acquaintance, is C. M. Gidings, Esq., President of the Cuyahoga Agricultural Society; and I assure you I had not been long in town, before his splendid match of bay trotting fillies were hitched on to a light comfortable buggy, and away we were tramping on a farming excursion.

If there is any being above all others that I most admire in the animal creation, it is a spirited, well bred and well *educated* horse. I never break or drive one, that it fails to almost instantly infuse its own fire and vivacity into my veins; my blood mounts with its rapid career, a general happiness and gaiety fill my mind, and my spirits keep pace with the speed of the noble animal. Like the Arab in the desert, I could lie down with it in my tent at night; and, as the Emperor of Rome, share with it the honors of a consulate.

It would not be easy to show a more beautiful and perfect filly than the nigh one of Mr. G.'s match; and her strength and speed, and endurance, are quite up to her perfection of form. She is, most any time, equal to a single mile within 3 minutes; and 14 to 16 miles in an hour. She has but one fault for general purposes; and that is, being nearly, if not quite thorough-bred, there is rather too much fire in her disposition to make her safe in general hands. However, if Mr. G. should take the odd notion into his head, of pricing me a pair of Bellfounder colts out of her one of these days, the fault I speak of, being something akin to that of the horse in consanguinity with my own taste, would not amount to a *very serious* objection on my part.

We were not long in arriving at the pretty cottage farmery, where from the ornamental yards in front, to the garden, the barns, the stables and sheds, and fields beyond, every thing was neatly and conveniently planned. The first thing that we took a look at, was the fillies, of which there is a pretty good stud, more or less deep in the blood, but chosen with such forms as are best calculated to breed horses of utility. All these had graced the harem of Bellfounder, who made his season this year at Cleveland; and I shall be greatly mistaken if the produce does not grow up a valuable race of animals. A racing mare of Mr. G.'s had been sent in the season of '38, to Bellfounder, at Buffalo; and I was shown a yearling horse colt as the produce, that is considered by good judges as equal to any thing in the state of his age. He is very clean in the limbs, with great size and substance; and though but just halter broken, shows a fast walk, and square, rapid, easy trot.

The Durhams came next in order, and Mr. G. seems to be rather fortunate in the way of bulls, as he has Collingham, lately imported; and said to be of Lord Althorp's stock. His characteristics, especially in the short upturned horn, are much like the heifer that we see figured in the work on British cattle, and belonging to this celebrated Nobleman. But the loin of Collingham appears in proportion superior to the heifers; and he is much better let down in the twist; indeed it was quite enough to make one's mouth water, to think of the savory steaks and jerking beef that could be cut from his haunches. He handles well, and is of large size. Mr. G. informed me, that he expected another imported bull this fall, from the late Rev. Mr. Berry's stock; and has in addition a capital son of Comet-Hally, that was sold into Kentucky for $2,500, also a yearling; and a good one got by my brother's Favorite.

As Mr. G. purchased most of his cows out of my father's herd, perhaps it would become me to speak the more modestly of them; but this I can say, without the fear of flattery, and I leave gentlemen to judge for themselves by an inspection of the animals in question, that a cow of more commanding presence than Dew Drop, rarely ever walked. When visited in pasture, she rises up like a roused deer, with head erect, and graceful animated posture; and notwithstanding her great bulk, when she pleases, can show a foot as light as the airy courser on the plain. Talk of Durhams not being able to endure work; I should like to see a yoke of oxen bred from her, that would not walk off with any thing reasonable that could be hitched to them; and I suspect at a pace that it would bother an active driver to keep up to them. Cinderilla is also an animal of great beauty, with the finest limbs, the best spread hips, and thickest loins for her size within my recollection. There were many other good animals, but my time was too limited to examine them with that accuracy that I would have wished.

I found quite a herd of Berkshires here, though mostly young yet; they therefore do not make that show in size that they will another year, but since Black Warrior has taken up his abode in Mr. G.'s piggery, with Maid-of-the-Mill, and Shaker Girl, the farming community in this neighborhood will see that Berkshires can carry size to their heart's content, when desired. I look upon Black Warrior as one of the best boars, take him all in all, that I ever saw, and money would have been no inducement for me to have parted with him, had it not become necessary to give my friends fresh crosses another year by a new importation. The sows also are capital ones, and approved good breeders.

I found the crops here good, especially of roots and corn; the ruta baga was large and thick, it being just the soil that it most delights in; and I much like Mr. G.'s system of feeding, which consists mostly even to horses of green crops. This gives juiciness and bulk to the animal, and is far preferable in my opinion, to so much corn as is usually fed farther south, but I mean on this head, to give when more at leisure, a small experiment I made at home in September, in feeding a lot of breeding sows. Mr. G.'s location I think a very happy one for a stock farm, as there is plenty of dry, sandy and gravelly soil for the yards and buildings; and late fall, and early spring pastures, where any thing like mud or wetness is unknown; so that in this respect, the animals are made perfectly comfortable at all seasons of the year. Beyond these, the soil is of a heavier and stronger cast, and very enduring for grass, and abounding in springs through the dry months of August and September. In fine, Mr. G. has taken hold of farming with the same spirit and energy that characterized his commercial pursuits, and a few years of perseverance as he has begun, will carry him forward to an enviable rank in that noblest of all occupations, the agricultural.

In returning to town, we made a call upon Mr. Wm. T. Bebee, who among other things, showed me a large fine Short Horn bull, bred by Mr. Renick, of the Sciota Valley. Close along side of the stable, was a heavy growing crop of ruta baga, that I think it will require some help for him to eat up during the ensuing winter. I was so much pressed for time, that I did not see Mr. Baldwin's stock, but this was of the less consequence, as I was already pretty familiar with it. He has a beautiful cow among others, worth mentioning, from the herd of Mr. Sullivant of Columbus; and a treasure in Miss Lawrence, imported by my father, and one of England's best milkers; she is also of great size, and fine noble form. Her bull calf, Wisconsin, takes greatly with the public; and I am sure we shall hear of his doings hereafter.

There is considerable other good stock in the vicinity of Cleveland, that I regretted that I could not at this time look over; but I hope to be able to return to the Fair that is to be held the 21st and 22d Oct., for a more leisurely inspection. The whole lake belt of Ohio, is admirably situated for the growing of stock. Its great facilities of water communication, opens to it an extensive eastern and western market in the States, and north in the Canadian dominions; and I shall be truly rejoiced to see this favored region awake to its true interests, and marching forward in such improvements as cannot but greatly redound to the wealth and happiness of its agricultural, and indeed all other branches of the community.

I must say, that I left Cleveland with regret. It possesses in the American one of the pleasantest and best regulated hotels that I know of in the west. The roads about the town from the dryness of the soil, are always good; the weather was delightful, and joined to a considerable rural beauty in the country around, is a sea-like view all along the banks of the lake, that renders it almost impossible for one bred on the Atlantic shore, to realize that he is looking out upon any thing less than an ocean. I shall not soon forget a glorious sun-set here on the lake; it carried me back to those days that my heart often yearns to witness again; when every clear evening I used to race up the shrouds of our ship in the wide sea, to catch the last rays of the sun sinking beneath a boiling mass of clear golden waters. The banks of the lake have quite a sublime aspect, as you gaze on them from above; for during the great rise of waters throughout our inland seas for the last few years, they became undermined by the force of the waves, have broken off in long, deep, wide masses, and tumbled into a wild confusion below, that presented a sight to me no less new than interesting.

I found this a capital fruit country; and after having been so long starved out in peaches at Buffalo, I absolutely reveled at Cleveland, in great juicy Clingstones, as large as my fist, and that is by no means a very small measure. But I find my communication has already reached a greater length, than you or your readers will have patience for, and as the mail is about to close, I will just do the same. A. B. A.

FAIR AT ROCHESTER.

Editors of the Cultivator—The Genesee Agricultural Society held their first Fair on the 7th and 8th of this month, at Rochester. It was a credit to the farmers of western New-York. The exhibition of fine horses, was large; several imported ones of the best blood. There was the heavy draught horse, the carriage horse, with several others of choice blood; and a number of native stock; showing a decided improvement in fine horses. We were happily disappointed in the show of fine cattle. The exhibition of imported cattle was large. It was thought by good judges to have been one of the best exhibitions of Short Horn Durhams that has been held in this State; there were many of the very best that could be found in England; the native cattle exhibited were creditable to the graziers of the Genesee Valley. Several friends of the cause of agriculture from Canada, were present with several very superior Short Horns. The exhibit of sheep was good; the Cotswolds, Leicesters, and South Downs, were most numerous; with some very fine Saxony and Merino bucks. The swine were numerous; and in viewing the many well filled pens of pigs from four weeks to four years old, one would be compelled to say that the friends of fine pork resided in western New-York. The Berkshires and Leicestershires bore off the prizes. Some of the native stock was very fine. At 1 o'clock, P. M. ploughmen to the number of fourteen, entered for the prizes; (three plows were offered as premiums,) and the way they turned over the turf was not slow; showing that we have plowmen that understand turning up the soil to find the golden treasures. After the plowing was over, they repaired to the Court House, which was filled with the hardy tillers of the soil, to listen to an address delivered by L. F. Allen, Esq. of Buffalo. In the evening there was a rush to the market to attend the Mechanic's Fair. The crowd was so large, it was difficult to view the many fine specimens deposited there by the ladies and mechanics of western New-York. On the 2d day, the yards and pens were well filled with horses, cattle, sheep, and swine, for sale and exchange. The sales were somewhat limited for the want of the ready. There were no premiums offered on wheat, it being after wheat harvest, when the premiums were made out; several samples of extra qualities were exhibited. One competitor for corn, raised 114 bushels per acre, which was the highest, it being of the large yellow twelve rowed. Several lots of potatoes, sugar beets, mangel wurtzel, carrots, and ruta baga, the samples of which were large and fine. Mr. Pitts was present with his grain thresher and cleaner; and he deserves the thanks of the wheat growers of western New-York, for his perseverance in constructing a thresher and cleaner whereby grain can be threshed and cleaned for a less sum than can be done with any machine that has yet been introduced. R. HARMON, Jr.

FAIR OF THE FARMER'S AG. SOCIETY.

Messrs. Gaylord & Tucker—Thinking some general and succinct notices of the meetings of the several Agricultural Societies of our State, should find place in the columns of a paper devoted to the farming interest, I take the liberty of offering you a few remarks on the meeting of the "Farmer's Agricultural Society," held at Butternuts, Otsego Co., for the exhibition of stock, and the award of premiums, &c. &c.

The 24th of September, was a beautiful day; its temperature such as best suited man and beast; the sun shone mildly at times, but never fiercely, so the animals in the pens were not suffering from heat, but stood comfortably and often quietly ruminating, with a sleekness and glossiness of coat that added much to their appearance. Later in the season, cold nights, wet days, and occasional frosts, give a harshness to the hair and otherwise affect the good looks of an animal more than common observers would suppose. This I think, makes an early day in the season desirable for the exhibition of stock. The stock occupied something more than an hundred pens; and notwithstanding the apology every where made of drouth and scanty feed, yet the animals looked generally well. Among the cattle, the grade Short Horns and the beautiful little Devons attracted much attention; some of the latter were imported.

Mr. Nicholas Gardiner's yearling bull, by a "Son of Warden," took the first premium; a very large and promising animal, a very good handler, fine in the bone, and of a rich red color. Size *only*, would not have given him the first place with that committee.

Mr. John Alexander's three grade Short Horn heifers were superb animals; one of 22 months old, weighed 1,160 pounds; and "feelers" were put out for them at a hundred dollars a piece; but even that price could not reach them. Many of our farmers have been tempted by such offers to let their *best* young animals go, and on second thought have seen their mistake and regretted the sale, as it throws them back in their upward breeding; indeed, no breeder should sell his best or his worst—an axiom pretty well understood, as I suspect, by the owner of these animals.

The Devons were great favorites; and were of the purest blood from Mr. Coke's and the Duke of Norfolk's herds; the latter originally imported by Mr. Patterson, and the former by Mr. F. Rotch, but now owned by Mr. Washbon and Mr. Franchot. Those from the Duke of Norfolk's, seemed to be of the smaller family. On light soils and short feed, these are unquestionably the grazier's stock; and as oxen their uniformity of color makes it easy to match them.

The working oxen were tested with a loaded wagon weighing 3,600 lbs., on a well selected piece of ground, where there was a short steep hill that severely tested their honesty, patience, strength, and excellent training. The three year old steers managed this load surprisingly; and Mr. E. Parker and his steers, walked off with the load and the first premium, greatly to their credit.

The competition in long wooled sheep, was not as great as usual, though there were some excellent sheep in the several classes. Mr. John Hume took the first premium for ewes of the mixed breed, while Mr. Wm. Musson stood first as breeder of the pure long wooled ewes, and Mr. Paul Burgess for the best buck lamb. It should however, be observed that some of our best breeders entered for *exhibition only*, thus showing that the amount of premium is not their object.

It is a little remarkable that so few of the short wooled mixed merinos were shown, considering that they are the common sheep of the small farmer. One pen only of Saxons were on the ground; they were good specimens of the breed, and belonged to Mr. John Bell. Merinos were more abundant; and some of them showed at once their descent from that beautiful flock formerly in possession of the writer. Messrs. Gregory, Gollins and Weaver, who were purchasers of individuals from this flock, took all the premiums for pure Merinos, and an excellent opportunity was afforded to those who wished to obtain heavier fleeces and more constitution, by the purchase of bucks. Mr. Fitch Gregory and Mr. Vose, owners of the best pen of Merino ewes, refused $20 a head for the two best ewes.

There were but few horses and colts worthy of notice; Mr. Sutton Pearsall's and Mr. Oscar Bundy's, however, were exceptions to this remark, and took the first and second prizes; Mr. George Kennion came in third; formerly this county, under the judicious selections of Mr. Marvin, used to send many excellent horses to market, of the most useful description; and among them, some very fast ones; but the miserable, short-sighted economy of using "cheap horses," saving two dollars and losing fifty, has left us with scarcely a good stallion in the county. Two years hence the "Membrino Messenger" colts will unquestionably attract attention, as they did formerly, when that most valuable horse stood a season in Laurens—he however went back to Long Island, but was again obtained and passed the season of 1838 in this vicinity. It strikes me that such a horse, "on" our common country mares, produces the most useful animal we can have; they are of sufficient size and weight for our work and climate; they are calculated for the *promiscuous* labor of the country; they suit the harness and the saddle; are capable of quick or slow draft; they have endurance and constitution, and are generally good dispositioned and honest. I therefore question the utility of importing from England or any other country, a horse suited only to *one* specific purpose. Desirable as it may be to have a particular description of horse for each particular purpose where their is a division of labor, not only among men but among horses, I think it would be found undesirable in our own country. The very laws of England tended to a classification of horses, from the fact that horses for labor were taxed at one price, and horses for pleasure at another; horses of one size were taxed less than horses of another size, &c. &c. And such was the literal interpretation of these laws, that an owner having been known to have *once* rode his "cart horse," or horse for labor, was subject to the tax on pleasure horses; but more of this some other time. I will return to the pens where stood the grade Downs. There were various crosses made with this excellent close wooled mountain sheep. That on the Merino had lowered the grade of fleece, but had rather increased than diminished the weight of wool; so that it was supposed no actual loss in its value had been sustained, whereas the carcass was greatly improved, and the odious disease of "foot-ail," promises to be eradicated in the cross; this last was considered a very important feature. The Saxon cross was a still more beautiful sheep; and the cross on the "native" produced a very improved animal, as was seen by those exhibited by Mr. Hopestill Crittenden, and Messrs. Hume and Jackson. Mr. Hollis had a pen of beautiful ewes, bred between the Leicesters and Downs, which were sold.

The exhibition of swine was very excellent; most of them, if not all, were of the Berkshire breed. Mr. Hollis' boar, "Lord Bacon," appeared on the ground, and I think would have won a pedestrian match against any pig of his weight which did not then exceed 522 lbs. for he was only in working condition, and that day traveled 12 miles. "Fanny Kemble" was not on the ground, but her offspring took the first premium in every class but one; they certainly have the characteristics of the breed in an extraordinary degree; for we do hold stoutly to the creed of "*no ham, no Berkshire.*" It is a matter of regret that Dr. Yates did not exhibit specimens of his Chinese, which are very superior of their kind; and perhaps feed faster than any other breed, but are rather the gentleman's than the farmer's hog. We however, hold that the Chinese forms a part and portion of every improved breed.

The premiums on skim milk calves created much interest, as it excluded expensive feeding, and was within the reach of every farmer; and will, it is hoped, lead to more care and attention on the subject. An admirable lesson might be learned by looking into Mr. Sutton Pearsall and Mr. Stephen Cady's pens, where could be seen full, round barreled, meaty, sleek looking calves, fed only on skim milk and *boiled potatoes.*

The plowing-match was a scene of great interest, for the Scotchmen were out—and where will you find better plowmen?—with their long scow plows and well trained teams; and the work was excellent, I assure you. One American only entered the list with a Scotch plow, and from his work this day, promises to become a "tough customer" next year, when we hope to see more of our young farmers familiar with this excellent instrument. The greatest object of attention, however, was a new "side-hill" plow, with a beam revolving on the standard, and secured behind between the handles, by a catch; this the plowman touches with his foot, as the horses turn, which throws the beam round so as to let the other shear of a double mold board come into its work; thus the double mold board acts alternately as mold board and land side. It is in appearance, a very strong, durable instrument, and well suited to the Otsego hill side. However, it was now to play the part of a common plow on a very hard level piece of ground that had not been broken up for 19 years; and was rendered still harder by a severe drouth. Fortunately the patentee was able to induce a very first rate plowman, Mr. J. Miller, to hold it; who thus suddenly entered the list with a stronger team and yet stronger implement to compete with the Scotch plow in the hands of those who best knew how to use it. It was a "plowing match," not a trial of plows; and the award was given according to time and excellence of work. There was on the ground, a committee to keep the time, and maintain order, and enforce the rules of the Society; the time bill was then given to the judges of the work, who came on after it was finished and numbered; and they awarded the premiums to the respective numbers without knowing to whom they belonged; in this way all jealousy was laid to rest. The admiration of the bystanders at the work of the "side hill plow" was fully sanctioned by the returns of the committee, who awarded to it the third premium.* The first plow "out," did its work in one hour nineteen minutes, and the "side hill" performed the same in one hour and twenty minutes, but the first plow out drew the fourth premium only. This new instrument was then put upon the roughest, most difficult side hill that could be found, and performed its work to admiration, I may say to the perfect and entire satisfaction of every one present; the old side hill plow, in first rate order, was now set in; but it was soon found impossible to keep it in the ground, or indeed to do any thing with it, even by our old hill side men, who were well used to such rough jobs; never was triumph more complete; and orders were given on all sides to Mr. Henry Mooer of Ithaca for "Barnaby's patent side hill plow," which he engaged to furnish at the very moderate price of nine or ten dollars; thus a farmer has a side hill, common, and double mold-board plow all in one. It was one of the few instances I have met of the farmer's *old tool* giving way, at once, to something *new;* but conviction was here too powerful for prejudice.

Another very simple but exceedingly useful contrivance was presented to the inspection of the Society, for preventing newly threshed grain or corn from heating in the bin, or for cooling off a bin when so heated. It was nothing more than a tin tube of two or three inches diameter, and of length enough to rise above the grain, punched full of holes like a nutmeg grater, and pointed at the end to facilitate its entrance. This being thrust into the heated bin, and occasionally moved from one part to another, we were assured would entirely do away with the necessity of removing or shoveling over the contents; the projecting points of the tin, made by punching the holes, prevented small grains from choking up the holes; and from twelve to twenty-four hours would carry off the increased heat, and secure the grain from injury. When it is remembered how much damage and expense is sustained by farmers in consequence of the heating of grain and corn, this simple and cheap expedient of a few shillings, I should think would be at hand in every granary and store house. Mr. Avery of Butternuts is the inventor, and his statement can be fully depended upon; so try it.

The Society were much indebted to those who, without consideration of the trouble, to say nothing of the risk and expense, brought stock for *exhibition only;* adding greatly to the interest of the day, and evincing a spirit and love of improvement that will go far to render our little Society permanently useful. Among this valuable class of members, we recognize Mr. Billy Shaw, who exhibited a couple of beautiful animals, a steer and heifer, twins; they were half bred Short Horns in high flesh, of great symmetry, and heavy weights, with the least possible waste; the steer weighing 2,420 lbs. and the heifer, 1,780 lbs. united weights 4,200. Mr. Smith had twin two year old steers on the ground, that were very handsome. Mr. S. Gilbert's twin Devon calves were not to be distinguished from each other; they were finished specimens of the light, airy, small boned Devon family. Mr. Thomas Jackson was also present with a few of his long wooled flock so well known among the breeders of mutton sheep, for their good fashion and quick feeding. Very many other gentlemen to whom the Society is indebted for the exhibition of animals, occur to my mind, but your columns, I am aware, ought not to be occupied with a mere list of names, not otherwise useful but as indicating where such animals may be found.

In a lot adjacent to the village, were collected my own herd of Short Horns—all Herd Book animals, showing, however, in condescension to New-York prejudice, rather more color than would suit the Ohio or Kentucky breeders, who from frequent importations have learned to admire the more fashionable color of roan; and have, from their numerous grades, become a little suspicious of too much red. In an adjoining lot were a flock of Downs comprising about forty ewes, all of them of Mr. J. Ellman's blood; and four of them drawn, as a matter of personal kindness, from his chosen flock of fifty, selected from 700 ewes. It is from this little flock, annually drawn out, that Mr. Ellman expects to breed his most valuable bucks; and they are consequently chosen with much care; and the whole flock show the great attention this gentleman has paid to the quality and *evenness* of the wool; an attention, such as is only found among our best flock masters owning Spanish sheep; this will, I think, give an extra value to sheep imported from Mr. John Ellman's flock, should the Down become a favorite cross with our present Saxons and Merinos. R.

Bulternuts, Otsego Co., Oct. 19, 1840.

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* This plow we are informed, took the first premium as the *best plow*, at the trial of plows for the premium offered by the American Institute, at Newark on the 9th October.—Eds

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THE CULTIVATOR:

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

Cult. Vol. VII—No. 12. ALBANY, N. Y. DECEMBER, 1840. Cult. and Far. Vol. I—No. 12.

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TERMS—One Dollar per annum—*Six copies* for $5—the money to be remitted in advance, free of postage. A commission of 20 per cent will be allowed to Agents who obtain 25 or more subscribers, and 25 per cent to those who obtain 100 or more. All subscriptions to commence with a volume.

THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, Editors.

☞ An Extra Sheet, containing the Title-Page, Index, List of Agents, and a variety of other matter, is now in press, and will be ready for mailing to our subscribers by the middle of the month.

☞ For "Notice to Correspondents," see Extra Sheet.

TO OUR SUBSCRIBERS.

The present number closes the Seventh Volume of the Cultivator, and according to our original terms, all subscriptions, except such as are paid in advance, will expire with the year. We are truly grateful to the public who have so liberally sustained us, and awarded such ample encouragement to our labors. In the company of our Twenty-Two Thousand Subscribers the year has passed pleasantly with us, and we trust that the feeling of mutual benefit and kindness has been fully reciprocated; and now that the first period of our mutual engagement is closed, we are unwilling to part with any of our friends, and respectfully ask them to renew their subscriptions and keep us company another year. We ask them, at the time of taking this paper from the office, or as soon after as practicable, to authorize our agent or the postmaster to forward us their names for the coming year.

The plan of the Cultivator and its character are too well understood to render a word of explanation necessary. Placed by the unanimous consent of the farming community at the head of the Agricultural Journals of this country, the extent and variety of its contents, its list of contributors, unrivalled for numbers as well as practical and scientific skill, the superiority of its practical execution, and the number and excellence of its illustrations on every subject connected with agriculture, have all contributed to render it a favorite with all classes interested in the cultivation of the soil. This elevated standing it will be the uninterrupted effort of the publishers and conductors to maintain; and at no time has the means of doing this been so ample as at the present.

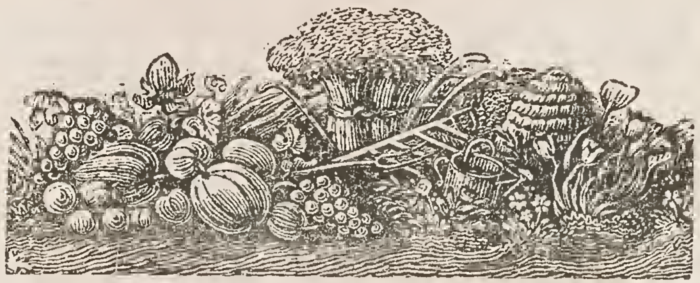
We hail it as a sign that augurs well for the prospects of an improved agriculture, that multiplied as the Agricultural Journals of our country are, each one is now receiving a larger patronage than the two or three which existed ten or fifteen years since did at that time. Men are not ashamed to inquire; they are not afraid to read; the charge of book farming has no terrors for them; and the idea that farmers have from their birth all the knowledge of agriculture necessary for them, has now few advocates. To extend the means of knowledge; to inculcate correct theory and sound practice; to furnish the reflecting with matter for thought, and the practical man with instruction immediately available, has been and will continue to be the great end of this periodical.

Our thanks are particularly due to Postmasters and other gentlemen, in all parts of our country, who, feeling an interest in the success of our agriculture as the great source of national and individual prosperity, have kindly brought our work to the notice of their friends, and otherwise interested themselves in procuring subscribers. We respectfully ask a continuance of their kind offices in our behalf.

For terms, &c. see Prospectus in another column.

☞ The number of Contributors to the Cultivator, during the 7th vol. now completed, amounts to about Three Hundred, from all sections of the Union, not a dozen of whom but are practical farmers.

☞ Gentlemen who receive our Prospectus for vol. 8, are requested to act as Agents.



"To Improve the Soil and the Mind."

"I know of no pursuit in which more real or important services can be rendered to any country, than by improving its Agriculture."—*Washington.*

"Agriculture is the Great Art which every government ought to protect, every proprietor of lands to practice, and every inquirer into nature improve."—*Dr. Johnson.*

THE CULTIVATOR,

A consolidation of Buel's Cultivator and the Genesee Farmer.
WILLIS GAYLORD & LUTHER TUCKER, EDITORS.
Prospectus of Vol. 8, *for* 1841.

In offering to the agricultural public of the United States, the prospectus of the Eighth Volume of the Cultivator, (the Second of the New Series,) we desire the privilege of taking our patrons and correspondents familiarly and cordially by the hand, and thanking them most heartily for the very liberal aid and support they have rendered us, both by their communications and their subscriptions.

The Cultivator was established to improve and elevate the Agriculture of the country; to give a proper tone to the morals and mind of the farmer; to show him the dignity and importance of his profession; to store his mind with useful knowledge, and convince him that while all classes are and must be more or less dependant on each other, he alone of the whole can make any near approach to independence. If there is one thing more than another, which in this country gives a man superiority over his fellow men, it is knowledge; and this knowledge,—knowledge which is as essential to the success of the farmer as of other men,—it is the design of the Cultivator to aid in imparting.

In taking charge of the Cultivator, the Editors were aware of the arduous nature of the undertaking. Under its former conductor, this journal had already attained a very high character, and we might have shrunk from the task of sustaining the reputation it had gained, or from the efforts necessary to still farther elevate its standing, had not the assurance of aid from the ablest writers and the most experienced farmers of the country—aid which our columns will show has been and will be most promptly and fully rendered,—encouraged us to the undertaking. How far we have succeeded must be left for the readers of the Cultivator to determine; but if an increase of subscription beyond any precedent in the history of Agricultural Journals of this country; if the almost unanimous voice of the public press in our favor; if the multitude of private yet flattering testimonials we have received, added to a circulation probably treble that of any other journal devoted to the agricultural interests, may be admitted as evidence, then we have certainly most abundant reason to be gratified with our success.

In our efforts to render the Cultivator worthy of the patronage it has received, no expense or labor has been or will be spared. As it is every where received as the exponent of the condition and prospects of Agriculture in the United States, we intend that every subject connected with that great interest in any part of our country shall receive its due share of notice, and its proper place in our columns. The Cultivator will be a record of all improvements in the science of Husbandry; of the introduction of new and important varieties of seeds and plants; of the respective values and adaptation of the several improved breeds of Horses, Cattle, Sheep and Swine, to the different sections of the United States; in short it is intended to make it a work which shall interest, instruct and be acceptable to all.

In the number, variety, and excellence of the Illustrations, the Cultivator is without a rival, either at home or abroad. This department will be fully sustained, and increased interest and attraction given by a greater number of figures of American Animals, selected from our best specimens of all kinds, native and imported; by the drawings of new Implements, Agricultural and Mechanical; and by engravings of such objects as will be better understood, when given with such illustrations. The engravings and illustrations of the present volume will be nearly equal to one hundred in number; and the satisfaction they have given our patrons, will secure their continuance, notwithstanding the great expense they necessarily occasion us.

The sales of the Cultivator have been so great during the past year, and the demand for the back volumes as well as the current one so constant, that we have stereotyped each number; and shall be able, now and hereafter, to furnish subscribers with whole sets, or any single volumes they may desire.

To our personal friends, to the friends of Agriculture, to those Gentlemen who have acted as our Agents, to Postmasters generally throughout the country,—in short to all those who have so generously interested themselves in our behalf, in bringing a knowledge of our work to the notice of their friends, and in obtaining subscribers, our most heartfelt and cordial thanks are due. While we have endeavored to make our terms such as to offer an adequate inducement and reward to those who are disposed from pecuniary motives to interest themselves in our favor, we shall still be indebted to all who will in any way aid us in our efforts to make the Cultivator more generally useful, either by increasing its circulation or employing their pens for its columns.

Our gratitude is especially due to those gentlemen whose numerous able and varied communications have given such an interest and value to our paper; and we are confident from their well known regard to the vital interests of American Husbandry, that our appeal to them for their farther aid, will not be in vain. We invite communications from all. There is scarcely a subject in nature that is not more or less intimately connected with agriculture, and may not be made subservient to its advancement.

TERMS—One Dollar per annum—Six copies for $5—the money to be remitted in advance, free of postage. A commission of 20 per cent will be allowed to Agents who obtain 25 or more subscribers, and 25 per cent to those who obtain 100 or more. All subscriptions to commence with a volume.

ENGRAVINGS FOR THE CULTIVATOR.

We are gratified at the proofs we are receiving from various quarters, that our efforts in procuring figures of American animals, from herds or stocks of the most approved kinds, is duly appreciated by our subscribers. We are determined to spare no expense in this respect, and shall make the Cultivator the Herd Book of America. One of the greatest difficulties is the obtaining good drawings, spirited and life-like, for the engraver. The value of the portraits depend on their correctness. Though we may have failed in this respect in some cases, we can refer with pride to the portraits from the pencil of our correspondent "R." (the respected President of the N. Y. State Ag. Society, Francis Rotch, Esq.) who is without a rival in this country, and who has, we are inclined to think, few rivals abroad in the skill of perfectly delineating an animal. Of this, those who examine the portraits of 'Oneida' and 'Dallimore,' and the 'Merino Ewe' in this paper, will feel the force and admit the justice. But Mr. Rotch has added vastly to the value of his pencil sketches, as correct representations of living animals, by the sound and discriminating views which characterize the remarks and descriptions he has attached to them. We hope, and we are sure our numerous readers will concur with us, that he will continue the series he has commenced with so much skill and taste, until our pages shall be graced with portraits from his pencil of all the valuable breeds of domestic animals, so many fine specimens of which are to be found among his own flocks and herds.

TENNESSEE AGRICULTURAL SOCIETY.

The second annual meeting of this efficiently constituted society took place at Nashville on the 13th of October. Quite a number of the able and spirited members of the society were present, and a number of interesting reports on various subjects connected with agriculture were made. The Hon. E. Dillahunty addressed the society on the necessity of a radical reform in the agriculture of Tennessee; and the President, Dr. John Shelby, delivered the annual address before that body. The subject was the true principles of breeding domestic animals, a topic which the scientific knowledge and research of the writer, as well as his experience in this branch of rural economy, well qualified him to discuss.

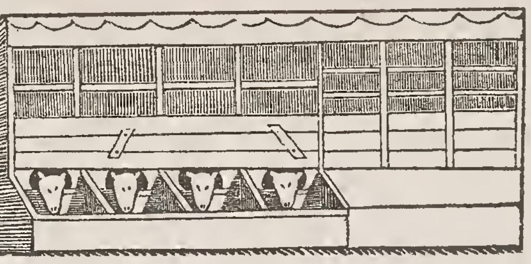
At one of the sessions of the society, it was upon motion "resolved that M. Mechand of Paris; A. B. Allen of Buffalo, N. Y.; Luther Tucker of Albany, N. Y.; John S. Skinner and Gideon B. Smith of Baltimore, Md.; Edmund Ruffin of Petersburg, Va.; Hon. Henry Clay of Kentucky; and Hon. Isaac Hill of N. H., be elected honorary members of the Tennessee State Agricultural Society."

We thank the society for the honor thus conferred on ourselves, and beg leave to assure that respectable body, that they have our most cordial wishes for their entire success in the laudable purposes contemplated in their organization.

FATTENING PORK.

Madam Glass, in her delectable dissertations on cookery, as a preparatory step towards dishing a sturgeon's nose, first directs the novice in culinary art to catch one; so the preliminary step in making pork is to catch or procure the pigs. On the choice of the animals made for feeding, most of the profit will be depending; and when it is recollected there is an immense difference between the pleasure of feeding daily a pen of sleek, quiet, thriving grunters, and the continual irritation and vexation experienced in dealing out provender to a gang of ungrateful, squealing, squabbling creatures, of whom, week after week you are obliged to say, " the more they eat the worse they look," the necessity of attention to this point of selection will be apparent to all. It would be rather difficult at present, in any civilized part of the country to find any of the genuine old fashioned squealers, that used to devour all a farmer's corn, and then weigh from one hundred to one hundred and fifty; but a little observation will show there are multitudes of hogs about the country, but a few shades removed from these, and the task of making pork from such will be found both tedious and unprofitable. In spite of the opposition which has been made by the ignorant and the prejudiced, the good effects of the importation of good breeding hogs, has long been felt in the improvement generally of our swine. In some kind and degree, and under some local or general name, hogs with an infusion of imported blood which has essentially altered their form and propensity to fatten, are to be found all over the country. The Byfield, the Mackay, the Darlington, the Parkinson, and a multitude of other varieties, all originating from some fortunate cross of the imported and native breeds, have for a number of years nearly or quite in the eastern and middle states, displaced the alligator, shad backs, and saw horse tribe of the original stock. More lately still have been introduced the pigs called the Grass breed, the Irish grazier, and superior to all, as combining the good qualites of all, the beautiful Berkshire. We know that it is a common remark among the stationary, or no-movement farmers, that it is the feed and not the breed that makes the hog; and we know too that a more unfounded and injurious notion scarcely exists. Fifty years since, farmers gave their hogs more good feed in making pork than is now done, yet no one will pretend the average weight at that time, could be compared with that reached by modern porkers. In conversing with a veteran farmer of nearly eighty, a few days since on this very topic, he remarked—"I remember when with three yoke of cattle and a common cart, I carried to market at a single load twenty-seven fatted hogs, and all scarcely weighed as much as half a dozen of our best hogs now weigh." Perhaps as good a breed of hogs for the farmer as can be found, would be one that with small clean bone and light offals, would weigh at eighteen months and well fatted, about four hundred pounds. There is no possible necessity in a hog of this weight, in having one third of the weight bone, as was the case with the coarse, large boned, long legged breeds. There is as much difference in the size of the bones in the improved hogs and the old breeds, as between those of the Arabian and the English dray horse; and while there should always be enough, too great a redundancy of bone is one of the most serious defects in any animal intended for feeding. Select then for fattening, hogs well formed, short snouts, light offals, clean boned, quiet, and if possible of breeds which experience has proved fatten easily, and place the greatest weight where it will be worth the most. The extremes of the hog genus are the Alligator and the Chinese. On the first food and time are thrown away; the last are when pure too small for the farmer who makes pork to sell, but is the most quiet and easily fattened of any breed. Experience has shown that a cross between the Chinese and some variety of fine points, but heavier and larger, makes the best farmer's hogs, and the improved Berkshires are at present deemed the *ne plus ultra* of swinish perfection.

Having selected your pigs, the next thing to be attended to is your hog-house, pen, or place of feeding. Many farmers have their pig pen as long as the road, or as large as their fields, and affect to wonder they do not derive as much profit from making pork as some of their neighbors, who manage things differently. A pig must be kept comfortable, as well as well fed, if the farmer would have the full profit of the materials fed out. Pens, where a farmer feeds several hundred hogs, as many of those of the west do, would perhaps be impracticable, or from the low price of pork and the cost of building materials, unprofitable. There the farmer divides his hundred acres of corn into ten or twenty acre fields. When the corn is ripe, his hogs, numerous in proportion to the acres of corn on which they are to be fed, are turned into one of his fields, and gather the corn for themselves; and this they soon become expert in doing. When the first field is cleaned, the hogs are let into another, and so in succession until the whole is devoured, when, if the fields have not been overstocked, they will be fit to be driven to market. This mode of feeding would, however, be ruinous to a large majority of the farmers in the United States, and a more economical method of fattening must be adopted. A hog house then, with fixtures for preparing their food by steaming or boiling, and attached pens and yards for the use of the swine, are indispensable where much profits in making pork are expected. In arranging the pens, particular reference should be had to the convenience of feeding, and the comfort of the animal. The pen itself should be warm and dry, and the bed free from dirt or manure. Hogs love to have dirt at their pleasure, but no hog wishes to live in it constantly. Experience would seem to show that the more quiet a hog is, and the less he is permitted to exercise his locomotive powers, the faster he will fatten; and hence in many parts of Great Britain, it has become common to give each pig a separate stall, so arranged that he is completely separated from all others, has his part of the trough and his feed entirely to himself, and is not disturbed by the intrusion or voracity of his fellow grunters. These stalls are so narrow that the hog cannot turn in them, and whether he lies or stands, it is always with his head to the trough. The floor is kept clean by slanting backwards, where a sliding board or door, enables a man with a hoe to remove whatever filth or dung may have accumulated in the stall. The following cut will give a front view of a section of these stalls, the board before the troughs removed to show the position of the animals.



[*Pig Stall*—Fig. 91.]

Where a number of hogs feed together at the same trough, there are some among them that usually monopolize an undue proportion of the food and of the trough, (in this attempt at monopoly has the genus *sus* been instructed by the genus *homo?*) and to prevent this, some place erect pins in front of the trough, the upper parts secured in a piece of timber parallel with the trough, which will prevent a good deal of this tyrannical usurpation; while others, to accomplish the same end, put wooden pins across the top of the trough, which will prevent the master or mistress of the stye from inserting their nose at one end, and with a single sweep clearing the whole. It is an excellent plan to have the troughs fitted with a board in such a way, that the hogs can be shut from it while the attendant is replenishing it. This may easily be done, by having one suspended over the trough by hinges, or otherwise, in such a manner that it can at pleasure be swung forward and secured, shutting the porkers from the trough or backwards, to allow their access.

A large part of the expense of feeding and fattening swine may be made up to the feeder, if proper arrangements are made about the pen and yard, to have the full benefit of the manure made by the pigs. The value of hog manure is so well known, that it is unnecessary to say a word in its favor here. For corn, it is so far beyond all others we have tried, that for that crop as well as others it may be considered invaluable. Give them a chance, and each pig that is fattened will make at least two loads of good manure. To do this, their pens and yards must be frequently covered lightly with horse littering, for them to root over and work upon. The yards attached must retain the urine and wash of the pens, and into this, with the straw mentioned, should be put an occasional load of muck, weeds, wash of the roads, or almost any substance hogs will work upon, and which will retain the salts and volatile parts of the manure now generally lost. If the porkers do not seem inclined to root over and incorporate the mass, fling over it a few handfuls of corn or barley, and they will soon mix it to the bottom. Keep the pens clean, and keep the manure distributed over the yards. Follow these directions, and the farmer will find himself in the spring, in possession of a supply of manure, that applied to his corn in the hill, or otherwise, will give, in the increased crop, an ample reward for the extra labor incurred, in addition to the permanent benefit afforded the soil.

In making pork, the food used, and its preparation, is a most essential part of the process; for the most perfect pigs, and the best arranged pens, do not make first rate pork without plenty of good food. No good farmer ever attempts to see with how little food he can keep his animals, summer or winter, or fatten them; his object is to ascertain how good food can be most beneficially employed, and made the most profitable. Different substances are of very different values for fattening animals, although a sufficient supply of nearly any kind of food, will cause them to improve; this value in most kinds is very much increased by cooking, or other preparation. A few words will explain why cooked food is more nutritive, than that which is in a raw state. Raspail and Biot, by an able and curious series of experiments, proved that the nutritive power of any substance lies in the farinaceous globules, and that to be available, these globules must first have their envelop crushed, or otherwise ruptured. This is partially done by grinding, still more by mastication, but never so completely as by boiling, or subjection to an elevated temperature. In that case the matter in the globules expands, bursts the envelop, and of course is wholly appropriated to the purposes of nourishment. Experiments a thousand times repeated, demonstrate the justness of these conclusions, and prove that the man who attempts to fatten animals on uncooked food, overlooks the simplest principles of domestic economy. Roots and fruit are best cooked by steaming. A large proportion of the pork made at the present day, is partially or wholly fed on potatoes or apples. To give these with profit, steaming is indispensable; and the apparatus is as simple and cheap as it is efficient for doing this. A box or vat of the size required, is made of plank closely grooved and secured at the corners, on the bottom of which common sheet iron is thickly nailed, which will give the box the power of retaining water. This box with a tight lid, is placed on bars of iron over a fire flue, and the substances placed in this are quickly and fully cooked. Steamers made in this way are used for scalding hogs, and by some for making maple sugar. Steamers of a more costly and complicated kind, may be found described and figured in the previous pages of the Cultivator, and other journals.

In the United States, Indian corn may be considered the main article for feeding swine, although many other kinds of food are used, as circumstances may require. Corn, however, stands so decidedly at the head of all other substances used for making pork, wherever it can be grown, that the best method of feeding it becomes an object of national importance. It is most generally fed to pigs in the ear, frequently thrown upon the ground or the mud; practices far from economical. It is sometimes soaked in water until softened and swelled, or ground into meal and mixed up with water at the time of feeding. Either of these methods is preferable to feeding the grain to them in the ear; but in none of these ways do the hogs derive the full benefit of the corn given them. It should be ground and made into pudding by the addition of a large quantity of water, and long boiling. Should any one have doubts as to the great saving which would be effected by this preparation of corn, we think his doubts would be removed by an examination of the series of experiments made by Mr. Colman of Mass., and to be found in the Transactions of the Essex Co. Ag. Society for 1835, or the abridgment of them in the American Swine Breeder, by Mr. Ellsworth. The experiments of Mr. Colman have been repeated and varied many times with the same results, and one recorded in the first volume of the Farmer's Cabinet, made in the most satisfactory manner, shows that the saving of feeding hogs on pudding, over that of feeding on shelled corn, is fully equal to one half of the grain used. Some experiments made in feeding animals with meal made by grinding the corn and cob together, and cooking the whole, would seem to show, that the gain in this way was equal to one third of the grain used. This is not improbable, when it is recollected that where food contains large quantities of nutriment, more is usually taken into the stomach than can be appropriated, and is therefore lost. The stomach, to perform its functions completely, requires distention as well as nourishment; and it seems likely that the desired proportion between bulk and nutritive matter, is much more nearly gained by grinding the cob than using the grain without it. It is on the same principle that the oat is found better for the horse than any other grain; namely, because the relation between nutriment and the required bulk for distending the stomach, is better fulfilled in this grain than any other.

But though corn may be considered the best of all grains for making pork, there are others used, which are more or less valuable. In England, where corn is unknown, pork is made by feeding peas and barley ground together; and this is probably of all substances, the one that approaches nearest to corn in feeding swine. Roots are also extensively grown for this purpose; apples are very valuable; but whatever may be the article used to begin with, the feeding must be finished with grain or peas. There may be bulk without this, but solidity and sweetness will be wanting. It will resemble meat made at the distillery; the hams will lack firmness, the lard will be oily, the pork shrinks in cooking, or will not wear well. The best pork therefore, can only be made by the use of corn, peas, or barley; and this should be well understood and practiced upon by the farmer. But in the use of these materials and their preparation, much, if not all of the profit of feeding is depending; and in fattening twenty porkers, some farmers waste food enough to feed at least a quarter more if properly managed. Let the man who wishes to take lessons in feeding pigs, visit a Shaker's establishment; let him see the attention with which their pens are littered; the neatness with which they are kept; the nicety with which the food is prepared and served out to them, and he will not be surprised at the thrift and condition of hogs so cared for, or the profit resulting from the process.

After hogs have reached a certain point of fatness, there is no profit in keeping them longer; for though they consume little food, they gain little in weight, and do not compensate for the care and trouble of feeding. It is true this point is not commonly reached in feeding swine; and more are killed before they have reached the point of greatest profit, (that is before they have become fully larded or their flesh solid,) than after that time. No small part of the goodness of pork depends upon the operation of killing and dressing; and these should receive strict attention. In bleeding a pig, some will so mangle the throat, and so hack and saw the shoulders with the knife, that more meat will be lost from its bloody state than would pay for dressing the animal in the best manner. Then the scalding and removal of the hair is so imperfectly done as to render every part of the rind a nuisance in cooking; whereas this part of dressing a pig should be performed with the greatest care, and finished in the most perfect manner. Two methods of removing the hair are practiced in England. In one, the part of the animal to be scalded is covered with a thick woollen cloth, and this is kept saturated with hot water till the hair and scurf comes off easily and smoothly, and this process is continued by removing the cloth till the whole is finished. In those parts of that country celebrated for their bacon, as Hampshire and Lincolnshire, the animal, instead of being scalded, is singed. He is laid on his side, covered with dry straw, which is burned off, and the operation is repeated until the hair is destroyed. The reason given for this is, that scalding softens the skin, and renders it impossible to make the pork into bacon of the best quality. In this country, scalding is universally practiced, and is generally performed in a tub or kettle, and if effectually performed, is perhaps the best way on the whole, that can be adopted.

After a hog is killed and dressed, the operations of salting and packing are to be performed, and on these much are depending. Hogs should never freeze before cutting up, but should be thoroughly cooled before cutting and salting. If they hang out all night, unless there is danger of freezing, they will cut up better, take the salt well, and make far sweeter pork, than if the operation of cutting and salting is hurried through before there has been time to cool. Heavy, thick hogs, require particular attention to being spread open, or there is great danger of their spoiling in the thickest part near the back bone. We have known fine hogs, so injured in this way, by a little haste in taking them down, and not airing them fully, that they were lost to the grower. Be particular then, that your hogs cool well. Before commencing operations, it is necessary that every thing be in order for packing; that the tubs and barrels are perfectly tight; that the salt be of the best quality and in abundance; and then the pork may be cut according to the purpose of the proprietor, whether intended for bacon, barreling, or domestic use.

None but good salt should be used in packing pork. Rock salt, or Onondaga coarse salt is the best, and where they can be obtained, should always have the perference. The common salt of Onondaga or Kenhawa, or Turks Island, will do very well, but all of these have some impurities, that more or less injuriously affect the meat. Perhaps there is no salt superior to the Onondaga coarse salt, or that made by evaporation, for any purpose where strength and purity are the main considerations. At Cincinnatti, the great pork market of the United States, 50 lbs. of Turks Island salt is allowed to a barrel, or 200 lbs. of pork; and in addition to this, salt added to water to the point of saturation, or strong brine, is used to fill the barrels after heading. Of rock salt, or Onondaga coarse, from half a bushel to three pecks is used for 300 lbs., the barrels to be afterwards filled with saturated brine.

Almost every farmer has his own method of cutting up his hogs, and packing them; while the law prescribes the manner of packing when intended for the market; and multitudes of recipes for pickling pork or hams may be found in the agricultural and other publications of the day. In Europe, the Russian pork bears a high price; and its quality is supposed to be owing to the pickle in which it is preserved. This is called the "Empress of Russia's Brine," and is prepared as follows:—"Boil together over a gentle fire six pounds of common salt, (that in most common use in Russia, is rock salt,) two pounds of powdered loaf sugar, three ounces of salt petre, and three gallons of spring or pure water. Skim it while boiling, and when quite cold, pour it over the meat, every part of which must be covered with the brine. Small pork will be sufficiently cured in four or five days; hams intended for drying, in two weeks, unless they are very large. This pickle may be used again and again, if it be fresh boiled up with a small addition to the ingredients. Before putting the meat into the brine, wash it in water, press out the blood, and wipe it clean."

Pickling tubs should be larger at the bottom than at top, by which means when well packed, the pork will retain its place until the last layer is exhausted. When the pork is cool, it may be cut up, the hams and shoulders reserved for bacon, and the remainder salted. Cover the bottom of the tub or barrel with rock salt, and on it place a layer of meat, and so on till the tub is filled. Use the salt liberally, and fill the barrel with strong brine, boiled and skimmed, and then cooled. The following method of preparing hams and shoulders is a good one; as many who have tried it in substance, can testify.

To ascertain the probable weight of the meat to be prepared, weigh a number of the hams and shoulders. Then pack them with rock salt in a suitable tub or cask, being careful not to lay the flat sides of the large pieces upon each other, and filling the intervals with hocks, jowls, &c. To every 300 lbs. of meat, then take twenty lbs. of rock salt, or Onondaga coarse salt, one lb. of saltpetre, and fourteen lbs. of brown sugar, or half a gallon of good molasses, and as much water (pure spring water is the best) as will cover the meat; put the whole in a clean vessel, boil and scum; then set it aside to cool, and pour it on the meat till the whole is covered some three or four inches. Hams weighing from 12 to 15 lbs. must lie in this pickle about five weeks; from 15 to 25 lbs. six weeks; from 25 to 45 lbs. seven weeks. On taking them out, soak them in cold water two or three hours to remove the surface salt; then wipe and dry them. It is a good plan in cutting up to take off the feet and hocks with a saw instead of an axe, as it leaves a smooth surface, and no fractures for the lodgment of the fly. Some make only six pieces of a trimmed hog for salting; but it is more convenient when intended for domestic use to have the side pork as it is called, cut in smaller pieces.

The goodness of hams and shoulders, and their preservation, depends greatly on their smoking, as well as salting. Owing to some misconstruction of the smoke-house, to the surface of the meat not being properly freed from saline matter, or other causes, it not unfrequently happens that during the process of smoking, the meat is constantly moist, and imbibes a pyroligneous acid taste and smell, destructive of its good qualities. The requisites of a smoke house are, that it should be perfectly dry; not warmed by the fire that makes the smoke; so far from the fire that any vapor thrown off in the smoke may be condensed before reaching the meat; so close as to exclude all flies, mice, &c., and yet capable of ventilation and escape of smoke. The Westphalian hams are the most celebrated in Europe, principally cured at and exported from Hamburg. The smoking of these is performed in extensive chambers in the upper stories of high buildings, some of four or five stories; and the smoke is conveyed to these rooms from fires in the cellar, through tubes on which the vapor is condensed and the heat absorbed, so that the smoke is both dry and cool when it comes in contact with the meat. They are thus kept perfectly dry, and acquire a color and flavor unknown to those smoked in the common method. Hams after being smoked may be kept any length of time, by being packed in dry ashes, powdered charcoal, or by being kept in the smoke house if that is secure against the fly, or a smoke is made under them once a week. When meat is fully smoked and dried, it may be kept hung up in any dry room, by slipping over it a cotton bag, the neck of which is closely tied around the string which supports the meat, and thus excludes the bacon bug, fly, &c. The small part of a ham, shoulder, &c., should always be hung downwards in the process of smoking, or when suspended for preservation.

Agriculture in Canada—Buel's Address.

There is, among many individuals, an impression that Canada is unsuitable for most of the operations of agriculture; that its climate forbids improvement, and that it may as well be abandoned at once to the perpetual reign of frost and famine. This is a most mistaken opinion. A glance at the map will show that so far as climate is concerned, it is as favorably situated as several of the states; an acquaintance with its geological structure would prove that a large portion of Canada,—that part bordering on the Ontario and Erie particularly,—had the same general character in its formations, as the most fertile parts of New-York; and an examination of the actual state of agriculture in many parts would make it apparent, that not only had the best breeds of cattle, sheep, and swine been introduced, but that in spite of all the difficulties with which agriculture has had to contend, in consequence of the unsettled state of affairs in those provinces for the past few years, great advances have been made, and the most approved implements and methods of culture are in successful operation. A return of more peaceful times, has given a new impulse to the friends of good farming, and the formation or re-organization of several agricultural societies, those sure precursors of improvement, has already taken place. As conductors of an agricultural journal, we find another decisive proof of the increasing interest taken in the cultivation of the soil by the intelligent farmers of Canada, in the great increase of our circulation in those provinces within the past year.

We have before us an address delivered before the "District of Johnstown Agricultural Society," by Wm. O. Buel, Esq. and which both in matter and manner is worthy of the important subjects discussed. These relate to agriculture itself; to its condition in the district embraced by the society; and the suggestion of such means of improvement in husbandry as seemed best adapted to the country. We should be pleased to extract liberally, but our limits forbid. As specimens we give one or two detached paragraphs. In treating of the best methods of improvement he says:—"But agriculture too is progressing by the assistance of science in good old England, as also in the United States. The efforts made by the learned, by agricultural associations, by experiment, are working wonders. The spirit has not yet pervaded our own beloved land. The way to begin the work is to get up and encourage a cheap periodical publication, and let every man feel it his duty to extend its circulation. This is a most powerful and effective means of doing good; it is no experiment, it has been tried, and bears the impress of wisdom upon the face of it. Meanwhile the farmer—every farmer—no exceptions—should be supplied with an agricultural paper." After naming the *Albany Cultivator* as a valuable and cheap publication, he adds, "there may soon be a *Canadian Cultivator*." This last is an important suggestion. The farmers of the two Canadas ought to give such a paper an efficient support, and we *know* there is talent enough to make a most able and interesting journal.

There is much truth in the following remarks. Let every farmer read and remember. "It is easy to tell a good farmer by the appearance of his place and it is always a blessing to a neighborhood to have such in its midst. People will learn many things from him, without being, as it were, aware of it; they will learn in spite of themselves; his example and success *will* influence them. Now what I wish to say is, that whenever you hear of a *good farmer*, inquire all about him, about his farm, what stock he keeps, what grain he raises, how far he is from market, of his whole management; ask about his family; in short in your own minds, become thoroughly acquainted with him; and if you find any thing worth remembering, which cannot fail to be the case, remember it; any thing worth following, follow it. You need not *wait* to hear of a man of this kind, but when you meet with another farmer from a distant neighborhood, ask who is the best farmer, and so on. Every neighborhood, your own for instance, has some farmers better than others,—now *why are they better?* make the inquiry; trace the thing to the bottom—it may do you much good."

TOBACCO.

One of the great staple productions of this country, particularly of the southern and western part, is tobacco; and great as is the amount now produced, it is evident that if the market abroad was not so fettered and clogged with vexatious restrictions, and such enormous duties, a far greater quantity might be readily grown. In Europe, it seems to be a favorite object for excessive taxation in nearly every government; and at the great meeting of tobacco planters last May, it was shown from authentic documents, that on an export of 100,000 hogsheads, valued here at seven millions of dollars, a duty was paid by the consumers in the various countries of Europe, of more than thirty millions of dollars. As a matter of interest to many of our readers, we copy or condense from the report of that body, the amount of tobacco exported to the European countries respectively, or the most prominent ones:

Countries.	*Export of Tobacco in Hhds.*	*Tax per lb.*
Russia,	358	
Holland,	3,300	13 cts.
Belgium,	6,000	24 "
Great Britain,	28,772	72¾ "
France,	12,000	
Spain,	5,700	
Portugal,	363	
Italian States,	2,000	
Austria,	4,000	

The remainder of the 100,000 hogsheads is distributed through the German states, Sardinia, Hungary, &c. &c. We have been unable to ascertain the precise duties paid in all cases, but the enormous rates of those ascertained, and the fact that the tobacco import is in most of the countries of Europe farmed out for a stipulated sum, renders it certain that while none are below what is here named, some of the highest much exceed the almost prohibitory imposts of Great Britain. A duty of 800 per cent, such as England imposes on our tobacco, is an anomaly in the history of trade; and which, under all circumstances, may be deemed positively unjust. Wheat they can grow to any extent, and we must expect them to protect their own agriculture. Tobacco they cannot grow; it is an article of almost universal consumption; and their scale of duties is such as to be felt, not only by every consumer of tobacco in the British empire, but on the sources of Green River or the Miami. Free trade is a good thing; but we have some misgivings about the propriety of that trade in which all the freedom is on one side.

The culture of tobacco is every year extending itself in the western states, and promises to become a most important article of export from the rich districts north and south of the Ohio. That tobacco can be grown in Indiana, Ohio, Kentucky, and Tennessee, with a profit greater than that attending the culture of wheat and corn, seems certain; and we doubt not that as the cultivation progresses, and the better methods of curing are adopted, the tobacco of the new states will rival in quality and celebrity that of the old. The plants on new land grow more luxuriantly than on soils cultivated for any considerable time; but experience proves that the quality is not so fine. The best tobacco in any country, is grown on lands in good condition, but not extravagantly rich, or highly manured.

CENSUS OF AGRICULTURE.

The results of this excellent measure undertaken by the United States, are beginning to show themselves in various reports from single towns or counties which are reaching us, and exhibit an amount of product in the agricultural districts, of immense amount and value. The census of 1840 will be an era in the history of American agriculture; and will furnish a more correct view of our country,—our whole country, in this respect than has ever been given. The conception was a happy one, and though it cannot be expected to be perfectly accurate in all its parts, it will be so, as far perhaps, as such an extended investigation, and a first one, can be expected to be. So far as we have been able to learn, the amount of grain, particularly wheat and corn, produced, has exceeded the expectations of all, and demonstrated that in growing the staff of life, the United States are not behind any country on the globe. The value of the bread crops of the north, will, when thus ascertained, serve to correct an error into which some of our political economists appear to have fallen, in comparing the value of the products of different parts of our country. There can be no doubt that the tables which will be provided from these returns, will furnish abundant matter for the consideration of the statesman as well as the agriculturist; and as little that the example now first set of such an enumeration of the products of labor, will be followed at each succeeding census of this great nation.

Work for the Month.

Care of Stock in Winter.

From December until April in our northern climate, and in a greater or less degree in more southern ones, the great business of the farmer consists in the care of his domestic animals. One of the great sources of loss to the farmer is the wretched condition in which his animals are frequently kept: their wool, their milk, and their ability to labor being in a great measure determined by their mode of keeping during the winter. Without shelter, without water, without food, or at best an irregular and partial supply, it must be expected that disease will invade his flocks and herds, and occasion losses that months of hard labor will be required to counterbalance.

At the commencement of winter, the farmer should carefully examine the condition of all his animals; ascertain whether any are unwell, weak, low in flesh, and the cause. Such animals require particular attention. One diseased animal may infect a hundred when brought into close contact with them; a weak poor animal will fare worse with a number than alone, and the chances of getting through the winter are proportionably abridged; and all such must have good care and attention, or there will be a total loss. If there is one truth respecting animals more deserving of remembrance than another, it is that the animal entering the winter months in high condition is already half wintered; that is, the care and food required to bring him out well and hearty in the spring, will not be one half as much as will be required by the one that commences winter, spring poor. A fat, strong animal, will be warm and comfortable, where a poor, weak one can hardly live, and the hearty vigorous one will digest and assimilate food which the weak one would scarcely taste. All weak and sickly animals at any season of the year, and particularly in the winter, should be kept by themselves, and receive the best care, and the best keeping possible.

Shelter for animals is a point too often neglected by farmers. Their sheep or cattle are left to find the warm side of a stack or fence, during our winter storms of snow or rain as they best can; and when the former die off by the dozen in March, or his cows are "on the lift" for a month or two in the spring, the owner affects to wonder at the cause, or why his neighbor who has good sheds is not as unlucky as himself. Domestic animals must have a shelter; it is as necessary for them as it is for man, and one may as well talk of comfort without it as the other. Few things are more trying to the man who has a soul, than to see a flock of sheep crouching in a corner of the fence half buried in snow; a few lean cows, their feet so drawn together by cold and hunger that all might stand in a half bushel; half a dozen swine of the alligator breed, squealing, and their noses imploringly turned to the place where the trough should be; and the same air of discomfort and misery pervading every thing on the premises. Where animals are kept in this way we instinctively expect to find the windows of the house stuffed with cloaks and old hats, and the owner at the fire side of the nearest tavern or grog-shop, and rarely will such expectation be disappointed. It is very true much less attention was paid to the shelter of animals than now, and it is equally true that the difference in the mode of keeping was not greater than that existing in the wool, size, maturity and value of the respective animals.

Water is another essential thing in the winter management of animals, but it is a thing more frequently neglected than almost any other matter connected with their comfort. Cattle are often allowed during the severest storms to go half a mile to drink, and require a good feed and an hour in a warm stable to counteract the effects of the labor of wallowing through the snow. In addition to this, their drink is frequently found in a slough, and the animal is covered to the knees in mud, which is left to freeze, stiffen the legs, and by retarding the circulation cause their freezing. It is no disadvantage to cattle to go a suitable distance to water, but rather a benefit, as promoting circulation in the feet, and thus preventing diseases of the extremities, but the place of resort should be free from mud, and room for the animals to approach without crowding or fighting. Sheep are almost universally the victims of neglect in respect to water; while, although they *can* live without it, water is as essential to their comfort, and used by them as constantly, as it is by cattle. There are few farms on which with a very little expense plenty of water may not be had sufficiently near the barn for all the purposes of stock; and where buildings are to be erected, particular reference should be had to this point.

Animals should be salted in the winter with the greatest attention and regularity. Farmers are too careless about this in summer, and are apt to neglect it altogether in winter, a course which requires reformation at once. It is necessary for their health, gives an appetite, and summer or winter they should always have access to salt. Where a farmer has no sheds or troughs for salting, the best way is to make a strong brine and sprinkle it over the hay, straw, or other fodder they are to receive. Such food will be eaten more cleanly, and there will be no waste of the salt.

Regularity in foddering or feeding all animals, is very necessary. Experience has shown that a given quantity of food will keep an animal in much better condition when fed to them at regular hours, than when given to them without order and at haphazard. In the former case the animal in the intervals of feeding is quiet; he has taken his meals and is expecting nothing more until the stated hour arrives, for all animals soon acquire the habit of computing time quite accurately; in the latter case he is continually restless and uneasy, bleating, bellowing, or squealing, and wasting what nourishment he receives, in expectations and efforts to obtain more. Feed your cattle regularly then, whatever may be the kind of food. This half starving animals, feeding them as it suits your convenience, keeping them without salt or water, and thinking they can get along without shelter, is bad policy, and should be repudiated at once, by every man who would be merciful to his beast, or find in his pocket satisfactory evidence that keeping stock is not a losing business.

Preparation of Fire Wood.

Another thing to be attended to in the winter, is the getting of wood for the year. This work must not be put off till the last of the season, since if this is the case, the farmer has too often the pleasure of drawing his wood a *jag* at a time, and finding when he comes to cut it, (perhaps when he should be haying or reaping,) that it is so filled with gravel, that his axe will require grinding after each operation. The wood-house must be filled in the winter for the next season's use, that green wood, and smoke, and the sour looks of the good woman, and the delay incident to bad wood and worse fires may be avoided. Where a saving of fuel is desirable, and this is decidedly the case with most farmers in this country, it is better to use the saw in preference to the axe as far as is practicable. But where the axe is used, care should be taken to gather up the chips if the wood is cut in the wood lot instead of the yard, as we have found by experience, that a chopper in cutting up three cords of four feet wood will make a full wagon load of chips, which for many purposes are the most valuable part of the wood, and too frequently now wholly lost for the use of fuel.

Where there is no wood-house the fuel should be drawn, split, and closely piled in such a way that a roof of boards may be placed over it to protect the wood from the weather while seasoning, and after it is dried. The difference between protected wood and that exposed, is nearly as great as that between wood made from green trees and from dead ones. The more hard, heavy, and sound fire wood is, the better it will be when dried, and the least decay or exposure to the elements after cutting, is prejudicial. Some have contended that part of green wood is preferable to having it wholly dry. This is a decided mistake; as the experiments of Count Rumford proved, that the difference in the heat given out, was precisely equal to that required to evaporate the same quantity of water as was contained in the green wood.

Improvement of the Mind.

And now, when your animals, and every thing without doors is well and snugly cared for, is the time during the winter evenings, and days when the storm confines you to your homes, to store the mind with useful knowledge, and avail yourself of the means of educating and schooling the man as well as the child, which happily are within the reach of every American citizen. Books, magazines, papers, on all subjects and in profusion, exist; New-York and Massachusetts have placed excellent collections within the reach of every one; and the whole genius of our institutions, the history of our most distinguished men, and the undisputed advantages of knowledge, invite to a perusal. The demand is made upon the farmer as well as others, and none can be more interested in the acquisition than he. The successful prosecution of his business, the duty owed to himself and his country; the necessity of intelligence to the continuance of our institutions; all require and force upon the farmer, the propriety of employing every leisure hour in strengthening and improving the mind.

There are many who seem to suppose that where the man or woman has learned to read and write, or mastered perfectly the rudiments of education, the work is done, and he has nothing more to think of in the way of learning. This is a serious mistake; and it is as fatal to the liberally educated, and as common to them, as to him whose learning has been gained at the district school. When the boy or the man leaves the school or the college, they are not educated, however great may have been their acquirements. The means only have been gained of obtaining an education, and without their continued use and unwearied application, a man may live many years very learned, and die at last little better than a fool. It is this education of the mind, the turning of knowledge to practical uses, which has marked the rise of the greatest men in this or any other country. Read, then, acquire knowledge, use it faithfully, and be an honor to your country. On the use you make of your winters, much is depending, and the work of educating the mind is one that cannot be neglected with impunity.

As every farmer should keep a record of his farming operations, the account of his receipts and expenditures, and the manner in which his course of cropping has been conducted, the close of the year or the winter forms an excellent time for examining it carefully, and correcting any errors in practice that may be discovered. Especially look over your list of purchases (it is to be hoped you did not run in debt for any thing,) and see whether any useless articles were purchased, a course to be strictly guarded against in future. Never buy a thing you do not want, however cheap it may be, for if this is done, you will soon find yourself unable to obtain the articles you need. The Farmer's Book is an essential part of every farming establishment, useful in many respects, and by no means to be overlooked. One half of the failures and mishaps of life, arise from a neglect of the past, and the lessons it teaches. It is the part of the wise to profit by these, to know and shun past errors in a future course; and to do this such a record is indispensable. Years are the monuments that mark our course; their lapse should show the lessons each one must have taught, have not been in vain.

MEETINGS OF AGRICULTURAL SOCIETIES.

In our last number, we gave notices of the meetings of the Ohio State Agricultural Society, the Farmer's Agricultural Society, the Rochester Cattle Show and Fair, the Berkshire Agricultural Society, the Oswego Ag. Society, and we this month continue such notices, feeling as we do that few things will be more interesting to farmers generally, than such records. For ourselves, we regard the new impulse which such associations have received, their rapid increase, and the spirit and success which has this year attended them, as one of the most promising signs of the times, and only regret that our limits prevent us from doing as ample justice to them as would be desirable. The notices we are receiving are so numerous that we are compelled to condense and abbreviate as much as possible the various interesting details with which the reports abound.

Worcester Agricultural Society.

It is estimated that not less than twelve thousand persons assembled on the 14th of Oct. at Worcester, to celebrate the 21st annual meeting of that central institution of the Old Bay State, and never have the proceedings been conducted in a better feeling or spirit, than in the present instance. The editors of a number of the N. England Agricultural Journals were in attendance, and gentlemen of eminence from various parts of the country. It was a neutral ground on which political partizans, if they did not forget their preferences, forbore discussion or contest; and party and sect were lost sight of for a time in the stirring incidents of the day.

The show of animals was very fine; and the following table will show the rapid increase, in the number of animals exhibited, for a few of the past years:

Years,........	1819,	'34,	'35,	'36,	'37,	'38,	'39,	'40,
Animals shown,	133,	269,	259,	276,	311,	342,	415,	540.

We do not recollect an instance in this country where so great a number of animals have been shown at a fair as this; and should it continue to "go ahead," as we trust it will, it will soon in its animal department, rival the most celebrated societies of Europe. The plowing match went off admirably, and the show of domestic manufactured articles, particularly the ladies' department was good. The reports of the different committees at the Worcester Fair, have long been celebrated, and various "lots" of swine have been immortalized, in the reports drawn up by the "elder and younger Lincoln." The dinner was good, the weather fine, the animals capital, and Worcester may well be proud of her fair for 1840.

Onondaga Cattle Show and Fair.

The second meeting of the Onondaga Co. Society was held at Syracuse, on the 7th of Oct. and was attended by a large number of the farmers and others of the county. There was a superior show of cattle, horses, sheep and swine, to the number of between two and three hundred; a number of sales of valuable stock were made on the spot; while the spirit manifested was such as to furnish encouragement to the friends of agricultural improvment to renewed exertions. The improved breeds of animals were well represented; the department of domestic industry was well sustained; the show of vegetables was good, and the kinds numerous; and that part devoted to the ladies' offerings did honor to the fair hands and patriotic hearts that presented them.

The position of Onondaga County is most favorable to the success of such an association, and it should be improved to the utmost. Its central location; its numerous and industrious population; its ample agricultural, mineral, and manufacturing resources, decidedly mark it as a county where an agricultural society should flourish and prosper abundantly. Such we cannot doubt will be the result from the spirited beginning already made.

A number of premiums were awarded for the best cattle, sheep, horses and swine, and a large number of choice animals were exhibited, upon which no premium was claimed. By the kindness of a friend of the society, a number of volumes. of the Cultivator were presented as premiums or gratuities; and we would here remark that we highly approve of the proposition or remarks of Mr. Bement, in his notice of the Berkshire cattle show in our last number, and believe that all societies would find it much to the advantage of all, if, instead of the distribution of small sums in cash, valuable agricultural journals or works were selected for such purpose. The State Ag. Society of Rhode Island, has annually distributed as premiums a large number of such volumes, and the most beneficial results have followed. Where the volumes of a periodical have been chosen, the arrangement respecting prices would of course be satisfactory to all. We hope the managers of our societies will take this matter into consideration in deciding upon their premiums in coming years.

A very able and appropriate address, distinguished by the sound, practical, common sense views of the author, was delivered by the president of the society, John Sanford, Esq. A number of valuable reports were made on the culture of particular crops and farm management generally, some of which we hope to be able to lay before our readers.

Ontario Agricultural Society.

This society has been organized within the present year, and held its first meeting at Canandaigua on the 20th of Oct. From the manner in which the farmers of this rich and flourishing county engaged in the matter, the talent and wealth as well as public spirit of the gentlemen embraced in its board of managers, we were convinced the association would be an honor to old Ontario, and this first report, which by order of the society has been forwarded us, proves we have not been mistaken. Although organized so recently, the attendance of members and others, was larger than had ever attended the meetings of the former society, which existed in that county some twenty years since. The bulls, cows, oxen and calves, were of a superior order, and showed that the attention of the farmers of Ontario, had not been directed to the improvement of their stock in vain. The plowing match limited this year to ox teams, was well contested, and exhibited a fine display of practical skill in the plowmen. The show of corn, wheat, roots, and vegetables generally was good; and a variety of agricultural implements and machines were on the ground.

We notice a few of the premiums awarded:

To Charles B. Meek of Canandaigua, for the two best acres of wheat, 45½ bushels per acre, $10. To Bani Bradley, of East Bloomfield, for the two best acres of Indian corn, 116 bushels per acre, $8. To Bani Bradley, of East Bloomfield, for the two best acres of oats, 77¾ bushels per acre, $6. To Francis I. Paul, of Canandaigua, for the two best acres of peas, 38 bushels per acre, $8. To Charles B. Meek, of Canandaigua, for the best half acre of ruta baga, 880 bushels per acre, $3. To Charles Godfrey, of Seneca, for the ox team that plowed ¼ acre best within an hour, $8. To William Ottley, of Phelps, for the greatest quantity of useful articles manufactured in any family, and by females, from wool, cotton, flax, hemp, tow or silk, $10. To Harlow Monson, of East Bloomfield, for the greatest quantity of reeled silk, raised by any female, $10.

The address was delivered by John Rankine, Esq. and as the production of a practical and scientific farmer, was listened to with great interest, and by a vote of the society, was to be printed for the use of the members.

The officers of the society, and the managers for the ensuing year, appointed at this meeting, give the most ample assurance, that in the progress of its society, Ontario will not be behind any association in the State.

Agricultural Fair of Cortland Co.

The annual Fair of the Cortland Agricultural Association was held at Homer, on the 7th of October, and was very numerously attended by the enterprising farmers and others of that county, as well as by several gentlemen from other sections of the state. The day was fine, the multitude were in good spirits, smiles were on the faces of all, and this annual holiday was pronounced a proud one for Cortland. The show of animals, particularly young ones, surpassed that of any previous year, and afforded the most gratifying evidences of improvement in the important department of cattle husbandry.

The number of cattle amounted to 160 head, horses 12, sheep 80, and swine over 100. The cattle exhibited, were by far the greater portion of them, and nearly all of those below three years old, crosses between the Short Horn and the native cattle. Some beautiful specimens of pure bred Devons, from the stock of John Cowlen, Esq. were shown, and their fine proportion and rich color, so unlike the "miserable, heavy buttocked Yorkshires," which have obtained the name of Devonshires in many parts of our country, attracted much admiration. Some fine animals of a cross between the Short Horn and the Devon, particularly a six year old bull, bred by the Rev. Henry Berry of England. The bulls standing first in each of the three classes, were all of a cross between the Short Horn and the New-Leicesters, and their silky coats, and nice handling properties were much noticed and admired. The native stock of cows and working cattle exhibited, showed "that though the American farmer may find it expedient to resort to foreign *crosses*, he has the proper material to *build upon* already in his possession."

Of the swine exhibited, some were specimens of very good Berkshires, but the show was not as good in this respect, as it is hoped it will be another year. Some native sows of large size with litters of Berkshire pigs, well illustrated the value of such a cross; and two large white boars of the Hampshire breed, were great favorites with the advocates of large hogs.

The different varieties of sheep were well represented, and the specimens of Merino, Saxon, Bakewell. and South Downs, attracted much notice. A flock of thirty ewes offered for exhibition only, presented a fine combination of the points desired by the wool grower, viz superiority in quantity and quality of fleece, with a size of carcass and form indicating a vigorous constitution. They were understood to be a cross between the Merino and Saxon.

The show of vegetable products, such as beets, turneps, and corn, and cheese and butter were unusually good, and proved that few if any counties could excel Cortland in these respects. The society was ably addressed by Samuel Griggs, Esq. well known as an able and practical farmer. Cortland has set a noble example to her sister counties, in her efforts to improve her stock, and she is now beginning to reap a rich reward. Let others go and do likewise.

COTTON.

Every one is aware of the vast importance of this article to our country. It is the basis of the most extensive of our manufactures; it constitutes the grand article of export, and whether viewed in its connexion with our prosperity at home, or our financial relations abroad, assumes an importance second to no other production of our soil, not essential to positive subsistence. It is not to be wondered at, therefore, that every thing relating to it, or remotely connected with its growth, should be narrowly watched, particularly by those states most interested in its production. At present, the United States produces more cotton for the market than all the rest of the world, a circumstance not altogether owing to our more favorable soil or climate; but because we have invented and adopted improvements to which the cotton growers of other countries are strangers; and because our citizens are at liberty to follow those pursuits they deem most conducive to their interests without the dictation or interference of government.

Considerable quantities of cotton have long been grown in India, in Brazil, and lately in Egypt; but not in a sufficient amount to seriously interfere with our prices or product. The population of the Brazils is not sufficient to compete with ours in the cotton markets of Great Britain, France, and Germany; in Egypt the territory capable of growing cotton is not sufficiently extensive to interfere with our sales materially; and the unsettled state of that region forbids that great cultivator, Mehemet Ali, from making the most of the territory he does possess; in India there are no assignable limits to the population that may be employed in the culture, or to the soil suitable for its growth; and it is to this point, therefore, that America may reasonably look for a rival in the cotton trade, should one arise. India, too, is under the oppressive control of the greatest cotton using and manufacturing nation of the world; and one which has every inducement to establish and forward its culture by every means in its power. For hundreds of years, cotton has been produced and manufactured in India, but no attention has been paid to improving the quality, facilitating its production, or preparing it for market or manufacture. The wretched population have been compelled to grow only such things as their taskmasters preferred, and this to a very great extent, has been opium for the China market. Only as much rice has been cultivated as was deemed necessary to avoid famine, and in several instances a failure of that crop has caused the starvation and death of millions. For a few years, however, the attention of British statesmen has been directed to the cultivation of cotton in their India possessions, and agents have been employed to collect such information and arrange such facts, as would best enable them to act efficiently and decidedly.

In carrying out this plan, the improvements made in the United States in ginning, or cleaning and packing cotton, required a full investigation; and the last season an English gentleman by the name of Baylies, has been exploring the cotton states, examining the soils minutely and accurately, ascertaining the peculiarities of climate and temperature, making himself acquainted with the whole process of growing cotton from the preparation of the soil and planting the seed, to the cleaning and packing of the fibre, and collecting and comparing the various seeds and products of the several kinds of cotton grown in this country. In the farther execution of the intentions of his employers, he has engaged the services of ten or twelve intelligent and practical cotton growers, men thoroughly acquainted with every step in the process, who have sailed with him for England, eventually to proceed to Surat, or other points in India, to commence plantations in the American style. A large collection of the best machinery, such as gins, gin stands, and all the implements for cleaning cotton, have also been purchased and forwarded with the same destination. The government has appropriated some sixty thousand dollars for the purpose of pushing forward the undertaking; and there can be little doubt that it is determined to make a vigorous effort to introduce the cotton cultivation on an extended scale in India. That it will succeed, can scarcely be doubted. Both the climate and the soil are favorable to it; this the experience of ages has demonstrated. The average price of labor in that country is only about two dollars per month, or from $24 to $30 a year, while in our cotton states a good slave hand will command from $10 to $15 per month, or $150 per year; this difference will give an advantage the English seem prepared to appreciate. In forming correct conclusions on this point it must be remembered that the cotton business of this country has grown up within comparatively a few years to its present immense magnitude; that the British start in the competition at the point which we have so long toiled in reaching; that the implements we have invented are now the property of the world; and that in a period of twenty years, England can if she will, produce in India, cotton to supply her manufactories, and control the cotton trade of the world.

Under these circumstances, the question becomes a perfectly proper one, and one we have seen not unfrequently asked in southern journals, what effect the carrying out of the British project would have on the cotton growing states? The answer to this has usually been, that it would be destructive to the prosperity of the South. We are inclined to dissent from this opinion altogether. We do not believe the fate of this great nation is depending on any single product of her soil, however important that one may be. It is true, less cotton would be required for exportation and more would be wanted at home. It is not reasonable to suppose that if Great Britain should exclude our cotton, as she certainly would do, could she produce it in her own dominions, that we should allow her to send us those cotton goods we now receive from her, but which we might, were it not for the sake of the exchange, just as well manufacture at home. To precisely the extent therefore that we now receive cotton goods from England, should we increase our consumption of the raw material here; and as the supply of the English market would not effect that of the rest of Europe, the falling off must be comparatively limited.

There is besides another branch of industry most admirably adapted to the south, which might well take the place of the culture of cotton to a considerable extent, and we believe, even at the present time, with decided advantage. That business is the culture of silk, and to supply the already existing demand would require no inconsiderable part of the population and capital now engaged in growing cotton. Neither silk or cotton can be grown in Europe, except to a limited extent, and the demand far exceeds the supply of the former, while the latter has already reached the point where the producer crowds the consumer. Under these circumstances, we cannot apprehend any serious injury to the country, even should the India government succeed to the extent of their wishes in producing cotton. Our resources are too ample; our productions too numerous and diversified; our climate and our country too various and extended; and our inventive and appropriative faculties too well developed to fear the rivalry of any nation whatever.

CIDER.

Apples may unquestionably in most cases be more profitably used than for conversion into cider; but as this liquor will still be drank in considerable quantities, and when used with food, and in moderation, if the history of the pilgrims may be cited as proof, cannot be very injurious to health or morals; it is certainly desirable that it should be made as unexceptionable as possible. There is much vile stuff used as cider, as well as of wines, beer, &c.; and in many instances the injury sustained by the drinker of cider, arises quite as much from the wretched state of the liquid, as from its reputed alcoholic qualities. The farmer or the mechanic does not now spend his long winter evenings in telling stories and drinking cider; more rational means of passing them have been provided; but there are many who take a glass of cider with their dinners, and such should see that they do not mix with their food an article that is not pure and well made.

To make good cider, the apples for each grinding should be all of one kind, that the fermentation may be complete and uniform. Apples should be selected, the juice of which has the greatest specific gravity, as such juice contains the most sugar, and of consequence makes the richest cider. It should be pressed neatly and cleanly, and every step of the process from the gathering of the apples to the final bottling or barreling of the liquor, should be in the same careful and unexceptionable manner. The goodness of cider, and certainly its purity is in a great degree depending on the perfect manner in which it is freed from all the feculent or sedimentary matter. This is usually done at the time of fermentation, at which time, if the barrels are properly attended to and filled, most of the foreign ingredients will run over, and so far cleanse the cider; but this method, which is all that most cider makers attend to, is very imperfect and leaves a mass of impurity that soon renders the liquor sour, turbid, and unfit for drink, or the best kind of vinegar.

To render cider of the best quality, fit for bottling, drinking, or culinary purposes, it should be filtered thoroughly, and thus fully freed from all impurities; it is only in this way that it can be done, and this, properly performed, never fails. For filtration, there is no substance equal to pulverized charcoal. In preparing a vat or vessel for filtering cider, the bottom strata (and this must be placed a short distance from the bottom, to allow the clear liquor to flow or be drawn off,) must consist of fine charcoal; over this a strata of that which is rather courser; and above all, a layer of well washed pure sand. The several divisions should be supported by hair or flannel cloths, and the number of the filters, or their size, may be determined by the quantity it is required to purify. The sand as it becomes filled with sediment and clogged, must be taken out and washed, and new charcoal must take the place of the old, particularly in the fine, or lowest section.

This method has been practiced in some few places we believe in this country, with great success; and a patent on this principle, has lately been taken out in England, and is very highly spoken of, for its effect on the cider submitted to its action. For ourselves, were we in the habit of cider drinking, we should prefer a liquor as fine and as rich as most of the foreign wines, to the sour, acrid, and villainous liquid that commonly passes under the name of cider.

DR. PERRINE AND MR. SMITH.

After our September number went to press, which, the reader will remember, contained some strictures upon the plan and statements of Dr. P. by Mr. Smith, P. M. at Key West, we received the distressing intelligence of the murder of Doctor Perrine, and the breaking up of the beautiful and flourishing settlement of Indian Key by the Indians. A short notice of his death was all we could at that time give, and the following imperfect tribute to his memory and labors, prepared for the next number has been unavoidably deferred until the present time.

Dr. Perrine had for many years been U. S. Consul at Campeachy; was a physician of eminence, and passionately fond of Botany and its kindred studies. In these he had attained great proficiency, and few if any men now living, have that intimate acquaintance with tropical plants, their habits and uses, which he had. It has long been known that some of these plants of the family of the Aloes, produce articles of great importance to trade and commerce, such as Sisal or Manilla hemp, as the strong fibres of the leaves of these plants are called; and Dr. Perrine had formed the plan of establishing in Florida a colony for the purpose of naturalizing these, and all tropical plants suitable to the climate and soil, or of permanent value for their products. In his preparations for this establishment; in collecting the plants which he hoped would form a valuable acquisition to this country; in conducting the extensive correspondence necessary to engage public attention and secure the aid of government in the undertaking, he has been indefatigable; and had not the fatal Florida war, with its massacres and murders, broken out, every thing promised ultimate success. It was a great undertaking, and of its vastness and importance he was well aware, to transport and naturalize on our shores, the agave, the cocoa, the breadfruit, and the various other productions so well known and so valued in a tropical clime.

Before the war broke out he had collected many useful plants, some of which were transplanted in favorable locations on the Peninsula, near the Florida Cape, and under the temporary care of Mr. Dubose, keeper of the light-house at that place, while others were under his own care at Indian Key. It is well known that the settlement at the Cape was one of the earliest places that felt the fury of the savage foe, and no attempts to restore the colony or proceed with the object of the tropical plant company could now be made. Dr. Perrine and his friend Mr. Howe, employed themselves in making such arrangements and suggesting such facts for the consideration of the public, as would best enable them, when peace should be restored, to most effectually accomplish their intentions. They established themselves on Indian Key, one of those coralline reefs that enclose the Florida coast, and which from its distance from the main land, the known cautious habits of the Indians, and the fact that Table Key, another islet about a mile from Indian Key, was a naval depot, was considered perfectly safe from savage assault, a confidence which the melancholy result has proved was most mistaken. The meteorological tables kept at this place by Mr. Howe, which we have had the pleasure of examining, and of which a part were laid before Congress in the able Report of Mr. Linn on the petition and statements of Dr. Perrine, with the accompanying documents, engravings, &c. were far the most complete papers of the kind we have ever seen, and furnished the most ample data on which to found conclusions respecting the temperature of that part of the United States.

Dr. Perrine was so well acquainted with the nature of the obstacles to be encountered, arising from the peculiar formation of the country and the Indian character, that he had little faith from the first in their expulsion by the ordinary rules of warfare. His plan was to offer a reward sufficiently large to induce the Indians themselves to come in voluntarily; and had it been tried in good faith, before the foe had become so convinced of his being able to carry on the war with almost perfect impunity on his part, there is the greatest reason to think the plan would have been successful; and the expenditure of millions of money, and the sacrifice of hundreds if not thousands of valuable lives, been arrested. Even now it may not be too late, and it seems the only method that can be adopted with a reasonable hope of terminating the contest.

The numerous letters and reports of Dr. Perrine, published in the various journals of the country, or in the hands of his friends, contain a vast amount of useful information on the geology, botany, meteorology, and general character of the Florida peninsula, and if his strong expectations, and unbounded attachment to his undertaking, gave their flattering colors to some of his representations, his conscientious regard for truth, and the mass of facts they contain, with the useful suggestions they embody, give assurance they will not be lost to the country.

Those who have read the interesting details of the massacre, and the almost miraculous escape of the few survivors, given in the public prints, and particularly in the account drawn up by Mrs. Perrine herself, since her arrival in this state, will not desire a recital of that tragic occurrence. Indian Key which, under the indefatigable care, and at the great expense of Capt. Houseman, had become from a barren coral rock, one of the most delightful retreats in the Florida seas, a garden of a few acres in the midst of the ocean, is now desolate; and the hospitable, intelligent and friendly few, who constituted its inhabitants, have fallen beneath the tomahawk, or are scattered wherever safety and a home can be obtained. In the death of Dr. Perrine we feel that we have been deprived of a kind and noble-hearted friend; that the country has lost an ardent patriot; national independence and improvement, a zealous friend; science an able advocate; and the cause of agriculture, a steady, intelligent and efficient co-operator. Peace to his memory.

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Since the above was prepared, we have received from Miss H. M. S. Perrine, daughter of Dr. Perrine, a communication, dated Palmyra, Oct. 16th, correcting with no little feeling the alledged misrepresentations of the paper of Mr. Smith; as part of the remarks of Mr. Smith were owing to an inadvertance of ours in attributing the improvement of Indian Key to the Doctor, an error corrected above, Miss P. will pardon our omission of that part of her paper relating to this subject. To Mr. Smith's remarks on the subject of the Mulberry and growth of silk, she replies as follows:—

"The Chinese Mulberry can be seen at Indian Key, in the garden of Charles Howe, Esq. from 10 to 12 feet high, of a healthy, thrifty appearance, from which worms have fed and spun their cocoons in each of the winter months. That there has been one failure in Key West, I shall not dispute, though he (Mr. Smith) says the '*several thousand cuttings,*' were taken from trees raised on Key West; and of course *these trees* were not a failure."

In common with every other individual acquainted with the labors and the object of the Tropical Plant Company, Miss P. sees in the breaking up of Indian Key and the death of her lamented parent, a cause of deep regret, "as withholding from the country for a time at least, the cultivation of plants which were calculated to make the calcareous and shallow soils of southern Florida support a dense population; supply for commerce important articles; and furnish a large surplus, for which many thousands of dollars are now annually sent abroad."

The subjoined extract is the close of Miss P.'s communication:

"To some of your readers it may not be uninteresting to know that the remains of my father, which have been found, will lie beneath the broad leaves of one of the *original Sisal hemp plants* (Agave Sisalana) that he introduced from Merida, as being the most suitable place, until some other monument shall be erected to his memory."

We have watched the progress of the Tropical Plant Company with great interest. We have been fully aware of the importance to the country of the undertaking; and have admired the enthusiasm and self-devotion of Dr. Perrine. We have from the first been convinced that when the time shall come in which the labors of peace can advance in Florida, and the plan projected by Dr. Perrine in the colonization of plants be carred into effect, that the peninsula of Florida, will assume an importance in the estimation of the cultivator of the soil which it does not now possess. And then, long after the notes of regret with which the journals of the country from Maine to Georgia have been filled, the plants he has been the means of introducing, and under one of which he is now sleeping, will be a monument more durable, and more honorable to his memory, than any mausoleum constructed by human hands.

WINTER BUTTER.

Of all the products of the dairy, there is none more extensively used than butter; and there is none, the preparation of which requires more care, or better repays a little extra attention. The difference between good and bad butter is as wide as between the Zenith and the Nadir; and there is nothing more advantageous to the dairywoman, or more to be coveted by her, than a high reputation for the quality of this article. Good butter always indicates good order, great neatness, personal supervision, domestic industry, and skill in housewifery; and when a man carries an inferior article to market, the opinion entertained of his wife is directly the reverse of this.

The first thing to be attended to in making sweet butter, and butter that will keep, is the perfect purity of every thing used in the manufacture. Not only the vessels used, the pails, pans, churns, &c., but the room in which the milk is set, and the air which circulates in it, while the cream is rising, should be clean and free from every offensive odor whatever.

The temperature also of the milk while rising, and of the cream while churning, is of much moment. Cream on the milk will be injured or melted, by too high a temperature, as well as while the churning process is going on; and if the temperature is too low, the cream rises so slowly, that it becomes bitter and the butter of course is unpalatable. A temperature of from 50° to 60°, has been thought the best for the milk room, and from 60° to 65° will make good butter. The churning after it commences, should proceed without intermission until the butter is formed, and separated from the milk as far as it can be in this stage of the process.

The salting of the butter is a matter essential to its good quality. Too frequently, salt of a coarse, inferior description is used; and so much is put in that it remains undissolved, gritting like sand in the teeth, and provoking uncomfortable thirst. The salt for butter should be of the purest kind, made as fine as it can be by grinding, and if a little powdered salt petre is mixed with it, it will be none the worse. Some have recommended 5 lbs. of good salt, 8 ounces of salt petre, and 1 lb. of first rate loaf sugar, thoroughly incorporated and used for salting, at the rate of an ounce and a half to the pound of butter. If the salt is of the right kind, and the butter is correct in other respects, it may be questioned whether the addition of any foreign ingredient is not to be deprecated.

The great point in making good butter, and that which will keep, is the freeing it from *all* buttermilk; and if every thing else is well done, if this point is overlooked, good butter is impossible for any length of time. The mixture of milk in any degree with the butter is sure to produce frowiness or an unpleasant taste to the butter; and the entire freedom from this, constitutes the grand secret of making good butter. There are many who think washing butter with water incompatible with retaining the rich flavor, but if the water is cold and pure, it is scarcely possible any thing should be washed away, the buttermilk which destroys the flavor of all butter excepted. Besides, the best butter in the world and that which in all markets commands the best price, viz. Dutch butter, is invariably made in this way; and where the example has been followed by others, it has rarely failed of success. If any, however, doubt the propriety of washing butter, they may use any method they choose, provided the milk is separated perfectly. Perfectly freed from the substance that causes it to assume the putrid frowy taste of bad butter, it may be kept with almost as much ease as tallow; and solidity in packing, clean sweet vessels, and a low temperature, will ensure its keeping for any reasonable time. Let no one expect good butter, however, so long as coarse, impure salt is used, or a particle of the buttermilk is allowed to remain in it.

Domestic Economy.

Italian mode of preparing Strawberries.

Place as many berries as will form one layer at the bottom of the dish, and sift powdered loaf sugar over them; then place another layer, and sift sugar again. When there are five or six layers prepared, cut a fresh lemon, and squeeze all over them. Before serving, they should be gently moved, that all the berries may have the benefit of the lemon juice and sugar. Good, eaten in any way; when so prepared, this fruit is truly delicious.

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Cooking Beets.

Take beets of middle size, and after removing the tops and dirt, roast them in a fire as potatoes are roasted. When done, they are peeled and served up in the usual manner. One who has tried them cooked in this way, says they are much sweeter and richer than when boiled; as by roasting, none of the saccharine matter is lost. It is a singular fact, that roasted potatoes are one of the most efficient remedies or preventives of the scurvy, a property wholly lost when boiled.

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Oyster Corn Cakes.

Take one quart of green corn, rasped from the ear with a coarse grater, two tea cups full of new milk, one tea cup full of flour, mix them together, and add two eggs well beaten, season the batter with salt and pepper, and bake upon a griddle. The corn should be in a state most suitable for roasting or boiling. This preparation makes a capital dish.

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Preserving Fresh Fruit.

Currants, cherries, and damson plums may be preserved in a fine and fresh state, by gathering the berries or fruits when perfectly dry, leaving the stem on each, placing them lightly in stone jars, or bottles, without bruising or causing the escape of liquor, closing the bottles with cork and rosin, so as to exclude all air and moisture, and then burying them in a trench in a garden, neck downwards. Fruit so preserved, for some uses is preferable to dried fruits.

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Buckwheat Cakes.

To make good cakes, the flour must be good; not that coarse black compound, which sometimes passes under the name of buckwheat flour, but which owes its origin to the slovenly gathering of the grain, and imperfect hulling before grinding. Mix a quart of flour with a pint of lukewarm milk, (some prefer water,) add a tea cup of yeast, and set it in a warm place to rise. A little experience will teach the house wife so to regulate this point of yeast and rising, as to have cakes wet at evening for breakfast, and in the morning for supper; for be it remembered, those who have these light cakes for a few meals, will with difficulty come back to cold bread. When the cakes are light, salt is added, (some put it in at the making,) and should the cakes sour, a little salæratus dissolved in milk and stirred in, will improve them much. A small quantity left in the vessel, a stone pot is best, will serve as yeast for the succeeding mixing. They may be baked or fried; eaten as bread with meat, or with butter and sugar.

The Endicott Pear Tree.—The oldest fruit tree in the United States, is probably the pear tree known by the above name, and growing at Danvers in Massachusetts. Two hundred and ten years since, this tree was brought, with many others, from England by Governor Endicott. All the others have perished, but this is still vigorous, and has this year borne a large crop of fruit. This is valued more as being the production of a tree dating from the days of the *pilgrims,* than from any peculiar excellence, it being, when compared with some of the modern fruits, only of inferior quality.

DICTIONARY OF TERMS USED IN Agriculture and its Kindred Sciences.

DUNG. The excrementitious parts of the food voided by animals, and generally employed as a manure. Its value to the agriculturist is very great; and the best farmers are the most careful to gather and preserve it in a proper state, as one of the most important of their resources for fertilizing the soil.

DURATION OF PLANTS. The several kinds of plants vary very much in their degrees of longevity, some being annual, perfecting their growth within a year, ripening their seeds and perishing. Others are perennial and continue to grow and flourish for years and centuries. Warm or cold climates have much influence on the duration of plants, and in some few instances plants that are annual in cold climates, become perennial when transplanted into warm regions, and vice versa. There are some kinds of trees that are very short lived, as the peach and the plum, others reach a great age, as the pear and the apple. Some kinds of forest trees are remarkable for their duration, and specimens are in existence seemingly coeval with the date of the present order of things on our globe. The oak and chestnut or pine of our forests reach the age of from three hundred to five hundred years. The cypress or white cedar of our swamps has furnished individuals eight or nine hundred years old. Trees are now living in England and Constantinople more than one thousand years old, of the yew, cypress and plane tree varieties; and Adanson found trees of the baobab growing near the Senegal in Africa, which, reckoning from the ascertained age of others of the same species, must have been nearly four thousand years of age. It may be remarked that plants of the same variety attain about the same age in all climates where they are produced.

DWARF. In horticulture, this is the name given to trees so prepared as to have their tops low and occupying but little room. They may be considered as perfect, though almost miniature trees, and when loaded with fruit exhibit a beautiful, though somewhat singular appearance.

EARTHS. The earths that are of the most consequence to the agriculturist as constituting arable soils, are silica, lime, alumina, magnesia, oxide of iron, and some few saline substances, as sulphate and phosphate of lime. The arable soils or earths are produced by the decomposition of the rocks which form the basis of our globe, and their quality is depending on the proportion in which the several ingredients enter into combination. Not one of these earths is of itself adapted to cultivation, and where any one of them is found in excess, sterility is the inevitable result. The best earths, or those best adapted to agriculture, are those that unite the properties most in demand by vegetables, and nearly in the proportions in which they exist in the most valuable plants. There is to be a distinction made between earths and soils, though the difference is frequently overlooked or forgotten. The earths are made by the decomposition of the primitive elements of the globe; this material is converted into soil by the admixture and combination of animal or vegetable matter, and the fertility is usually depending on the proportion in which this is blended with the earths. The earths in some form exist in all plants; and by reducing them to ashes and submitting them to analysis the proportion and kind of earths may be ascertained. Thus Buckhart found that 100 parts of the ashes of the following plants, well leached yielded of the principal earths as follows:

	Silica.	Lime.	Alumina.
Ashes of wheat,	48	37	15
" " oats,	68	26	6
" " barley,	69	16	15
" " rye,	63	21	16
" " potatoes,	4	66	30
" " red clover,	37	33	30

Tillet instituted a great variety of experiments with the earths, in order to ascertain the most fertile mixture, and succeeded best with 46 parts of silica, 37 of lime, and 16 of alumina. The analysis of an excellent soil by Bergmann, gave of silica 56 parts, alumina 14, and lime 30. In soils the greatest proportion may be silica, some fruitful soils going as high as 75 or 78; but when alumina is found to exceed 45, the soil is worthless for agriculture, and only fit for earthen ware or brick. That the earths are held by water in a state of solution, and are thus taken up by plants seems clear, from the fact that plants growing on soils to which salts of lime, such as gypsum or phosphate are applied, are found by analysis to contain more than where they have not been so used. A knowledge of the earths, and the ability to determine the proportions in which they exist in the soil, is of very great service to the farmer.

EARTH WORM. (*Lumbricus terristris.*) This worm, the common angle worm of the fisher, though apparently of little consequence to the agriculturist, is in some places found in such numbers as prove a great nuisance, and seriously affect the character of the soil. It is generally most abundant in moist lands, or in gardens that are heavily manured, and their presence may readily be known by observing the earth after rains, when numerous openings will be found, each accompanied by a small portion of earth apparently forced upwards from the opening and termed worm casts. That these worms absorb, where they exist in great numbers, much of the nutritive matter that should go to the growth of plants cannot well be doubted; though there is no proof that they feed directly on the roots of the plants, as some have supposed. Where they are found in large numbers they will sometimes accumulate in cisterns, wells and other reservoirs of water from which they cannot escape, in such quantities as to render the water most offensive. Quick lime applied to the earth worm is fatal; but the most probable means of destroying it would seem to be deep plowing late in the fall, and the consequent exposure to the frosts of winter. The anatomical structure of the earth worm is curious, a row of holes existing along the back between the several segments, some 120 in number, through which the respiration is performed.

EGG. "Every thing from an egg," was a favorite maxim with the ancients, and so far as living, organized creatures are concerned, may be considered as true; birds, fishes, reptiles, insects and worms bring forth eggs; and the ovaria of the higher classes of animals are to be considered as collections of eggs, from which under favorable circumstances the germ or embryo of the animal is produced. The eggs of birds, particularly the domestic fowl, is an excellent article of food, and for many of the purposes of cookery seems indispensable. The white of the egg, composed of albumen, is used for clarifying liquors, cleansing sugars, varnishing paper, and when mixed with fresh burnt slaked lime, or other powdered articles according to the use required, it makes a strong cement. Eggs may be preserved by keeping them in lime water, by packing them in salt, by covering them with varnish or oil and keeping them in a place of low temperature. Some of the eggs of reptiles are good for food, as those of the turtle; and the eggs or *roe* of fishes, are extensively used for food in those countries where the salmon or sturgeon are found in abundance.

ELDER. *Sambucus* of the botanist, is a plant well known to the farmer, as subjecting him to no little trouble in eradicating it from his fields. There are two kinds, the *S. canadensis*, or black berried elder; and the *S. pubescens*, or red berried elder. The last rarely occasions any inconvenience except in new districts; the first chooses the meadows or the richest intervale, and when once allowed a foothold, spreads slowly but surely, occupying every inch of ground to the total exclusion of other plants. It is also very apt to insinuate itself by fences, the banks of streams, &c., and when established it is eradicated from any place with difficulty. The berries, leaves, and wood of the elder are applied to various useful purposes. The juice of the berries, fermented, makes a wholesome wine; in Germany a strong spirit is distilled from them, and they are extensively used for giving a deeper color to pale wines. Mowing the elder appears to have little effect on the spread of the plant; beating the plant down to the earth, stripping and bruising the stem and leaves as much as possible, and repeating the operation twice or thrice in the season is said to arrest and destroy them effectually. In the early settlement of western New-York, we have seen millions of the wild pigeon feeding on the red berries of the *S. pubescens;* though those of the other kind are said to be fatal to poultry.

ELECAMPANE, (*Inula helenium,*) is a plant now naturalized in this country, to which it was early imported from Europe. It is much used in disorders of the breast and lungs, as it promotes expectoration, and is also a sudorific. Whenever it is cultivated, however, it should be watched and kept within prescribed limits as it is apt to spread, and become a troublesome weed to the farmer.

ELECTRICITY. The name given to one of the most important branches of the natural sciences, the development of the laws of which is of comparatively modern date, and in which discoveries of the most important nature are now continually making. The ancients were aware that certain substances, as amber, when rubbed, received a power of attracting to themselves light substances, but very little interest appears to have ever been felt respecting it even in modern times, till the bold conjecture of Franklin, verified by himself, that lightning was only accumulated electricity, fixed the attention of men of science on the subject; and by successive advances has demonstrated that every particle of matter is penetrated by and under the influence of this invisible, imponderable agent, and that to it we owe most of the numerous changes that are continually taking place in nature. It has been rendered probable that the fluids known as caloric, light, electricity, magnetism, and galvanism, are only different modifications of the same all-pervading agent, and that to its efficiency we owe all chrystallization, growth and organization. The power of producing the electric spark has long been possessed; but within a few years the researches of science have united the before considered distinct agents of electricity and magnetism, and currents of the electro-magnetic fluid are now kept up for any desirable time, and their action directed with the greatest certainty and ease on any given point. By means of this, a continued power is produced capable of moving machinery, as has been demonstrated by Davenport and others; and though as yet but few practical applications of the power have been made, it seems reasonable to suppose that farther advances in the investigation will develop its applicability to most of the uses where steam is now required. The effect of electricity on vegetation has not received the attention it deserves. That plants push forward much faster where the electric currents are active is well know to the farmer; but how far this new agent may be used to hasten vegetation is not generally understood. Some experiments seem to show the power to be very great. Thus by sowing the seeds of cresses in a suitable earth, watered and of the proper temperature, and making the mass part of a voltaic circle, the seeds are germinated and the plant fully developed in a few hours; and very similar effects are produced on other seeds. There can indeed be little doubt that all vegetation owes its existence to currents of this fluid, and if man is able to produce or control them, they may be made of essential service. The effect of electricity in hastening vitality in the embryo of animals is not less striking. The eggs of the common fowl require from twenty to twenty-five days to produce the young, according to the temperature. By exposing them to the electro-magnetic current, the young are hatched in five or six days; and most are aware of the result of Mr. Cross's experiments in which insects were repeatedly produced by the passage of the current through silicate of potash. It may well, therefore, be supposed that our knowledge of this electric agent is yet in its infancy; and that the investigation of science will soon cause this powerful but mysterious actor in the phenomena of the universe, to cause to be regarded as something only existing in the speculations of the philosopher, and that it will be made subservient to these purposes of practical utility of which it is evidently capable.

EMBRYO. The germ, which is the earliest point of vegetable or animal existence, is never developed beyond a certain state, unless it be vivified by the action of a peculiar fluid, which is the product of other organs. Thus there are established two different classes of structures; the office of one being the formation and preservation of the seed, germ, or ovum, and the other the production of the vivifying fluid. The effect of this vivifying fluid upon the hitherto latent germ is called *fecundation*, and the germ when fecundated is called the embryo. The bud, though it may produce a plant or a tree, is of a very different class of embryo existence from those formed by the fecundation of the seed or ovum. The manner of the formation of the embryo, is almost infinitely varied in plants as well as vitally organized beings. In some of the infusorial animals, production takes place by a simple division of the parent, the embryo and the orignal stock being of the same size and undistinguishable from each other. Some plants also possess the same power of casting off embryo from their own substance, of which a curious instance is afforded in the *Lemna* or common duckweed, found on stagnant water. It consists of a small circular leaf floating on stagnant pools, and the gems are developed on the edges of the leaves, from which, when sufficiently grown, it is detached, and floats away to become the founder of new families. In the *Filices* or fern tribes the embryo plants are formed on the under surface of the leaves, apparently by the simple process of evolution, and when detached they fall to the ground and taking root become new plants. By far the greater number of plants have the two sets of organs necessary for the formation of the embryo, contained in the same flower; or at least in flowers belonging to the same individual plant; but there is a limited number in which the fecundation of the germ is effected by organs on another individual plant, and the formation of the embryon depends on the transference of the fecundating dust or pollen from the blossoms of one plant to the other. Attention to, or a knowledge of the different methods in which the fecundation of the germ in plants is affected, gives the producer of them great advantages in improving the species by crossing, or by impregnating the germs of one plant possessing some desirable quality, with the pollen of another kind desirable on some other account, and thus producing an embryo plant uniting the best qualities of both the parents; and the same rule has been most satisfactorily tested by the scientific farmer in the improvement of that part of the animal kingdom committed to his care.

ENDOGENOUS. In some plants the addition made to their growth takes place from the interior of the plant, and in some from the exterior. In the first case the plant is called *endogenous*, and in the last, *exogenous*. All trees belonging to the family of palms, the date, cocoa nut tree, breadfruit tree, the bamboo, sugar cane, and indeed most of the trees belonging to tropical climates, as well as all gramineous and lilaceous plants, are endogenous. On the contrary, most of the trees of temperate or northern regions, such as the oak, pines, and elms, and the various fruit trees, are exogenous. In the first, each successive addition is made from within like drawing out an additional slide to a telescope; in the last the addition is made between the bark and the wood of the previous year's growth, and these successive layers determine the age of the tree, as the joints of the palm do the age of that class. The stems of endogenous plants, after they become consolidated, never increase in size; they can only increase in heighth; while the exogenous ones continue to increase in circumference as well as in height during their whole life.

FARMING ON THE PRAIRIES.—The Christian Intelligencer contains a most interesting description of Madison and its vicinity, in Wisconsin, from which we make this extract. "The prairies have their beauties. With no more difficulty than the management of an old meadow in the east, a farm of almost any extent, can here be opened, and in three years, it has all the appearance of having been cultivated one hundred years. You would be surprised to see the luxuriant fields and gardens of the west, reclaimed from a wilderness of centuries by the labor of two or three years. Already the Cultivator is read, and the most approved modes of agriculture are in use."

THE SCHOOL DISTRICT LIBRARY.

One of the most important acts of the legislature of New-York, in relation to education, was the passage of a law three years since appropriating fifty-five thousand dollars a year for three years, or $165,000 in the whole, for the establishment of school libraries in all the districts of this state. Millions had been before expended in teaching all to read, and then the effort was made to put into the hands of all, books worthy of being read. To provide books of the proper kind was not the work of a day or year. The books must be numerous to supply the demand; they must be written, for those suitable were not in existence; they must be of a high order of excellence, or the intentions of the legislature would be frustrated. In making out a series for the first year, the Messrs. Harpers were greatly aided by selections from their excellent Family Library, and it was, as it deserved to be, well received by the public. It was deficient, however, in works relating to the most important branch of industry in this country, Agriculture—a deficiency supplied in the second series published last year by the same booksellers, by the incorporation of Chaptal's Agricultural Chemistry; Armstrong's work on Agriculture; and two volumes by Judge Buel. The second series was also superior to the first in the better adaptation of the series to the wants of the community, an advantage derived from the time which had been given for its preparation.

Under the patronage of the Superintendent of Common Schools, and aided by the general excellence of the works embraced, the neatness of their getting up, and the convenient manner in which they were offered to the public, as well as their extreme cheapness, these series have had a most extensive circulation, and found a place not only in almost every school district of this state, but also in many of those in the adjoining ones. The Third Series has just been issued by the same enterprising publishers, and from a hasty examination of a set of the work we do not hesitate to state our conviction that in almost every respect, it is far superior to either of the former series. A large proportion of the works embraced in this series have been written expressly for it, and among the names of the writers we notice with pleasure many of the most celebrated in the country; such as Dr. Nott, Professor Renwick, Washington Irving, Gulian C. Verplanck, W. C. Bryant, F. G. Halleck, Prof. Upham, Theodore Dwight, Dr. Hawks, and others whose names are a sufficient guarantee of the value of their contributions. Of the works we notice a valuable History of the United States, a Life of Dewitt Clinton, Keightley's History of England, Memoirs of John Jay, Alexander Hamilton, and Commodore Perry, &c. &c. the whole making a series of reading, attractive as well as instructive. Of the volumes on American Husbandry furnished by the Editors of the Cultivator, we shall not be expected to speak particularly, farther than to say, we hope they will be found useful to the great body of farmers for whom they have been prepared.

The School District Library now embraces about 150 volumes, and forms one of the most valuable collections of books to be found in any country. They are beautifully bound in cloth, and there are few libraries indeed to which they would not prove a valuable addition. The average price of the volumes is but about thirty-eight cents each, and we may mention, that one of the works embraced in the present series, Keightley's History of England, the different editions of which sell from five to ten dollars each, are priced in the School Library at only about one dollar seventy-five cents, and this is by no means an example of cheapness, solitary and alone. The price of the present series is *nineteen* dollars, and the Trustees of School Districts should make their arrangements for ordering and receiving them with as little delay as possible. Perhaps very few instances can be found in the records of literature where a series of works have attained such a popularity as the Harper's School District Library, and more rare still are the instances in which such a popularity is better deserved.

BERKSHIRES IN KENTUCKY.

The way they do up the hog business among our farming friends in the great west, is a "caution." Durhams and Berkshires are the favorite breeds of cattle and swine, and neither money or time are spared in improving and spreading the numbers of these valuable animals. Were not the peculiar circumstances of the Mississippi Valley, its immense resources for the production of pasture and corn, and the propriety of the inhabitants devoting their attention and capital to objects that will best repay transportation, to be taken into consideration, the prices that animals of the best kind command in the west, would be deemed the result of speculation, and such as could not be justified by any process of rational calculation. We, however, are far from thinking such is the case. The farmer who fattens 100 hogs or sells 100 head of cattle annually, can well afford, from the increased profit he will receive, to pay 100 dollars for a boar or 500 dollars for a bull. On this point, any one may satisfy himself in a moment, by making an estimate of the greater quantity of meat a given amount of pasture or corn will produce when fed to the improved animals, over the old breeds. Of this, any one will be convinced who will grow and fatten the common hog and the Berkshires together. On the subject of improving their stock, the western farmers are setting an example which might well be followed by their brethren in the east and south. But our object was not to write an essay on stock, but to show from an advertisement in the "Agriculturist,"—(by the way, this "Agriculturist" is a most valuable journal published at Nashville,) the spirit with which the men of the west enter upon any important enterprise. Wm. P. Curd, Esq. of Fayette Co. Ky., after giving a catalogue of some 20 or 30 hogs, goes on to say:—"In all, I have 14 Berkshire, and 3 Irish Grazier breeding sows, and 4 Berkshire and 2 Irish Grazier boars, at a cost of $3,000. During two years, 31 silver cups have been awarded at different fairs to these hogs. From them I have sold 110 pairs of pigs at $40 the pair. 254 sows, some of which have come 200 miles, have been bred to my boars at $10 each. All these facts indicate the popularity of this stock." Mr. Curd gives one instance of the facility with which the Berkshires take on fat, to which we do not now recollect any parallel. Black Hawk, a full bred Berkshire, at eight months old, was so injured, accidentally, as to be useless as a boar, and was after three months castrated and put in with Mr. C.'s fattening hogs, weighing at that time 122 lbs. "After being fed 64 days, he was taken out again and weighed, and lifted the beam at 410 lbs; showing the astonishing gain of 4½ lbs. per day. He is now fed solely on grass, and weighs 550 lbs. at the age of two years."

Notes for the Month.

Budding the Pear.—That valuable publication, Hovey's *Magazine of Horticulture*, gives the following account of the method pursued by Mr. Howland, of New-Bedford, in budding the pear. "Mr. H. has adopted budding with the terminal eye; and a small part of the branch; the bark of the stock has two incisions made similar to the one made by budding: the scion is pared down on one side, and the whole is then inserted under the bark, and bass matting or yarn applied in the usual manner. By this method considerable time is gained; the operation may be performed in July, and a strong shoot will be made the same season."

Influence of vegetation, in modifying the qualities of Plants.—Prof. Christison of Edinburgh, has instituted a series of experiments, which go to show that the qualities of plants are essentially changed in the progress of their growth; that plants which have roots and leaves acrid, narcotic or poisonous while green, are frequently inoffensive when ripened, and in some cases are good for food. Thus the Ranunculus, or crowfoot of our meadows, is offensive and poisonous to animals while green, but is eaten with avidity when ripened and made into hay.

Inherent heat in living Plants.—The experiments of Dutrochet, which have since been confirmed by DeBeck and others, demonstrate that living plants have a heat peculiarly their own, and which is retained in a greater or less degree while life lasts. That it is owing to an electric or magnetic current, influencing the circulation, appears very probable, from the different manner in which a delicate suspended needle is affected by living or dead plants. It is not improbable that when the nature of these agencies shall be better understood, the means of creating and directing them will constitute the grand object of the farmer.

Southern Rains and Southern Vegetation.—A Georgia correspondent of Hovey's Magazine, in a letter of September, says that "Not less than six feet of water has fallen since the first of April; and only once until last week has there been three consecutive days without rain. At the time of the great freshet, (May 26) not less than 18 inches fell in 28 hours, and twice since about 12 inches have fallen in 24 hours. * * * I have grafts set in March, of cherries, plums, and pears, (some even on quince stocks,) which have made a growth of from five to seven feet, and are still going ahead at a great rate. * * * Among my dahlias, I have one received from Thorburn some years ago, which measures now eleven feet high and without the least sign of a flower bud upon it."

Seedling Potatoes.—Mr. Robinson of Waterville, Maine, in 1834, planted the seeds from a potato ball, and has continued to plant from the product of these seeds. Last year he carefully sorted out, and planted each variety by itself. One of the varieties, a large round kind of a pale orange color proved very productive, and this year he planted one row with his new seedling, and one with the Rohan, to test their comparative yield. At the harvest in September, the Rohan row yielded one bushel and seven-eighths of a bushel, and the seedling row yielded two bushels precisely. Another of the kinds was a capital table potato, but yielded only about half as much as the other.

Veteran Farmers.—At the cattle show and fair at New-Haven, Mr. Reuben Tucker, of Derby, and Mr. Bronson, of Middlebury were present; the first, 97 years of age, the last 81. Mr. Tucker came for the express purpose of plowing a furrow with the long team; and Mr. Bronson walked from Middlebury to N. H. 25 miles, and drove a beautiful pair of fat oxen, which he entered for the premium.

Lightning Rods.—During the last summer, a heavy charge of electric fluid passed down one of the rods attached to the barn of N. I. Sharpless, of Downington, Pa. The barn escaped without injury, except that the mortar was torn from the stone walls to a considerable extent near the foot of the rod; but strange to say, two cows near the wall, but twenty-five feet from the rod were instantly killed. The rod was five-eighths of an inch in diameter, with platina points. The brass solder by which the point was fastened to the rod was melted, and no trace of the point could be found. The base of the rod or the lower part terminated in charcoal; but was it not probable that the depth was not sufficient to ensure moisture in a very dry season, and consequently the fluid on reaching the earth scattered in every direction over the surface.

Great yield of Pumpkins.—Mr. E. H. Derby of Boston, has communicated to the Courier the result of an experiment in raising pumpkins. He planted 70 rods of ground about the middle of May, in hills 9 feet apart and well manured. The whole spot was soon covered with vines, and some of the pumpkins weighed 112 lbs. The whole yield ascertained by weight, was 22,220 lbs. or at the rate of 50,788 lbs. per acre. It is of the kind called Harrison or Tippecanoe; is rich and solid in the flesh, and Mr. D. generously offers to furnish seeds to such as may desire them.

Buckthorn Hedges.—Hedges of this native plant are becoming quite common in the vicinity of Boston and Salem. Large quantities have been set within two or three years, and appear very fine and flourishing. They are purchased at the nurseries, for 50 or 75 cents per 100, and require protection for four or five years while growing. The number of plants required to a rod is 25 or 30, and the expense of the hedge for the same distance, seventy-five cents.

Value of Lime.—From a piece of land, which five years since produced only thirty bushels, Mr. Cadwell, of Valley Township, Pa. has this year raised four hundred bushels of wheat. In this interval of five years, Mr. Cadwell has spread on this land fifteen hundred bushels of lime.

New Wheat.—A new variety of wheat has been introduced into South Carolina, by Col. Spieren, agent for the Osage Indians. It is called the many headed wheat, and promises to be a great acquisition. Mr. Spieren brought 7 heads home with him, and committed the cultivation of them to A. Baker, of Abbeville, S. C. Mr. B. says he "believes every seed came up, and each seed produced a stool of from 20 to 50 stems or straws. Each head of wheat contains from 100 to 150 seeds." Mr. Baker, sowed his the 2d of January, but it is evidently a fall wheat, and should, he thinks, be sown at least two months earlier. He offers to sell the heads at $5 each. That looks rather too much like a hoax. It is probably a variety of the multi-headed wheat already known—possibly the Egyptian.

Cabbage Worms.—A writer in the Southern Cultivator, says he "had a square of very fine cabbages in his garden, upon which the worms had commenced making great ravages. Penny-royal was gathered and scattered over the cabbage heads plentifully, and the work of destruction ceased." The writer did not know whether the discovery was a new one, but it seems to have been a very easy and effectual one, and well worth a trial.

Use of the Mullein.—We have noticed in the foreign Journals that the common mullein, *Verbascum thapsus*, is extensively used in the German states to prevent the depredations of mice in granaries. The plant is gathered, and the leaves and stems placed in considerable quantities in barns and depositories of grain, and is said to effect a speedy expulsion of mice from the premises. Where trouble from this source existed, the measure, though simple in itself, might be worth a trial.

Salt for Poultry.—The Franklin Farmer contains a notice of a farmer's wife in that vicinity who killed her flock of thirty young turkeys, by giving them a pint of meal wet up with a large spoonful of salt. A few years since, a friend of ours killed about 50 chickens by allowing them to eat a quantity of meal in which salt had been liberally put and wet up for his horse. Salt may be safely mixed with food given to geese or goslings, but is fatal to turkeys or chickens.

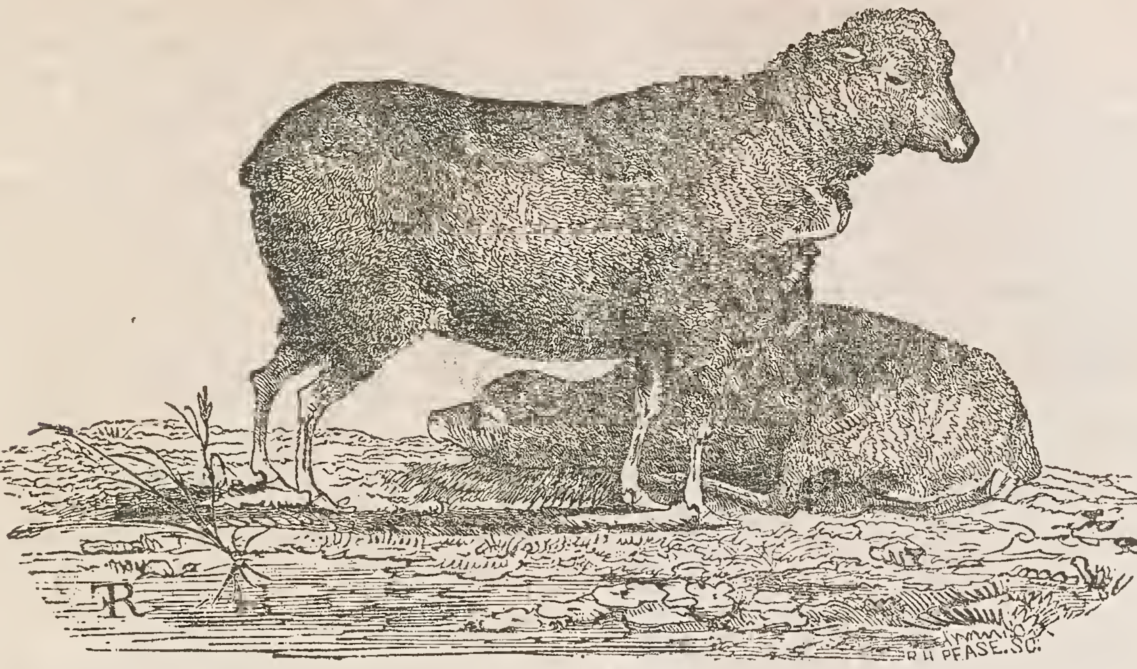
Bees Wax.—This valuable material is most easily separated from the various substances with which it is usually mixed, when taken from the hive, by tying in cloth of loose texture, and then being placed in a kettle of boiling water. On pressing this bag of comb below the surface, the wax rises to the surface, where it should be skimmed off and poured in a vessel of cold water standing by. By repeated pressing or squeezing of the bag under the water, the wax will all be extracted, and saved free from dirt of any kind. When well managed, wax forms no inconsiderable part of the bee-grower's profits.

Sober Truth.—"Establish the principle that what we fairly acquire, is not our own, we shall have as great inducement to be industrious and active as the slave has, and no greater. You may reduce all to a common level, but this will not secure all against want. That community will not be so likely to starve where some have wealth, as that in which none possess it."—*Buckminster.*

Hogs.—"*Long hogs* are every thing with some people; but a long back is as bad a point in a hog as a horse, and a hollow back is the worst of all points. It indicates a bad constitution, and an enormous gormandizer."—*Franklin Farmer.*

A good Pig.—Mr. Bailey Birge of Norfolk, Ct., lately butchered a pig 8 months and 21 days old, which weighed when dressed *four hundred and forty-three pounds*. The pig was a half blood Berkshire, crossed with some native breed. For some time before it was butchered, its weight forbid its rising, nor could it see, unless the fat was pressed away from its eyes.

Communications.



MERINO EWE.—[Fig. 92]

Butternuts, Nov. 12, 1840.

Messrs. Gaylord & Tucker:

Gentlemen—It is with some hesitation that I proceed in my original intention of furnishing you with a series of Portraits from living animals, an intention growing out of the conviction that, if *correctly* done, they would offer a valuable standard for comparison to those of your readers, who think they have not time to look beyond their own yards and cots, and consequently know little of the advances and improvements made in stock elsewhere; but really, you seem so amply supplied with such evidences, that were not the drawing already in your possession, I should let the series drop. As it is, I will address a few remarks to you in reference to it. The subject is a Merino ewe of, I presume, the "Paular" breed; for she possesses in a striking degree, what I understand to be the features of that family. Her form at any rate is genuinely *Merino*, as may be seen in the rise of the shoulders, the uneven line of the back, the drooping quarter, and crooked leg; with all this, however, she had depth of carcass, tolerable width of chest, and a good constitution. Her skin hung in loose heavy folds round her neck and shoulders, and this same amplitude of covering extended, though in a less degree, even to her sides and flanks. She was remarkably thick and close in her wool; carrying a very fine and even fleece that yielded, when *thoroughly* washed and cleansed on the back, *over five pounds,* notwithstanding she had a stout ewe lamb by her side!

When I made the drawing, she was one of a small flock of thirty breeding ewes, whose average clip was $4\frac{1}{4}$ lbs. of clean wool; and such was the standing of this flock for purity of blood, quality of wool, and weight of fleece, that its buck lambs sold readily at $13,50, and its ewe lambs at $7 a head. The sheep were well fed, well sheltered, and well cared for, and consequently rarely failed raising a lamb to each ewe. Thus it will be seen that, allowing the wool to be worth 60 cts. per pound, (and that is a low estimate for the times when I made the portrait,) these few sheep produced an income of at least $12 a head! This may perhaps be considered a *breeder's* rather than a farmer's profits; but the same flock in any hands, with the like care, management, and attention would have produced the like results. Still it must be acknowledged that the Merino, compared with the *improved* breeds of sheep, is an ill formed animal; and I am only surprised that some enterprising and competent Flock Master in America, has not, ere this, set himself seriously to work to obtain a better carcass, and more symmetry in an animal carrying so valuable a fleece. I conceive this might be done to a certain extent, by selection and better nurture, but would be yet more easily effected by an occasional cross with the South Down, which is itself a mountain sheep of moderate size, (and whose wool bears the same relation to the Merino that the Merino does to the Saxon,) and is exceedingly beautiful in form, possessing early maturity, great constitution, and an industry that enables it to obtain a living on the shortest bite. It is true, that some few attempts were partially made in England to improve the Merino, but the animal was so distasteful to them in its appearance, so unprofitable in its carcass, that the English breeder had but little inducement to encounter the task; moreover the demand for mutton and the coarser wools exceeded their production, and the prejudice or interest of the manufacturers discouraged the growth of the finer wools. In this there might be policy, for the manufacturers could draw an abundant supply of fine wool from abroad, but were dependant on the farmer at home for their "combing wools" and mutton.

But with us it is very different; we have only here and there a few sheep of the improved varieties, while the general character of our flocks is Merino—Merino in all its various grades, up and down the scale from "R" to "F" & "T" and how much lower, let the "negro cloths" testify; the most of these sheep are without beauty, without size, and without any of those symmetrical qualities indicative of an "improved breed;" and very many of the higher grades, I am sorry to see, have not a sound foot to stand upon! Under these circumstances, selection seems to me almost hopeless, or at least, involving much greater difficulty than crossing. This latter experiment I have occasionally made with a Down buck on a Merino ewe, and the *first* cross (for I have never gone farther) has almost invariably produced *great beauty of form,* but has perceptibly lowered the grade of the wool, though not reduced the weight of fleece. This I presume is to be retrieved by again using fine wooled bucks, taking it for granted that the quality of wool is as much under the breeder's control as beauty of form; I have also found the character of the Merino's foot entirely changed by a South Down cross; and I believe it would go far towards enabling the owners of fine wooled sheep to escape, if not eradicate, that terrible pest from their flocks, the foot rot.

I believe now it is generally conceded, by the fine wool growers themselves, that they are not sufficiently paid for the cost and labor of producing it. If that be the case, why not exchange that last costly twist of the most attenuated fibre, for which it is said the manufacturer *will not pay*, for an extra weight of wool and *meat* that *will be paid for?* to say nothing of beauty and constitution, early maturity, and docility that might be obtained by a suitable cross. These suggestions, all crude as they are, I hazard for the consideration of the Merino flock master, feeling assured that he will not forget the lesson of caution taught him by his past experience. More *practical* men have, I understand, this subject under consideration; and having myself disposed of some half dozen Down Bucks to growers of fine wool, we shall probably hear from them on the subject.

Yours with respect, R.

SHEEP HUSBANDRY IN TENNESSEE.

Having some time since received from John A. Grimes, Esq. of Kentucky, a specimen of very fine Saxony wool, from sheep procured from M. R. Cockrill, Esq. of Tennessee, we addressed a letter to Mr. C. soliciting information in relation to the origin and history of his flock. The following is his answer:

Messrs. Gaylord & Tucker,—You request a description of my Saxon sheep for the Cultivator. I have been about 26 years breeding fine wooled sheep, and during that time, I have given the greatest possible care in examining and selecting, myself, the bucks I have bred from, and at all times would reject all that had an appearance of coarseness about the horns or thighs, and always making choice of the bucks of the most uniform, fine, soft, cotton-like fleece, and at the same time, the largest fleece and the best formed animals with the greatest share of life and sprightliness. A flock may be brought to be precisely like the buck; therefore the success depends upon skill in selecting the bucks. I never saw any sheep of the first order, until I got some Electoral Saxony sheep imported in 1824. They have less wool about the head and legs, and perhaps the fleeces are a little lighter than the best Merinos. The sheep are without dewlaps, and are a little longer in the leg than the Merinos. My Saxon sheep in this climate are hardy and longer lived than the common sheep of the country, and the bucks of the first quality produce about 5 pounds of wool unwashed. I weighed 4 head on the 25th Sept. last, two ewes 98 and 102 pounds; two ewe lambs, 5 months old, 56 and 62 pounds. They were in good order, but sheep are fattest about the 1st of November in this country. This breed of sheep is calculated to do well in almost all climates. I have had my sheep five years in Mississippi, in latitude $32\frac{1}{2}$° north, and in that level damp country they did well, grew larger, and produced fine soft cotton-like wool, very free from hard white hairs, which is sometimes seen in wool, where the proper care is not taken to reject bucks having that fault. When my flock left Mississippi, they traveled direct to Lexington, (Ky.) about six hundred miles, to latitude 38° 10", and were directly exhibited at the cattle show, against the Hon. H. Clay's very superior Saxon sheep, and the premium was awarded to my sheep. I name this to show that we have, from latitude 30 to 45, to grow wool; hence the U. States is destined to be one of the greatest wool growing countries upon earth. The premium being awarded to my sheep was no doubt the reason that Mr. John A. Grimes, and Mr. William Price of Kentucky, sent an order for a few breeders from my flock, which I think it would be hard to surpass in fineness. Others might do well to breed from this flock, as the cost would be much less than to import and get as good sheep. I have been for many years comparing my wool, with samples of imported wool from Saxony, and believe that I have as pure sheep as any that can be produced, and will at all times compare with any imported or American sheep for any kind of a premium.

I feel anxious to get the flock masters to investigating an important matter as I think. There is a fly that nature has fixed his residence, or place to mature, in the cavities of the sheep's head over the eyes. From the sheep being a brisk lively animal, the fly necessarily has to drop his young alive upon the nose of the sheep, and the little creature runs up the head and there remains until of proper age, and the sheep blows him out or he drops out, and then enters the ground and presently comes up, bursts off his covering and comes out a fly. I have caught them and found from 3 to 500 live worms in them. In this climate, they are after the sheep from the 1st of June, until frost. They some times defeat the object of nature, as they kill the sheep. It is by taking, as I think, the wrong course, and going up to the brain, and often producing dropsy or other derangement of that important organ. More lambs are destroyed by them than any other sheep. It may be because the lamb is not so capable of avoiding the fly, or because its head is not so closed up, to prevent the small worm from going in to the cavity of the brain. I have no doubt thousands of sheep have died from this cause, and shepherds have attributed it to other causes. My only remedy is to bore augur holes in timber, and drop a little salt, and tar the holes with a brush every two or three days during the fly season, as a preventive; a little powdered sulphur on the tar will be of use. You will please, through your valuable paper, ask for all the information on this important subject. This fly seems not to be as smart as the bot fly, for they, it appears know the age of the horse, for a colt or other young nag never has the same number of eggs deposited on his coat that grown horses have, all running together. The death of the lamb, produced by this worm, we may suppose is from the head not being grown up to prevent the entrance of the small worm into the cavity of the brain. MARK R. COCKRILL.

Near Nashville, Oct. 17, 1840.

From a communication of Mr. C., in the last *Agriculturist*, published at Nashville, we extract the following:

"All must readily see with but a moment's reflection that there is more country in a much better cotton latitude, than will be wanted for the culture of that article for a great length of time, and if we expect prosperity, we need not work against the laws of nature, trying to make cotton a profitable business in our climate; but should turn our attention to the various pursuits our climate is better calculated for. Some might do well at growing wool, hemp, silk and provisions. I think mainly at raising sheep, for as much flesh may be produced for what is consumed, as any other animal, and a valuable fleece of wool at the same time, which is more universally used than any other article we can produce, and all the time fertilizing our lands. Wool growing may be carried on profitably upon cheap lands. In Europe where their valuable lands must necessarily pay a high profit, this business is mainly encouraged. But this is far from the case in this country. A small flock of Saxon or fine wooled sheep well taken care of will, in our climate, average about 5lbs. of wool unwashed; a large flock cannot be so well taken care of, and would not average more than 4lbs. The Bakewell sheep, if an equal number of wethers, would average about 7 lbs. The common sheep of the country about $3\frac{1}{2}$ lbs. Saxon wool of the best quality is worth three times the price of the common wool, and Bakewell, about ten per cent more than the common. The form of all the long wooled sheep I have seen from England, proves that Bakewell's blood predominates, and I am not disposed to strip any man of his merits, and therefore call all the improved long wooled sheep from England after Bakewell. About eight head of Saxon sheep will keep upon what a common sized cow consumes, and seven common sheep and about six Bakewells. Three good hands may take care of and maintain 1000 head of sheep, provided the farm is fitted out for that purpose; 8 head of Saxon may be grazed to the acre of first rate grass; 6 Bakewells and 7 common sheep; what is here spoken of as an acre of good grass, is first rate land, well set in grass, without timber or any other impediment. A sheep farm should have division of pastures, so as frequently to change them, or extensively range them upon unenclosed lands. For winter, a cutting of clover, timothy, and two ages of Millet, so as the hay cuttings should be at different times. Sow all the corn lands in peas, and about the 1st of September, sow rye on all the plow lands, or after the 15th of August, if the land should happen to be completely wet. Rye will make a pretty good stand on land well covered with pea vines without plowing, but the millet or other lands will do much better if the rye be plowed in lightly. Every person should at any rate, have rye fields for their weak sheep and bad nurses; any ewe will do justice to her lamb if on a plentiful rye field. In this climate, about three months sheep require what we call wintering. They will do upon plenty of any kind of food the farm will produce cheapest. My flock have done as well at all times, for the past 25 years, as any reasonable man could have expected. I invite all that expect to engage in this business to call and judge for themselves. I believe the loss of domestic animals is generally in proportion to the attention paid to them, and none need expect prosperity in any agricultural pursuit, without it is reasonably managed with a due share of never tiring industry and economy."

Importance of a National Agricultural Society.

Editors Cultivator—More than twelve months have passed away since your very intelligent and patriotic correspondent, Mr. Solon Robinson, proposed the establishment of a great National Agricultural Society. The project received such high commendation from various parts of our country, that any one who was ignorant of our true character as agriculturists, would have supposed that our whole class would hasten with the utmost zeal to adopt measures for its speedy execution. But,—to our shame be it spoken, the whole scheme, fraught as it was with the promise of great good to the nation, as well as to individuals, seems to have evaporated in idle talk. Why has this happened? Can it be, that the owners and cultivators of the soil, in these United States, are so dead to their own best interests—so insensible to their own honor—so regardless of the various means by which they might elevate their own class to that high rank in our community, which they are justly entitled to hold—that they will not even move a finger towards it? Heaven forbid, nor will I believe it so long as a shadow of hope exists, that we may be roused from the torpor which appears to have paralyzed every effort heretofore made to disenthral us from its influence.

To enumerate all the advantages, both to the public and to our own class, which would certainly follow from the establishment of a National Agricultural Society, would require a much longer communication than I intend to make, but I hope you will permit me to state a few of them. One of the first and most important is, that by annually bringing together the distant members of our great agricultural family, who, at present know little more of each other, than if they inhabited different planets, the bonds of that cordial brotherhood, which should forever unite us, would be so strengthened as to defy all those efforts to sever them which of later years have been threatening destruction to our heretofore happy Union. This could never be dissolved could the members thereof be more fully apprized of its vital importance to their own and the national interests; and to do this, there surely can be no way more effectual, than that which would draw them together solely for the purpose of consultation in regard to matters in which they have a deep and mutual concern, wherein no conflicting interests exist to mar the harmony of their deliberations. This view alone of the subject,—if it struck the rest of my brethren as it does myself, would suffice to get up a National Society of Agriculture before six months more shall pass over our heads. But there are other considerations of hardly less weight that may be urged in its favor, which I beg leave to suggest. It would enable our whole class, in the shortest time practicable, to possess themselves of all the latest and most valuable improvements which have been made in the various branches of husbandry throughout our whole country;—improvements, that without such a society, will most probably remain unknown beyond a very limited circle, for many—many years to come. Lastly, it might put an end to the vast waste of money expended in the purchase of the numerous worthless machines and implements which, under the sanction of a patent, have found their way into almost every part of the United States, and against which the present patent law affords no adequate protection. Very few of our class possess sufficient mechanical knowledge to be good judges of such matters. Consequently, when we find that any machine or implement offered for sale, *has been patented*, we are very apt to take it for granted, that it must be very useful, and are thus often led to buy what frequently turns out to be good for nothing. But if we had a National Society of Agriculture, they would, in all probability, deem it a part of their duty to make comparative trials between all things of the kind; and would pass sentence of approval or condemnation on the whole. This, when published, would be such a proof of merit or demerit, in regard to every agricultural machine or implement, that our whole class would place full confidence in it, and would no longer be exposed to the numerous impositions under which very many of us now suffer.

I could add much more on this deeply interesting subject, but am unwilling to occupy that space in your highly useful paper, which many of your other correspondents can fill so much better than I can. Permit me, however, to say, that if there are any of our brethren who can possibly doubt as to the great utility of such a society as I have been recommending, they may instantly have those doubts removed by referring to the highly interesting accounts of the Scotch and English Societies of Agriculture which have already rendered, although but recently established, such eminent services to their respective countries, that their periodicals are filled with eulogiums on these institutions. It is not, therefore, a matter of conjecture how far similar establishments may benefit even the oldest nations. And if *these* can derive from them such inestimable advantages, it is perfectly demonstrable that a country comparatively so young as ours, must thereby be benefitted in a far higher degree. To organize one for the United States, might very easily be done, without trouble or expense. All that need be done, in the first place, would be for the members of congress to devote a single one of the numerous holidays which they are in the habit of taking, to making out a scheme for the purpose, and we ought not to doubt that they would do so, if their constituents generally were to request it. In the earnest hope that they *will do so*, I shall now conclude with an anxious petition to all your correspondents who may favor the project, to take the matter in hand, without delay; but I especially entreat that most active and zealous friend of our cause—Mr. Solon Robinson, once more to sound his trumpet in summoning all the true lovers of American Husbandry, to a cordial co-operation in the promotion of a project, which I verily believe if once achieved, would become more and more popular with the American people, in all time to come. I remain, gentlemen,

Your friend and constant reader,
JAMES M. GARNETT.

Elm Wood, Essex Co., Va. Nov. 9, 1840.

THE CURCULIO AND FRUIT WORMS.

Messrs. Editors—In the September number of the "Cultivator," (page 136,) you say in answer to a correspondent, that "the worm in the *apple* as well as in the plum and cherry, is a species of *curculio.*" Also, that "the worm with the fruit, falls upon the ground, *in which the worm takes up its abode in the chrysalis state, until revivified and changed by the spring, it issues a perfect insect.*"

I am well convinced there is a mistake here, in two particulars: 1st, as to the worm in *apples* being a *curculio;* 2nd, as to the curculio *continuing in the ground till spring.*

In 1831, seeing it stated in all the books that the curculio, in its chrysalis state, remained in the ground during winter, I undertook to verify the fact by actual experiment. The result was communicated to the "New-York Farmer," (vol. iv. p. 178–9.) But as many of your readers have probably not seen that book, you may do a service by publishing an extract from it.

"I put some moist earth into a tumbler, about the first of June, and placed about twenty small peaches, containing worms, upon the earth, and covered the tumbler with a piece of glass. June 30th, the worms had all left the peaches and had all crawled into the earth below. July the 7th, the worms had divested themselves of their skin, without having formed a shell or cocoon, and were nearly changed to bugs. At this time they were white, and showed upon the breast the soft rudiments of the proboscis, legs, and wings. These parts had not attained their full size, and appeared immovable. One insect, however, had completed his metamorphosis and was a perfect bug, of a mahogany color. All have since left the earth of their own accord, having finished their change, and are now [July 19th] creeping about the tumbler and feeding on a plum leaf. On the 10th of July I opened the ground under a peach tree and found the insects in great numbers, from two to four inches beneath the surface, in all stages of their metamorphosis. July 19th, I found *one* in the earth under an apple tree, but could find *none* under peach trees. It appears then that *this insect retreats into the earth about the first of June, where it divests itself of its skin, and changes into a bug before the 19th of July, by which time it leaves the earth.* What becomes of the bug from July to May following, remains to be discovered."

"The curculio is not the only insect that produces the worm in our fruits. I stated above that about twenty peaches were placed in the tumbler. In the earth under them were six small, oval cocoons, thick, strong, and smoothly spun, which contain worms that manifest no approach toward a change. The same cocoons are also found under peach trees. The worms in these envelopes are different from those of the curculio; they are smaller, they are white throughout, while the larvæ of the curculio have orange colored heads. There is reason for the belief that the larvæ of the curculio, all or most of them, leave the various fruits in which they are deposited as early as the beginning of July, and that the worms found in fruits after that time, have a different parent. Some years ago, I preserved a worm from a Vergalieu pear, which produced a *gray miller.* Last November a worm from a Newtown pippin placed itself in a cavity on a board, covered itself with a web, and remained till April, when it produced a *gray miller* like that produced from the pear."

I continued my observations during that summer, and sent another communication to the "New-York Farmer" (vol. iv. p. 248,) from which the following is an extract: "I have said there is reason for the belief that the larvæ of the curculio, all or most of them, leave the various fruits in which they are deposited as early as the beginning of July, and that the worms found in fruits after that time have a different parent. One reason for this belief is, that after that time very little fruit is left in which their eggs can be deposited, and what little is left is, for the most part, untouched by the curculio. Let me present a hasty estimate of cherries, apricots, plums, and peaches, in my orchard; on the first of May last, there were probably 200,000. On the first of July, the number remaining on the trees did not, I am confident, exceed 500. Of that 500 perhaps 20, before the middle of August contained a curculio; the rest continued fair. I think it would puzzle Dr. Tilton to say where that vast multitude of curculios that deposited 199,500 eggs before the first of July, have deposited them since that time, if they 'continue their ravages,' and equally puzzling it must be to devise a reason why any fruit has escaped—why only 20 eggs should be deposited, and 480 peaches left undisturbed, if this vast swarm of insects has continued its operations ever since the first of July. It may be said that they resort to apples and pears. But before the first of July the greater part of the *apples* had also disappeared from the trees; most of those remaining have continued since untouched by the curculio. *The worms found in them are not the larvæ of that insect.* I have not succeeded in finding a curculio in a pear, at any time. The only worms that I have found in pears, [and I have taken pains to collect a considerable number this summer,] are the larvæ [I believe] of the *gray miller* mentioned in my former communication. They resemble the larvæ of the curculio in having orange colored heads, but differ from them by being larger, and having a slight tinge of scarlet or brick color upon portions of the body. Instead of popping into the ground, they crawl under the rough bark of the trees, inclose themselves in a web, and are transformed into a chestnut colored chrysalis. Placed in a tumbler with moist earth, they form a web upon the cover of the tumbler, and there undergo their change. As none have yet left the chrysalis state, I suppose [as was the case with those which I have before preserved] that they do not complete their metamorphosis till spring. All the worms found by me in *apples*, since the first of July, *have been similar to those in the pear.*"

An excellent observer, David Thomas of Cayuga, maintained the prevailing opinion in regard to the worms in our fruits, and with a view to show that I was incorrect, he took "a worm with an orange colored head, from a bell pear and put it in a tumbler, with moist earth," on the fifth of August. On the eighth of August he took from *apples* "three more worms with orange colored heads, and which appear to be the full grown larvæ of the curculio—another similar, but only half as long—and two others resembling the former with brown heads, but 100 [10?] times less in bulk than the first kind. Viewing these last under the microscope, I am satisfied that they also are larvæ of the common curculio, thus far confirming Dr. Tilton's remark that this insect 'continues its ravages from May until autumn.'"—*New-York Farmer, vol.* iv. *p.* 205.

In a subsequent communication, in October, with his accustomed candor, he says, "N. Darling may be interested to learn that the worms which I confined, 'with orange colored heads,' left the moist earth, and encased themselves in a web under the cover of the tumbler. Soon after one of them came forth a *dark gray miller;* and *I conclude there was no curculio amongst them.* We are therefore indebted to him for the interesting discovery that the larvæ of *several* insects feed on our fruits; and it is now rendered at least probable that Dr. Tilton ascribed too much of this mischief to the curculio."—*New-York Farmer, vol.* iv. *p.* 281.

With these facts before us I think we may safely conclude that the *worm in apples is a larvæ of a gray miller*, and *not of the curculio, which is a bug.* Also, that the curculio *leaves the ground in a short time after entering it.* Its *winter retreat* has not, within my knowledge, yet been discovered.

If your correspondent will look under the rough bark of his apple trees in October, he will find a great many of the worms from his fruit, *which have shut themselves in with a web*, and *are transformed into a chestnut colored chrysalis.* If he will carefully preserve them, he will find them coming out a *gray miller.* By simply scratching off, or rather picking off this rough bark [the scales or flakes, I mean] a vast multitude of these insects may be destroyed—not all, however, for they resort to other places of concealment, such as crevices in boards, posts and rails. Yours very respectfully,

N. DARLING.

New-Haven, Conn., September 19, 1840.

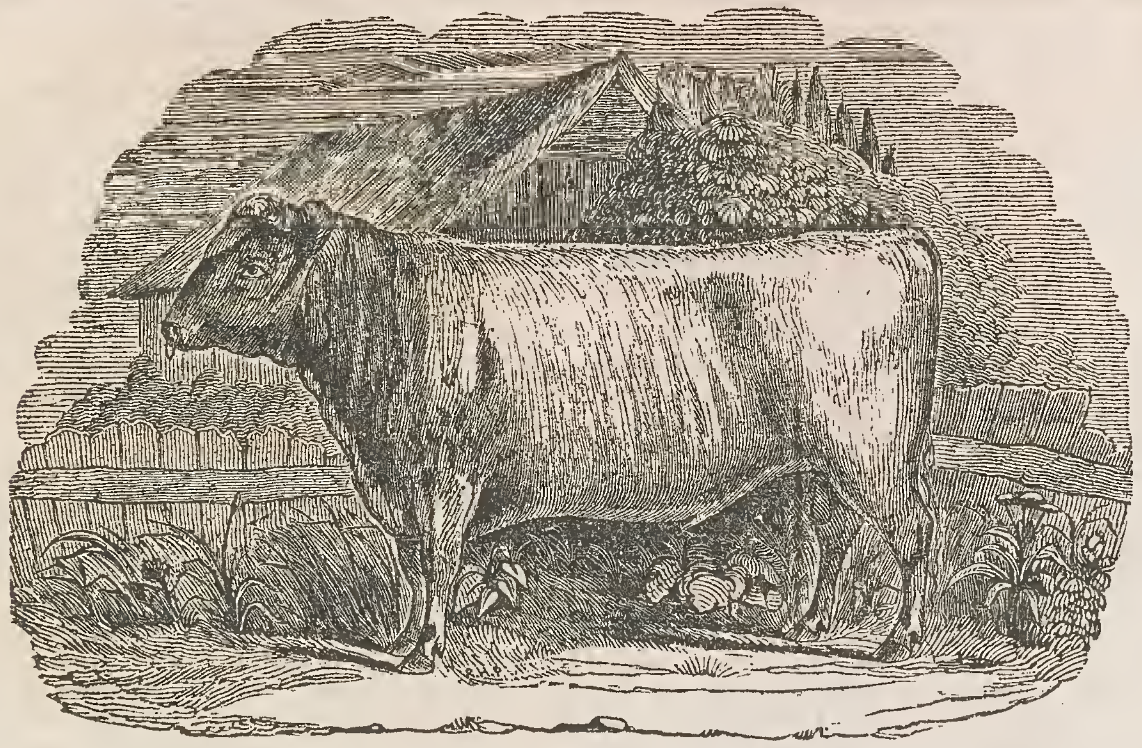
A FAIR CROP.

Messrs. Gaylord & Tucker—I planted a piece of sward ground, without any manure, to corn, potatoes, pumpkins and beans, measuring 104 rods and 207 square feet, on the 20th of May.

To corn, pumpkins and beans, 78 rods and 107 feet, which produced 85 bushels of ears corn, at 2s. per bushel,	$21 25
207 bundles stalks, being topped,	2 07
½ bushel beans, 10s. per bushel,	63
Husks and bottoms left in the field,	2 00
190 pumpkins 8s. per hundred,	1 90
Product of less than half an acre,	$27 85
26 rods and 100 feet to potatoes, 48½ bushels at 20c. per bushel,	9 70
	$37 55
Tending and seed,	10 68
Leaving a profit of	$26 87

It will at once be seen that the above is a very large crop, although at first sight it would seem that $10.68 worth of labor and seed, laid out on so small a piece, was too much, yet it leaves $26.87 profit including interest on land, which certainly pays well for the extra labor. It was plowed in the best manner and deep. In planting, every sod that lay up loose, was put down with the foot, which accounts for two days occupied in planting less than three-fourths of an acre; it was hoed but twice, but well done, and no plaster on seed, or after it came up; once dressed with unleached ashes. C. M. L. A.

Macedon, N. Y. Oct. 3, 1840.



SHORT HORN AND GALLOWAY BULL SIR WILLIAM WALLACE—[Fig. 93.]
The property of Edward Bement, Esq., *near New-Brighton, Staten Island.*

Messrs. Gaylord & Tucker—I was much gratified to find you had commenced giving portraits of superior animals in your valuable paper, in July last, by presenting that of "President," the property of Messrs. Gaylord & Fuller, as being the best way to convey a description, and placing them in a situation to be viewed by persons at a distance; as well as giving to those unaccustomed to the different herds and breeds of cattle, an opportunity of forming some idea of their general and peculiar points and form. It will go far to correct the taste, and form an opinion of what constitutes a *good animal.* By comparing the portrait of *Oneida* or that of *Julia,* with a calf or cow in their own yard, they can see at once how near they approach them, and where they are deficient. And by looking at the portrait of President, and comparing it with a bull they are breeding from, they can form some idea of the good points or defects in their own animal, although I do not consider him a perfect bull.

There is one difficulty, however, not easily overcome, and that is to find competent cattle painters. Now, I am well acquainted with the form and points of the bull President, and have bred to him, and think I can see a general resemblance in the portrait, still it will not bear scrutinizing closely, unless he has altered since I saw him. Possibly the engraver has not been faithful in transferring it to the wood, nor is the execution equal to some others which have appeared in the Cultivator since. "Oneida," "Dallimore," and "Julia" are all well engraved, and reflect great credit on the artists who executed them.

Now, as the demand increases and suitable encouragement given, cattle painters will spring up among us and be found equal to the task. It requires as much, if not more study, than to paint a portrait of the human face. In animals it is not only the face and head, but the whole animal must be a portrait. I find I am wandering from the object of this communication, which was to introduce to the readers of this paper, "Sir William Wallace," who stands at the head of this article, and not to criticise the portraits which have already appeared.

"Sir William" is a beautiful cream color, with a roan head and neck, was five years old last spring—was bred by Mr. Mills, of Long-Island; was got by his imported Short Horn Durham bull "Young Wallace;" dam an imported full-bred Galloway cow.

I saw him in August, and thought he possessed many valuable points, and was so well pleased with him, that I prevailed on his owner to have his portrait taken for the Cultivator, which he has kindly done and sent me. He was in low condition when I saw him, which enabled me to scan him closely, and I must admit I saw much to admire.

The artist Mr. ———, has put him on paper very correctly; particularly his head, neck and fore quarters. He has given him a mild and placid countenance, which he possesses in an eminent degree. He has not, however, given him the breadth of bosom, depth of chest which belongs to him; but take it as a whole it is very clever.

He may be called by some rather heavy about the head and neck, but cannot be called coarse, and for myself, I like that masculine appearance in a bull, for it indicates vigor and stamina.

He measured around the girth 6 feet 9 inches, in length 7 feet 8 inches, 4 feet 2 inches high, and 1 foot 11 inches across the hips, and was estimated to weigh 1,600 lbs.

As I have not seen any account of the Galloway breed of cattle published in the Cultivator, and presuming it may prove interesting to some of your readers, I have transcribed from that valuable work, the "Farmer's Series," on "Cattle," the following description of this breed.

"The Galloway cattle," says Mr. Youatt, "are straight and broad in the back, and nearly level from the head to the rump. They are round in the ribs and the loins. They are broad in the loin without any large projecting hook bones. In roundness of barrel and fullness of ribs they will compare with any breed, and also in the proportion which the loins bear to the hook bones, or protuberance of the ribs. The Rev. Mr. Smith, the author of the Survey of Galloway, says that, "when viewed from above, the whole body appears beautifully rounded like the longitudinal section of a roller. They are long in the quarters and ribs, and deep in the chest, but not broad in the twist. The slightest inspection will show that there is less space between the hook or hip bones and the ribs, than in most other breeds, a consideration of much importance, for the advantage of length of carcass consists in the animal being well ribbed home, or as little space as possible lost in the flank."

"The Galloway," continues Mr. Youatt, "is short in the leg, and moderately fine in the shank bones—the happy medium seems to be preserved in the leg, which secures hardihood and a disposition to fatten. With the same cleanness and shortness of shank, there is no breed so large and muscular above the knee, while there is more room for the deep, broad and capacious chest. He is clean, not fine and slender, but well proportioned in the neck and chops; a thin and delicate head and neck would not correspond with the broad shoulders, deep chest, and close, compact form of the breed. The neck of the Galloway bull is thick almost to a fault. The head is rather heavy; the eyes are not prominent, and the ears are large, rough, and full of long hairs in the inside."

"The Galloway is covered with a loose mellow skin of medium thickness, and which is clothed with long, soft, silky hair. The skin is thinner than that of the Leicester, but not so fine as the hide of the improved Durham breed, but it handles soft and kindly."

"The Galloway cows," continues Mr. Youatt, "are not good milkers, but although the quantity of milk is not great, it is rich in quality, and yields a large proportion of butter. A cow that gives from twelve to sixteen quarts of milk per day, is considered a very superior milker, and that quantity produces more than a pound and an half of butter. The average milk, however, of a Galloway cow cannot be reckoned at more than six or eight quarts of milk per day, during the five summer months, after feeding her calf. During the next five months she does not give more than half that quantity, and for two or three months she is dry."

It occurred to me that this bull "Sir William," would be a valuable animal to introduce into the herd of some breeder, where stock are a little coarse and too high on the legs. But I fear few or none will be found possessing courage or independence enough to try the experiment. This was the cross resorted to by Mr. Colling, which resulted so favorably for him, as will be seen by the following, which is also transcribed from the "Farmer's Series."

"It is a well ascertained fact," says the Rev. Mr. Berry, "that during his career as a breeder, Mr. Colling tried several experiments in crossing, and the breeds to which he resorted on these occasions, being very considerably smaller than the Short Horns, this circumstance tends to corroborate the writer's opinion that he considered it desirable to reduce their size. The cross with the Kyloe led to no results worthy of enumeration; but those with the *polled Galloway* must not be passed over without comment. Before stating the circumstances attending this experiment, it may be proper to observe, that no breed of cattle promised so successful a cross with the Short Horns as the Galloway. They were calculated, by their deep, massive frames and short legs, to bring the Short Horns nearer the ground, and to dispose their weight in a more compact manner; their hardy habits would be essentially useful, and the quality of their flesh and hair were such as to render the experiment still more safe. Add to this, that they could be obtained of a red color; and we are prepared to admit, even without the sanction of a successful experiment, that they were admirably adapted to cross with the Short Horns, standing frequently too high from the ground, not very well ribbed home, and not seldom of loose disjointed frame."

"To this breed Mr. Colling resolved to resort, and though at the time when he did so, the event was regarded with some degree of ridicule by the pure-blood advocates, and comments passed which would have deterred ordinary men from the exercise of their judgment, Mr. Colling persisted."

"He was much favored by circumstances in promoting his object, which was to take one cross, and then breed back to the Short Horn—the only course, by the way, in which crossing can be successfully adopted. To breed from the produce of a cross *directly among themselves,* will lead to the results which have induced many persons, without due consideration, to believe conclusively against crossing; but to take one cross, and then return and adhere to one breed, will in the course of a few generations be found to stamp a variety with sufficient certainty."

"Mr. Colling's Short Horned bull, *Bolingbroke,* was put to a beautiful red-polled Galloway cow, and the produce being a bull calf, was in due time put to *Joanna,* a pure Short Horn; she also produced a bull-calf. This grandson of Bolingbroke, was the sire of the cow *Lady,* by another pure Short Horned dam, and from Lady has sprung the highly valuable family of improved Short Horns, termed in reproach, the *alloys.* How far the alloys was derogatory let *facts* testify."

"It will probably be admitted," continues Mr. Berry, "that the prejudice against this cross was at the highest at the time of Mr. Charles Colling's sale. The blood had then been little if at all introduced to other stocks, and it was manifestly the interest, whatever might be the inclination of the many breeders, who had it not, to assume high ground for the pure blood, and to deprecate the alloy. Under these untoward circumstances for the alloy, what said public opinion, unequivocally certified by the stroke of the auctioneer's hammer? *Lady,* before mentioned, at 14 years old, sold for 206 guineas. *Countess,* her daughter, nine years old, for 400 guineas. *Laura,* another daughter, four years old, for 210 guineas. *Major* and *George,* two of her sons, the former three years, the latter a calf, for 200 and 130 guineas; besides a number of others, more remotely descended from Lady, which all sold at high prices, in fact, in a sale of forty-eight lots, realizing £7,115 17*s.* Lady and her descendants sold for a larger sum than any other family obtained." CALEB N. BEMENT.

Three Hills Farm, Nov. 1840.

TO MAKE HOME PLEASANT.

The way to make a man's home more pleasant than any other place, is that he should endeavor to please his wife, and accommodate her with every convenience, that she may have his meals, &c. prepared with the least possible attention and labor. There should be good water near at hand, an article wanted every few minutes; a house well planned, and every thing so arranged as to facilitate her operations; hence the necessity of her having every convenience to direct her servants in the performance of this three times a day business, of all others the least animating, as it is never done; she will, as she ought, enjoy her husband's smiles of approbation for her attention and good management, and also partake with him of the good things prepared by her care; yet this is often her principal remuneration for a sameness, is in her employment which continues through life.

But the husband has many things to stimulate him to exertion. Sometimes popularity, or a prospect of gain. If a farmer, his growing crops; the increasing thriftiness of his stock; and more than all, the amount of annual receipts arising from a well conducted farm all combine to encourage him and lighten his labors; his wife having her household affairs well arranged is thereby enabled to assist in the despatch of his business, by having her part regularly performed, establishing a union of interest, and consequently affection, which never fail to make home desirable.

But as money alone will not make home pleasant without a proper expenditure of it, and as we all have appetites and senses to please, the necessity of planting around our dwellings a variety of best fruits is obvious to every one, such as will furnish the kitchen and table with a succession all the year; also a portion of the grounds should be suitably planted with ornamental trees, a part evergreen, and a part with deciduous shade trees; the former by their dense green leaves protect from the north-western blast, and their lively appearance beguile the gloomy aspect of winter, whilst the broad leaves of the latter planted along the avenues afford a shade from the scorching sun.

The yards and garden may be adorned with flowers to bloom in succession all the season, but to attain both profit and pleasure from fruits and flowers, they should be planted in a soil somewhat rich, and receive regularly during the summer season sufficient cultivation to keep the ground mellow and free from weeds—these together with good farm crops will render a man independent; he visits his neighbors more from duty or necessity than pleasure; he enjoys more at home. A family thus situated has great cause to be thankful to a kind providence for blessings bestowed, and they should be very cautious about selling a home thus improved, if middle aged or in the down-hill of life; as many thereby unsettle and unfix themselves at a time when rest and repose are desirable and disqualify themselves from answering the great end of their creation.

ROB'T SINCLAIR, Sen'r.

Clairmont Nurseries, near Baltimore, Md., Sep., 1840

LETTERS FROM THE WEST—No. 3.

Columbus, Ohio, Oct. 1840.

I took the canal route to this place, the first part of which I found dull enough, for though the country is said to be picturesque and tolerably well settled, and cultivated all the way, yet after leaving the fertile bottoms of the Cuyahoga, the water line is bounded almost entirely to Akron, by a thick belt of forest and undergrowth, alternated by high embankments, which greatly circumscribe the view to the traveler, and I was not sorry, therefore, that this section was to be passed mostly in the night. We arrived at Akron, 38 miles from Cleveland, early the following morning, and found it situated on the summit level of the canal, 395 feet above Lake Erie. Here the little Cuyahoga gives a considerable and never failing water power,—inexhaustible mines of iron ore, and the best of bituminous coal are found in the vicinity. Akron has consequently risen within a few short years, from a paltry place of a dozen or so log huts, to quite a manufacturing town of about 2,000 inhabitants, abounds in mills and furnaces, that I suspect are but a small earnest of what they will be hereafter.

There are sixteen consecutive locks to be overcome here, and being single, and something of a crowd of boats to pass up and down at the time, I made the best use of the delay I could, by taking a stroll through the town. We had a pelting shower during the whole time, but rain never deters me from any enterprise, so spreading a rude umbrella over my head, and rolling my pantaloons up to the top of my boots, I gave a wide leap from the deck of the boat and trudged away. There are some fine buildings here, and a pretty view of the adjacent country from the hill back of the churches, and so well as I could judge, the soil seemed to be of a loamy gravel, and sufficiently fertile for all ordinary farming purposes. I should suppose it an excellent district around here for sheep, but unfortunately I found no one who could give me any positive knowledge as to whether they were bred to much extent or not in this vicinity, or indeed of improved stock in general. But the want of information on these points, was probably pretty amply compensated by what I obtained from a sort of Natty Bumpoo dried up coon skin looking old fellow on another, viz: "that beaver here abouts in the ponds, that foolish canal and milling folks *was* drying off as fast as the rain would let 'em, was kind o' plenty when he first knowed the woods, hang their skins for scaring 'em off, and a feller like him out of an honest livin', and if he warnt so old," he added, "he'd soon be off to the Rocky Mountains, where he thought a body would'nt be troubled by this sort o' game for one etarnal while." I presume he was one of those whose steps had rapidly been followed up, by the march of western civilization for the last half century, and he had now found himself, in his old age, entirely overcome and surrounded by it to his great sorrow, and as for sheep thinks I, versus beaver, I 've worn their fur in the shape of a hat now this many a year, but I always found the latter so much lighter and more agreeable than the former, that upon recollection, I could not but sympathise in the querulousness of the old trapper, so giving him a hearty shake of the hand, and telling him since beaver had fled, I hoped he had found plenty of other more profitable occupation, each turned upon his heel and went on his own way.

After passing Akron, some little distance, we began to look down, and now found ourselves in a more open and thicker settled country than we had before passed through. We were not long in approaching Massillon, a fine flourishing town of about 3,000 inhabitants. This place again has almost entirely grown up, since the Ohio canal was cut through, some ten years or more since. It is situated in what I was informed, is the best wheat district of the state, and abounding in water power, its mills have become celebrated at the east. Of the interesting German colony at Zoar, I hope to speak at length hereafter, so coasting along down the beautiful waters of the Tuscarawas, with now and then a pleasant village interchanged with an open forest, and a delightful farming country, crowned with numerous stacks of grain and hay, and glittering in tall corn fields, we crossed over from Jefferson to Newark. This is not quite so showy and large a town as Massillon, but is much older and abounds in wealth, and from the fertile country that surrounds it, must ever continue to flourish and be one of the most important inland towns of Ohio.

It is not till we arrive at Lockbourne, that we fairly burst upon the wide rich bottoms of the Sciota, celebrated the country over for being the finest corn district, taking its whole length and breadth, to be found upon the face of the globe, and I must confess, as much as I had been prepared by reading and conversation to see "a pretty tall sight," as an urbane fellow traveller expressed it, "in these ere diggins," I was absolutely amazed when rising a small eminence, I got a commanding look around me. It was not exactly a *sea*, but it was a pretty fair *lake* of corn spread out before me, and I can compare it to nothing else that I ever saw, but the extensive plains of wheat, that stud the middle counties in harvest time of western New-York. But the corn here is much the more extensive of the two, and I think myself within bounds when I assert, that in occasional bends of the river, the views would extend from four to seven miles, and perhaps more in length, and one to three in breadth, of almost uninterrupted fields as thick as grass, and in stalks far above the reach of the arm of the tallest mountaineer. There thought I, is feed for the public, and a glorious vision for any one that happens to be in the fear of starvation. Why a whole nation might come here to take a nibble, and then I suspect that there would be enough left to make considerable of a husking and as to pumkins, they were as thick in the fields as stars in the skies, and to get at the number of loads of which would require all the deep cyphering of the celebrated Jack Downing. I have thought it quite a pity, that the gallant Major when out here, was so engaged by political matters, that he could not have just made the attempt at calculation—no doubt that the simple effort would have got up a batch of pies, big enough to have treated all his worthy relations down east, through an arduous thanksgiving, to say nothing of half a wintering to boot. But I am quite at the bottom of my sheet, and the Valley of the Sciota, its products and stocks, are deserving of a chapter to themselves, which I shall endeavor to give your readers in my next.

Of stock between this and Cleveland, I am told there is some very good, but much more sparsely located than the wants of the country and the interests of its cultivators demand. Let us hope that it may spread widely from this Valley, and other favored parts of the state, for the crops throughout are so abundant of grain, grass and roots, that the producers are puzzled to know what to do with them, than to feed to cattle and swine. Corn commands now only 12½ to 15 cts. and wheat 45 to 50 cts. per bushel. Hay in the country 2 and $3 per ton, and grass knee high, that will be a good bite in this mild climate all winter, for merely the asking!

A. B. A.

TO WESTERN EMIGRANTS—No. 2.

Messrs. Editors—Since reading my first article of advice to emigrants, I have concluded to risk throwing away a little more advice, and shall endeavor to point out "who would be likely to benefit themselves by emigration."

Young hearty men, married or single, mechanics, or laborers in agricultural employments, who with an untiring industry are unable to "get ahead in the world," if they emigrate to the west, and pursue the same industrious course, will find their situation improved by the change. But let no one come here with the expectation of finding wages higher, provisions low, land so cheap that he can get an 80 acre *farm* for $100, and consequently that he will be able to acquire an independence with little or no exertion on his own part. True, land is cheap—it is hardly possible to imagine a soil more rich, but land bought of the United States at $1,25 an acre, is not a cultivated farm.

And although it is easy to bring dry prairie land into cultivation, it requires a persevering industry on the part of the settler, sometimes accompanied with great privations and hardships for himself and family; and in this case, "a bad beginning" does not "make a good ending."

Thousands, who were "well to do in the world," in the eastern States, and who on an old improved farm would have continued "well to do,'' have had their minds highly excited by overwrought pictures of "a paradise of a place'' in the west, and without stopping to inquire whether they were fit for pioneers, have rushed upon the shipwreck of their hopes, health and happiness of themselves and families.

Upon the other hand, thousands are toiling from year to year as tenants or owners of some barren little spot, who might with similar industry in this country, become large and wealthy farmers. For what their own little farm or other spare property would sell for where they are, they might procure a farm for themselves and each child around them. A farm, did I say? No, not a farm, only the raw material out of which to manufacture one, by long and constant toil. But then that toil is cheered and supported by the constant exciting pleasure that an industrious man always feels while "making improvements," while creating new things. But I have known many emigrants to this country, who were totally incapable of making the necessary improvements to render themselves comfortable, and after a few months of vexation and trouble, after exhausting almost every thing they possessed, have returned to the place from whence they came, to curse the country and discourage others from emigrating, who under the same circumstances, would have laid the foundation of a fortune for themselves and children. Had some of these disappointed seekers after the paradise of their distorted vision, first inquired whether they were at all fitted to perform the pioneer duty of a new settlement, they might have saved themselves much money and vexation. Let the emigrating disposed person, then seriously inquire whether he is going to benefit himself or not; above all things, let the wife and daughters know what they have to go through in a new country. I have known some that have come to the west with high wrought fancies of romantic felicities, who have removed to weep with bitter disappointment; such do not make happy, contented, good citizens. But had they "known the worst at first," they would have met it with fortitude; and enjoyed life in a log cabin, better, perhaps, than they had formerly done in a large mansion house.

Let those who are unwilling or unable to bear hardship, or who are unwilling to humble themselves to a residence in a log cabin, remain where they are a little longer. The west is no place for pride or laziness; we want industrious farmers and mechanics; we don't care how poor a man is, if he is industrious, he cannot remain poor. We are also glad to see the wealthy come too, particularly when he brings along a lot of choice stock, as many of late do.

There is one more class of inhabitants that we need; that is, able and efficient teachers of common schools. It is one of the difficulties that all new countries labor under, the want of good schools. Dollars and cents are of so much more importance to many men, than the education of their children, that they are unwilling to incur any extra expense; and in many cases, the difficulty of obtaining a teacher without taking any trouble, keeps a neighborhood destitute of a school for a whole season.

But enough at present; in my next, I have some idea of drawing a picture of "making a new settlement in the west," for the amusement of emigrants, or those that intend to be such. Your old friend,

SOLON ROBINSON.

Lake Court House, Ia., Oct. 20, 1840.

USE OF BARILLA IN VIRGINIA.

Editors of the Cultivator—Having seen in the October No. of your valuable paper, an inquiry respecting the best mode of applying barilla, or leached ashes, to the soil, and having made several trials of it, I deem it my duty to give the results of my experiments in its use. I must premise by saying that until I commenced the use of it, those who had it to dispose of, were in the constant habit of selling it to the captains of the northern vessels, *as ballast*, on their homeward voyages, at about *seven cents* per bushel. My first trial of it, was on a small lot of ruta baga; a part of the lot was highly manured by my cows during the preceding winter, and the balance with barilla, at the rate of about 100 bushels per acre; the portion having the barilla was decidedly the best. The next spring, I tried it on my corn, by putting it in the hill before planting, and chopping it well in, at the rate of about 50 bushels per acre; but I found it too hot to be applied in this manner, although the corn was improved by it. I can now plainly perceive the benefit arising from its use, by the improvement to the succeeding crops. My third, and in my opinion, most successful mode of using it, was by scattering it on a heavy coat of weeds in the fall, and plowing it under immediately, the land being intended for corn the ensuing year. By the side of this piece was another highly manured with compost from my farm yard. I think the corn was better on that part having the leached ashes; and the succeeding crop of oats and clover was greatly superior. I have used it this fall on my ruta baga at the rate of 100 bushels per acre. My crop is only a moderate one, having been sown late, and the fall being too dry for it.

The dawn of a better day for agriculture is appearing to the view; and our southern farmers, profiting by the examples of their northern brethren, are beginning to turn their attention to the improvement of the soil, the first grand desideratum of which, is the increase of manures. It is not, as formerly, the object with Virginia farmers to see who can first procure a crop of broom straw and pine from their land, but who can improve his land fastest. Several years ago, I remember to have heard gentlemen, who called themselves *farmers*, say that they had no time to devote to *making* manure; and that they hardly had *spare time* to haul out what was made in the ordinary way. This reminds me of an anecdote told of a gentleman formerly a resident of King & Queen county, who said he never made but one *good* crop of wheat, and it nearly ruined him to get it to market. Yours truly, RICHARD HILL, Jr.

MINER'S PATENT PUMP.

Messrs. Gaylord & Tucker—For several years past I have been in want of a new pump for my well, which is 18 feet deep. Wherever I have been, I have carefully examined all the pumps I could see in use, and read all the advertisements and recommendations, but could light upon none that suited me, till I saw Mr. Bement's description and notice of Miner's patent pump in the first No. of the current volume of the Cultivator. As soon as I could, I procured one, and have had it in use several months. It more than answers my most sanguine hopes. A child four years old can draw water with it with ease; and it discharges water fast enough for any ordinary purpose. I sincerely wish others to be as well accommodated as I am.

SAUSAGE MAKING.

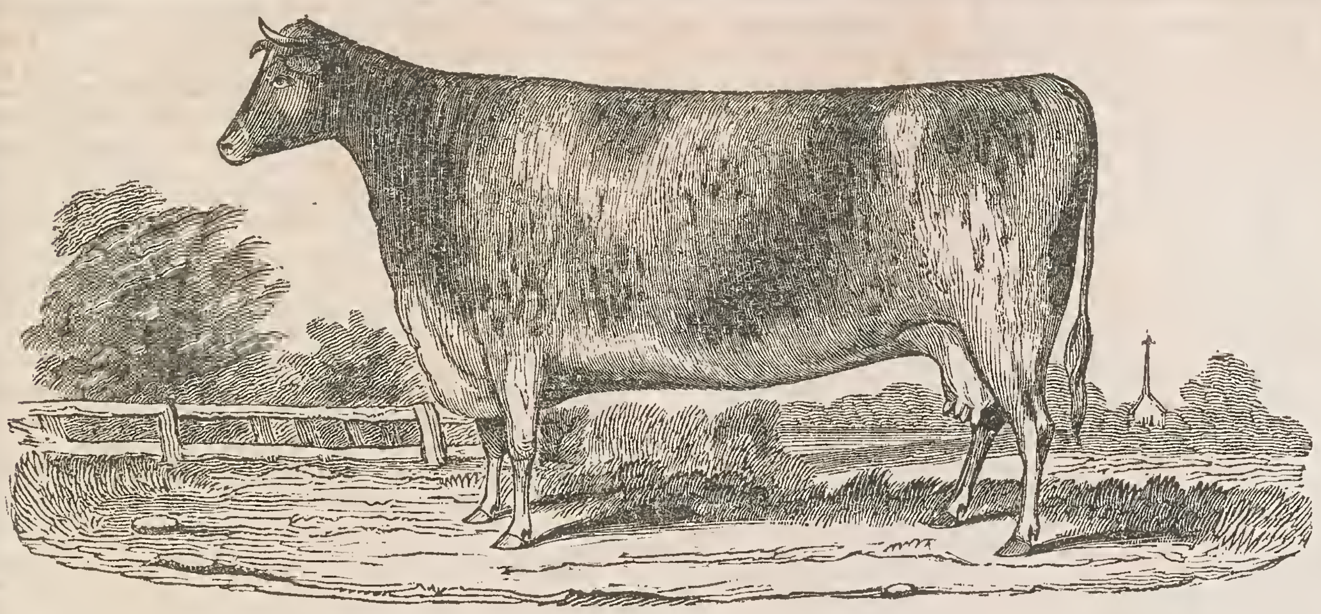
Should you think our mode of making sausages worth a place in your chapter on domestic economy, you can place it there.

We prepare our sausage meat in the usual way. Then instead of putting the meat in skins, prepared from hogs' entrails, we make bags of white clean cotton or linen cloth, as large, say as a man's arm, larger or smaller as may suit, and of convenient length, say about a foot long, and put the sausage meat in these bags, and hang them up to dry. In this way, we save much labor in preparing the skins, and considerable in cooking; we slip off the bag from so much as is needed, and cut the sausage into slices of sufficient thickness for coooking. I much prefer sausages put in bags to those put in skins, as they keep more moist. Others, for the same reason dislike them. Respectfully yours,

CALVIN BUTLER.

P. S. Ripe elder berries make good pies. Try them, ladies. C. B.

Plymouth, (Conn.) Sept. 17, 1840.



MR. PRENTICE'S SHORT HORN COW APPOLONIA—[Fig. 94.]

Messrs. Gaylord & Tucker—In the accompanying cut, I think you will recognize my cow "Appolonia," which you have frequently seen at Mount Hope, except, perhaps, that she is made a little too long in the body and neck; otherwise it strikes me that it is a most perfect likeness. She is one of those I selected in the spring of 1838, from Mr. Whitaker's stock in Yorkshire, England, then in calf by the celebrated bull "Prince of Northumberland," and is by good judges pronounced to be a most perfect model, and combining I think as many good points as any cow I have known. She is a very superior milker; indeed such a tendency has nutriment to the pail, that during the milking season, with her a very long one, it is almost impossible to keep up her flesh; but no sooner is she dry than with astonishing rapidity she puts it on; illustrating perhaps a universal fact that the best milkers (quantity and quality considered) are the best feeders, though this rule will not always work the other way; but that it is entirely within the control of breeders to make the improved Short Horns every thing that can be desired for the dairy, I have no doubt; and in accordance with this belief I have observed the practice to be in England, and so would it probably have been here but for the paucity of their numbers and the justly high value put upon their peculiar combination of other perfections.

You may recollect among the herd at Mount Hope, is a large cow we call "Susan," imported by Mr. Smith, an Englishman, formerly of this city; from her we have taken regularly through the favorable season over thirty quarts of milk a day; and her family, of which there are several, all give evidence of possessing the same properties. Now can any one doubt but that by crossing these with that of the cow whose likeness is given above, or with any other of like character, the issue would be a great improvement, even for milk, on the best of our native stock; but since the opinion seems to be generally entertained in this country that the improved Short Horns are not desirable for the dairy, while I feel persuaded the fact is otherwise, will you allow me to quote from Mr. Dickson, a very intelligent writer on cattle, (see the Dec. No. of the 2d vol. of the Cultivator,) who says the owners of public dairies in London, Edinburgh and Liverpool, prefer the Short Horns, as the greatest and most steady milkers, and that it is now difficult to see cows of any other breed than Short Horns, or crosses with them, in their stalls. Mr. C. H. Bolton, in a communication to the British Farmer's Magazine, says he is justified in asserting that improved Short Horns, inferior to none for the grazier, may always be selected and bred with the most valuable dairy properties—that even a moderately good milker of this kind will be found to yield as much butter in the week as one of the unimproved giving ~~a much~~ greater quantity, and that reason~~ably nothing~~ less could be expected from an animal so proverbially given to excessive secretions of flesh and fat, than that she would also produce other rich secretions.

The last authority I shall mention is Mr. Youatt, in his excellent treatise on cattle, when, in speaking of the dairies that supply London and its environs with milk, he says, "they are composed, with very few exceptions of Short Horns, and almost invariably with a cross of the improved blood; that many of the cows in the London dairies are as fine specimens of improved Short Horns as can probably be produced;" and he very justly remarks that the universal preference given to this breed by such a body of men, differing materially on many branches of the treatment of cattle, is perfectly satisfactory as to their value; and farther, that whenever the improved Short Horns have been crossed with other cattle, their superiority is equally manifested in respect to dairy qualifications, as in every other. Now if this evidence is sufficient to show that improved Short Horns are not necessarily bad milkers, then do I think it will be admitted that, well selected, they do possess a combination of perfections, and that the stock of our country would be immensely increased in value by adopting them.

Their early maturity, combined with the capacity to continue growing; their disposition to carry flesh, to feed rapidly and make a great return for the food consumed; the quality of their beef, the hardiness of their constitution, their mild and quiet temperament and the beauty of their form, I believe it is generally admitted cannot be surpassed.

I am gentlemen, truly yours,
E. P. PRENTICE.

Mount-Hope, near Albany, Nov. 16th, 1840.

THE HEREFORDS, SHORT HORNS, &c.

Messrs. Gaylord & Tucker—In the August number of the Cultivator, Mr. Bement of Albany, expresses the opinion that the statement made by me in a previous number, "*that the Durham would lost in milking properties by a cross with the Devon or Hereford,*" was incorrect. Mr. Bement's skill as a breeder and his candor as a gentleman, to both of which I am happy to bear ample testimony, entitle his opinion to much respect. The subject too, derives additional interest from the recent importation of Herefords, and the introduction of several valuable herds of Devons into our state.

The essay of mine from which Mr. Bement quotes, was designed rather to correct several popular errors, than to furnish a text book for the scientific breeder. But brief and imperfect as was the account it contained of the Herefords, much subsequent examination both of English writers and living English breeders, has only confirmed me in the correctness of the positions therein assumed, particularly of the one controverted by Mr. B. His evidence, founded on the results of his own experience, is good as far as it goes—but a few instances do not establish a rule. The entire preponderance of testimony both of writers and breeders in England, is *against* the milking properties both of the Devon and the Hereford. The work on British Cattle by Mr. Youatt, is acknowledged *the* standard work of the day on the subject on which it treats. Mr. Bement relies on it as *his* authority in *favor* of the Herefords. On the same page from which he quotes, I find the following (one would think) conclusive statements—"The Herefords are far worse milkers than the Devons. This is so *generally acknowledged* that while there are many dairies of Devon cows in various parts of the country, *none of which however are very profitable to their owners,* a dairy of Herefords *is rarely to be found.*" Again, "the Hereford cow is apparently a very inferior animal. Not only is she *no milker,* but even her form has been sacrificed by the breeder." Our friend of the Three Hills Farm, is, I presume, too good a lawyer to attempt to invalidate his own witness!

If such *are* the facts, how are we to suppose that the Short Horns, concededly the first breed in England or America *as milkers,* will suffer no deterioration in this property, by a cross with a breed so decidedly inferior! Whatever results individual experiments may have led to, such a position would be at variance with every established maxim of breeding.

I desire to be distinctly understood in my remarks as taking no ground against either the Devon or the Hereford, except in the single point involved in this controversy. The stylish and high-bred Devon has always been a decided favorite with me. Of the Hereford I know little personally, but am prepared from the English publications of the day, as well as the testimony of American breeders, to believe that in positions suited to them, they may be regarded as a valuable acquisition to our American breeds of cattle. On the large and little cultivated prairie farms of the western states, where early maturity and milking properties are of comparatively little consequence, and where they must be driven great distances to market, the Hereford can have few equals. The Hon. Henry Clay, of Kentucky, was the first importer of this breed into the United States, and the following extracts from a letter which I received from him, bearing date September 21st, will I doubt not be read with much interest:

"I first imported, upwards of twenty years ago, two pair of the Hereford reds, and bred from crosses between them until I was induced to discontinue, in consequence of an apprehension that I should breed in-and-in too far, which in some instances I found to be the case. I could not obtain conveniently crosses from other females of the same race."

Mr. Clay afterwards remarks:

"My opinion is that the Herefords make better work cattle, are hardier, and will, upon being fattened, *take* themselves to market better than their rivals. They are also fair milkers. On the other hand, the Durhams, I think have the advantage in earlier maturity, in beauty, and in the quantity of milk which they will yield. They will also attain greater size and weight even."

"The choice between the two races should be regulated somewhat by circumstances. If one has rich, long and luxuriant grasses, affording a good bite, and has not too far to drive to market, he had better breed the Durhams, otherwise the Herefords."

After some remarks in relation to the origin of the two races, he continues:

"The Herefords resemble the Devons—the race of New-England cattle, and a fine race it is. But the Herefords have the advantage over them of greater size, greater length, more power consequently for draft, and are I think quite as quick in the step and as good at the pail."

"I have thus," he says, "expressed my own opinion; but I must add that here, in Kentucky, the Durhams are generally preferred to all other races. Our grasses are rich and abundant, and our blue grass especially (a name improperly given, for it is the green sward) is an object of great admiration. The Durhams are much more generally distributed than the Herefords, there being none of the latter, within my knowledge, but what have sprung from my importation."

Mr. Clay's opinions cannot be regarded otherwise than as strong testimony in favor of the Herefords—though I presume his general statements are to be understood to apply as much to his *mixed* as to his pure bred animals. That mixture was with the Short Horn, and it is not impossible that this drop of alien blood has had a significant bearing on their "fair" milking properties. Nor is it to be presumed that this cross has resulted in *very* serious deterioration to the Herefords in *other* respects.

Since writing the above, the Cultivator of November has come to hand containing a communication from Mr. Sotham, on the subject of the Herefords, in which he takes the same position with Mr. Bement, in relation to their milking properties; and also denies the correctness of other portions of my description of them, in the essay already alluded to. Mr. Sotham has doubtless imported some very valuable animals. I have not had the pleasure of seeing them, but have conversed with several very intelligent breeders, who have examined them closely, and who speak of them favorably. One gentleman writes me "They have nearly the size and breadth of loin of the Durham, but are coarser in the head, and are not so handsome."

This is certainly a very different description from that given by Mr. Youatt. How are we to account for the discrepancy? It is but *six* years since Mr. Youatt wrote, and his remarks cannot therefore be supposed to apply to the breed as they existed "twenty or thirty years ago," as suggested by Mr. Sotham. It is well known too, that his great work on British Cattle was published under the auspices of the Society for the Diffusion of Useful Knowledge; and that he was aided in it by the first breeders of England, who are equally responsible with himself for the correctness of his statements. Writing with little individual interest or bias of his own, it is perfectly apparent through the whole work, that it is his aim to present every breed, possessing any claims, in its most favorable coloring. The quotations made by me are neither isolated nor garbled ones. The history of the struggle between the Durhams and the Herefords, (as well as the Devons, Lancashires, &c.) is the same throughout nearly all the most fertile districts of England. In almost every one the star of the Short Horns has risen to the ascendant. It strikes me as idle to talk of "unjust accusations," "prejudice and abuse," as directed towards any particular breed. The contest has been a warm one—many severe things have been said on all sides—but how are we to suppose that the Herefords have been more "abused," or called on to encounter more "prejudice" than their rivals? One would naturally infer precisely the contrary. The Herefords are an indigenous breed—or at all events they separated from the parent stock (the Devon) at a period "whereof the memory of man runneth not to the contrary." On the other hand it is less than a century since a little handful of cattle in the hands of three or four breeders on the banks of the Tees, were attaining that superiority which has since asserted itself, beyond intervening oceans, on the then scarcely discovered Ohio. "Prejudice" is ordinarily enlisted on the side of antiquity, and opposition to innovation. The Herefords were a known and favorite breed, long before the improved family of the Short Horns had their origin. The The Short Horns were the *innovators*—innovators in size, shape, and last but not least in popular estimation —*color.** Is it not they then, instead of their opponents, which have been made the particular victims of "abuse" and "prejudice." I confess I have always so regarded it. I will cite one specimen of unfairness and "abuse" which has been frequently resorted to against them. It is this. The advocates of other breeds in making their pretended experiments between improved Short Horns and their own favorite breed, in feeding properties, &c. have repeatedly selected the *unimproved* Short Horns (known as Lincolns, Teeswater, Holderness, &c.) to make the trial with, and then published it to the world as a fair experiment! But enough of this.

Mr. Sotham differs as widely from Mr. Clay, as from Mr. Youatt. Mr. Clay says, "the Herefords resemble the Devons, the race of New-England cattle." Do the Devons or the New-England cattle approximate in "size and breadth of loin" to the Durham? A single instance of the kind, might well be deemed an extraordinary one.

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* I should perhaps except the midland counties where the the Lancashires, Cravens, Leicesters, &c. prevailed, which also exhibited much of the interdicted *white.*

I will not refer to Marshall, Lawrence, Culley, Loudon, or the other older English writers, because it may be objected that the breed has changed since their day. It may be remarked, however, that they speak of the Herefords, in the same general terms with Mr. Youatt.* I might cite the opinion of many eminent English breeders, residing in this country, in corroboration of their opinions, but shall not do it on this occasion, as it would occupy much space, in an otherwise sufficiently extended article.

I will now ask, if the concurrent testimony of all the standard English writers on cattle, ancient and recent, corroborated too by the statements of many eminent breeders, do not *prove* what the Herefords *have* been,—have been too, if we may rely on the authority of Mr. Youatt, *until within six years.* If it is pretended that any so great and radical a change has been effected during that period, does it not devolve on him who asserts it, to show and to *prove* when, and where, and how that change has been effected?

If a few specimens of animals, called by the name, are relied on alone to prove it, the question arises, what certainty have we that they truly represent the breed, or that they are pure blooded and unadulterated animals? A Short Horn cross, for instance, engrafted on the Hereford, might work wonders if the color was attended to? It would offer a very convenient solution of the physiological enigma of converting a small, shapeless and milkless cow, into a stately, broad hipped and deep milking animal, *all within the space of six years?* I do not pretend to state that such a cross has been made, because I know nothing about it. Mr. Sotham doubtless ascertained the character of the men he dealt with.

That Hereford oxen, and in some instances cows, have recently received many prizes from English Agricultural Societies, I have no disposition to deny or conceal. The oxen in such cases are exhibited in reference to their ripeness for the hands of the butcher. The Herefords are conceded on all hands to be a breed that feed kindly, and that they should occasionally receive prizes is much less surprising than would be the fact, that they did not. But if a Hereford cow has triumphed over the Durhams, as a *dairy* cow, it is certainly a new thing under the sun, provided the Durhams were properly represented. I presume that no breeder of Herefords *in this country,* will be found willing to challenge the breeders of Short Horns to such a contest.

But suppose we concede the point, that a few English breeders have approximated the Hereford to the Short Horn in size, shape, early maturity, &c., the question immediately presents itself, *cui bono?* If the Durham already possesses certain properties, in the greatest attainable degree, what is the practical benefit of forming a new, or remodelling an old variety, only to attain the same properties? Is it not better to avail ourselves of the skill and industry of those who have gone before us, *commencing where they left off,* than it is to spend our whole lives in trying to overtake them by a road of our own? What should we say of that student of mathematics, who, disdaining to avail himself of the labors and discoveries of a Newton and La Place, should begin *de novo* with the nine digits, and attempt to build up a mathematical system of his own!

But is it contended, that the Hereford, if made to equal the Durham in *its* peculiar points of value, will superadd to them that hardihood and muscular power peculiar to the old Herefords? This cannot be. It is contrary to physiological laws, which every man's observation has recognized. The wild boar of the desert, or the pencil immortalized "Land-pike" of Mr. Allen, is a better traveller and possesses more muscular power than the quiet and fat-secreting Chinese hog. The untamed Argali, that subsists among the rocks and glaciers of the Alps, is an animal of greater endurance and muscular energy than its *descendant,* the New-Leicester sheep. That course of breeding which modelled the Chinese hog, the New-Leicester sheep, or the Durham ox, has, and inevitably must, deprive the animal from which they descended, of that fleetness, strength, and endurance of the rigors of climate, which was *necessary for their protection,* before they were subjected to the dominion of man:

The Hereford, if converted into a Durham, will cease to be a Hereford. Marshall, in giving his eulogistic description of the capabilities of the Hereford ox for labor, did not write of a quiet, sleep loving animal, which would become a lump of fat at two years old. Mr. Clay, in referring to the same point, said nothing of animals possessing the size and broad loin of the Durham, and one year's earlier maturity.† He spoke of a race "resembling the New-England cattle."

But after all, I am not quite convinced that the Herefords have been converted into Durhams. If Messrs. Walker, Hewer, and other breeders in Gloucestershire, had possessed such animals *six years* since, it is astonishing that they should have escaped the notice of Mr. Youatt—if they have been created (so to speak) since, it is little short of miraculous. On the bleak highlands of Gloucester, no breed has been cultivated, with any very marked success. In the vale of Berkley, (a name so cherished by all the lovers of good cheese!) the prevailing breed is a compound of nearly every thing, the old Gloucester, Hereford, Devon, Durham, Leicester, Suffolk Dun, North Wilts, &c. Mr. Youatt says expressly, "there are (in the vale of Berkley) no Herefords for the pail, a few Devons, some Suffolks, some North Wilts, and the rest Gloucesters, with various crosses." And not a word does he say, of a race of Herefords in this county, equaling the Durhams in size and form, "filling the pail as high as most of them," of one year's earlier maturity, &c. &c.

Now who shall decide when doctors disagree? Mr. Youatt has certainly given as much attention to a comparison of the English breeds as any other individual—is thought in England, to be about as well qualified to arrive at a correct decision as any other individual, and above all, had no personal interest in the result. This last consideration is one of no little import. "It is according to our gifts," as the Pathfinder would say, that every man's goose should have a most swanlike aspect to *himself*. I do not doubt the propriety of Mr. Sotham's motives, or the sincerity of his convictions. He doubtless believes as he would have us believe. He deserves high credit for his enterprise in introducing so valuable a stock of cattle. But when he calls upon us to give up opinions supported by all the best English authorities—opinions until now unquestioned, he must be sensible that we have a right to demand something besides the authority of an interested witness.

Yours truly, HENRY S. RANDALL.

Cortland Village, Nov. 16, 1840.

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* Without the trouble of making a reference, it it is my impression, that Cully speaks of them much less favorably.

† As asserted by Mr. Sotham!

MR. SEARLE'S APIARY.

Messrs. Editors—Having received a polite invitation from Mr. John Searle, of Franklin, Merrimack co., N. H., who is now on a visit to our village, to call and examine an Apiary of his construction, and its appendages, built on the plan patented by him in 1838, I called Sept. 10, when he showed me the Apiary, and politely explained its construction and pointed out to my notice the several improvements on which his patent was obtained. It can hardly be necessary to say that I felt a sensation of extreme delight when I saw a large swarm of bees, that were found in the woods and taken up the day before I visited him—the bees all saved alive, brought some miles to his Apiary and united with an old stock of bees in a hive that contained a sufficient quantity of honey to keep them all through the winter; and readily uniting their efforts with the old stock to provide and lay up more. To see these little laborers (that during the season have showed themselves patterns of of industry and provident care,) made thus to contribute to man their nectar sweets, and still remain preserved unharmed for future labors and future rich dividends of most delicious sweets is grateful to the humane heart.

The taking of the honey from this Apiary, without the least harm to either the bees or the remaining honey or comb in the hive, is a great improvement by which we can "live and let live," and rejoice while we partake of the "spoils," that the despoiled were not cruelly subjected to torture by fire and brimstone, but may still live on the fruits of their own industry and rear their tender young, for the honey taken from them is made in boxes or specie jars, which are fitted to the top of the hive, and the egg or larvæ of the bee is always deposited in the cells of the comb in the hive, and so of the bee-bread.

By the peculiar construction of the Apiary and its appendages, and their ingenious arrangement, the bees are completely protected from the depredations of their numerous enemies, the bee-moth, mice, &c. and made comfortable through every change of season, and being protected also from robbers of their own species. They are well pleased with their own home, and of course when they swarm they do not seek another.

The samples of honey shown me, made by the swarms in specie jars, were exceedingly beautiful. They had almost the whiteness of snow; and its purity from specks or stains; from the peculiar construction of the Apiary and the arrangement of the hives, the owner can visit and inspect their industrious inmates at all times, free from danger of the sting, as the bees have no access to the room in which the hives stand, but are seen through panes of glass, set in the side of the hive and covered by a nicely fitted sliding blind so as to exclude every ray of light from the hive.

This invention is warmly recommended by Governor Hill, and many other names that rank high in office, in science and in arts in New Hampshire, and approved by experienced apiarians wherever it has been exhibited; and after a close examination of its several parts and conveniences I would cheerfully say in the words of Governor Hill: "It is believed Mr. Searle's invention is an improvement on all others, for the convenient protection and keeping of that highly useful little animal, which might be advantageously multiplied in all our towns."

This Apiary was 12 feet long and 10 feet wide—cost $25. The hives made in a workmanlike manner, cost 25 cents each. In short the edifice and its appendages were economical and ornamental in every acceptation of both the terms; for on this plan of managing bees the small and late swarms are united in the fall season with an old hive or a large swarm that has a store of honey for winter, enough for both.

Description.—Construct an Apiary of any required dimensions:—Elevate it 2 feet from the ground on posts of wood or stone—frame your sills and plates; if you plank the body with 1½ inch plank you will need no posts; make a tight roof with shingles—lath and plaster the body outside and inside with a good lime and sand cement, to exclude insects and and keep the temperature regular; lay a double floor, with the same cement spread between—on this floor raise an elevation on three sides 2½ feet wide, adjoining the walls, say 4 inches; and spread a coat of cement on the same for the hive to stand on. On the other side is the door, well fitted, with a lock and key. Four feet above this floor is a gallery running around the same three sides for a second tier of hives; the floor prepared in the same manner as the lower elevation. Once in 10 feet on every side is an opening or ventilator, covered with a tin plate perforated like a grater, or a wire screen, to exclude the moths. The spouts for the bees to enter, are made of 1½ inch plank, 6 inches wide and ten inches long, having two passage ways grooved in the top, 2 inches wide and ⅜ths of an inch deep—leaving in the middle a strip to support the cover. This spout passes through the wall and floor at an angle of 22 degrees entering the room 3 inches from the wall, is made tight with cement and white-washed inside and out with a mixture of quick lime, ley and salt; a lighting stool is placed at the lower end of the spout, having the same angle; one foot above this is placed a board 12 inches wide and sloping so as to shelter the bees and the spouts; the ventilators must have blinds to close them at pleasure.

The hive is made of inch stuff, thoroughly seasoned, clear from knots and shakes or seams—16 inches square—well planed and halved together at the corners—the joints hollowed inwards and filled with the above mixture—across the top are two parallel bars 1 inch square, to support the cover, which is ¼th inch thick. These hives are 12 inches deep or 6 inches as the proprietor may choose, and being all equal of size may be set one upon another as they become filled. These have a glass light with a sliding blind to each. Beside the hives there are boxes say 14 inches long and 4⅓ inches wide, adjusted to a false top or cover, with passage ways for the bees to each box. These boxes are covered after being adjusted to the top of the hive with a box the size of the hive, which effectually screens the three boxes on the hive from the light, the bee-moth and air. Besides these there are specie jars, adapted with their mouths downward to openings in a false cover, and covered in like manner as the boxes to exclude the light.

For a description of these adapters, the dividers, the feeders and all the et ceteras used by the ingenious patentee, the inquirer is referred to a small and cheap book entitled, "A new and improved mode of constructing Bee Houses and Bee Hives, and the management of the same, by John Searle."

N. B. To be found at Breck & Co's. Agricultural Ware House, No. 52 North Market-street, Boston.

The boxes will hold about 9 lbs. and the jars 3 lbs. each, and I can state from actual observation that a swarm of bees in this Apairy hived about the middle of June last, had on the 10th of September filled one hive 16 inches square and 12 inches deep—one hive 16 inches square and 6 inches deep, nine specie jars, 3 lbs. each; and were then engaged in filling a third hive 16 inches square and 6 deep, this last being half filled.

R. T. COMSTOCK.

Sherburne, N. Y. Sept. 1840.

THE TREE CORN AND ROHANS.

Messrs. Gaylord & Tucker—From the extent of the correspondence to which my article on the beet root and Tree corn has introduced me, published in your paper a while since, I am disposed to believe that a knowledge of the result of my experience with these articles will be acceptable to some of your readers. I have therefore forwarded it, to be disposed of as you please.

In the spring, I prepared an excellent piece of ground, of uniform quality, and planted it in three equal proportions with Tree corn, Red Blaze, and Dutton. The season has been a long one, and very favorable to the growth of corn. The whole came forward and apparently prospered well. I have now completed my harvest, and here follows the result. The Dutton gave me seventy bushels of the finest corn I ever saw, per acre; the Red Blaze gave me fifty, and the Tree corn twenty-five bushels. Last year the Tree corn gave me 106 bushels, more than 50 of it sound and good, to the acre, with stalks more than 10 feet high, and very thick and stocky, with numerous ears upon each. This year, the stalks are between 7 and 8 feet high, slender, with one ear, and sometimes a very small one besides, on each stalk. This result to me was very unexpected. I planted from the finest corn to be selected, and calculated on an improvement, instead of so fatal a deterioration. All my neighbors suffered precisely with myself. Perhaps no corn ever planted in this latitude, if suffered to get ripe, will reward the husbandman so bountifully as the Dutton. For the last two years, I have observed it with much care, and find it about 12 days behind the red blaze, or white flint, in ripening, but vastly superior in product.

In my catalogue of humbugs this year, I place the Rohan potato at the top. As this thing has taken so extensively, it is important that its true character should be promptly understood: and I will contribute my mite of experience to this object. My Tree corn dwindled into insignificance in a hurry, but the Rohan potato has beat it outright in this contest. In 1839, I raised from seed had at Albany, at the rate of 800 bushels per acre; the potatoes of course very large. This year, I planted from my last year's product, one acre; and have now estimated my crop at less than 30 bushels—the potatoes small and few. The ground was good, the season favorable, and the crop well cultivated. I selected a small spot in my garden, as rich as I dare make it, and planted early with some of the best of my seed; it was nursed with the utmost care, and although the growth of vines was not great, yet the yield was scarcely greater than the amount of seed planted. But this is not all; the quality of the potatoes is abominable: no man would eat them in his right senses; and they are undoubtedly as poor for stock as the table. I have extended my inquires as far as I have been able to do, and find myself as well off with my Rohans as my neighbors. If the quality of the potatoes were worthy of the expense, seed perhaps might be brought from the south, and the product kept up. But as we have so great a variety of better potatoes, I think in this latitude, the Rohan potato will rank with many other exploded humbugs.

Respectfully yours, SAMUEL GUTHRIE.

Sackett's Harbor, N. Y. Oct. 24, 1840.

PROGRESS OF THE SILK BUSINESS.

Messrs. Editors—As many of your readers are interested in the progress of the silk staple in our country, and as many, not directly interested in its prosecution, are nevertheless quietly waiting for the whole business to become so much simplified, by the experience and the improvements of others, as to render it a safe and certain occupation for them to embark in, I should be glad of an opportunity to communicate through your columns, some facts in relation to this interesting subject. My feeding operations the present summer, have resulted in my constructing an entirely new apparatus for rearing silk worms, which I call the "Burlington Silk Worm Frame." It is altogether opposed to the whole hurdle system, and combines advantages so remarkable, as to take away all objections to the rearing of them, as a regular business on an extensive scale. Among these advantages may be enumerated the following:

1. It secures the most thorough ventilation to all parts of the frame on which the worms are feeding, below as well as above, and obliges them of necessity, to clean themselves of their excrement and other rubbish.

2. That part of all former modes of feeding which requires *waiting* for the worms to mount upon fresh foliage in order to clean them, is entirely dispensed with; and though cleaning is never necessary, yet should the worms require changing, it is done almost instantly, a thousand at a time, and without the worms being conscious of the change.

3. The whole apparatus is as portable as a quilting frame; and all the parts which require handling during the feeding season, are as portable as an umbrella, without being liable to breakage.

4. Ventilation and cleanliness are so prefectly accomplished, that disease seems out of the question, unless originating in the egg.

5. The age [from the spinning] of any number of cocoons, from one thousand up to a million, is identified to a day, and they are gathered with six times the facility of the hurdle system, at the same time coming out perfectly clean, and with but little waste of floss.

6. By using branches, cut down with a grass hook or scythe, it saves more than one half the usual expense of gathering foliage and feeding it out to the worms, and more of them are accommodated in the same space, and it is cheaper and more durable than the hurdles.

The vast superiority of this over all other fixtures for feeding silk worms, is such as to be apparent even to persons not acquainted with the rearing of them; while intelligent gentlemen, practically conversant with the business, have pronounced, without a single exception, that it fully accomplishes all that has been said above. It has been tried repeatedly and found successful in practice, and may be seen at the Burlington Filature, where persons interested in the silk business are invited to examine into its merits. It rejects the hurdle system entirely, and is original in all its parts. A frame sufficient to feed 12,000 worms, may be seen at Jos. Leeds' U. S. Silk Agency, No. 2 Franklin Place, Philadelphia, the proprietor of which has been appointed agent for the sale of frames and rights, to whom, or to the patentee at Burlington, application may be made. An engraved view, with a full description, will be sent on application, post paid. Gentlemen about to erect cocooneries will find it highly important to examine the capabilities of this frame, previous to erecting any other fixtures. Many large cocooneries are now being fitted up with it, and others are building, in which no other fixtures will be used. At Halifax, N. C. Mr. H. Wilkes is fitting up a cocoonery, 200 feet long by 21 wide; at Brinckleyville, in the same state, Mr. S. Weller, has also erected a large cocoonery; at Catskill, N. Y. Mr. John C. Johnston is preparing an extensive establishment; at Carlisle, Pa. Mr. R. S. Hall, has just completed a cocoonery 60 feet long; at Concordville, Pa. Mr. James S. Peters will erect one of the same dimensions, and at Bristol, Pa. Mr. C. S. Newbold, is about erecting one of similar size. All these, with others that could be mentioned in abundance, will use the Burlinton frame exclusively. Most of them have witnessed its operation here, while the worms were actually feeding on it, and have thence adopted it without hesitation as the only true plan.

It is a mistaken idea to suppose the silk business on the decline. At no time was its extension greater, nor its goodness more apparent to its friends. Silk has been made in quantities, varying from one to fifty pounds, all around me. I have made nearly fifty pounds the present season, and others here have made nearly as much. At the Burlington Filature, which is under my charge, three reels are constantly employed in converting cocoons into raw silk, and the highest price in cash is paid for all that are offered for sale. Between two and three hundred bushels are now on hand, and contracts will be made for purchasing the crop of the ensuing season. The Filature will be extended as the supply of cocoons enlarges.

I have a variety of printed documents, in relation to the silk business in our country, prepared for gratuitous distribution, which I will send with great pleasure, to those gentlemen who write for it without charge of postage. Respectfully yours,

EDMUND MORRIS.

Burlington, N. J. Nov. 13, 1840.

HOT AIR FURNACE.

Messrs. Gaylord & Tucker—I have recently become a subscriber to the Cultivator published in Albany, N. Y. which I find to be a very valuable paper. On perusal of the April No. of said paper I find a description of a *Hot Air Furnace* which has engaged my particular attention. The reason was, it so very nearly resembled a furnace I had constructed in a house of my own built in 1836; I have used that alone since that time to warm my whole house except my kitchen. The part warmed consists of two rooms below 16 by 17 feet square, entry 8 by 16 feet, 2 rooms above 14 by 14 feet, 2 rooms above 8 by 9 feet, entry above, and two rooms above in the L over my kitchen, 8 by 16 each. The construction of my furnace was original with me. I so arranged the arch upon which my chimney was to stand as to make that the furnace of itself which I consider an improvement on yours.

I left apertures 7 inches in diameter, same as those marked in yours E. E., which passes up through both my hearths to supply hot air in my lower rooms which are as before stated, 16 by 17 feet square each. To conduct hot air into my chambers, I left two flues each about four inches square in my chimney which led from the hot air chamber of furnace into each of my two large chambers above, and came out of the chimney about 5 inches above the chamber floor by means of a tin pipe inserted into the chimney horizontally, to extend from the flue into the room. Those pipes can be closed by a tin cover similar to that of a tin pail which can be opened and shut at pleasure. My smoke flue was carried up in the chimney beginning at the hot air chamber, no larger than the stove pipe, and directly between the two hot air flues (with only one thickness of brick between) and extended to the top of my chimney. The stove that I have used is nothing but a common box stove of large size, say 2½ feet long, 16 inches square. Upon the top of this stove I have one large round drum about 16 inches in diameter, and nearly as long as the stove, and above that I had two small drums only six inches in diameter, but extended the length of my hot air chamber, and then into the chimney above. In addition to the above, I had a pipe for hot air made of brick placed upon a plank supported for the purpose to lead from the side of my furnace near the top, and extended about 7 feet through my cellar, (which is kept apart for the furnace) and leads up into my entry by a ventilator. This keeps the entry or hall which is about 8 by 28 feet perfectly warm as well as my whole house. In half an hour after a fire is built in the morning, you would be comfortably warm in any room or entry even when the mercury stands 15° below zero outside, which is not unfrequently the case in this climate. My stove had no grate on the bottom, neither had I an ash-pit. In other respects, my furnace resembles that represented in your paper. This is found such an improvement in this country, that many have followed my example, and many others have even laid by the coal furnaces which are so much cracked up in cities, and adopted mine. The first year I used my furnace, I burnt about 12 cords soft wood, pine and spruce. I would prefer a stove for my furnace such as you recommend, but none are to be had in this section of our country.

Truly yours, LEVI L. LOWELL.

Calais, (Me.) Sept. 27th, 1840.

Rearing Calves on Flax Seed and Hay Tea.

Messrs. Editors—Permit me through the medium of your valuable periodical, to thank my friend of Washington, for his favors bestowed on me, the which through your politeness I have received, and in reply to his question as to my way of rearing calves, I reply that I believe not one of the calves I raised, ever received a drop of milk from the cow. My cows were watched closely, and as soon, and in fact in more than one case before they did stand, they were carried in the pen I had prepared for them; their mouths were then filled with salt, (this by the by was done at least once a day, until they were turned in pasture.) In preparing the flax seed, we put half a pint of seed to three quarts of water, and boiled it till it became a jelly; then boiled water on hay, so that when the hay tea and flax seed was mixed, it was but little thicker than milk; this, when about blood warm, was put in a trough, and it was but a little time before this was the only trouble we had with them. We every day put fresh hay in their pen, and I have seen my calves at 7 days old eating considerable of the finest of the timothy hay, and it was really amusing to see the sprightliness of a calf at 4 and 5 days old that had never tasted milk, which is so contrary to the common way of rearing them; but it convinced me of the saying of Sam Patch that some things can be done as well as others. My calves can be seen at any time on my farm in Bethlehem, half a mile south of Albany on the White Hall road. I have never tried this mode of raising pigs, but I intend to with some of the first litter I have, and will let you hear of my success. I see only one obstacle in the way, and that is to learn them to drink, for I think if this method is adopted it must be done without the pigs having any milk. I think we must obey the command in fact and deed to train it up in its infancy in the way we would have it go, if we expect success.

E. S. WILLETT.

THE HEREFORDS.

Messrs. Gaylord & Tucker—Anxious as I may appear to defend the Herefords against all unjust attacks, I hope not to depreciate any other breed by it. However highly I may value their good qualities, there are other breeds that are commendable. I think the right sort of Durhams, hard animals to be beaten, and will never be intentionally depreciated in value, from my remarks. If I advance my opinion to society, I am subject to public criticism, and am ready and willing to meet it. I neither aim at display, or ever expect to derive any pecuniary benefit from it; whenever I am in error, I hope to be corrected; as what I advance is from my own observation and practice, and I trust, founded on facts; when proved so, all I ask, is to have them confirmed. Should they tend to promote the public good, my hopes are realized, the obligation cancelled, and I am satisfied. I will now endeavor to answer the objections brought against the Herefords by Mr. Hepburn.

Mr. H. I see, has read Youatt, and quoted a passage from him that he would do better to reperuse. How far Youatt's practical knowledge extends, is to me a matter of doubt, especially when he says "the Hereford cow is an inferior animal; not only is she no milker, but even her form has been sacrificed by the breeder." I refer Mr. H. back to his own quotation, and he will perceive that Mr. Y. acknowledges the breeder to have attended to form in his cow, to breed a good ox. I would ask Mr. H. if a good ox can be bred from an inferior animal, or if a breed of any kind can be kept up with inferior dams? There seems to me to be something wrong in the remark of Mr. Y. that does not read well to a practical man. I will also refer him to a sale of Herefords twenty years since, that will show they stood high at that time in the estimation of breeders.

A sale of Hereford cattle took place at Wellington, Herefordshire, Oct. 19, 1820, the property and extra stock of the Misses Tompkins, at which 29 lots, consisting of 16 cows, 5 heifers, 2 two year old bulls, 6 calves, were sold for £4,709.7; the highest price was a two years old bull, which sold for £588, or $2,610. The average price of the 29 animals, was £162.7, nearly $800 each. This sale can be referred to by any Hereford or Durham breeder of note in England as a bona fide sale. If Mr. Youatt had been at this sale previous to writing his views of Herefords it might have been couched in a different position; as I cannot allow the good judgment of English breeders to be so disgraced, as to give such prices for inferior animals. I cannot think Mr. Youatt gleaned his information from practical men, or where were the advocates of all other breeds when the owner of Trojan offered to show him against all England for a thousand guineas. This was more than twenty years since; I can refer to date and all particulars if necessary. If he had been an inferior animal it certainly would have been accepted, or could any inferior animal breed a bull of this description? Let England produce a better bull of any breed than old Cotmore, or Major, of the present day; then I will be convinced that Herefords can be beaten.

I might trace the origin of the Durhams from the ancients, without any proof that it was that breed only deserved from it the ascendancy. I might pursue their advancement, and find them supported by the hands of wealthy, popular men, who nursed them with the most tender care, who spared no expense in effecting their improvement, and gave them the advantage of their art, skill, and study. In the mean time, a better breed may spring up, go through a less flattering process, and come out triumphantly; and I think all will allow that Durhams have had the decided advantage over Herefords in this respect.

I am sorry my remarks do not read well to Mr. H. after reading a standard work. I should like him to explain to me, the true derivation of that standard, and establish its firm foundation. My idea is that the practical man that makes the improvement, is the truest standard. A man may be a proficient in disease, and effect many miraculous cures, which I have no doubt Mr. Youatt has done, and is as highly respected as any man in England; but we are all liable to mistake, and are all open to correction. I am sorry my efforts are called forth against him. Whatever the Herefords may have been, they are now all they are represented to be—beautiful, noble animals. And I think other breeders will find they have something to contend against, to maintain the top standing. And as our worthy and esteemed friend, A. B. Allen, Esq., says, that good and gentlemanly judgment is showing itself in Ohio, that is all I ask to judge, and will cheerfully abide by the decision. True judgment, and a right spirit in agriculture, is all that America requires to make her what she must be, the head of all nations. It was that only, that kept England up, and raised her to what she is.

I cannot agree with Mr. H. when he tries to deter men from importing. My idea is that we should get the best animals that can be obtained, and of every breed that are likely to render service, leaving prejudice entirely out of the question; and as many of them as the purse will allow. A good start is half the battle, and now is the time to make that start; those who wish to obtain glory and honor, in warfare, must not come to the field when the battle is won, but must share some part of the burthen. Money cannot pay a man for the care, anxiety, and risk he is exposed to, in importing stock. It is a task that I shall be glad to see others undertake, as I have done my share of the duty. I must now do justice to those we have, which is much the pleasantest part; there is no art, no science, no study so pleasing, so substantially gratifying to the mind of man, as to fully develop the good points of animals, by his own superior skill and management. It may be made the theme of usefulness. My opinion of securing good stock with economy in view is this; the farmer should procure two heifers and a bull of the very best order of that breed his taste directed, and let no price stop him, if the purse will sanction it; what says Shakspeare, "that the purse is trash," so say I, compared with good animals; they were the wealth of the first people; why not continue that of the present.

With any ordinary luck, the progeny of two females will soon extend, while the male improves the inferior, and adds value to the whole; this consideration will sustain high prices, and pure animals cannot be imported without paying high for them.

I am further of opinion, that pure breeders for sires, that can be depended upon, should be upheld in high prices, so as to enable them to keep their stock without a stain, as I think the most important part in breeding lies here; the progeny always degenerates if the sire has the slightest cross; it is not so with the dam; the stock will improve if the sire is well selected.

Mr. H. talks of showing spirit in selecting a breed of our own. I should like to hear his suggestions in commencing the breed, without having the best animals to resort to; even their crossing with a bad breed will take a full century to make any thing out of it, if founded on the best judgment. I will allow there are a limited supply of the best Durhams, but not a tenth part there should be.

No person can go to England, and fetch the best animals unless he is favored in freight, for less than five hundred dollars each.

We have sold one sheep to Mr. Clift, and let him another for the season; and from what I saw of his flock, they were the right sort of ewes to put to them. There is much credit due to Mr. C. for the enterprise he has shown, and much good taste displayed in his selection of ewes. I have no hesitation in saying, that the produce of these sheep will afford him an excellent flock, and one worthy of notice. The sheep he hired, was the one the portrait in the last No. was taken from. We have also sold two rams to Mr. Dunn, whose flock I have previously spoken of.

Mr. E. C. Delavan, of Ballston Centre, purchased a ram and some ewes. Mr. McIntyre, of Albany, a ram and some ewes. Mr. Watkins, of Georgia, some rams and a ewe. Mr. Clark, of Otsego, a ram; and others that I shall name in your next. I do this, as the names of our purchasers may be referred to; it is customary for men to say that their breed is descended from a good flock; the Cultivator will show if it is correct. I am well aware that these sheep will be valued and appreciated when better known; they possess an excellent constitution, produce a heavy fleece and carcass, easy feeders, a good quality of mutton, and not extravagant consumers; their paunch is small and quickly filled, they are quietly disposed, and kept in pastures with a very slight fence.

I see our friend Mr. A. B. Allen, Esq. says that Ohio is the home of the lordly Short Horns. I hail their prominent name, and as ours are principally of the feminine gender, will say York state is the home of the ladylike Herefords. As ladies are considered the first race of animals, I hope the Herefords will maintain it.

I am, dear sirs, yours sincerely,
WM. H. SOTHAM.
Perch-Lake Farm, Jefferson Co., Nov. 25, 1840.

N. B. I am pleased we have two breeds that can contend against each other; it will have a tendency to keep pure breeders to their duty; and I hope will rouse them to feel worthy of their names.

Rohans and Mercers.

Messrs. Gaylord & Tucker—I planted one half peck of Rohans in four rows, three rods in length, cut in single eye cuttings, by the side of the Mercer potato. The product of the Rohans was eight bushels three pecks, weighing 523 lbs. The Mercers produced one bushel to a row, on each side of the Rohans, and the Rohans wanted but one peck in four rows of being two and a half bushals to a row, while the Mercers had as much seed in one row as the Rohans had in the four; so that I am satisfied that they are the best potato to yield of any we have seen. The ground that they grew on has been planted six years in succession to potatoes, and no manure the present season.
C. M. L. A.
Macedon, Wayae County, 1840.

CURE FOR HOOF AIL.

Messrs. Editors—Perceiving in your last number, an inquiry respecting a remedy for the hoof ail in cattle, I am happy to have it in my power to communicate one which never fails of effecting a cure in two or three days. Blue vitriol finely pulverized, and applied to the diseased part of the hoof, once a day for two or three days, is all that is necessary. In the case of a cow of mine, one application was sufficient, and I presume would generally answer the purpose. The disease here is called by some of our farmers, "*fouls*," and by others, *hoof ail*. If the case alluded to by your correspondent, is the same disease, you can depend on my remedy.

Yours, &c. P. E. HUBBARD.
Middletown, (Conn.) Nov. 7, 1840.

BALDWIN'S CORN CRUSHER.

Messrs. Gaylord & Tucker—Having noticed in the last number of your excellent agricultural journal, an inquiry relative to the corn and cob crusher, we have thought proper to enclose to you two numbers of the American Farmer containing several letters from respectable farmers who have tested Baldwin's crusher; as also the benefit of feeding stock on this description of food. We take the liberty of informing you, that the article is manufactured by us, and will be furnished at $65. Several machines for crushing corn and cobs, have passed under our notice, all of which in our opinion, fall far short of Baldwin's. We have made and sold a number of them the last five years which have given entire satisfaction to all who have used them. They are capable of grinding (by one horse power,) 15 or 20 bushels of corn and cobs per hour, and can be regulated by a pinch screw to grind coarse and fine at pleasure. If you think these certificates, and our remarks, worthy of notice, you will please give them a place in the next number of the Cultivator. Respectfully yours,

ROBERT SINCLAIR, Jr.
Manufacturer and Seedsman.
Baltimore, Oct. 20, 1840.

The above crusher occupies a space of 4 by 2 feet, and is about 4½ feet high. The first impression on the cob is made by two fluted cylinders, placed horizontally and operate similar to the nuts of an apple mill grinder; these are intended merely to crush the cob; after this process it passes immediately through two finer fluted or ratched cylinders, and a cast iron concave, which last process leaves the article ground on an average as fine as a common early garden pea, the coarsest being as fine as a grain of flint corn, and the finest ground entirely into meal. S. & Co.

Chinese Tree Corn and Rohan Potatoes.

Messrs. Gaylord & Tucker—There having been some diversity of opinion, and generally unfavorable reports concerning the above variety of corn, I will briefly state the result of my trial of it. A year ago last winter, I procured from Thorburn's, New-York, one ear; of which I planted nine-tenths, having given away the residue; believing that different kinds of corn have been sold under this name, I will state that mine was a very handsome ear, about ten inches in length—10 rows, grain very closely set, long, and wedge form, well filled out to the end of the cob—some of the grain slightly indented. Planted it the 8th day of May, yielded over 900 ears; being more than a thousand fold, from the seed planted; and all, except less than a peck of ears, perfectly sound and fit for seed. The present year, I planted of this kind, about one acre in the same field, with other varieties; not having gathered it, I cannot state the amount of product; but it is judged it will yield one-fourth, if not one-third, more than the rest of the field, the ground being equal, and *all* sound; when ground it made meal handsomer and better flavored than other corn. As to the Rohan potatoes, my trials this year and last, show that *with us*, it is neither as good to eat nor as productive as the *Merino*. My neighbor, Peter E. Guman, Esq. tells me the same in regard to yield.

HENRY VAN KLEECK.
Cuddebackville, Orange Co., N. Y. Oct. 1840.

☞ Mr. Van Kleeck's remarks on the use of Ashes and Lime, for which he has our thanks, will appear next month.

"CURL" IN POTATOES.

In the September number of this paper I noticed, in a communication of S. P. Rhoades, Esq. my letter to him on the subject of disease in potatoes, called "the curl;" wherein I expressed an opinion that it "was attributable to the age of the variety." Another years experience has convinced me that I was in error. For, on examining all the different varieties, and among them was the *Long Keeps*, I could not discover any traces of the disease.

This leaves us just as much in the dark as ever, and I very much doubt whether the cause can be accounted for by any one. If, however, this should meet the eye of any person possessing the information and thinks he knows of a remedy, I would thank him to publish it in the Cultivator, for the benefit of the agriculturists. There is something very mysterious, to say the least of it, and requires investigation.

CALEB N. BEMENT.
Three Hills Farm, Nov. 1st, 1840.

WILD CHERRY AS A STOCK.

Messrs. Editors—For the information of your correspondent, Mr. Dille, in reply to his inquiry in the last number of the Cultivator, I would state that in June last I called at the nursery of Mr. Floy, Harlem, New-York, where for the first time I saw the wild cherry, (*Prunus Virginiana*,) used as a stock for budding. He had two or three rows of them budded with plums last year, (1839,) I believe by way of experiment, and with what I would call tolerable success, half or two-thirds of them having taken; they were doing well, having made shoots averaging two feet long, (then June,) of the most luxuriant and thrifty appearance. I am not aware whether he has tried the peach or apricot.

For any further information I would refer your correspondent to Mr. Floy, who I have no doubt will cheerfully impart it. A READER.

Useful Recipes.

To Cure Scratches in Horses.

Wash the feet, or parts affected, with soap suds, wipe them clean and dry, and then apply white lead ground in oil, as thick as can be smoothly and evenly laid on. Exercise moderately, keep the animal dry, and in most cases, the first application will cure effectually. Should a second be necessary, wash off the old lead, and apply with a brush as at first. Six or eight days should intervene between the applications.

Staggers in Swine.

To cure this disease, De Grauchy recommends cutting a knot in the roof of the mouth till the animal bleeds liberally, and then rubbing it with powdered loam and salt, and giving it a little urine to drink. Pigs have openings on the inside of the fore legs below the knee, from which, when in health, a small discharge is kept up. A stoppage of these orifices, is supposed to be one cause of the staggers; and rubbing them open with a cob or other rough material, will usually effect a cure.

Sore Throat in Swine.

Turn animals so affected, into an open pasture where there is fresh feed, and ground to root. It is a disease resulting generally from confinement. Pounded charcoal mixed with food, where pasture cannot be had, or room for exercise, is one of the best preventives of disease in swine.

Horn Distemper.

A "Practical Farmer" in the Boston Cultivator, while he admits that the application of spirits of turpentine is good, asserts the use of hot brimstone is still better, for the cure of the horn ail. He turns one spoonful boiling hot into the cavity just between the horns.

Scours in Animals.

A writer in the Maine Farmer, recommends for this disease, finely pulverized bone. We have never seen it tried, but from the nature of the substances that constitute bone, such as lime to correct too great acidity, and gelatine to smooth the irritated surfaces, it is probable its employment would be useful.

Croup, or Hives in Children.

Cut onions into thin slices, between and over them, put brown sugar. When the sugar is dissolved, a teaspoonful of the syrup will produce almost immediate relief. The Editor of the Farmer's Advocate says he has known the onion used for this formidable disease, but prepared differently. "Wrap the onion in a wet cloth, or cabbage leaf, cover it with hot embers, and roast it slightly which may be done in a few minutes; the juice then pressed out and sweetened with sugar." Prepared in either way, it is pronounced effectual.

Scours in Calves.—When the calf is attacked, it should be put in a warm, dry stable, and not be permitted to suck more than half the quantity of milk it is wont to do; but should be put to the cow regularly three times a day. Make a tea of equal portions of white oak, beech, dogwood and slippery elm bark, and give small doses twice a day, and the calf will soon recover.—*Agriculturist.*

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CULTIVATOR:

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CULTIVATOR AND THE GEN. FARMER.

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WILLIS GAYLORD AND LUTHER TUCKER, EDITORS.

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DESIGNED TO

IMPROVE THE SOIL AND THE MIND,

AND TO

Elevate the Character and Standing of the Cultivators of the American Soil.

WILLIS GAYLORD AND LUTHER TUCKER, Editors.

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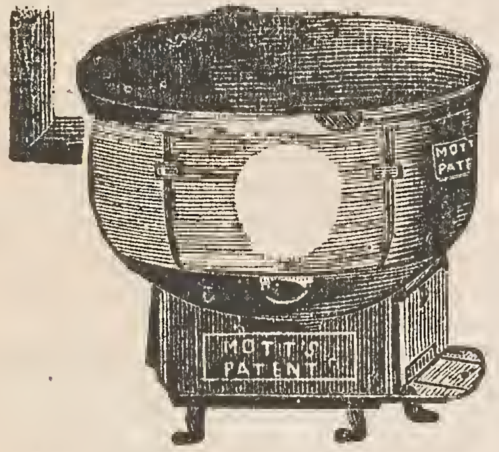

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Dickson on the Management of Poultry etc. 12mo. $1.50. London.
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The Flower Garden, its cultivation, arrangement etc., with list of plants, etc., 12mo, colored plates, cloth, gilt, $3. London, 1839.
Liebig's Organic Chemistry, and its Application to Agriculture, edited by L. Playfair, 8vo, $3.50. London, 1840.
Lindley's Guide to the Orchard and Kitchen Garden, $5. London.
Loudon's Encyclodædia of Agriculture, $11. London.
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Low's Elements of Practical Agriculture, new edit. 8vo, $5.50. London.
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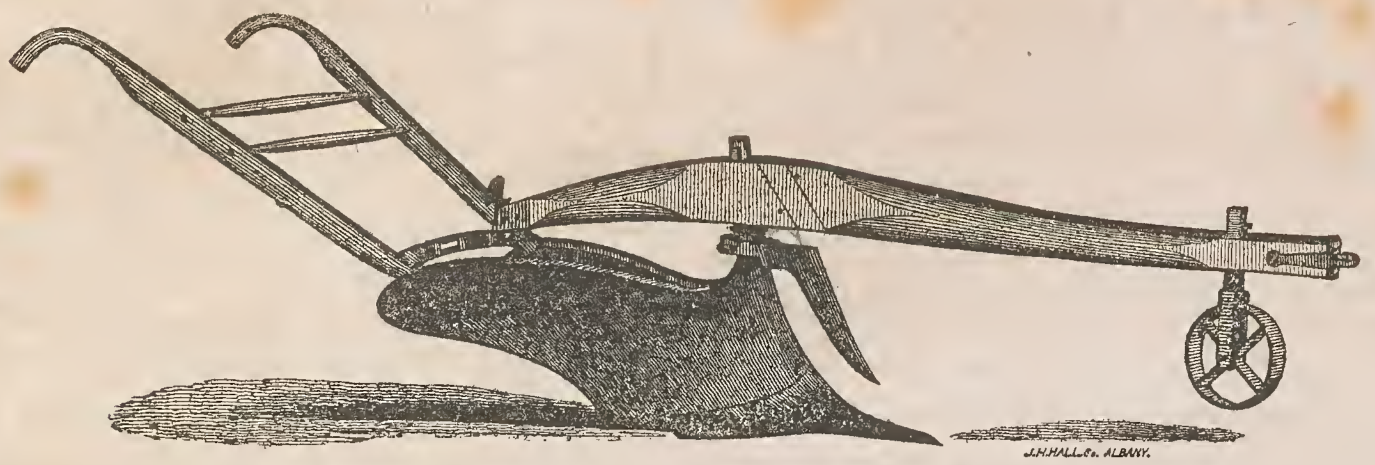
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The cut above is a correct representation of the plow, showing the whole of one side and a small part of the mold-board on the opposite side, and in way of explanation would say, both sides of the plow are precisely alike, and the mold-boards so formed that they both serve as land side and mold-board, when used as such. The standard is round and serves as a pivot for the beam to revolve upon, allowing it to traverse on the cross piece between the handles, and when the beam lays near either of them, it is then parallel or in line with the mold-board on that side, and that one is then the land side, and the other serves as mold-board. In coming round to plow back, the plowman touches with the foot, the hold-fast passing through the socket on the end of the beam, pressing on it in the same manner as we do on a thumb latch to open a door, which disengages the hold-fast from a catch, the team at the same time by turning round carries the end of the beam to the opposite handle, where the hold-fast by a small spring behind it forces it into a catch as on the other side, confining the beam until removed as above described. The catches above referred to, can be moved towards or from the handles in a groove on the backside of the cross piece in order to make different width of furrow, which can be varied from eight to sixteen inches, and still wider when the furrow is thrown down hill.

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The premiums which have been awarded it, have always been for plowing done on *level ground*. For side hill it has no competitor. The advantages peculiar to this plow are several, and among them may be mentioned,

1st. It is either a right or left hand plow, admitting the furrows all to be laid one way.

2d. By the simple arrangement at the end of the beam already mentioned, the width of furrow can be varied as circumstances may require.

3d. By placing one of the catches in the hole for that purpose in the center of the cross piece to confine the beam, it then, at the same time, throws a furrow both ways, preparing it for plowing between corn or anything planted in rows, and is found very convenient for digging potatoes by plowing deep and splitting the rows or hills; also for ditching, and plowing in green sward, making what is called "green ridging," preparing it for planting corn, by throwing two furrows together and planting on the ridge. Allow me to say to farmers who have not adopted this plan, that I have seen great crops produced from such a process.

4th. If the farmer has side hill to plow, he is, with one of these, prepared for it; and last not least, I am convinced by many experiments I have made with a dynamometer and other methods, to ascertain the power necessary to do the work, that a plow on this principle admits of a form or construction of mold-board, not available in the common horizontal or swing plow, to render it of lighter draft.

Three sizes are now made; No. 3, weight of castings 70 lbs.; No. 4, 80 lbs.; and No. 5, 90 lbs. No. 4 and 5 sufficiently large for breaking up fallow ground or green sward, and No. 3, also in light soil or sandy loam.

The price is $10, $10.50 and $11, graded according to size. Coulter, if added, $1.50, and wheel $1.00 extra; shares 50 cents.

JUSTUS SLATER.

Ithaca, Nov. 16, 1841.

Pitts' Separator.

THE subscriber would respectfully give notice, that he continues to manufacture his machines for Thrashing and Cleaning Grain, at the old establishment on Patroon's Creek in the city of Albany, N. Y.

He will furnish the Separator with or without Thrashers.

N. B. The Separator without the Thrasher is designed to receive and clean the grain as it comes from the common thrashing machine.

Price of Separator with the Thrasher $150, and without the Thrasher, to attatch to the *common* thrasher $85.

I also manufacture a first rate 4 horse sweep power which I sell at $100.

Any one who wishes to go into the manufacture of my Separators in any State, County or Town, not already disposed of, can do it on reasonable terms, and all letters post paid, wishing information on the subject, addressed to the subscriber will receive prompt attention.

JOHN A. PITTS.

Albany, November, 1841.

To Farmers.

THE writer, a young man 23 years of age, is desirous of obtaining a situation with some practical farmer; he has received a liberal education, and for a number of years has been engaged in mercantile pursuits, with the exception of the last eighteen months, during which time (being out of employ and from childhood having had a taste for farming,) he has devoted himself to the reading of agricultural works. He would prefer a situation with some farmer advanced in life, under whose guidance and direction he would be, and at the same time take charge of the farm, receiving for his service a share of the produce. He is active, persevering and fond of work, and is willing to go to any part of the country, provided it is healthy. Satisfactory testimonials of character, ability, &c. will be given.

Any person feeling disposed to make an arrangement with the writer, can hear further from him by stating his address through the columns of the Cultivator.

December, 1, 1841.—$2.

Very Valuable Farm in Ohio For Sale.

THE subscriber (wishing to employ all his means in commercial operations,) offers for sale *at a great bargain*, the celebrated "*Estramadura Farm.*" This is one of the best farms in the State of Ohio; situated 1½ miles south of Massillon, Stark county, extending over a mile on the Ohio Canal; containing 408 acres of *very choice land*, (300 of which is under cultivation.) It is a part of the original farm noticed by "a Traveler," in the Oct. number of the Cultivator. It is admirably adapted either for *wheat* or *wool* growing; there being extensive accommodations for sheep on the premises, and in the immediate neighborhood of the principle *wheat market* in the state. For more particular information apply to the subscriber at Massilon, Ohio. JAMES L. REYNOLDS.

Mount Hope Garden & Nurseries, Rochester, N. Y.

THE proprietors of this establishment offer for sale a general assortment of nursery articles; comprising Fruit and Ornamental Trees, Flowering Shrubs and Plants, Tulips, Hyacinths and other Bulbous Flower Roots with a choice collection of Double Dahlias.

Also a large and fine collection of Green and Hot House Plants, including Chinese Monthly Roses, Geraniums, Chinese Azaleas, Cammelias, Cape Jasmine, Cactuses, &c. &c.

Orders, large or small, for any of the above, will be promptly and faithfully executed, and charges in all cases will be very moderate. A liberal discount will be made to those who are forming new establishments, or who wish to act as agents in their neigborhood.

Persons ordering from a distance may rely on having securely packed for transportation, and marked and shipped as their orders may designate, or if left to us, by the best route. Gardens or pleasure grounds will be laid out, and skillful gardeners furnished on reasonable notice, and information on any subject connected with the business, will be promptly and cheerfully imparted.

It is expected that persons unknown to the proprietors, will either accompany their orders with a remittance, or the name of a guarantee in the city of Rochester or vicinity. Address (post paid,) ELLWANGER & BARRY.

N. B. Our Fruit Trees comprise the most desirable varieties, and their genuineness may be fully relied upon, as they all have been propagated from trees whose qualities have been sufficiently tested.

Rochester, November, 1841.

Prince's Nurseries and Gardens.

THE new Catalogues are now ready for distribution, *gratis*, to all who apply *post paid*, per mail. They comprise the immense assortment of Fruit and Ornamental Trees, Shrubbery, and Plants, Bulbous Flower Roots and Dahlias, Green House Plants, Garden Seeds, &c. All of which now are at much reduced prices. Orders per mail, to Wm. R. PRINCE, Flushing, will receive prompt attention.

Durham Short Horn Cattle.

THREE thorough bred Cows and two three year old Bulls. Herd-book animals; bred by the late Stephen Williams, Esq. Also, 30 Dishley or New Leicester Bucks and Ewes of great size and beauty. For sale by the subscriber, at Northborough, Worcester county, Mass.

B. D. WHITNEY.

South Down Sheep.

FOR sale, South Down Sheep raised from the stock of the Marquis of Torrington, as pure a breed of sheep as any in England. Enquire, (post-paid,) of CHARLES M. ARMSTRONG, near Newburgh, Orange county, N. Y.

THE NEW WORLD.

EDITED BY PARK BENJAMIN.

This well-known journal of Literature, Science, Art and Intelligence, continues to increase in the favor of the public as its merits become more widely known. The most distinguished literary men of the age, both in America and England, are engaged as contributors to its columns. Besides Donald MacLeod, resident of London, Francis J. Grund, in Bremen, and Brantz Mayer, in the city of Mexico, it has correspondents of the first order of talents in Constantinople, Africa, and other parts of the world, who will give to the New World an interest and value which no other paper on this continent can possess. Proof sheets and copies of popular works issued from the prolific press of England are received and given to the readers of the New World in advance of their ordinary receipt in this country. All new discoveries and advances in the Sciences and Arts find an early place in its columns. Each number is embellished by one or more

SUPERB ENGRAVINGS ON WOOD,

done in the best style of the art. These arrangements for the gratification of the readers of the New World, which render it without a rival in this or any other country, have been made at a vast additional expense; and the proprietors feel a confidence that they will meet a full reward from the enlightened people of America.

The columns of the New World are uncontaminated by party politics, and its ample pages unsoiled by profane and improper jests, vulgar allusions or irreligious sentiments. Thus the New World is made an unexceptionable Family Newspaper.

CHARLES O'MALLEY

is published in the New World, and all new subscribers who commence with the present or 3d volume, will receive the 1st volume of this inimitable work gratis.

Terms—Three Dollars for one year, or $5 for two years—payable invariably in advance—for either the Folio or Quarto Editions.

Postmasters are authorized to remit subscriptions free of expense.

☞ Any individual who will procure *five new* subscribers, from the commencement of the present volume shall receive a sixth copy for one year gratis, and to each will be sent a copy of the 1st vol. of O'Malley. The remittance must be in New-York or New-England funds, post-paid or free. Address

J. WINCHESTER, Publisher,
30 Ann-street, New-York.

"THE CULTIVATOR."

TO FARMERS AND GARDENERS.

THE CULTIVATOR, (a consolidation of Buel's Cultivator and the Genesee Farmer,) a monthly periodical, designed "to Improve the Mind and the Soil," and "to Elevate the Standing and Character of the Cultivators of the American Soil." Willis Gaylord and Luther Tucker, Editors. Published at Albany, (N. Y.) by Luther Tucker, proprietor, at One Dollar per annum—Six Copies for Five Dollars—20 per cent commission on twenty-five or more subscribers—25 per cent on one hundred or more. All subscriptions to commence with a volume. All payments to be made free of postage. ☞ The paper can be furnished from its commencement—Vols. 1, 2, 3 and 4 at 50 cents each; and Vols. 5, 6, 7 and 8, at $1.00 each.

The publisher of the Cultivator has the pleasure of presenting to the friends of Agriculture in the United States, the prospectus of a new volume (the 9th, commencing January 1, 1842,) of that periodical. This paper is so well known in every part of the country, as to render a recapitulation of its objects and contents, generally, unnecessary. The range and variety of its articles—its list of contributors, (embracing the most distinguished agriculturists in every section of the Union,) unrivaled in numbers as well as in scientific and practical skill—the superiority of its mechanical execution, and the unequaled number, rich variety and superior beauty of its illustrations, embracing in the last two volumes about

TWO HUNDRED ENGRAVINGS,

representing the improved breeds of

Cattle, Horses, Sheep, Swine, Buildings, Implements, &c.

and on every subject connected with agriculture, have contributed to render it a favorite with all classes interested in the cultivation of the soil, and given it a circulation hitherto unknown among the agricultural periodicals of the country—amounting to about

Twenty-Two Thousand!

Grateful for the very favorable consideration the work has received and the extensive patronage awarded, the publisher would state that NO EFFORTS OR EXPENSE will be spared to give *new* and *increased* interest to the volume for 1842. It is intended to devote a larger portion of the work, (at least *one page* monthly,) to the subjects of GARDENING and the ORCHARD; and to enlarge the department devoted to DOMESTIC AND RURAL ECONOMY, and to the DISEASES OF ANIMALS, so as to render them as useful as possible to *all classes of our citizens*. To accomplish this, such arrangements have been made as will place within our reach all European periodicals and publications important in agricultural and veterinary matters, and they will be made available in such a manner, as, in every respect, to render the Cultivator worthy the patronage it has received, and make it, all things considered, the

CHEAPEST AND BEST AGRICULTURAL PAPER

ever published in this or any other country.

Post-masters and all those kind friends who have heretofore with so much liberality and patriotism, as well as those who wish to "elevate the standing and character of the cultivators of the American Soil," are respectfully invited to use their influence in promoting its circulation by acting as agents in their respective neighborhoods.

LUTHER TUCKER,
Albany, December, 1841. Publisher of the Cultivator.

☞ Editors with whom we exchange are requested to insert the above.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

Cult. Vol. VIII.—No. 1. ALBANY, N. Y. JANUARY, 1841. Cult. & Far. Vol. II.—No. 1.

PUBLISHED MONTHLY.

GAYLORD & TUCKER, EDITORS.

JESSE BUEL & CO. PROPRIETORS.

One Dollar per annum—Six Copies for $5.

(PAYABLE ALWAYS IN ADVANCE.)

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Subscriptions to commence with a volume; and the money to be sent free of postage.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

TO THE FRIENDS OF AGRICULTURE.

In offering to the public the first number of the Eighth Volume of the Cultivator, and in tendering to our personal friends, and the thousands who have already given us assurance of their support, the compliments of the season, we feel a pleasure in the confidence that the satisfaction we experience is reciprocal, and that we are but exchanging sentiments of kindness and good will. We enter upon the year under favorable auspices; with our means of usefulness greatly enlarged; and the experience of the past gives us grounds of hope for the future. As conductors of the Cultivator, we should be doubly ungrateful not to acknowledge the many proofs of confidence and kindness we have received. Our friends, therefore, who have so cheerfully interested themselves in our behalf—those who have so liberally and effectively aided us by contributions for our journal—Conductors of the public press who have copied our Prospectus, or noticed our journal—Postmasters who have rendered us such services and facilities in the transmission of money, &c.—in short, all friends of the cause of agriculture into whose hands this paper may fall, will permit us to wish them peace and prosperity, and a happy, thrice happy, New-Year.

AGRICULTURAL MEETING.

The friends of agriculture in New-York, will recollect that the annual meeting of the State Agricultural Society will be held at Albany on the 2d Wednesday of February next. The interests of agriculture demand a full and explicit expression of the will of the great mass of farmers in the State, with regard to many topics connected with an improved husbandry, the formation and support of County Agricultural Societies, semi-annual meetings of the State Agricultural Society, the establishment of Agricultural Schools connected with experimental farms, an Agricultural survey of the State; in short, on all subjects which can advance the cause of good farming. In no way, it is believed, can this desirable object be so well attained as by a meeting of farmers and those engaged in the cultivation of the soil, from all parts of the State; certainly in no way can the wishes of the people on the matter be more fully elicited.

No one can doubt that an efficient State Society, conducted with spirit and ability, serving as a rallying point to the friends of Agriculture, holding semi-annual meetings in two or more places of the State, developing and embodying in a series of reports from able and practical farmers the best methods of culture, cropping, and rotation, would prove of the greatest utility to the country; and it can be as little doubted that if the proper measures are taken, and the right feelings enlisted, if the friends of Agriculture awake to the interests at issue and give a prompt and general attendance, these desirable results may be obtained. We would suggest to the numerous county or town Agricultural Societies that are now organized, the propriety of being fully represented at the coming meeting of the State Society. These associations, many of which have been formed the past year, exhibit the most gratifying proof that the people, the farmers themselves, the very individuals most interested. have begun to act; and the spirit of zeal, liberality, and devotion to the great source of state and national prosperity exhibited thus far, we hope will not diminish until the end of their organization is fully accomplished.

The time has arrived when the flourishing state of the country, and all its great branches of industry, warrant the expectation that something will be done by the State, to aid in the advancement of Agriculture. Much is not asked or desired. The farmers neither wish or require Societies with bloated resources, and exercising an overshadowing influence, but they ask, and reasonably, from the treasury of the State they so liberally aid in replenishing, sums sufficient to give an impulse to the County Societies, and enable the State Society to perform the ends for which it was instituted. We do not presume to dictate, but can there be a reasonable doubt that had the legislature appropriated a small sum to have been apportioned among the County Societies, and distributed as premiums at the late fairs, that the State would not have been much the gainer eventually? Does any well informed man doubt that if three or five thousand dollars was appropriated to the formation of a Board of Agriculture, and employing one or two Commissioners to make an Agricultural survey, that the money would not be returned with interest to the coffers of the State? And if a grant of two or three thousand dollars was annually made to the State Society to be expended in premiums at its semi-annual meetings, who can doubt that the benefit would far more than counterbalance the trifling expenditure. We merely allude to these things, because in this way small sums may be made to bear most immediately and effectually on the prosperity of agriculture.

We earnestly invite the attention of all well wishers to the farming interests to this subject. The legislature of the State, will not, we are confident, refuse to listen to the voice of the people properly expressed, and we hope that the meeting which is to be held in Albany, on the Second Wednesday of Feb. next, will be so attended as to leave no room for doubt on the subject. We publish this month several valuable communications on these topics which will be read with interest. We particularly request the attention of the managers of Agricultural Societies to the suggestion of our respected correspondent, T. C. Peters, that the Cultivator be furnished with the names of the President and Secretaries of the various Agricultural Societies in the State, as furnishing when published, great facilities for address, and an interchange of opinions. All such lists forwarded us will receive a place in our columns. It is to be hoped that the Committees appointed at the last meeting of the State Society to prepare reports on various subjects of interest to the farmer, will be prepared to make them at the next meeting. New-York can, if she will, have a State Society second to no Agricultural Society in the world; let the meeting of February demonstrate that she both can and will.

PREPARATION OF BACON.

It is not uncommon to hear foreigners, and particularly Englishmen, complain of the undeviating use of pickled pork in this country, while bacon is so much neglected. There may be two causes for this,—one is in our habits of living, which renders the daily use of meat indispensable, and can be gratified in no other way so certainly; and the other the difference in the temperature of this country and Great Britain, which renders the summer preservation of bacon more difficult here than there. There can be no doubt, however, but that the more common use of bacon among our farmers, would prove an essential addition to their comfort, and give an agreeable variety to a principal article of their food. In this country, the idea of *smoked meat* is invariably associated with the word bacon, but such is not the case in England. It is there applied to all meat salted and dried, whether by smoking or otherwise; and large establishments exist in which bacon is prepared by drying, with the aid of stoves without smoke. Among the farmers this operation of drying is performed by suspending the flitches from the beams over the kitchen; or where smoking is to be added, hanging them in the chimney. During the process of smoking, oak wood is preferred, and when completed they are placed on the racks over the kitchen for use. In this country we have heard of but few instances in which the making of bacon without smoke has been attempted, and we shall condense from the British Husbandry and other sources the mode there adopted.

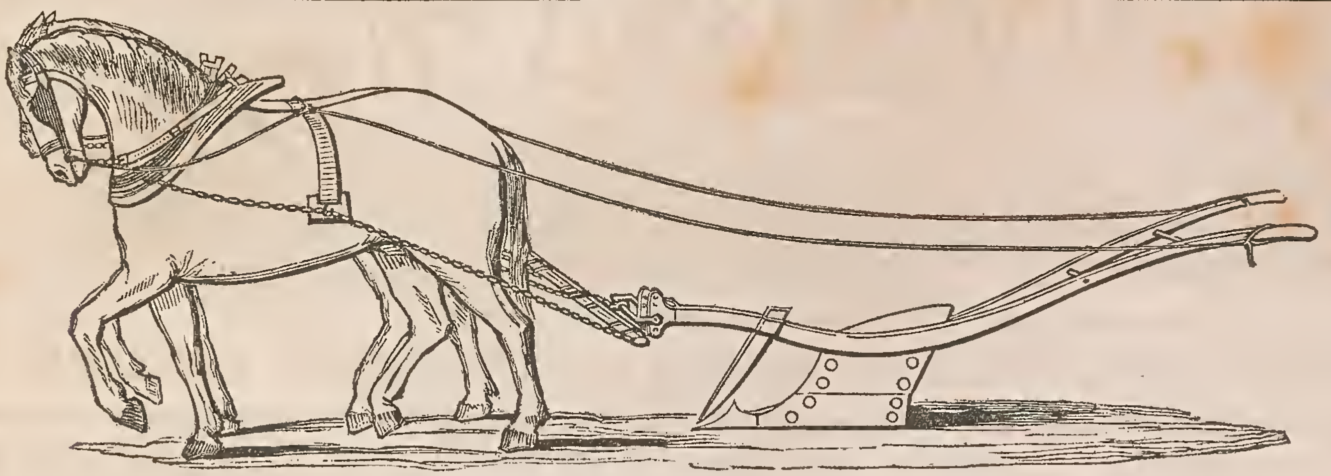
The animal fasts twenty-four hours before it is killed; and in the operation of dressing all bruising is avoided. The scalding is usually performed by cloths laid on the animal, on which hot water is poured till the hair starts easily; or where bacon for smoking is made, the hair is singed off by burning with straw, and to this the superiority of Hampshire bacon is attributed. After dressing, the pig lays twenty-four hours to cool; the head is then cut off close to the ears; the feet cut, leaving enough of the leg to prevent disfiguration; the body split down the middle, and laid on a table. The ham is then cut from the side by the second joint of the back bone. The spare-rib taken out, and the shoulders taken off at the first rib next the shoulder. Both hams and shoulders must be trimmed carefully, their corners rounded, and all lose fat taken off. Thus it will be seen, that the body of the hog is made into six pieces, three on a side, the ham, flitch, and shoulder, although in common parlance all these are termed "flitches of bacon," when cured.

As is the case in this country with the pickling of pork, the salting of the meat is there performed differently in the several sections of the country. In Westmoreland, the flitches or hams, after trimming, are rubbed hard with bay salt, and left on a stone bench to drain off the brine. After four or five days this rubbing is again performed, with an addition to the salt of about an ounce of finely powdered salt petre to each ham, afterwards suffered to lie for a week and then hung up to smoke or dry. When the weather is warm they are wrapped in paper and packed in oat chaff. In Berkshire the flitches are first rubbed with the common salt and salt petre, and then laid in a trough where they lie for three weeks or a month, according to their size, being frequently turned, and are then taken out to dry. In preparing the celebrated Witltshire bacon, "the flitches are laid in large wooden troughs, and sprinkled over with bay salt, then left for twenty-four hours to drain off the blood and superfluous juices. They are then taken out and wiped thoroughly dry, and some fresh bay salt previously heated in a frying pan is rubbed into the flesh until it has absorbed a considerable quantity." This process is continued four or five successive days, and they are then kept in brine five weeks, when they are hung up to dry. In drying or smoking, the neck of the flitch should hang downwards, and the operation is usually performed in about a fortnight, although large hams will require a longer time. They must be kept at all times quite dry, and neither bacon or ham should ever be preserved in cellars or damp places. The side pieces lose little in drying, but about one-sixth is calculated for the loss in hams.

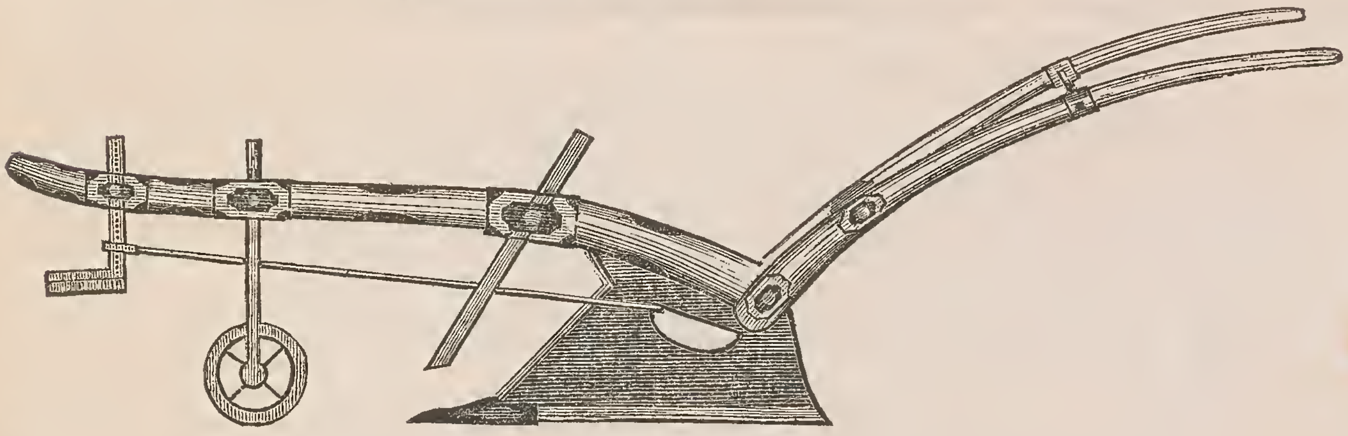
Among the few in this country who have attempted the curing of bacon in the English mode, is Mr. Letton, of Tennessee, who in the "Agriculturist," (page 184,) has thus in substance described the mode of preparing it. The meat must lie in salt from 24 to 48 hours, when the lose salt is brushed off and the meat hung on hooks from the joists to dry. When warm weather comes on, it is necessary to guard against the fly, and this is done by bags made of cheap cotton cloth, drawn over the bacon as it hangs, and the mouth of the bag tied close around the string by which the flitch is suspended.

There can be no question that lying in salt too long is injurious, making the meat hard and inferior, but the time allowed by Mr. Letton would seem hardly adequate for the salt to impregnate a ham sufficiently to preserve it well. We think too Mr. Letton is in error, in asserting, as he does, "there is no such thing as smoking of bacon and beef in England." Since in Sinclair's Works, the County Reports, the Grazier's Guide, British Husbandry, and indeed every English work of note in which the subject is referred to, ample directions are given for smoking, and it is universally spoken of as a common mode of curing meat. It is, however, more prevalent in some districts than others; and we should like to have some of our farming friends who have the conveniencies, make the experiment of curing bacon by salting and drying rather than by smoking. It is to be presumed that the addition of sugar to the salt, in the proportion of 1 lb. of sugar to 3 of salt, and 2 ounces of salt petre would materially add to the quality of the bacon, as well as aid in preserving it when dried.

Yellow bugs and Cucumbers.—"A subscriber" says that a thin layer of tow spread over cucumber and melon plants when they first appear, will save them from the striped yellow bug. Our remedy for the bug, and for the worm in the garden, is to put a coop with a hen and a good brood of chickens there, and these intruders and most others of the insect depredators will soon become scarce.



(*Ferguson's Improved Scotch Swing Plow—Fig. 1.*)



(*Hart's Improved Berkshire One Wheel Plow—Fig. 2.*)

TRIAL OF PLOWS.

Experiments in England and at Worcester, Mass.

Of all the implements used in husbandry, the plow is confessedly the most important. With other tools, defective, or of an inferior quality, by adding more labor, or employing extra help, the difficulty may be obviated, or the harvest secured; but a bad plow is such a radical defect that it will be felt in every stage of the farming, from the putting the plow to the ground to the gathering of the crops, and always injuriously. There are therefore, no questions of more interest to the farmer, than those relating to the proper construction of the plow, its lightness of execution, and the excellence of its work. These two points have of late attracted much attention; and though much light has been thrown upon the subject by the various experiments instituted by competent and skilful men both in Europe and in this country, it may well be questioned whether it is yet divested of all its difficulties. Enough has been done to prove, however, that of several plows working in the same soil and performing equally good work, one will require double the power of another; or, in other words, to make good work with one plow, only two horses will be required, while another will require four. Almost wholly overlooked as this point of ease of draft has been by the farmer, it is not to be wondered at that he sometimes finds his horses much more distressed at the same work some years than in others, or that sometimes they are required to perform work entirely beyond their power, owing to the bad construction of the implement. To show the vast difference in the ease of draft, or the lightness of working, we propose to give some account of experiments that have been made to test this point. To determine the force exerted by the horses in plowing, an instrument called a Dynamometer has been invented, which by the compression of springs in the draft, shows with great accuracy the power expended in the operation.

The most complete set of experiments yet made are those instituted by Mr. Pusey, President of the Royal Agricultural Society of Great Britain, and described by him in the 3d No. of the Journal of that Society. The points Mr. Pusey had in view in his experiments, and it will be seen they embrace the most important questions relating to plowing, were,

1st. The comparative lightness in draft of wheel and swing plows.

2d. The lightest plow absolutely of whatever kind.

3d. The effect of different soils upon the qualities, and chiefly on the draft of the plow.

4th. The comparative tenacity of different soils.

5th. The power of two horses to plow the strongest or clay soil.

Ten plows, embracing some from the most celebrated makers in England, the highly famed Scotch swing plow, and several of those in common use in the different districts of the kingdom, were selected by Mr. Pusey for his experiments, and he was aided by the presence and advice of some of the most distinguished agriculturists in the country. The plows were worked by skillful plowmen; and, as much interest was attached to the experiment on the Scotch plows, a Clydesdale span of horses and a plowman accustomed to the plow were sent up by Lord Moreton to manage that part of the trial. The Scotch plow has obtained considerable celebrity from the strong praise bestowed upon it by Mr. Loudon, who declares the Improved Scotch Plow to be superior to any similar implement known in England. They are constructed on the principles laid down by Mr. Jefferson, in his celebrated Report on the true shape of the mold-board, addressed to the French Institute, which he showed from mathematical data should be in the form of a gentle hollow curve; while the other plows were more full and short, not raising the earth gradually like a wave, but throwing it over at once. In condensing Mr. Pusey's experiments, we shall select as sufficient for the present purpose, from the list given by him, three plows—1st, the Improved Scotch plow (fig. 1,) made by Ferguson, and entirely of iron—2d, a one wheeled plow (fig. 2,) of wood, with an iron breast, by Mr. Hart, but commonly known as the improved Berkshire plow; and 3d, an old fashioned plow made of wood, and such as is in general use in many parts of England, and is called the old Berkshire plow. Some previous experiments had convinced Mr. Pusey that the Hart plow was of easy draft, and the ones now instituted showed that his impressions were correct.

First Trial.—Field, a sandy loam, free in working, a clean wheat stubble; depth of furrow 5 by 9 inches; a depth and width carefully adhered to; plows drawn by two horses. Power required, given in stones of 14 lbs. each:

Ferguson's improved Scotch swing plow,.....	19	stone.
Hart's improved Berkshire, one wheel,......	14	“
Old Berkshire,..........................	23	“

In this experiment it appears that the Scotch plow was 34 per cent heavier for the horses than Hart's plow. That a plow with its mold-board rusty, or covered with coal tar as is the practice with the maker, runs 6 stone heavier than when clean and bright, in the same soil. That the easiest plows were wheel plows and the severest ones for the horses swing plows. That the old Berkshire would be worse by two stone for 3 horses, than Hart's would be for two.

Second Trial.—Land, a clean bean stubble, with a dark mold on blue clay. The furrow here was 6 inches by 9; and this strong clay was selected to test the question whether there was any plow, with which two horses, without too great distress, could work such lands:

Ferguson's, ...	50	stone.
Hart's, ...	43	“
Old Berkshire, ...	52	“

The difference between the plows was less in this trial than the former; but the power required, and the effect of such severe labor on the horses, were considered as decisive of the question that two horses are *not* sufficient to plow such lands in a proper manner. The average of the first experiment was 18 stone, that of the second, 47, and this within the space of two miles; a fact that should be remembered by farmers, as near, if not absolutely adjoining fields, may require a great difference of power to plow them thoroughly.

Third Trial.—As some of the gentlemen at the trial deemed the principle laid down by Mr. Jefferson, and adopted in the Scotch plow, better adapted to sandy than adhesive soils, a field of brown loamy sand was selected, and the plows were tested at the depth of 4, 5, 6, and 7 inches respectively—width of the furrow, 9 inches.

	4	5	6	7 inches.
Ferguson's Scotch plow, ...	18,	19,	19,	22 stone.
Hart's, ...	11,	12,	16,	18 “
Old Berkshire,.............	22,	21,	24,	31 “

At the depth of 4 inches, the Scotch plow still appears at a disadvantage, but at the depth of 7 inches the plows, with the exception of the old Berkshire, approached in the power required to move them much more nearly. It has been usually laid down as a rule in works on the plow and plowing, that the draft increases rapidly in proportion to the depth plowed, or that if the draft at 4 inches be 18 stone, at 7 inches it will be as 49 to 16, or 54 stone. In mathematical terms, the resistance is according to the square of the depth. This is a very important point, and to test it fully, Mr. Pusey made an experiment with the Scotch plow, in a poor moory soil, of uniform quality to a great depth. He commenced with a furrow 5 inches deep by 9 in width:

Depth in inches.	Draft in stones.
5,.............................	23
6,.............................	22
7,.............................	25
8,.............................	30
9,.............................	31
10,............................	40
11,............................	50
12,............................	50

The difficulty of keeping the plow at the proper depth accounts for some discrepancies in this table; but it proves the law of increase laid down in the books altogether erroneous; since, if that were the true rate, the draft at a foot would not have been 50 stone, but 132.

At this state of the trials, it occurred to Mr. Pusey to ascertain the draft of each plow when merely drawn on the surface without severing the ground at all. The result of several trials was as below, the weight of the plow being also given.

	Surface draft.	Whole weight.
Ferguson's, ...	12 stone.......	15 stone.
Hart's, ...	3 “	12 “
Old Berkshire, ...	8 “	

This experiment proved that the surface draft was altogether in favor of the wheel plows, Ferguson's being a swing plow, and the two others one wheel each. The next experiment by Mr. Pusey, was to determine how much of the power exerted in plowing, was actually expended in moving the soil:

	Gross draft.	Surface draft.	Working draft.
Ferguson's, ...	19 stone.....	12 stone.	7 stone.
Hart's,...........	17 “	3.....	9 “
Old Berkshire, ...	21 “	8.....	13 “

In this experiment, the situation of the Scotch plow and Hart's is greatly changed, and the disadvantage under which the first has labored, seems to have disappeared. It would seem therefore, that the great difference in working between the Scotch plow and Hart's, must arise from the shape of the mold-board, and the want of a wheel or both.

Fourth Trial.—The field chosen was a deep strong loam, good for all kind of crops, resting on yellow clay. It was selected by Lord Moreton, to prove to the farmers of the county that ground usually worked with four horses might be done with two. It offered great resistance to the plow as the table will show; furrow 5 inches by 9.

Ferguson's, ...	35	stone.
Hart's,.......................	23	“
Old Berkshire,................	36	“

The superiority of Hart's one wheel plow over the Scotch plows, was as evident here as before. The Clydesdale horses worked without signs of distress on this ground.

Fifth Trial.—Many farmers attended this trial. The soil was more a clay than a loam. Four strong horses were at work in line, the usual practice, on an old Berkshire plow in this soil, and evidently having enough to do. The gauge showed that in a furrow 5 by 9, the force exerted was 32, and in one of 6 by 9, 34 stone. On this soil the several plows worked as below:

Ferguson's,....	24 at 5 inches,....	26 at 6 inches,
Hart's,........	27 “	.... 30 “
Old Berkshire,.	32 “	.... 34 “

Here it will be seen Hart's plow lost the advantage, for the first time. This was attributed to the fact, that owing to the soft nature of the ground, the wheel "instead of governing the depth of the plow, sunk in the soil, and dragged through it like a coulter."

The Clydesdale horses were much admired in their work; and it was the opinion of the bystanders that such land usually worked with four horses in line, might be plowed with two such horses abreast; though it was said it would cost as much to keep two horses in that condition, as to support the four in their usual working state. On this ground where the horses had a firm footing they worked with perfect ease.

Sixth Trial.—This last trial was made on a damp moory soil, selected by Mr. Pusey as a kind of ground in which the Scotch plows might excel. The ground was a grass ley, the roots much thrown out by the winter, and the surface more than half bare. The following was the result; 6 inches deep.

Ferguson's swing plow, ...	22	stone.
Hart's one wheel,.............	18	“
Old Berkshire,................	28	“

In this case the Scotch improved plow was half as heavy again in its draught as one of the others, (a two wheel plow) and nearly one-third heavier than Hart's.

In summing up the trials, Mr. Pusey remarks that the plow requiring the least draft was Hart's, though in the last trial it was beat by Ransome's two wheel plow, and that of all modern plows the Scotch swing plow was the heaviest, "out of the question on a light soil, and by no means the best on a heavy one." The following table shows the average draft of all the plows on the several soils in which the experiments were made:

Trial 1.	Sandy loam,.........	$17\frac{3}{4}$	stone.
2.	Clay loam,..........	$47\frac{1}{4}$	“
3.	Loamy sand,........	$16\frac{1}{2}$	“
4.	Strong loam,........	$31\frac{2}{3}$	“
5.	Clay loam,..........	$28\frac{3}{4}$	“
6.	Moory soil,.........	20	“

We have have thus given in as condensed a form as possible, all the principal points of Mr. Pusey's experiments, and shall now proceed to copy from Mr. Colman's Report of the Worcester Plowing Match, the results of the most skillfully conducted experiment on the draft of the plow yet made in this country. The experiments took place to determine the award of two premiums offered by the Massachusetts Agricultural Society, of $100, and $75, for the best plows—one plow for lapping furrows, and the other for laying them flat. The following remarks by Messrs. Clark and Putnam, the reporting committee, will enable the reader to understand the experiments :

" The power required to turn over a given quantity of earth by a plow, is a very important consideration. This power can be measured with great accuracy; greater than many of the committee supposed, before they witnessed the operation. The Dynamometer, inserted between the plow beam and the chain, measures with great accuracy the strength exerted by the team. Suppose the strength applied be the same that would be required to raise 336 lbs. over a single pully ; suppose also that the depth of the furrow is six and a half inches with a width of 13 inches. Multiply 13 by 6½ and you will have 84 with a fraction. Now if 336 lbs. of power, will take up and turn over 84 inches of earth, then 112 lbs. will turn 28 inches. Tried in this way, the plows exhibited showed the following results. The power in each case is 112 lbs.

First Trial.—*Plows for lapping furrows.*

By Charles Howard,............	29½	inches.
Ruggles, Nourse & Mason,...	24	"
John Wilson,...............	21½	"
Stevens' Plow,..............	20	"
James Stewart, (Scotch plow,)	19½	"
Cornelius Bergen,...........	18	"
Barnaby & Mooers,.........	17⅔	"
E. G. Whiting,.............	18	"

Second Trial.—*For flat furrows.*

Prouty & Mears,............	27½	"
Charles Howard,............	25	"
Ruggles, Nourse & Co.,......	24	"
Barnaby & Mooers,.........	18½	"
E. G. Whiting,.............	14	"
Another plow by Prouty & Mears, ...	26	"
Another plow by Charles Howard,....	25	inches."

The terms used in this experiment are different from those adopted in the English one ; but those who choose may easily compare them with each other by remembering that 112 lbs. is 8 stone, and making the furrow slice to correspond, which in the American experiment was 84 inches and in the English one 45 ; or 6½ by 13, to 5 by 9. When this is done, the experiments will be found to correspond remarkably well, and the general results of both may be considered as establishing many important truths, some of which have been already pointed out. Thus it will be seen that in the same soil, and under the same circumstances one plow will work 100 per cent easier than another, or that one horse will perform the work of two, or two that of four, with the same ease. Could horses speak, they would doubtless direct a vote of thanks to the men who have invented, and the farmers who use implements, by which one half of the severest labor the horse performs, is done away. We very much question whether our farm horses on our heavy wheat lands do not often perform much more severe labor than the highest rate named by Mr. Pusey, (52 stone, or 723 lbs.) as we have seen them day after day showing more exertion and evident distress in plowing than when drawing a ton a day over hard roads. Whatever may be the obduracy or tenacity of the soil, or the toughness of the sward, only one pair of horses is used, where, under the same circumstances, four would be used abroad, and the question is never asked whether the plow is of a construction so defective as to require 5 cwt. to move it, or whether it works with ease, with a force of 2 cwt. applied. Mr. Pusey estimated the fair draft of the Clydesdale horse at 168 lbs. or 12 stone, and that of a common English farm horse at 112 lbs. or 8 stone.

(To be concluded next month.)

WORK FOR THE MONTH.

In the latitude of New-York, farm work must be considered as mostly suspended during the winter months ; the most that can be done is to prevent past labor being undone, and make such arrangements for the future as circumstances demand. Negligence and inattention is as inexcusable in the winter as in the summer ; and frequently is productive of worse effects. How often do we see farmers suffer such losses in their flocks and herds from sheer inattention or idleness in the winter that a year of hard labor and privation will hardly place them in their first position. If cattle and horses were looked to as they should be, or if sheep and swine were not left to get their living by hook or by crook, we should not see so many walking skeletons harnessed or yoked to the plow in the spring, or so many carcases around the fields and roads inviting the crows to their feast. The prudent careful farmer will consider the winter as the trying time for his stock, and by shelters, and sufficient food, avert its rigor, and prevent its consequences as far as possible.

Horses should always have plenty of litter in their stables ; it answers a double purpose ; first by absorbing and retaining the salts of the urine that fall upon it in a considerable degree, and thus rendering the manure more valuable ; and secondly, by preventing in part that liability to swell, to which the feet and legs of a horse are subjected when standing on a hard or plank floor.

All animals should, if possible, be housed, or provided with shelter. Cattle require much less food when stabled, than when allowed to run at large, as they waste little or none, and comfort is essential to their thrift. More manure is also secured, an object of great consequence to every farmer that understands his true interests. Sheep, if housed, must not be crowded into close stables or houses, as disease is apt to be the result ; and all animals require to have their stables well ventilated to prevent the effects of bad air. Horses are better fed from mangers than racks, and sheep should never have their food so that they draw it from above, as the grass seeds and chaff fall upon and fill their wool, injuring it materially.

Water and salt, are two things too much overlooked, by those who have the care of animals in the winter. If a horse or an ox is led or driven to water once a day, it is considered by many all they need ; when if left to themselves while feeding on such dry food, they might drink at least half a dozen times ; and sheep, by some farmers are forced to go without drink for weeks, if not for months. Nature's laws in such respects, are not infringed with impunity ; and the evil, if not at once apparent, is not the less certain. Salt is necessary to the health of animals. Their fondness for it is proved by the avidity with which the wild animals, the deer and the buffalo of our native forests, collect around the licks or natural brine springs of our country ; and the experiments of Cullen, Berry and others prove that this fondness is founded on principles that render it essential to their health. It should at all times be accessible to them ; summer and winter it is equally grateful, and its good effects are always apparent.

A little attention to the food of animals during the winter is frequently of much use in preventing disease. Horses are more liable to disease than any other domestic animal, and consequently require additional precautions. We have found decided advantage, where horses are fed on grain, from occasionally, or even regularly, giving them a few roots, turneps or carrots, (we prefer the last,) in addition, or in part as a substitute for their allowance of provender ; and since we have adopted this course with the addition of a handful of ashes once a week with their grain, we have not had a beast attacked with bots or with cholic.

Apples put up for winter use in the ordinary way in cellars, require occasional examination, and if any are found beginning to rot, they should be looked over and separated, as they will infect or injure others. Whenever it is necessary to handle winter apples, from the gathering them on the tree to the latest period of keeping them, care should be taken not to bruise them in the least, as such apples soon decay. A record of the qualities for cooking or for keeping of all the most prominent fruits of the orchards should be kept, their liability to particular diseases noted, that the best only may be retained, or propagated. Some trees are very shy bearers ; some produce fruit water cored, or subject to bitter rot, some do not ordinarily attain maturity in the northern parts of our country, and it is only by knowing, not *guessing* at facts, that certainty in the quality or adaptation of particular fruits can be ascertained.

If you wish to have large well flavored eggs, and early chickens, look to your fowls in the winter. Fowls require care and attention, but what is given them is amply repaid to the owner. If profit is consulted too many cocks will not be kept over the winter in the farmyard ; one to eight or ten hens is sufficient. Fowls cost little on the farm, and they contribute much to the comforts of the farmer. Ham without eggs would lose half its value, and what would become of a thanksgiving feast without the crowning chicken pie.

Winter is the season that, among the children of the farmer, and indeed most others in this country, is particularly devoted to education, and every parent should take a deep interest in the common school. It is here the first impulse is given that makes or mars the man ; and it is all-important that what is done here should be done well and effectually. To keep up the interest of all, parents, teacher, and children, it is necessary that the first should occasionally visit the school, and watch the conduct and the progress of the scholars. Children like to see others take an interest in them, and such attention will not be without its influence on the instructor.

It must never be forgoten by the farmer that there are works of charity and kindness, that more frequently press their claims upon him during the winter, than at any other time. While his happy family is clustered around the cheerful hearth ; while his table is loaded with the bounties which a kind providence, personal industry, and a fruitful soil have given him ; while his wood-house is filled, his granaries overflowing, and every reasonable want supplied ; he must not forget there are other less favored individuals or families around ; children destitute of fire and food ; widows and orphans distressed and destitute, all requiring care, and not to be forsaken while the frosts of winter are upon the earth. For the poor there must be employment : for the destitute there must be a supply ; and the honest and industrious, or the unfortunate poor, have claims on the more fortunate, that may not be disregarded. Well directed charity is one of the few acts of life in which both the giver and the receiver are blessed ; let no one then forget the poor.

Last, but not least, in the work to be performed this month, is the duty of extending the circulation of agricultural journals. The man who reads one will feel that every farmer should receive one or more, and will endeavor to make those who do not read sensible of the loss they sustain. There are many excellent agricultural papers in the country, but we are inclined to consider ours at least as valuable as any, and we hope every subscriber to the Cultivator who has a neighbor or friend destitute of such a paper, will show him the work and prevail on him to forward his name to us at once.

ANSWERS TO INQUIRIES, &c.

Bees, Wheat, &c.

" Messrs. Editors—I possess a few swarms of bees, and am desirous to preserve them in hives. I wish to learn through the medium of your periodical, the best method of preventing more than one swarm swarming together ; and likewise the best preparation for washing the hives, if any is required.

Oakland county, Michigan. F. B."

We fear there is no way, where bees are kept in hives, of preventing more than one hive swarming at a time ; or when they so come out, of preventing their incorporation into one swarm, if they will it. Hives of such a size, or so constructed as to prevent the necessity of swarming, would seem to be the only remedy in this case. As to washing the hives, Mr. Weeks, in his work on bees, one of the best authorities in this or any other country, says—" The old custom of washing the hive with salt and water, sweet herbs and other substances to give them a pleasant effluvia should be speedily abolished." Clean, sweet hives, seem to be all that is necessary to content the bee, unless the sun should be shining very hot at the time of swarming, when some protection or shade for the hive, may be proper.

Our correspondent adds,—" I almost forgot to mention that one ounce of mercury, dissolved in water enough to wet one bushel of wheat will kill chess, [query smut?] completely. The wheat should be dried in lime, then sown the same day."

We have inserted the query, because the experience of others has proved that such a solution will prevent smut ; and because we think a preparation powerful enough to kill chess, would also be fatal to wheat. We are sorry to learn that the doctrine of transmutation has disturbed the harmony of the Michigan tea coteries, and set our fair Wolverine friends " by the ears," and will hint for *their* satisfaction that there are two ways in which the case stated may be explained, without recourse to the absurdity of transmutation. In the first place the quantity of chess in the two kinds of wheat sown might have been materially different ; and secondly, as the kind of wheat in which the chess most appeared, (the red chaff bald,) is the most liable to suffer from the winter of any grown in the country, the excess of chess might be owing to the destruction of the wheat by the frost, and consequent greater growth of the chess.

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Bitter Rot in Apples.

" Messrs. Editors—Your subscribers at this place wish to inquire if you know any cure for the bitter rot in apples, which has destroyed much of the late fruit in this and other states for some years past. Please give us such information as you may have on the subject.—*Snoddyville, Tenn.* C. Snoddy, P. M."

The complaint alluded to by Mr. S. is at present not an uncommon one we believe in this part of the United States ; although little or no notice has as yet been taken of it in the public journals. With us, it has as yet been confined to the spitzenberg and winter greening, and these are not always affected. It appears to be owing to a fungus or mildew, which attacks the apple before it is ripe, and the later the ripening, the more extensive the damage to the fruit. When once attacked, the spots spread in the fruit after gathering until it becomes wholly black on the surface, and worthless. If gathered when wet, or before it is fully ripe, fruit suffers more than when secured in good condition. Exposure of all parts of the head of the tree to light and ventilation by pruning, would seem to be one of the first methods suggested for a remedy. A R. I. Greening tree of ours which had for some time produced fruit subject to the bitter rot, on being thoroughly pruned, gave a fruit of superior size, ripening better, and mostly exempt from the rot.

If any of our friends who are acquainted with this disease of the apple, and know of a remedy, will furnish us with a history of its cause, progress, and cure, they will much gratify us and essentially benefit the public.

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Cobble Stone Buildings.

" Messrs. Editors—I have lately purchasd a farm on which are quite a quantity of cobble stones. Wishing to build, I have thought it would be well to use the stone for that purpose. I wish to inquire of some of your subscribers, who have built of cobble stones, the expense of such buildings. A portion of Saratoga county is quite stoney, and I think the owners of such lands might be induced to make use of the stone for building purposes, if assured it would be as cheap, or cheaper, than brick or wood. Will not some one experienced enlighten us, as to the best method of erecting such buildings, the requisite thickness of the walls, the cost per perch, and the comparative cost of cobble, with buildings of other materials.

Saratoga Springs, 1840. J. H. B."

We hope the request of our correspondent, and we add ours to his, will receive from some builder, or from one acquainted with the cost, &c. of such structures, attention, and that such information, detailed and full, will be given as the subject requires. There are many parts of our country where the materials for cobble stone buildings are most abundant; and the houses or barns constructed of them promise to be very durable, as they certainly must be comfortable, and when a little care is taken very beautiful. It is a process by which, in many places, a positive nuisance may be converted into a decided good.

Food for Milch Cows.

"Messrs. Editors—Which is the best feed for cows, cooked or uncooked—how much is sufficient for each cow per day, and how much hay—that is to make them give good yields of milk? I keep twenty cows, and am anxious to learn through your valuable paper the cheapest way to keep them, without feeding swill or still slop. I have no land to raise my own feed, and therefore a word from you or some of your correspondents would be thankfully received by one of your subscribers.

Long-Island, 1840. T. D. W."

We have never known an instance in which food was cooked for milch cows; although from the success which has attended the practice of cooking food for other animals, particularly horses and pigs, there can be no doubt it would be equally beneficial when applied to cows. As our correspondent does not raise his own feed, it would be obviously impossible to state the cheapest mode of keeping his cows, as the price of hay, grain, or roots varies much at different times, and changes must be made to correspond. Soiling has in England been proved to be the cheapest manner in which cattle of any kind can be kept, and is extensively practiced in providing milk for the large towns. In winter, hay and roots, or hay and meal, made of peas, barley, or oats, the hay cut, mixed with the meal and wet, or the meal made into a slop and fed in that form, is considered the food that produces the best milk; brewers or distiller's swill causes an abundant flow of milk for a time but it is of a very inferior quality. We will gladly give a place to any of our friends who have experience on the subjects indicated in our correspondent's queries.

Manures.

"A. C. S." of Shushan, N. Y. has transmitted us the following queries, which we are obliged by want of space to answer in a summary manner, merely adding that full information on most of these topics may be found in the previous volumes of the Cultivator.

"1. Human urine, how is it used?"

By being combined with some substance, such as compost, or common earth, which will retain the valuable salts with which it is charged; such preparation when scientifically made is called urate, one of the most valuable of manures.

"2. Bone dust—where can it be had, and how is it used?"

Bone dust is the bones of animals, or human bones, ground in mills, and is of different qualities, according to the fineness. It is sometimes sown broad cast, but is usually sown in drills with seeds, that its effect may be at once felt. There are mills for grinding bones in the vicinity of Albany, Boston, and Troy, and perhaps in other places in the United States.

"3. Salt—is it a good manure?—if so, how much to the acre, to what crops and at what time should it be applied?"

Cuthbert W. Johnson, of England, one of the most distinguished agricultural writers in that kingdom, has published a work in which he strongly recommends salt as a manure, at the rate of from ten to twenty bushels per acre, to be sown some two or three weeks before the seed is put into the ground. The benefits he asserts are as follows:—"1. When used in *small proportions* it promotes putrefaction. 2. By destroying weeds, grubs, &c. 3. As a constituent or direct food. 4. As a stimulant to the absorbant vessels. 5. By preventing injury from sudden transitions of temperature. 6. By keeping the soil moist." Here, salt has been little used, and its value remains to be tested.

"4. Salt nitre—is it a good manure, and if so, how is it to be applied?"

The London Farmer's Magazine gives many proofs of the beneficial effects of nitre as a manure. In one instance a field of wheat was dressed with crude nitre at the rate of 1½ cwt. to the acre, with the exception of a part of an acre left as a test. At harvesting seven rods of each part was cut and kept separate. The nitred part gave 24 sheaves, 11 gallons of wheat, and 54 lbs. of straw. The part not dressed gave 16 sheaves, 6½ gallons of wheat, and 40 lbs. of straw.

"5. Poudrette—is it human ordure manufactured?—if not, what is it?—in what fashion can it be procured, and where?"

Poudrette is manufactured night soil, usually collected in cities. When manufactured it is packed in barrels, is a dry dust with little odor, and is sown either broadcast or in drills. It may be obtained in any quantity as also *Urate* at the manufactories near New-York. "Flemish soil" is night soil, with slight preparation. In poudrette and urate, we have a nuisance converted into one of the most valuable of manures; easy of application, and certain in its effects.

Sheep for the Small Farmer.

"Messrs. Editors—Just established on a small farm, and wishing to obtain a small flock of sheep, either by purchase, or by raising them, I am induced to ask your opinion as to the best breed for the small farmer, one that can expect to raise little if any more wool than will be required for domestic use. If there are none of the present breeds that possess the requisites of good constitution, hardihood and good wool, what selections in crossing would be most likely to give such animals as the wants of so large a class of our farmers demand.

Oneida County, 1840. A Young Farmer."

We will reply to our friend in very few words;—if wool is his principal object, in getting his flock, then the Merino selected from American flocks, of pure blood and good forms and wool, may be chosen; if the flesh as well as the wool, and comparative hardihood, are taken into the account, then the South Downs are to be preferred; and were we to attempt the production of a flock from any cross for the small farmer, it would be from the South Down ewe and the Merino ram.

Such is the course we would deem advisable in a case like the one stated; but as this is a subject upon which some inquiry has been excited, it may not be improper to give some reasons for the opinion we have advanced.

The sheep principally relied upon for wool suitable for the manufacture of cloths or domestic use, are the Saxon, Merino, and South Downs. For the small farmer, the Saxon, though producing the best wool, has a constitution too delicate, and requires too much attention to be profitable. It is also rather light, and the qualities of form and flesh seem to have been in a great degree sacrificed to that of superior wool. It was at one time supposed that a breed of sheep might be produced by skillful crossing and breeding, having the hardy constitution and form of the old English sheep, and the delicate, silky wool of the Saxons, but after the most persevering efforts it was abandoned; and that nation is now content to purchase their fine wools, and rear their own sheep for inferior wool and for mutton.

Next in the scale is the Spanish Merino, a heavier bodied, hardier sheep, with fine wool, not equal indeed to the Saxon, but still sufficiently good for the best domestic or superfine cloths. Of all the improved, or imported breeds, the Merino is the most extensively diffused in this country, and few flocks can be found in which more or less of the blood does not exist. A few flocks also of pure blooded Merinos can be found, and notwithstanding the varieties of new sheep, possessing more or less desirable properties, that have been introduced, the Merino is gaining ground in public estimation. For the small farmer who can keep but few sheep, and those for the wool, the Merino has proved a valuable sheep.

The South Down is one of the old English varieties of the sheep, produces the finest wool of any of their native breeds, is a hardy, strong constitutioned animal, adapted to hill lands, or close pastures, and by the skill and care of the Ellmans and others has acquired a perfection of form unknown to the earlier specimens of the South Downs. By the connoisseurs of mutton, the flesh of the South Down ranks among the best, and that of the Saxon the worst. There are many fine specimens of the South Down in this country, and we are inclined to consider it one of the most valuable animals yet introduced. Its wool is indeed inferior to the Merino or Saxon, but it has the advantage of them in weight, constitution, and ease of keeping, qualities which give it a strong claim on the farmer.

The above will show why we would, of the three, wool alone considered, prefer the Merino for the small farmer; and will also in part disclose the reasons why we should select the Merino and the South Down to produce a flock from which wool and flesh both were to be objects of greater or less importance.

In rearing a flock by crossing, various opinions have been entertained as to the best method of proceeding; whether the ram or the ewe had the greatest influence on the offspring; whether a South Down buck and Merino ewes; (supposing these varieties selected for the cross) were to he preferred, or South Down ewes and Merino buck should be chosen. Once we might not have considered a decision on this point very essential, but we are inclined now to view it in a very different light, and were we to undertake the production of a flock for ourselves would much rather choose the Merino buck and the South Down ewes, than the Merino ewes, and South Down ram. In the former case we think we should be much more certain of a Merino fleece, and a South Down constitution and carcase, than in the latter, and that result we take to be the real object of the cross.

Without adopting, or endorsing, all the speculations of late writers on the subject of breeding, we think it is a fact that the male leaves his character stamped externally on the offspring more frequently than the female. The horse more frequently gives his color to the colt, the bull his to the calf, and the ram color and fleece to the lamb, than the female parents. It is not invariably the case, but so much more frequently, that the failures must be considered only exceptions to a general rule. This is perfectly consistent not only with those modern theories of breeding that seem entitled to the most consideration, such as Cline's and Walker's, but also with facts and the results of observation. Berry, Lawrence, Cline, and Youatt, all recommended that in selecting a female for breeding, particular attention be given to her vital and nutritive powers, and Walker, although he assigns a different reason from others, is not less decided on this point, while all agree that in most cases, the form and external character is generally derived from the male. Thus, says Youatt, British Husbandry, vol 2, page 457:—"The flock master, attending in the first instance to these general rules, ought therefore to consider what are the defects among his ewes, either as to shape, quality of mutton, or wool, which he wishes to remove, and to select the tups which he uses who possess in an eminent degree the merits in which his ewes are deficient." The opinions of Walker, as shown in a late number of the Cultivator, need not be repeated here; and we think they all justify us in supposing that to breed from South Down ewes and a Merino ram, when the improvements sought are considered, is clearly to be preferred.

The man, however, who crosses the South Down with either the Saxon or Merino, must not expect the silky, soft wool of the two latter. He will find a good wool, sufficiently fine for all ordinary purposes, and will have sheep of good forms and improved firmness of constitution, as the South Down ewes will in all probability convey more or less of their superior vital stamina, and nutritive powers.

Culture of Indian Corn—Large Crop.

Messrs. Gaylord & Tucker—I read the Cultivator till I was satisfied that I could raise 100 bushels of corn to the acre. I accordingly went to work, and the result of my operation was 112 bushels to the acre; the kind of corn used was the common small eight rowed yellow. I think the crop was matured two weeks sooner by the process of hoeing or not hoeing, for I hoed nothing but the weeds, being careful not to make any hill around the corn, keeping the surface of the ground as nearly level as possible. My corn was from one to two weeks earlier than any of my neighbors. Some of them used to ask me what I did to my corn to make it grow so fast; my answer was, that "*I read the Cultivator.*"

This crop of corn was obtained on a hill farm; the hills not being considered as good for corn as the farms on the creek. Now upon this same hill, with a hard pan bottom, though not near enough to the surface to make it wet, or because it has the advantage of being tipped up sidewise a little, I have turned over three acres of stiff sward, that has been mown eight or ten years. I want to plant all or part of it with corn; and being young and inexperienced in the business of farming, I want a little advice. Shall I plow it again to incorporate the manure with the earth? or will a thorough dragging do it? or can I put sufficient upon it by putting it in the hill? I wish to put 30 or 40 loads of long manure to the acre.

One thing more—will the Brown corn ripen before the frost overtakes it in latitude 42°, on the hills in Otsego county? As we have been hoaxed several times with new varieties, and thereby lost our corn, I wish to know the certainty of it.

The Rohan potato does not succeed here according to our expectations, but we will not condemn it yet.

A Subscriber.

New-Lisbon, N. Y. November 27, 1840.

NOTE BY THE EDITORS.

Experience seems to have shown, that for the corn crop it is better to incorporate the manure with the soil, than to use it in the hill. The latter may be admissible where the quantity of manure is small, or when it is fermented or decomposed, but we have known instances in which fresh manures in large quantities deposited in the hill, produced so much heat in fermentation as to destroy or much injure the corn. The plan pursued by Mr. Brown in growing his great corn crops, is to put a covering of manure on his grass land in the fall before inverting the sward, and then in the spring incorporating another dressing of manure with the surface soil either by harrowing or plowing as the condition of the sward may be. We have found the manure from the pig pen, far the best for dunging in the hill; and have never known corn suffer from its use, in whatever way applied. It is probable "A Subscriber" can incorporate his manure sufficiently, without another plowing; and if the first was well done, he will have a more level surface to plant on than if another plowing should be given. A gentleman in Kentucky has reported 158 bushels of corn from an acre, by planting on a level surface; and only "hoeing the weeds," as was done by our correspondent. Such facts should induce farmers to consider whether the old mode of hilling may not in many cases be advantageously departed from.

As to the Brown corn, we, and several of our friends, planted it last year under such circumstances, and so late in the season, that we considered its ripening as very doubtful. It however proved a fine crop, and is a beautiful productive corn. The fact of its rarely or never failing to ripen among the hills and in the northern latitude of New-Hampshire, we imagine to be proof that it will ripen any where where the Dutton corn will; our acquaintance with it would induce us to suppose the Brown corn to be as early as any of the kinds usually grown for crops; farther cropping may he necessary to test its comparative productiveness with us in New-York.

NOTICES FOR THE MONTH,

Or the Spirit of the Agricultural Press.

[As we find it impossible to transfer to our columns many valuable papers, and many interesting facts, in the Foreign and Domestic Agricultural Press, we shall continue the system adopted last year of abridging and condensing such papers as we shall deem most important, or gleaning such facts as will be most useful, and present them to our readers under the form of these Monthly Notices. The origin of the Notice, we shall always be careful to indicate, as far as ascertained.]

Native Hogs in Kentucky.—It is well known that some of our native pigs are real racers, and where wild, are as difficult to be caught as wild buffaloes. A recent letter-writer from that State, thus describes one of the advantages resulting from this breed of pigs, and which is about to be lost by the introduction and rapid spread of an improved and less agile race.

"By the Statutes of this State, (Kentucky) the debtor has the privilege of designating what articles of his property shall be sold under execution to satisfy a debt; and of late it has been a practice in the new counties, among those who seek every means to escape from the pressing demands of the sheriff and constable, to point out the herd of wild hogs in the woods;—they being worth the amount of the execution, the limb of the law is obliged to accept them, 'but the thing is to catch them.' If not taken, they return to the possession of the debtor. A friend of mine saw the same herd of swine offered as satisfaction for execution, five times in one week, and this herd had been borrowed of a neighbor for a few days, and was of the wildest sort, to evade the process of the law. The executions being returned *nulla bona*, the title of the pigs was transferred to their rightful owner."

Improvement of Imported Stock.—It has been too often the case that valuable animals have deteriorated rapidly when imported from England; but the fine cattle taken into Ohio and Kentucky have not been so influenced; on the contrary, in the best herds, there has been a marked advance on the original stock. A traveller in that region says—"I saw yesterday, heifers three years old, that would weigh 1,500 lbs., and which were the most perfect models of beauty; and their calves of this season, now four or five months old, would weigh down an ordinary cow of full growth, and these lusty fellows were bleating after their dams, and tugging away at the teats like young sucklings, for here cows are kept, not for milk, but to raise calves; and no butter or cheese is made on these large stock farms for the market."

Premium Plows.—Several gentlemen have expressed a wish to learn the prices of the plows which competed for the great prizes at the Worcester fair; and what the probable price of the premium kinds would be, delivered at Albany. We cannot say; but as the plow is a very important article of agriculture, if Messrs. Prouty and Mears and Howard will forward us their scale of prices, and for what they will furnish them at Albany on orders, they would confer a favor on many farmers. In the mean time we extract from an able article by Mr. Colman, the prices as stated by him of some of them:

Barnet Vermont plow,......................	$7 00
Bergen New-York plow,..................	7 00
Superseder plow, 2 mold-boards, Barnaby and Mooers, Ithaca, New-York,............	12 00
Howard's plow, without cutter or roller,.....	12 00
Prouty and Mears, without cutter or roller,..	11 50

Farmers, remember the Humbugs, and don't bite.—Most of the readers of our agricultural papers, are aware that a new wheat called the Santa Fe, or Osage wheat, has been introduced into South Carolina; that it produces a cluster of ears on a stalk, and that it is selling rapidly at $5,00 a single head. Now there is every reason to believe that this wheat is nothing more than the *Triticum compositum* of Loudon, or the Egyptian Wheat, figured in his Encyclopedia. It many times appeared in the U. S. under the different names of Egyptian, Wild Goose, Many spiked, Reed, Seven headed, &c. but has always failed of establishing a character for a valuable wheat. That veteran in Agriculture, G. B. Smith of Baltimore, says of it,—"During the twenty years of my agricultural experience, this wheat has been presented to my notice at least twenty times."

Great yield of Corn.—George W. Williams of Bourbon County, Kentucky, has this year grown on one acre and one-eighth of land *one hundred and seventy-eight bushels*, or at the rate of *one hundred and fifty-eight bushels* to the acre. The corn was an early yellow corn, and was planted in rows two feet apart; and one foot apart in the rows. The corn was dropped in a furrow, covered with hoes, the surface leveled, and rolled after planting. The surface between the rows was scraped over with sharp hoes to cut the weeds, which was all the labor the crop received. The soil was good, plowed deep in the spring, and before planting, a thin coat of fresh stable manure was spread over the surface, cross plowed, and harrowed. Mr. Williams attributes much of his success to not disturbing the roots of the corn during cultivation.

Importance of the Silk Culture.—This will be best understood from the facts gathered from public documents and stated below:

Importation of	Silks into the U. S. in 1839,	$23,000,000
"	manufactured cottons,.....	14,692,000
"	iron and iron manufactures,	12,051,000
"	woollen goods,...........	18,831,000
"	sugar,.....	9,823,000
"	linen goods,..............	6,731,000

These are the most important articles we export from abroad, and a glance will show how much silk exceeds all others, as well as the necessity for introducing the culture at once in this country.

Corn in Indiana.—Two brothers in La Fayette Co. Indiana, have raised on their farm the past year, 35,000 bushels of corn. Those who have read Mr. Ellsworth's valuable work on the Wabash Valley, will understand how pork is made from this corn. The hogs are first turned into one field, where they gather the corn for themselves; when this field is exhausted, they are turned into another, and so in succession until they are fattened on the corn eaten, when they are driven to Cincinnatti or some other pork market for slaughtering. 350 hogs are allowed to 100 acres of corn where the latter is of medium quality, or 60 bushels per acre.

Thrashing Machines.—The best moving power for this important part of the grain farm implements, is water. If it should be considered too expensive for ordinary farmers, where water could be had several neighbors might unite. A friend of ours has one moved by water, which executes the business in the best style. At the Oxford Royal Agricultural Show and Fair, a machine was exhibited, which thrashed sixty bushels in an hour. This greatly exceeds the amount of work ordinarily done by American machines, yet we do not deem it incredible, as we have seen that amount exceeded in a run of a few minutes. We have generally found, however, the greater the hurry in thrashing, the greater the waste of the grain, owing to the impossibility of properly separating the grain from the straw by the rakers.

Geological Survey of New Hampshire.—Dr. Jackson's Survey of this State, now in progress, promises to do much in developing the agricultural and mineral resources of the granite State. Iron, copper, and tin ores, have been discovered, in quantities to admit of being profitably worked. The last is comparatively a new metal in this country, only a few chrystals having hitherto been found. The ores found by Dr. Jackson are at the eastern base of the White mountains, are abundant, and yield from 30 to 50 per cent of pure tin. Few metals of greater utility could have been discovered.

Great Yield.—In the Ithaca Chronicle, we find the following statement of the amount and value of production from *one-fourth acre of land* in that village, cultivated by Mr. Aaron Curtis, who furnished it for publication.

140 bushels of onions at	50 cents,.......	$70
600 heads of cabbages,.	5 "	30
50 bushels beets,......	50 '	25
		$125

120 sugar beet seed, produced 1,125 lbs. of beets, or 22½ bushels, occupying 1 1-2 rods of ground, yielding at the rate of 2,400 bushels per acre. Such crops as the above, and those produced by the Editor of the Maine Cultivator, Mr. Drew, on his acre of land, prove the profit of cultivating but a little land, and doing it well, in the most forcible manner.

Cure for the bite of a Rattle-Snake.—The Editor of the Cheraw, S. C. Gazette, says *aqua ammonia* (water of ammonia,) fresh and pure, in doses of a tea-spoonful at intervals of from 15 minutes to an hour, in water, is an infallible remedy for the bite of any snake. This is the dose for an adult, and the medicine is not to be relied upon if the bottle in which it is kept has been frequently opened."

In an early number of the American Journal of the Medical Sciences, is a paper containing a history of numerous cases successfully treated by Ammonia.

Good Crops in Old Connecticut.—The N. H. Register says that Mr. Wilmot of West Haven, the past season raised *two hundred and seventy bushels of corn, and ten bushels of potatoes, on three acres of land;* and the Bridgport Standard states that Mr. Ellsworth raised on a single acre of land *two hundred and forty bushels of ears* of Dutton Corn.

Domestic Silk.—From a communication in the Northern Journal, from Mr. J. H. Leonard, it appears that several persons have fed silk worms in Carthage in this state, the past season, with great success. He says he fed 5000 worms of the pea-nut kind—that not 30 died during feeding, and that the cocoons were very productive and large. He also fed with complete success, about 15,000 of the mammoth white and sulphur kind,—the cocoons being of unusual size, weighing about 133 to a pound—requiring from 1380 to 1400 cocoons to make one pound of reeled silk. "One acre of land," says Mr. Leonard, "properly set to Multicaulis Mulberries, and well cultivated, and fed to the mammoth silk worm, will produce from 120 to 130 pounds of reeled silk, worth $6 a pound which will amount (one acre,) to $700. The expense of feeding, the three first months would not be more than the time of one woman to feed them, and a boy 10 years old to pick the leaves the first two weeks, and the help of a boy or girl the third week, would be all that would be necessary."

AGRICULTURAL SOCIETIES.

Ag. and Hor. Society of Washtenaw Co., Mich.

Michigan is a young State, but she is rich in her agricultural resources, and in the spirit of her active and industrious population. The flour and wheat poured down our canals from the far West, prove her agricultural capabilities; the formation and spirit of her agricultural associations, show she is determined to go ahead, and that she will not linger behind the progress of the times.

We have received from the Secretary of the association named above, W. S. Maynard, Esq. a Report of the proceedings of the Society at their annual meeting in October, 1840, at Ann Arbor; and the reasons which have obliged us to condense the proceedings of such Societies in our previous notices, will oblige us still to pursue the same course.

Premiums were awarded for the best stock, both domestic and imported; and the show of both on the ground was good. Michigan may not equal Kentucky in facilities for raising cattle, but the country will doubtless improve in its adaptation to grass as the cultivation is extended, and we are glad to perceive that in the matter of cattle, she is determined to start right. Her enterprising farmers will also find that it is more profitable to feed the great crops of corn grown on the rich soils of that state to the easy fattening Berkshire, than to the Landpikes so extensively known in the west, as well as elsewhere.

The show of vegetables was very fine. Valparaiso Squashes, Rohan Potatoes, Chinese Corn, Sugar Beet, Blood Beets, Mangel Wurtzel, and Cabbages of magnificent proportions were exhibited from the fields and gardens of the gentlemen present.

The best feelings prevailed at the meeting, and the interest taken by the farmers of the County in the Association, is the best pledge of its succes and extensive usefulness.

Agricultural Society of Barnwell District, S. C.

The Anniversary Meeting of the Agricultural Society of Barnwell District, was held at Barnwell Court House, in November, 1840.

This Society have adopted the excellent practice of appointing a committee at each meeting to make Reports on some assigned topic connected with agriculture, the Reports to be made at the next anniversary. Papers of great practical value are thus furnished the public, and it is probable the same course might be adopted by other societies with much advantage. At this meeting, a Report on the cultivation of cotton, was made by Col. Hammond; on the cultivation of corn, by the Rev. D. Peeples; on the statistics of Barnwell District, by E. Bellinger, Jr., and on Silk, by James Clark. These Reports were ordered for publication in the Carolina Planter.

Fine specimens of the African potato were presented by W. G. Simms; of grapes, by Mr. Prevost; and domestic silk by Mr. Clark.

The Address was delivered by Mr. W. Gillmore Simms, so well known to the public as a beautiful writer, and he did not on this occasion disappoint the high expectation that had been formed of his effort. Of Mr. Simms' oration, the Southern Planter says—

"We shall not attempt to give an epitome of Mr. Simms' Address; to attempt it would be an injustice to that distinguished writer. A copy has been requested for publication, and we hope we may be permitted to present it to the public entire, clothed in its own beauty and excellence. Suffice it to say the address was worthy of the high character which Mr. Simms has acquired as a writer. It was well adapted to the subject and the occasion, and was received by his attentive and delighted audience with long and loud applause."

After the Address the large assemblage of ladies and gentlemen present partook of a fine barbecue prepared for the occasion.

The exhibition of stock was very fine, and of the most encouraging character. The horses, cattle and swine, were much admired for the various excellent qualities that constitute the best animals of each kind.

We take a pleasure in recording these triumphs of Agriculture at the South; particularly at the present time when such an effort is making abroad to destroy the value of the great staple of the southern part of the United States. It shows that they are not confined to the production of a single article; but that their capabilities include others which may by proper attention become as valuable as cotton.

Wayne County Agricultural Society.

At a meeting of this Society on the 15th Nov. in Newark, the following officers were appointed for the current year:—Samuel Hecox, Pres't.—Hamilton Rogers and Harvey Mallory, Vice Pres'ts.—D. M. Keeler, Secretary; R. H. Foster, Cor. Sec'y.; Joseph A. Miller, Treasurer; S. E. Hudson, A. L. Beaumont and Cullen Foster, Ex. Committee. At the same time, Esbon Blackmar and John M. Holley, were appointed Delegates to the State Ag. Society.

Genesee County Agricultural Society.

This Society held its first annual Exhibition and Fair at Alexander, October 14, 1840. It was very well attended, and went off with fine spirit. There were nearly 100 head of blooded animals on the ground, several of which were imported. The Society is permanently organized, and has its next exhibition in October. The following officers were elected for the ensuing year :—Theodore C. Peters, of Darien, President—Gen. P. Stanton, Middlebury; E. Bishop, Attica; E. J. Pettibone, Elba; Trumian Lewis, Orangeville; Phical M. Ward, Perry; Holland Earll, Pembroke; F. P. Pendell, Batavia; Jesse W. Duguid, Le Roy, Vice Presidents.—C. P. Turner, Batavia, Secretary; Thomas Rid, Darien, Corresponding Secretary, and a Manager to each town.

Fair of Tompkins County Agricultural Society.

Of the many County Agricultural Societies that held their meetings the last October, few have seen them go off with greater spirit and more encouraging success, than that of Tompkins county. The concourse of farmers and others was very great; the show of animals, vegetables, agricultural implements, and manufactured articles, such as to gladden the heart of a lover of his country, and encourage to still more strenuous exertions to render her truly prosperous and independent. The pens provided by the society were filled with beautiful cattle, sheep, and swine; and the tables of the show room were laden with fine specimens of domestic skill and ingenuity, honorable to the skill of the workmen, and the fair hands whose taste contributed so largely to the arrangement and to the pleasures of the day. Tompkins county has a good soil, and the vegetables exhibited, and the crops reported, showed that this advantage is appreciated and improved by the farmers. Tompkins county has some fine improved cattle and swine, and the flocks of fine woolled sheep that feed on her hills, are rarely equalled.

Premiums for corn yielding 112 bushels 29 quarts of corn to the acre; wheat 40 bushels 21 lbs. to the acre; Rohan potatoes 300 bushels from three bushels of seed; and for a variety of other articles were awarded. A number of superior Saxony sheep were shown by L. A. Morrell, and fine Bakewells and Lancashires by Messrs. Woodward and Brewer. Among the vegetables was a beet 28 inches long, and the same in circumference, taken from a lot one of which weighed 18 pounds, and a cabbage 15 feet in circumference, and weighed 34 pounds, both grown by Mr. Curtis. Ithaca has for years been celebrated for its manufacturing skill, and the variety of articles produced there, and the number and finish of those exhibited at this Fair demonstrated that its reputation in these respects was well deserved.

In all such matters it is experience alone that can make perfect; and the decided improvement made in conducting the fairs of this year over those of former ones, proves that in this respect errors have been corrected, and new attractions and inducements to action been made effective. 1840 has done much for Agricultural Fairs; 1841 authorizes us to expect still greater things.

Onondaga County Agricultural Society.

FARM REPORT—B. G. AVERY'S.

E. Marks, Esq. has kindly placed in our hands, the Report, which, as a viewing committee of farms for the town of Onondaga, he and J. M. Ellis, Esq. made to the Onondaga County Agricultural Society, at their meeting in October, and from it we select in substance their examination of the farm of B. G. Avery, which they were invited to visit.

The farm of Mr. Avery lies on the west side of the Onondaga valley, two and a half miles from Syracuse, and contains 160 acres of land. Of this 30 acres lies on the side hill, and is in woodland and permanent pasture; on the east part is a tract of about 20 acres of lowland or swale; and the balance is mostly dry arable land about equally divided into gravelly loam, sandy loam, and alluvial deposits, and like most of the soil of the Onondaga valley very fertile; and under good management producing fine crops. The swale is black muck, resting on a strata of clay of a few inches in thickness, and this on sand.

The crops of the present season were as follows:
Wheat, 19 acres, 380 bushels or 20 bushels per acre.
Oats, 25 " 1500 " 60 " "
Corn, 26 " not harvested, but a beautiful crop; and estimated by Mr. Avery from his experience in former corn crops, at 80 bushels per acre, making 2000 bushels.
Buckwheat, 2 acres not threshed, but very good.
Potatoes, 6 " 1500 bushels or 250 bushels per acre.
Hay, 20 " 40 tons, mostly sold by weight.
Sheep 200; horses 3; neat cattle 13; and swine 22.

The sheep on Mr. Avery's farm are a cross in which the Spanish Merino prevails; and the hogs are grade Berkshires.

The oats grown by Mr. Avery are of the kind called barley oat, having a shorter, thicker kernel and less hull or bran, than the common oat; Mr. Avery prefers it as more productive, and heavier than any other cultivated variety, his sometimes weighing from 42 to 46 pounds per bushel.

The corn-field of Mr. Avery was a beautiful sight to a farmer. The rows were planted 3 feet 5 inches apart each way, and so perfectly straight were the rows, that in a length of 60 rods, a deviation of only a few inches could be perceived, and in whichever direction viewed the rows were equally distinct. Such workmanlike planting adds greatly to the ease of cultivation. The corn planted by Mr. Avery, is the eight rowed yellow, and the Dutton; Mr. A. preferring the latter.

Mr. Avery draws his manures from his yards to his fields, and piles it, allowing it to ferment and decompose thoroughly, and become short muck. The committee considered this a waste of its fertilizing qualities, and Mr. Avery admitted such to be the case; but he contended that the destruction of the seeds of weeds by the fermentation, and the consequent ease of keeping his land and his crops clean, and the increase of product from this cause more than compensated him for any loss arising from the escape of fertilizing matter during decomposition.

In the summer of 1839, Mr. Avery applied manure to one part of a field which had been previously mown, inverted the sod, and sowed it with wheat. To another part of the same field, (from which he had harvested wheat) he applied refuse lime from the kiln, to the probable amount of 180 bushels per acre; which lime he deems equal in value to one-third of that quantity of stone lime. The result was, that where manure was used, the straw was large, and the berry somewhat shrunk; where lime was used the straw was not so large, but was bright, the berry good, and the yield the greatest per acre. The ground where the lime was used was more worn than the other.

In the swale before mentioned, the committee observed an improvement making by Mr. Avery, in the shape of a sod fence; the opening from which the turf and earth are taken to make the fence serving the purpose of an open drain. Where a fence and open drain are required at the same point, this will probably be found a cheap and valuable improvement. Mr. Avery estimates the expense of such a fence and ditch, aside from posts and boards, at three shillings per rod.

Agricultural Society of Fredericksburg, Va.

Mr. Garnett's Address.—The annual meeting of this Society, which has now been established many years, took place on the 13th of November, at Fredericksburg. The zeal and spirit with which it is conducted has had a most favorable influence on the agriculture of the district, and the Reports of its annual meetings are always looked for with interest. Virginia is essentially and truly an agricultural state; its resources in this respect are vast, and if they have in former times been too much neglected if her sons in their haste to be rich, have neglected and forsaken their patrimony for the western states, the action of such societies, by improving the culture of the soil, and developing the resources at home, will prevent the drain on the population and wealth of the Old Dominion, that has acted such an injurious part.

The Address before the Society at the present meeting, as at several of the previous ones, was made by J. M. Garnett, Esq., whose reputation as an agriculturist, and powers as a writer, are well known to the readers of the Cultivator, to the pages of which he has contributed many excellent papers. An accurate and untiring experimentalist himself, a careful observer of nature, and the effect of various modes of treatment on the same plant, the details of his experiments in culture which constitute the substance of his addresses, renders them particularly instructive.

In our notices of the Chinese Corn, we have expressed the opinion that it would prove a valuable grain for the middle or southern states, where the season gave a certainty of its ripening, and the following conclusions drawn by Mr. Garnett, from his planting of two years, would seem to show our views were correct:

"1st. It ripens sooner in our climate than any of six or eight early varieties that I have ever tried, except the Golden Sioux, which is very unproductive. Secondly, it is fit to grind by the last of August if planted by the 1st of April, and it will produce roasting ears in 90 days. In the next place it is much more productive than any other dwarf corn. And lastly, I infer from the two trials already made, that in land of medium fertility, it will probably yield more per acre, although not more by the hill, than any of our common large varieties, since you may place it so close as to leave rather more than double the number of stalks."

Mr. Garnett states the yield per acre, at the rate of "6 barrels and 2 bushels," and as weighing within a fraction of 64 lbs. to a bushel. Mr. Garnett's remarks on the changes that take place in the color of corn, are interesting, but we must omit them. Mr. Garnett corrects an error into which this paper had fallen, in relation to the point of insertion of the silk in the kernel, when remarking on Mr. Garnett's statements on that point of vegetable physiology, in a former address.

Mr. Garnett adduces some very strong arguments in proof of the position, that frequent stirring the earth in the summer is the surest remedy against drouth, an opinion in which he is unquestionably correct. As a proof of this, and also of the fact that the roots of corn are rarely injured by moving the earth, he quotes from a letter of Mr. Stevenson, of Arkansas, an extract in which he states, "that in 1834 he planted a lot of corn in a light siliceous soil, with a red clay subsoil, the hills 4 feet apart. This he cultivated solely with the single coulter, running it both ways, 7 or 8 inches deep, the strokes 8 inches apart, and within 4 inches of the plants. The summer," he says, "was very dry and warm, but his corn '*never twisted at any time*,' although the coulter was used 4 times. In September he cut off some of the corn to make room for a building, and found roots more than 20 inches below the surface." In speaking of the qualities of the white and yellow corn, and the higher price commanded by the latter in the northern markets, Mr. G. says—"Not one southern man in a hundred will ever eat yellow corn bread, when he can get white.—To our taste there is nearly or quite as much difference between the two as between a chokepear and a fine seckel or bergamot."

Mr. Garnett describes a most satisfactory experiment he made in planting the shoots or sprouts from growing potatoes, instead of the roots themselves; he found they gave at the rate of 302 bushels per acre, and there were very few small ones among them. In another experiment made by planting the roots on an even surface, 3 inches deep and 18 inches apart each way, and covering the whole with bean vines, dead grass, garden flags, &c., to the depth of 6 inches. This was all the culture they received, and the produce was at the rate of 504 bushels per acre. It has by some been supposed that Irish potatoes could not be produced in the south, but such experiments show the opinion to be altogether a mistake.

This year, as in former ones, Mr. Garnett has been successful with the Ruta Baga, and thinks there can be no serious difficulty in growing that valuable crop in the middle states. As a general rule we should not advise repeating the turnep crop on the same ground, for though we have sometimes succeeded in that way, yet experience here and in Europe seems to have shown that the crop is not uniformly as good, and is more liable to be attacked by the fly on grounds from which turneps were grown before than on others. We know of no crop which is not benefitted by a rotation, though some will doubtless resist the effect of a repetition longer than others.

The Farmer's Register, which has taken a deep interest in the silk culture, remarks that "although there have been sundry cases of success this year, (1840) in raising silk worms, it is nevertheless certain that the far greater number of trials have resulted in general or entire failure;" and Mr. Garnett's experiment in growing cocoons, was not an exception. He estimates the proceeds of his daughter's labor, and that of 6 or 7 other persons, for 7 or 8 weeks, at only about $35; slender encouragement it is true; but he justly remarks, that an unsuccessful experiment should not be deemed conclusive against the culture

The closing paragraphs of this excellent address are directed to an exposition of the propriety and necessity of reducing the rates of postage on agricultural pamphlets and periodicals, as well as written communications for such journals, to that of common newspapers; and he has appended the form of a petition to the Congress of the United States for the passage of a law to that effect. We can see no possible objection either on the ground of its effect on the treasury, or on constitutional ones, to the adoption of such a course, and we are confident the best interests of the country demand the change. We trust the proposition will receive the attention of that body.

"Log Cabin Agricultural College."

Our readers will remember that in the last volume of the Cultivator, we gave some interesting notices of the "Great West," from the Rev. T. S. Hinde, of Mt. Carmel, Illinois, a pioneer of the great west, and a contemporary and associate of Boon and his hardy and daring associates; and particularly of his intention to found an institution combining the advantages of collegiate and agricultural knowledge in the best possible manner.

In a late communication to us he states that the institution has been long in contemplation with him, "and arrangements made to erect it long before the rage for 'log cabins and hard cider' had become the topic of the day;" and in it he more fully discloses the 'means' at his disposal, and which he has devoted to its use. Did our limits permit we would gladly give his paper entire, but must content ourselves with a brief notice. The means specified are as follows :—

1st. Six hundred acres of land for the use of the college, and on which the buildings are to be erected. The necessary improvements for this purpose are now making.

2d. A volume of about 300 pages, entitled Soliloquies or reflections on a visit to the Old Dominion, (Va.) embracing many topics connected with the settlement of the West; the rise and progress of its agriculture and commerce; and the progress of navigation from the original bark canoe to the present majestic steamboat. The table of contents show that it will be a most interesting work. Illustrated with plates.

3d. A work to be entitled the Memoirs of the late Theophilus Armenicus, in 3 volumes, embracing a multitude of valuable facts in relation to western states.

These works are now ready for the press.

4th. Nearly ready for the press, a work on "The Philosophy of Moses, as illustrated in the original Hebrew, and sustained by facts as to custom, and maintained by the learned among the Jews." Two vols.

5th. "Notes on the Antiquities of the West; and the principal transactions that have occurred in the Upper Mississippi and the Ohio valleys from their earliest settlement." Few men have had a better opportunity of being acquainted with every part of the West than Mr. H., and few have witnessed more fully the progress of civilization, and its effects on the Indians. Personally acquainted with most of the powerful chiefs that have flourished or fought in the west for the last 50 years, with ample notes of their speeches, and correct minutes of proceedings at the principal Councils that have been held with them, Mr. Hinde can hardly fail of making a work very instructive.

We have only room to add that we wish Mr. Hinde every success in his efforts both in the cause of Education, and the Literature and History of the country, and trust the opening of the 'Log Cabin College' at Mt. Carmel will prove an era in the progress of agriculture, literature, and civilization in the West.

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

ERGOT. This is an elongated irregular excrescence, curved and dark colored, sometimes found growing on the heads of several of the cultivated grasses, particularly rye, and the smooth stalked June grass, (*Poa pratensis.*) It is generally known by the name of spurred rye. By some this excrescence has been considered a disease, by some a fungus; but the experiments of General Field, of Vermont, would seem to prove that if the young seed is punctured, no matter how, while it is soft, or before the fluid matter it originates begins to harden, the substance which would go to the formation of the grain continues to force its way out, blackens and hardens, and becomes ergot; and hence he infers that ergot in the grains or grasses arises from the puncture of the seeds by insects, or the bursting of their tender envelope from over accumulation of juices. However it may be produced it is an active vegetable poison, and it is singular that the same juices which, elaborated and retained, constitute the farinaceous and nutritive seed, should, when suffered prematurely to escape, produce the offensive and poisonous ergot. This substance is an important article in the *Materia medica*, but requires to be used with great caution, as it is found not always to be under the control of the practitioner, and its effects at times being durably pernicious. Gangrene of the feet, and occasionally death, have resulted from its use by those individuals who have fed upon bread made from grain containing large quantities of ergot, and in some seasons of scarcity in Germany, its effects over whole districts have been serious. To the agriculturist ergot is principally interesting from the loss it occasions him when it occurs in his grain in quantity, by lessening its amount; or when by appearing on his grasses cut for hay, it affects his cattle, producing the formidable disease termed hoof-ail, and frequently destroying or rendering worthless to the farmer the most valuable part of his stock. Though some difference of opinion exists as to the efficiency of this excrescence in originating *all* the cases of disease called by the above name, and many of them may arise from other causes, such as freezing, &c. yet there is a mass of testimony of the most conclusive kind, and such as to preclude all reasonable doubt in the matter, that ergot will produce the hoof-ail in cattle, and as such, should be carefully guarded against. Its effect seems to be to render the circulation in the extremeties, and in extreme cases, of the whole system, torpid and inactive; the consequence of which is, in winter there is a tendency to freeze, and in the summer to ulcerate, mortify, and fall off. Exercise, by promoting circulation, has the effect at times of preventing the natural effect of the poison taking place; but safety can only be calculated upon, by freeing the hay from the poison by a slight threshing before it is given out. Instances have occurred in which farmers, whose meadows and pastures were principally composed of the *Poa pratensis*, losing many of their cattle year after year with the hoof-ail, who found themselves at once freed from every vestige of the disease, by plowing their lands and substituting clover and timothy for the June grass.

ERRATIC ROCKS. Rocks which have been moved from their original position, and transported to greater or less distance, by natural causes, are termed erratic. In some cases the cause of removal may be still operative; in others it appears to have ended before the commencement of the present order of things. In some of the ponds of this country and in Europe, large rocks are found which have moved considerable distances within a few years, but they are always found in situations where they can be acted upon by ice, and to this agent their erratic propensities can clearly be traced. The removal of the erratic rocks or boulders which overspread our whole country, and which may in almost every instance be traced to a more northern origin, is involved in impenetrable mystery; but they serve the agriculturist as an excellent guide in the selection of soils, exercising as they do, by the gradual decomposition to which all stratified or other rocks are subject, no small influence on the earths, and pointing him to the place of their origin by their size or their frequency. In the United States, their course from their original position has been southward, and if the erratic blocks are of lime, greywacke, sandstone, or granite, deposits of the same kind may usually be found not far to the northward.

EVERGREENS. Plants or trees that retain their verdure through the winter of northern latitudes are called evergreens, to distinguish them from those that shed their foliage, and remain leafless during our cold seasons. The most common evergreens are those belonging to the pine and spruce families, of which the white pine, hemlock, black spruce, and yew trees, may serve as specimens. In ornamental planting, evergreens are very desirable; and where they can be successfully transplanted constitute one of the greatest beauties of the landscape. Recent experiments would seem to show that evergreens can be most successfully removed as late as May or June, and that trimming off the branches must be avoided, for the double purpose of preventing the exudation of the gum, and keeping the trunk from the action of the sun. Trees of any kind, and evergreens in particular, when taken from a thick forest, are apt to have the bark burnt or injured by the direct rays of the sun, and close trimming at first, has a tendency to increase the evil. Evergreens are usually long lived, the cypress and the yew furnishing some of the greatest examples of longevity on record in the history of trees.

EXCRETIONS. Plants take up various substances from the earth. Some are intended to remain permanently; some are retained for use at some other time; and a third class are thrown off as superfluous, or noxious. It is this last class to which the term of excretion is applied. It was conjectured by De Candolle, that the superfluous matter in plants was thrown off by the roots; and this conjecture would seem to have been rendered probable, particularly in those plants that ripen their seeds, by the experiments of Macaire. These were made on a variety of plants, such as the French bean, and common cabbage, and while the fact of excretion was established, it was also proved that the process was more active at night than in the day. The roots of the plant, experimented upon, after being carefully washed, were divided into two parts, one of which was placed in a diluted solution of some substance, as acetate of lead, lime water, or muriate of soda, and the other in a vessel of pure water. After remaining in this situation several days, the water was examined, and it was found that the substance taken from the other vessel and rejected by the plant, had, in every instance been more or less of it deposited in the pure water vessel. Admitting the fact of such excretion to be fully established, it would seem to explain many things connected with agriculture most satisfactorily, that have hitherto been very obscure, and furnish new arguments in favor of the improved system founded on a rotation of crops. All the rejected substances must be unfavorable to the growth or nutrition of the plant, and as these must continue to accumulate in the soil so long as the particular plant is cultivated, the unfitness of the soil for that plant is constantly increasing, until it will not produce it at all. This theory is found in most instances to agree with the fact. Experience shows that repeated croppings of the same vegetable more rapidly exhaust and render land unproductive than the same number of crops where a rotation is observed. It has hence been inferred, that the excretion which was injurious to the parent plant, and all of the same kind, was harmless to plants of a different species; or in other words that the soil impregnated with the excretions of wheat to such a degree that that plant could no longer succeed, would be found good for barley, corn or potatoes. As, however, the theory of a specific food of plants explains these facts equally well, it would seem that more experiments were needed before the noxious nature of the excretions of plants could be fully admitted.

EXOGENOUS. (See Endogenous.)

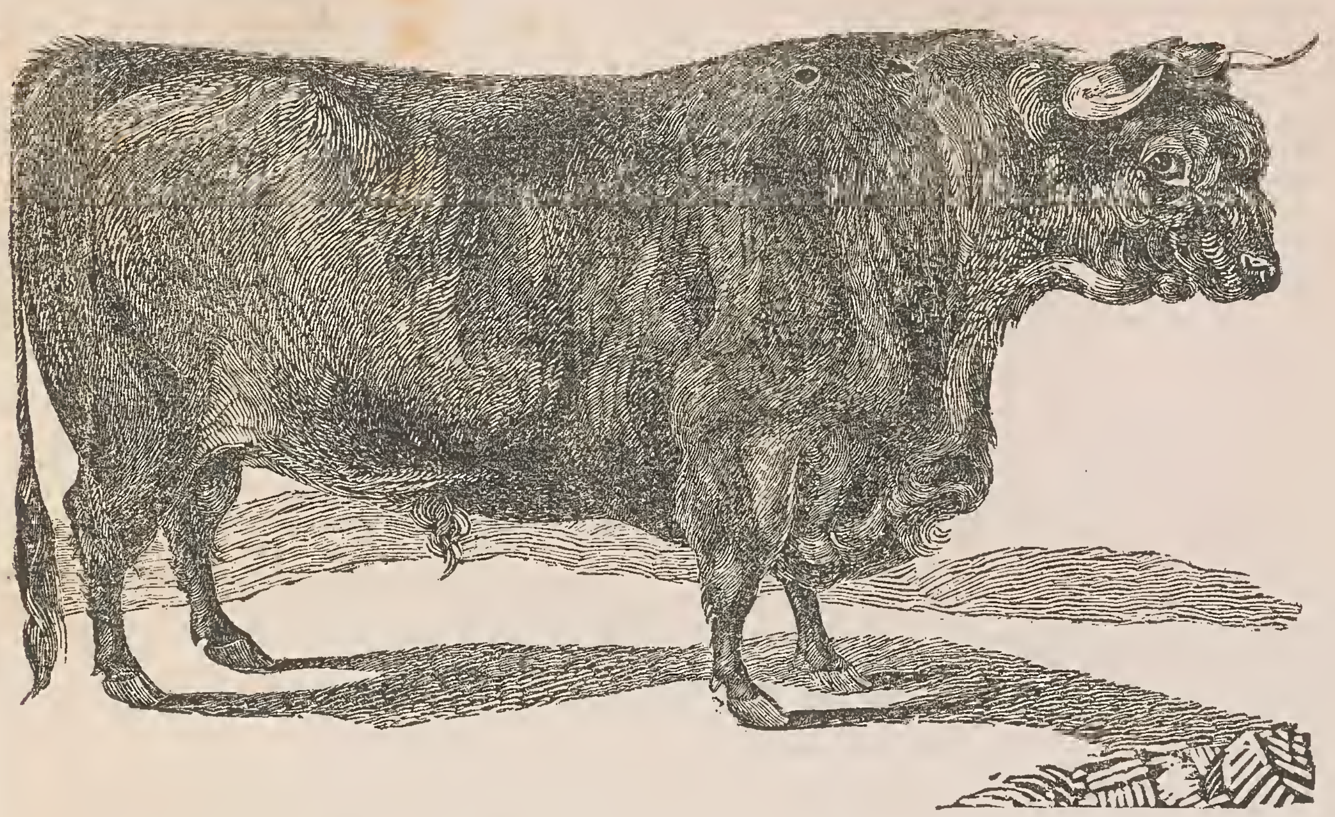
EXTRACT. The *vegetable extract* of Davy, the *humus* of the German chemists, and the *geine* of Hitchcock and Dana, do not appear to differ materially from each other, as all understand by these terms that part of the vegetable which being soluble has been used for nutriment and can be again used for that purpose. When extracted from plants, it has been considered as determining their nutritive power; but we think that the results obtained from experience in feeding animals on the several plants commonly cultivated, do not correspond with those deduced from chemical analysis; a difference probably resulting from the imperfect manner in which chemical analysis is carried on in the laboratory compared with the same operation in the stomach of the living animal. That the productive power of any soil depends in a great measure on the quantity of vegetable extract, or geine, it contains, is very clear, since on this must the plant nearly rely for nutrition. Furnished to plants in too great quantities, or in a concentrated form, it is injurious, and is usually found in soils only in limited amount. Saussure was one of the first to make any experiments with any degree of accuracy to determine this quantity. He filled a vessel with the richest mould or turf he could procure, and saturated it with rain water. After five days the water was pressed out; 10,000 parts by weight, filtered and evaporated to dryness, gave 26 parts of extract; and another experiment similarly conducted on earth from a well cultivated corn field, in 10,000 parts yielded four parts of extract. When treated with alkali or with the salts of lime, greater quantities of extract are yielded than when water alone is used; and hence the nutritive power of any soil must be estimated by the solubility of the humus or geine contained in it, or the materials capable of effecting such solution. Thus the analysis of soils shows that those containing geine, or vegetable extract, and also some of the salts of lime, are the most productive; and explains why ashes or other alkalies act with benefit on lands cultivated, since such usually contain more or less insoluble extract, but which is by the alkali rendered soluble and available to the nutrition of plants.

FALLOW. In the best cultivated districts of England and Belgium, what is called a fallow is a portion of land plowed immediately after the crop is removed in autumn, and is frequently, as need requires, plowed, harrowed, and otherwise made fine, until the time of sowing arrives in the following year. It is thus for near twelve months in a state of movement and æration. The result is, the land is thoroughly freed from the roots of weeds; that the seeds of weeds thus being made to germinate are destroyed; and the eggs of insects being exposed, and the larvæ being without roots or plants to feed upon, must, the most of them, perish. The land is also thoroughly pulverized, and the several parts well mixed together, inequalities removed, and the stones loosened for picking out. The great advantage, however, in such thorough fallowing is found in the complete æration or exposure to atmospheric influence every part receives, by which valuable chemical changes are produced in the soil, and the soil made warmer and more fit for the reception of seed and the production of a crop. But in a large part of every country, and particularly in this, a fallow is a piece of land intended for a crop of wheat, which is fed as long as possible in the spring, broken up perhaps in June, plowed and harrowed once or twice in the course of the summer, and the seed sown and harrowed in in autumn. In this process most of the advantages alluded to above are lost; few weeds or insects are killed; the soil is not made fine or sufficiently warmed and ærated; and it is not surprising that prejudice should have been excited against fallowing by such a half way course. Fallowing is doubtless the most effectual mode of cleaning land, and where it is infested with noxious weeds, such as the Canada thistle, Johnswort, &c. repeated plowings, or thorough fallowing, is the only mode that can be depended upon, to fit it for a crop.

FARCY. This is a disease of the horse, occasioned by an obstruction of the absorbents of the skin. The earliest indication of the disease in most cases, previous to loss of appetite or drooping, is the appearance of little tumors called by the veterinarian, *Farcy buds*, close to some of the veins, following their course, and connected by a kind of cord called *corded veins*. The increase of these buds mark the progress of the disease—the tumors break and become ulcers, healed with difficulty; larger tumors appear; simeses form in all directions; glanders speedily appear; and death terminates the life and sufferings of the animal together. Farcy, like glanders, springs from infection, or from bad management. It is very prevalent in some parts of the country, and wherever it appears, should be treated as a contagious disease of the worst kind; for though the matter of farcy must be applied directly, yet as all horses are fond of playing and biting, or rubbing against each other, one infected beast will most certainly communicate it to many. Instances have occurred in which fatal farcy has been given by a scratch from a curry comb that had been used on a diseased horse. Glanders and farcy are nearly allied, and in bad cases frequently appear in the same horse. The treatment for this disease must vary with the form it assumes. In its first stages cooling and mild physic is beneficial; when the tumors form, they require to be cauterized by an iron at a dull red heat, and if they heal kindly, the danger cannot be considered as great. If they form ulcers, and the constitution becomes tainted, more decisive measures must be resorted to. Corrosive sublimate in doses of ten grains is found one of the best of alteratives, when mixed with two drachms of gentian and one of ginger, repeated morning and evening; but in all violent cases the experienced veterinarian should be called to prescribe, and even then it will frequently terminate fatally.

FARMER. FARMING. It is the remark in substance of the celebrated Von Thaer, "that the man who expects to succeed as a farmer should unite energy and activity to reflection, to experience, and to all necessary knowledge." The experience of the present time proves that in none of the occupations of life is a more varied and extensive knowledge required, than in that of agriculture. To be a thorough farmer, and to be able to manage the business of farming in the best manner, an acquaintance with the most of the natural and chemical sciences is not only desirable, but indispensable. The farmer lives in a grand laboratory; and he should be able to aid or control many of the operations that are continually going on around him. To do this he must understand the nature of the processes required. Insects, plants, and animals are continually before him, and the habits of one, the structure and qualities of another, and the physiology of the third, should be known, to avoid damage and secure profit. He must have an inclination for the profession; and if he has been brought up to the observation and practice of farming, he will be more likely to succeed, provided the basis of necessary knowledge has been laid broad and deep. Farming, too long has been considered an occupation fit only for those who were good for nothing else; and the odium which rested on the English serf of the feudal ages, and which attaches to the ignorant boor of Russia or Poland, is not entirely done away from the minds of many when they think of the cultivation of the soil. Times have changed and farmers and farming have changed with them. The most honorable, the most useful, the most independent of men, is the well informed farmer, who cultivates his own soil, and enjoys the advantages that health, competence, and intelligence, are sure to bestow. This is not the place to lay down rules for the choice or management of a farm; indeed none except such as are very general can be given; and for these, recourse must be had to works devoted to such topics, or to the agricultural publications of the day.

Asiatic Fair.—The Fair of St. Onouffree which lasts four weeks had a numerous attendance in 1840. 30,000 wild horses were brought in from the plains of Tartary. 50,000 cattle, 100,000 sheep, 10,000 swine, and 10,000 horses of the best breeds were also collected. Horse racing was the great amusement; a Circassian horse gained a race of six French leagues, winning a stake of 500 ducats, and all the twelve horses which were run against him.



MR. GRANT'S WEST HIGHLAND BULL.—[Fig. 3.]

FOREIGN NOTICES.

West Highland Cattle.

We have the pleasure of heading our Foreign Notices this month, with a portrait of a superior specimen of the West Highland breed of cattle, taken from the London Farmer's Magazine for December. The subject is a West Highland Bull, owned by Mr. Grant of Ruthven, Banffshire, Scotland, to which was awarded the first prize of 15 sovereigns as the best bull of the breed exhibited at the great meeting of the Highland Agricultural Society at Aberdeen in October last. Of this breed, Prof. Low, in his Illustrations, says :—"The finest and largest of the native cattle of the Highlands are bred in Argyleshire and the neighboring Islands. This character they owe to the greater development of their forms, to the superior herbage of the Western coasts, but in a great degree likewise to the superior care bestowed in breeding. After the middle of last century, Archibald, Duke of Argyle, a worthy and patriotic individual, bestowed considerable attention in improving the cattle of the district surrounding his own seat of Inverary ; and more recently, numerous gentlemen of the Western Highlands have devoted the most sedulous attention to the improvement of this breed. On these accounts, the variety of the Western Highlands is usually referred to as the model of the breed. It is well known to all breeders, that a certain class of external characters indicates a disposition to arrive at an early maturity of bone and muscle, and to become easily fat. The most essential of these characters are, a large cylindrical body, dependent upon the greater curvature of the ribs, a body large with relation to the limbs, or, in other words, limbs short with relation to the body, a broad expanded chest, a skin soft to the touch and expansile, a relative smallness of the bones, and an absence of coarseness in the extremeties. In certain breeds of the lower countries, these characters may be developed to a high degree ; but in a country of mountains and heaths, with a cold, humid, ungenial climate, there must be combined with these a set of characters indicative of that hardiness of constitution, without which the animals would be unsuited to the condition in which they are placed. That extreme delicacy of form which can be easily communicated by breeding must be avoided. The hair, while it is silky, unctuous, and free from harshness, should be abundant and curling ; the neck should be strong and muscular ; the forehead rather broad ; and the nose, from the eyes to the muzzle, short ; a dewlap should exist as a character of the breed ; the eyes should be prominent and clear ; the horns should be of good length, without approaching to the coarseness of the long-horns of the lower country, spreading and tipped with black. Now, in the genuine West Highlanders, we shall find such a combination of these characters, as to show them to be well fitted to the country in which they are reared. Their limbs are short, though muscular, their chests wide and deep, their ribs well arched, and their backs as straight as in any other breed. The neck indeed, and dewlap, seem somewhat coarse in the bull, but these are characters indicative of their mountain state ; and almost all their other points are what breeders would term good. They are of various colors. A disposition exists in the breeders of the Highlands to cultivate the black color, as conceiving it to be more indicative of hardiness ; and hence the greater number of the cattle of the Highlands are black. The cows of this breed, like those of many alpine districts, are deficient in the power of yielding milk. The milk they give is rich in cream, but it is in small quantity ; and they very quickly tend to run dry."

Smithfield Market.—The supplies for this market for November, consisted of 15,920 beasts ; 120,940 sheep ; 790 calves, and 4,840 hogs.

Herefords vs. Short Horns.

We find in the London Farmer's Magazine for December, a challenge from John Price, Esq. of Poole House, Upton-upon-Severn, "to all breeders of cattle in England," in which he says, "I am willing to show at any time before the end of the month next ensuing, for any sum not exceeding 100*l.*, nor less than 25*l.*, a bull, and twenty regular breeding in-calf cows, [Herefords,] all bred by myself, against any bull and a similar number of cows, of any sort that have been bred by, and are now in the possession of any breeder of cattle in the United Kingdom."

From a letter to Mr. Price, in reply to this challenge, by Thomas Bates, Esq. of Kirkleavington, we make the following extract. Mr. Bates says :—"I write to say, that on principle I cannot be induced to gamble, but if your object be the investigation of the merits of different breeds of cattle, &c., I am ready to meet such investigation, and show you my herd of Short Horns, and to any others who you may bring with you for that purpose, and shall then accompany you and them, to view your herd of Herefords. Such investigations may prove of the greatest benefit, not only to those who make them, but their report, candidly written down, and inserted in any public documents, may have the most beneficial effect for the public benefit. I visited Hereford above fifty years ago, and was then and continue still an admirer of the best variety of cattle [Herefords]. But I consider now, and have for above forty years been convinced, that *the very best Short Horns—which are only a few*—are capable of improving all other breeds of cattle in the United Kingdom, as well as *the ordinary Short Horns which are far from a good breed, and inferior to the Herefords, Devons, and others.* I have at present two red twin year old bulls, out of the dam of Duke of Northumberland, which on inspecting, you may not think unworthy to be put to your herd of Herefords for one season, to give you an opportunity of testing the merits of this cross-breed. In my opinion, they would prove an invaluable cross with the best Herefords—increase the growth of the Herefords, and at an earlier age be fit for the butcher, with a less consumption of food, and quality of beef unimpaired ; and also give that breed an increased milking quality—both in quantity of milk and richness—yielding more butter."

Mr. Price replies to Mr. Bates that the bad state of his health prevented his accepting his invitation to visit him, and adds : "I have myself tried many crosses in breeding both cattle and sheep, and have witnessed the result of such trials made by others, all of which have signally failed where the object has been to obtain more *size* and *weight* by using large male animals with females of smaller dimensions. I stated that I had formerly seen what were then considered to be the best sort of Short Horns in existence, and latterly, among others, those of Lord Spencer, with whom I had the pleasure to spend a few days at Wiseton, three years ago, yet that I had never seen any thing to shake my belief that Hereford cattle would pay more money for the food they consumed, than any other breed with which I was acquainted. My desire has long been, and still is, to endeavor by all practicable means to ascertain which is the best description of cattle for both breeder and feeder, that is, which sort will pay the most money for the food they consume. I have repeatedly made public my willingness to find cattle to test this point with other sorts in the way I think best, viz., by keeping together and feeding in the way usually adopted by graziers, some animals of each breed, with this proviso, that the *quantity* of food consumed by each sort should be as nearly as possible ascertained."

In reply to this, Mr. Bates says, that "Whenever Mr. Price's health admits of it, *if he will state why, on the true principles of breeding*, it is wrong to breed from *a large male and a small female*, I am ready to meet him, and prove the contrary by incontovertible facts."

The Highland Society's Cattle Show.

The great meeting of this Society for 1840, was held at Aberdeen on the 7th, 8th and 9th days of October the detailed proceedings of which occupy nearly the whole of the Aberdeen Journal of the ensuing week. It was better attended and went off with greater spirit than any previous meeting of the Society. The exhibition of live stock exceeded any which has before taken place in Scotland. Premiums to a large amount, varying from $5 to $120, were awarded for the best cattle, horses, sheep, swine, seeds, implements, &c. Above 10,000 persons visited the show yards, the receipt for tickets amounting to nearly $2,500; and about 1600 persons were present at the great dinner in the pavilion, beside which there was a tempeperance dinner at which about 1200 were present. At the dinners several short practical essays were read by persons who had been appionted for that purpose, and a great number of speeches made, which were received with great applause, and the grand display was terminated by a ball, that was attended by about 400 gentlemen and ladies. —

Sale of Short Horns.—A sale of Short Horns, belonging to the Messrs. Dodds, of Hart-Warren, took place the last of October, at which 14 cows were sold at an average price of 59 guineas—5 two year old heifers at an average of 47½ guineas—5 yearlings at 32½ guineas average each—4 bulls at 44 guineas average each —11 calves, at 36½ guineas average each ; being an average on the whole lot of 48*l.* 11*s.* each. Among the purchasers were Messrs. Whitaker, Paley, Jaques, and other celebrated breeders.

Great Wonder.—The Aberdeen Journal of Oct. 14, 1840, says, "there is to be seen in that city, at "Cruikshank's Stables, 8 Schoolhill, a *Lusus Naturæ*, half-deer and half-cow. Its eyes are large, full, and bright, exactly like those of a deer ; so are its legs, tail, and head. This singular animal was calved at Marcassie, in the parish of Rafford. Its dam was a cow of the common breed of the country, its sire a deer."

Performance of an Arab Horse.—Capt. Horne of the Indian Army at Madras, says a Bengal paper, had a horse of great power, called Jumping Jemmy, which for a wager of 5,000 rupees ($2.000,) he rode in July last, 400 miles in five days. The wager was won with ease, both man and horse at the close, being perfectly fresh and in good spirits. Bets ran high against the performance, for though few doubted the powers of the horse, as these were known to be extraordinary, yet few believed that Capt. Horne could accomplish his part of the undertaking.

Great Oats.—We copy the following from the Glasgow Herald : "We were yesterday shown what was literally a sheaf of potato oats, the produce of two pickles, (or seeds.) To the one is attached 31 vigorous stalks, to the other, 25 ; the first bearing 4,000 pickles, or giving a return of four thousand fold, and the second bearing 3,200 pickles. The soil is a newly taken in moss, has been slightly manured, and this is the virgin crop. It is expected that it will return not much less than 200 bushels per acre, or more than three times the bulk of an average crop."

USEFUL RECEIPTS.

Remedy called Cure All.—1 pint of strong spirits of wine, 2 drachms of Alkanet root, let this stand 2 days ; then add 1 drachm of camphor, and strain through muslin ; then add 2 drachms of opium, 8 drachms of origanum, and 2 drachms of spirits of turpentine. It is good for cuts, green wounds, cholic, pains in the stomach, &c. for pain in the ear, drop it on wool and apply it ; for internal complaints take 20 or 30 drops on sugar.

Colic in Horses.—Take 1 oz. of tincture of rhubarb, ½ oz. of laudanum ; 1 oz. spirits of nitre, and half a pint of warm beer. Mix well in a bottle, and turn down the animal. F. Bourne.

Blind Staggers in Sheep.—Half a pint of hogs lard melted and poured down a sheep will cure the blind staggers in ten minutes. A Subscriber.

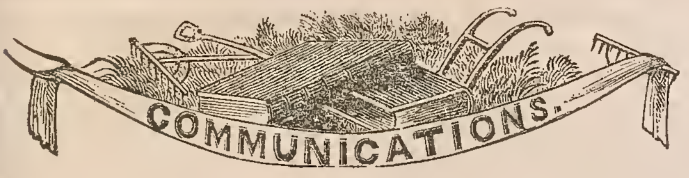
Remedy for Kidney Worm.—I cured swine of the disease called "kidney worm," by making an incision with an knife, on each side of the back bone, and applying spirits of turpentine to the wounds and along the small of the back. It may also be cured by giving red pepper in their food ; taken in season, it readily yields to treatment. M. Beach.

Cure for Hoof-Ail.—Conversing with a farmer of this vicinity, Mr. Clark, I learned from him that this disease can be cured by throwing the animal, and drawing a rough rope forcibly between the hoofs until the foot is thoroughly cleansed, when an application of spirits of turpentine should be made, and the cure is complete. I give the remedy as I heard it, having never seen it tried.

S. C. Lawrence.

It is expected that in transmitting to us such remedies as are considered valuable to the public, none will be offered which the writers do not know from personal experience or observation, to possess the properties ascribed to them. We have the testimony of many farmers that this department of our paper has already been of very great service, and it is our wish to insert nothing the value of which is in the least doubtful.

Prolific Sow.—Mr. G. Bancroft of Reading, Mass., has a sow which in about 13 months produced him fifty-three pigs at three litters ; or eighteen pigs in Sept. 1839, seventeen in April, 1840, and eighteen in 1840.



"I know of no pursuit in which more real or important services can be rendered to any country, than by improving its Agriculture."—Washington.

1841.

"Yes, the year is growing old,
And his eye is pale and bleared!
Death, with frosty hand and cold,
Plucks the old man by the beard,
Sorely,—sorely!

The leaves are falling, falling,
Solemnly and slow;
Caw! caw! the rooks are calling,
It is a sound of wo,
A sound of wo!"

The year Eighteen Hundred and Forty, with its bustling scenes, with its hopes and fears, with its good and evil, has passed away! Its dead are numbered—its incidents are registered—its bearing for weal or woe on the destinies of our race is decided. It is now for every one—the christian, the philanthropist, as well as the business man, to "strike the balance" of the departed year, and to ask himself, "what is my relative position to that occupied by me at the close of 1839?—what have I achieved?—where have I erred?—how shall I add to the first—how retrieve the last?"

What has been achieved by the agriculturist? What are the "signs of promise?"—So far as the products of industry are concerned, the "balance" is in his favor. A beneficent Providence has filled our garners to overflowing. Throughout all of our broad and diversified country, extending over about twenty-five degrees of latitude, scarcely a crop has failed, except in small districts and to a limited extent. But this does not answer *all* the question. Those products which afford aliment to man, though the proximate object and reward of industry, were not *all* that the agriculturist of 1840 was called upon to labor for. There was a higher and nobler field for him to plow, to sow, and to reap. He was called upon to lend his efforts, to contribute his mite, toward the moral and social elevation of his calling.

The Roman, in the better days of his country, knew something of the dignity of labor, but in the long darkness of Gothic night which followed, war and the chase were the only pursuits supposed to befit those of "gentle blood." In other words, butchery and rapine, during a portion of the time, and the pursuit of a hare or deer, with hounds and horns and troops of menials, during the remainder, were supposed to be the only occupations becoming the "high born and noble." The tiller of the soil was a serf—a bondsman. The Feudal Age, with its barbaric pomp, has passed away. The plow has passed over the mouldering relics of baronial pride. The cultivator of the soil is no longer a beast of burthen; his occupation has risen from a mere handicraft to a profession calling for the exercise of talents and the application of scientific principles;—but notwithstanding all this, he has not yet attained to the true relative dignity of his station among his fellow men.

Among the privileged orders of the old world, manual labor is still regarded as a degradation. In our own country, though the feeling does not prevail to the same extent, it is easy to discover traces of the same absurd and unmanly prejudice. How rarely do we witness an instance of a professional man or a merchant *voluntarily* educating his children to honest toil—to become producers instead of consumers? And worse than this, the farmer himself, false to the dignity of his calling, not unfrequently exhibits an itching desire to save his children from a life of labor! This diminution of producers and increase of consumers, is one of the marked causes of the disasters which have fallen on our nation. In this mania to escape labor, every profession and every pursuit not requiring bodily toil, has been overstocked. What is more common than to witness in some of our smallest villages, which should scarcely support two lawyers, a score of attorneys, rendered greedy by want, and obliged to promote litigation, to obtain their bread! "Two doctors riding on one horse," has passed into a proverb. Hundreds of broken young merchants, many of them the sons of farmers, and who started life with a capital, which, united with industry, would have made them prosperous and independent farmers, are now eating the bitter bread of poverty. Politics too, supports its class of non-producers, and its avenues to preferment are choked with crowds of eager votaries, four-fifths of whom must *necessarily* be disappointed;—and even the fortunate few, at the first giration of the political wheel, are cast upon the world—out of business—and with habits acquired which would render business irksome, and connect the idea of manual labor with that of intolerable degradation. How many such men might exclaim in the spirit of Woolsey—

"Had I but served *myself* with half the zeal
I serv'd my *party*, I should not, in mine age,
Have been left naked to mine enemies."

There is another numerous class of non-producers, not to be omitted in this catalogue,—the speculators—those lords of paper domains—those rare architects, who, like the Genii of Arabian tales, built up in a single night gorgeous cities in the distant wilderness—those alchemists who beat them of old, for they discovered that wondrous elixir (found to consist of avarice and credulity in equal parts) which transmuted every thing to gold—Bangor pine trees, and Rocky Mountain "city lots!" But their gold,

"Like to the apples on the Dead Sea's shore,
All ashes to the taste,"—

has proved but a sorry counterfeit!

It is not my design to invoke prejudice against the learned professions, or against any honest calling. The merchant is a necessary instrument of the farmer. He works for the farmer and he receives his pay. He receives his products or the avails of them—transports them to distant markets, and brings him back the products of other countries and climes. The lawyer is a necessary evil so long as vice and perversity shall continue to exist in the world. He is as necessary to repel the encroachments of vicious and quarrelsome men, as the dog and the rifle are to drive off the assaults of noxious beasts and vermin. We cannot dispense with the leech until the "ills that flesh is heir to" have become extinct before that "physical perfectibility of the human species," whose possibility is contended for by Doct. Graham! It is to be feared, however, that the time of its accomplishment is yet far distant!

Though these and various other classes of non-producers are to be tolerated, nay *respected*, where they work worthily in their vocation—though they are to be placed on a social *equality* with any other class of citizens, I ask are they to be looked up to as a superior or privileged caste, by the producers? Shame on the thought! Does any farmer think he is placing his children in a "higher rank," "making gentlemen" of them, by making them lawyers, doctors, or merchants? Shame on his abject soul! Does any young son of the soil court and repine after that patent of gentility which is conferred by the tailor, the jeweller, and the bootmaker, on the sons of idleness? Away with such a serf in spirit!—let him begone to his idols!

And yet it must be confessed with sorrow and shame, there are farmers and farmers' sons who entertain such sentiments as these in relation to their own calling. The very name of a profession dazzles their bewildered senses, and commands their respect, as stars, ribands, and other insignia of privileged rank receive the homage of obsequious vassals in the old world. Who have the majority, consisting as it always must of the producers, ever delighted to honor? Do they select the tried and trusty of their own class—the men whom they know, and in whose judgment they can confide? In periods of great national danger, such men *will* be called to the helm. Every student of history is aware that a large majority of the warriors and statesmen of the Revolution were from the producing classes—were, before they were called upon to relinquish the implements of industry, *laboring men*. But look into the Legislature of this and other States for the last fifty years, and what proportion of producers do we find? Is it contended that lawyers are the best qualified to form laws? Look at the cumbrous details of chancery practice—the jarring systems of law and equity,[*] (as if law and equity might with propriety differ!)—the annual acts explanatory of other acts which were wrought up with so much "*legal skill*," that even their own framers could not understand them![†]—the multitude of laws "which no man can number," and which are constantly accumulating—look at these things and then tell us if it is necessary to fill our Legislature with lawyers, because of their presumptive knowledge in forming laws? Is it contended that there is not sufficient talent to be found in the laboring classes? I answer in the eloquent language of Channing:—"Real greatness has nothing to do with a man's sphere. It does not lie in the magnitude of his outward agency, in the extent of the effect which he produces. * * * * A man brought up to an obscure trade, and hemmed in by the wants of a growing family, may, in his narrow sphere, perceive more clearly, discriminate more keenly, weigh evidence more wisely, seize on the right means more decisively, and have more presence of mind in difficulty, than another who has accumulated vast stores of knowledge by laborious study; and he has more of intellectual greatness. Many a man, who has gone but a few miles from home, understands human nature better, detects motives and weighs character more sagaciously than another who has traveled over the known world and made a name by his reports of different countries."

I would not preach up a crusade against the legal or any other profession. I would not drag them down, but I would *raise the producer up*—raise him up *in his own estimation*. I would sound a trumpet peal in his ear to arise and assert the dignity of his calling. Man was formed to labor and to be useful. The primal curse of labor was a blessing in disguise. There should be no drones in the great hive of humanity. Labor ennobles its followers. The farmer as he goes forth in his fields to converse with nature and nature's God, feels his soul dilate and expand under the benign influences about him. The bright sun, the refreshing breeze, the genial shower, are all blessings from a parent's hand. As he casts his eye upon the distant prospect, glittering in the auroral light of spring, or fading into the sober hues of autumn, his feelings harmonize with the outward agencies which surround him. He stands as it were in the visible presence of his Creator, and passion and selfishness are rebuked. There is no hum of excited crowds to drown the small still voice of reason and conscience. He stands erect in the conscious dignity of a *man*,—honest toil hath given him the nerves and physical vigor of a man—reason, reflection, conscience, and brotherly love hath expanded his soul to the dimensions of that of a man.

The true farmer is a philanthropist. He labors, not only to provide for his own wants, and wants of his family, but he is urged by a constant desire to leave the world better and more beautiful than he found it—to add to the stock of human comforts, and render them accessible to the poor and the lowly. Does that strong love of rural life, which characterizes some of the most elevated men of our time, spring from the pleasure experienced in the mere act of plowing or reaping fields, or the rearing of bullocks and swine—or because they deem those avocations the easiest method, in popular parlance, of "getting a living?" Are *such* the inducements which have led educated and intelligent men to abandon professions which are the almost exclusive avenues to honor and distinction, for the rustic avocations of the farm? I answer indignantly, no! They have preferred *usefulness* to fame. To make two blades of grass or two spears of grain grow where but one grew before, has been pronounced an achievement beyond that of conquerors—and so it is. The warrior desolates the earth and fills it with wo, the agriculturist whose object it is to improve and advance his calling, increases its fertility, and thus multiplies the sources of comfort and subsistence to his fellow men. He clothes the needy, and gives bread to the hungry, by rendering these things abundant and accessible. Every man who fertilizes one barren spot of earth, who reclaims one unwholesome swamp, or who discovers one improved process for cultivating the earth or increasing its products, has rendered a direct, tangible, and important benefit to his fellow men. He has not lived in vain, for he has rendered himself *useful*. He is a philanthropist.

Lord Townsend, who received the appellation of *Turnep* Townsend from the wits of a licentious Court, for having introduced the culture of that useful vegetable into England, has conferred a more lasting benefit on his country than all the popinjays who have spread their butterfly wings in the sunshine of Court from the days of William the Conqueror to those of Queen Victoria. Was it Doctor Johnson who remarked of some one sneeringly, that his conversation *savored of bullocks?* Yet the world would have been better off without a Johnson, than without a Colling or a Bakewell! Every generation produces its literary great, but not every generation nor every age produces men capable of originating great and signal improvements in those important departments of human industry which give subsistence to millions. Why should the breeder be sneered at? Is not the artist admired and caressed? And what is the breeder but an artist in the great studio of nature? The one chisels the shapeless marble into forms of beauty—the other moulds flesh and blood, and gives beauty and value to the unsightly and worthless. Is the latter pursuit then unworthy of a gentleman and man of taste? Is he who strives to beautify and adorn this fair world, instead of a gallery or a palace—he who labors to restore animated nature to her forms of primal beauty, engaged in a vulgar or tasteless pursuit? It strikes me on the contrary that no occupation is more congenial to a pure and elevated taste. No man more than the agriculturist has constantly presented before him images of inward and outward beauty. Books and the treasures of art are as accessible to him as to others,—nature and his fellow man wear for him their loveliest aspect. The merchant is brought constantly in collision with venality and avarice—the politician with selfishness and ambition, and both learn to disesteem their fellow men The physician spends his life amid ulcerous sores, the pangs and the moanings of decaying humanity, and nature must ever wear to him the aspect of a great charnel house. The lawyer is called upon to probe the yet darker ulcers of the soul. His eye constantly rests upon guilt, and his ear must drink in its polluted tale. Envy, malice, hate, avarice, and all the blacker passions, assuming more specious names, claim him as their champion. If he resist, as some have nobly resisted, he must yet meet and combat them; he must live in their polluted atmosphere; he must feel that they are the elements of his subsistence; he must feel that he lives on and out of the contention of his fellow men. The occupation of the agriculturist does not of itself necessarily bring him in contact, or but slightly, with man's moral or physical infirmities. The world is not to him a great "whited sepulchre." Its sunny smile is not a mask hiding the features of vice and wo. A demon scowls not forth on him from beneath every flower that throws beauty and perfume over the path of life. He rejoices that he is a man—he feels a fraternal love for the great brotherhood of man.

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[*] Many of the States, have to a great extent, and others almost entirely, done away with this practical absurdity, as it cannot but be regarded, notwithstanding the ingenious and extremely plausible arguments which every well read lawyer can offer in its support. In some of the States, as New-York, Virginia, South Carolina, and Michigan, the court of chancery is a distinct tribunal, and in others, as Connecticut, New-Jersey, Maryland, &c., courts of law possess ample equity jurisdiction. The contrary is the case in Massachusetts, Pennsylvania, Maine, Rhode Island, &c. Louisiana has, on the other hand, adopted a simple, concise, and *uniform* code, based on the Civil Law. The increasing intelligence of the times *must* soon demand a similar reform in the other States.

[†] For instance, the Non-Imprisonment Act, written by one of our most eminent and able jurists, was supposed to be so obscure in its provisions, as to require an explanatory commentary from the original drafter of the bill. The commentary was accordingly written—but lo! its correctness as an explanation of the true meaning and intent of the law, is denied by a great portion of the profession, and has been repeatedly decided against by the Supreme Court!

And shall the agriculturist "look up" to men, who, if not his inferiors, are in no respect his superiors? Shall his sons flee away into other occupations that they "may be gentlemen?" A better day, I trust, is dawning. The time will soon come, if it has not now come, when no talents however great, and no education however finished, will be supposed to be "thrown away" when devoted to the improvement of agriculture. Let our agriculturists assert the dignity of their calling, and who *dáre* gainsay it? They are, and ever must be, the most numerous and powerful caste in this great Republic. *They can make that power felt whenever an occasion demands it.* And has every one who reads this, contributed his individual efforts during the past year, to assert that dignity—to effect "the moral and social elevation of his calling?" If not, the "balance" of 1840 is against him! Let 1841 "retrieve" the "error."

Cortlandville, N. Y. Dec. 1840. H. S. R.

THE SILK CULTURE.

"Shall we give it up?"

Give it up! Why? What reason or cause is there that we should abandon it? "Why, the morus multicaulis is down—the trees will not bring any thing—we can hardly give them away—our prospects of getting rich from the raising and sale of the trees are at an end—our golden dreams are vanished!"

Thus absurdly, Messrs. Editors, many in our country probably reason! but none, I trust, who are the true friends of the silk culture—who see no just cause why we should abandon it, or any serious difficulty in the way to discourage them. I am happy to find that your interest in it, and your sense of its importance to our country as a branch of domestic industry, is not diminished; and that you are disposed to place the subject occasionally before your readers, among other topics of interest to our agricultural community. I am willing to contribute my feeble efforts as I have done, to further its interests, though far abler pens than mine, it may find to advocate its cause. My confidence in it, as a source of individual and national wealth, and in its ultimate success, remains unshaken; though untoward events the past year have thrown a cloud over it, and obscured in a measure its prospects discouraged and disheartened some who had turned their attention to it, and operated to retard its progress. These events were the general depression in the money market, and consequent embarrassment in almost every branch of business, and the bursting of the bubble of the mulberry speculation. Many had embarked in what was termed "the silk culture," solely with a view to the sale of the trees, without the least idea or intention of raising silk, and hoped thereby suddenly to reap that golden harvest which others had reaped; these may justly conclude to "*to give it up;*" that is, give up the raising and sale of the trees for speculation. Others had imprudently invested large sums or contracted liabilities to a considerable amount in the purchase of trees at a high price, for the purpose of raising silk with the hope of reimbursing themselves by the sale of a part of the trees; but by the sudden fall of the price and destruction of the market, have sustained embarrassments and loss. Some of them, not realizing their expectations, will probably abandon the pursuit. While those who have cautiously, prudently and understandingly gone into it, with the legitimate object of raising silk, will hold on their way; and others, encouraged by their success, now that the trees can be purchased so low, will probably embark in it, not for the purpose of speculation in the trees, but for the sure profits to be derived from the culture of silk. So that although the failure in the mulberry speculation has thrown a temporary cloud over the prospects of the silk culture, and retarded somewhat its progress, ultimate good I think will grow out of it. It has seen its darkest day; that cloud will ere long be dispersed and a brighter sun shine out upon it. I can see nothing in the *past* or in the *present* to discourage the true friends of the silk culture; no reason why they should abandon it, but many reasons why they should persevere. Our soil and climate are propitious, the morus multicaulis is as valuable now for feeding worms as it ever was, (and I consider it the most valuable, on many accounts, of all the varieties of mulberry which have been introduced into our country;) silk of a most excellent quality, fully equaling the best Italian, has been made, at a handsome profit; a demand exists for the raw material, both in the cocoon and reeled, in our own market, far beyond what can be supplied, at a price which will amply remunerate the grower; and Europe would purchase of us millions of dollars worth for her manufactures annually if we could supply it, and become *our* debtor, instead of we being a debtor to *her* for silks annually to the amount of many *millions of dollars.*

Shame for us, my countrymen! My blood warms in my veins when I think of it. It is a disgrace and reproach to us, which every true American should desire to wipe away, that possessing as we do a country as favorable to the culture of silk as any on which the sun ever shone, with that intelligence and ingenuity and enterprise characterestic of our people, and every facility which we would desire for entering into the silk culture extensively, we will still run in debt to Europe more than the amount of all our exported bread-stuffs, &c. for the single article of silk. If the blush of shame mantle not on the cheek of the patriot citizen, at the thought of this, I shame for him. What is it that has caused this present distress to our country, in its monetary affairs, and the paralyzing almost of every branch of industry, but our prodigal running in debt to Europe. I pretend not to say how much of our distress may be ascribed to other causes; but I can see enough in *this;* a course which will ruin any country. Look over our account with Europe; here is one item of *twenty millions of dollars* a year for silks! which our own people can just as well raise themselves and keep this amount of money in the country; and if they do not see fit to manufacture it, or feel a foolish pride in decorating their persons with the fabrics of foreign work-shops, rather than with those of our own manufactures, then send it to Europe for them to manufacture for us. But in the infancy of their existence our silk manufactories have shown that they can produce an article which our wives and daughters need not be ashamed, but proud to wear; and these manufactories only want a supply of the American raw material, to rival those of Europe; for the want of which they are obliged to use principally the inferior imported raw silk of China. Let us then go to work and raise our own silk. There is many a family among our farmers that might raise from one to ten pounds of silk or more a year by employing the children and a portion of the female labor without abstracting from the other products of the farm or hindering its necessary labors, which would be so much clear gain; and what female is there in our country, whether maid or matron, that would not be proud in saying that the silk dress she wore was the product of her own labor, formed from the material raised with her own hands?

So far as I have been able to learn, success has attended the efforts in raising the silk worm the past season, where there has been proper care and attention bestowed in keeping the eggs, hatching them and tending the worms. Most of the failures of which I have heard, resulted from the eggs being spoiled, not having been properly kept, but exposed to too warm a temperature before they were brought out to be hatched. If thus exposed in the spring and then put into a cold temperature, as in an ice-house, to keep till they are wanted in the summer, when the multicaulis is in full foliage, they are sure to be injured; either their vitality is destroyed, or the worms on hatching come out feeble and sickly, and most of them die, as I can attest from my own experience. Where the eggs have been properly prepared and deposited in an ice-house early in the spring, before exposure to the warmth, and kept till wanted, they have hatched well, and the worms been perfectly healthy.

Of the amount of silk that has been made the past season I have no means of judging; but I apprehend it will be found to be considerable. My information does not extend to distant parts of our country. In the county of Steuben, several individuals have fed more or less worms with success, from two or three to ten thousand or more; and are much gratified with their experiments. In the fore part of August, I visited several cocooneries in Cayuga and Tompkins counties, where they were feeding several hundred thousand worms which did well; and their proprietors spoke in encouraging terms of the business. I saw most beautiful specimens of cocoons at the house of J. H. Bostwick, Esq. in Auburn, which were fed in his parlor; and at the cocooneries of Messrs. Hamblin & Fitch; also at the cocoonery of Mr. Woodworth, in Ithaca, which for the simplicity, order and convenience of its arrangements, cleanliness and healthiness of the worms, exceeded any I had seen. A considerable crop of the large French pea-nut variety, (which the proprietor told me were far the best of all the varieties he had tried, and the only kind he meant to cultivate,) had finished their winding, and a beautiful sight they were; and he had then feeding, a second crop of several hundred thousand of the same variety, attended by two ladies, members of his family. A large bunch of beautiful raw silk was shown me, reeled by Mr. Woodworth himself, as his first attempt upon the Piedmontese Reel, who informed me that there was no difficulty in reeling silk, which with practice he could not easily overcome. He was about introducing an important improvement in feeding, by which nearly the whole labor in cleaning after the worms is saved. Mr. W. would confer a favor upon the public by publishing the result of his experiments the past season; and not he only but others who have fed worms; and I doubt not these results would afford satisfactory evidence that silk may be raised to advantage by our citizens; and that it should engage, as it merits, more of their attention.

The southern and southwestern states will find it for their interest to engage in it; for besides having the advantage over the north of a climate better adapted to the growth of the morus multicaulis, and a longer season for feeding the worms, they are urged to it by another consideration which must come home to them, viz: the prospect of a material diminution in the foreign market of a demand for their great staple product, cotton, by the present efforts of the British Government to introduce the culture of cotton into their East India possessions for the supply of their manufactures. Whenever this takes place, (and it is not improbable it will in the course of a few years,) it is plain the south will be under the necessity of introducing some *new* staple for the profitable employment of their labor and capital: And what, I ask, could they engage in so advantageously as the culture of silk? Besides, large portions of their land in the older states, have become or are becoming exhausted, worn out and worthless by their system of cropping, which may profitably be devoted to the culture of silk, and even resuscitated by its ameliorating effects upon the soil.

But the northern and middle states too, have a deep interest in the silk culture. There is scarcely any portion of our country where the mulberry in some of its varieties will not flourish and the silk worm thrive. Even in the coldest parts, the morus multicaulis, treated as an annual crop, dug up in the fall and buried or put in the cellar, and replanted in the spring like a crop of potatoes, it is confidently believed may be used with great profit in the culture of silk. Where it is desired to have a more hardy tree it may easily be obtained, several excellent varieties of which have of late years been introduced, as the Expansa, the Dandolo, the Brussa, the Alpine, and another which promises to be of extraordinary value, which originated in this country, called "Sharp's New Variety." This mulberry I am convinced is very hardy, is of rapid and luxuriant growth, soon forming a large standard tree, and the foliage is *splendid*, very little inferior in size to the leaves of the morus multicaulis, but thicker and heavier, and said to be superior as food for silk worms. Two scions set by the writer this last season as late as the month of June, grew to the height of 6 to 8 feet. As an *ornamental* tree as well as for raising silk, I think it will be valuable.

With so many facilities, with thousands of trees in the country, which may now be purchased at a trifling expense, so many inducements to engage us in the cultivation of silk, what is to prevent? "Shall we give it up?" Shall we lose the advantage already gained? *No*—persevere my fellow countrymen—"Onward, right on!" be your motto; and true to it, success will ultimately crown your efforts. Form not, however, too sanguine expectations of *getting rich all at once*, that "the golden stream will be *quick and violent.*" The culture of silk, pursued with intelligence, judgment, economy, patience and perseverance, will, I am convinced, yield a sure and ample remuneration to those who engage in it; and will gradually, but certainly, swell the stream of individual and national wealth.

Hammondsport, N. Y. Dec. 16. W. W. B.

LEGISLATIVE AID TO AGRICULTURE.

Messrs. Gaylord & Tucker—Now that the excitement of politics is over for a long season, would it not be well for the people of the State, and especially the farmers, to turn their attention to their own interests. The season of speculations has gone by, and an increased attention is awakened towards agriculture. Is there not sufficient feeling on the subject to warrant its friends in a general rising in favor of legislative aid? I apprehend we shall have no difficulty in procuring assistance, if we can only be agreed upon what we wish done. Heretofore there has been a vagueness and disagreement among the warmest friends as to the measures proposed, that has prevented any decisive action. Let us ask for but little this year, and in the mean time through your paper, compare notes, and by another year we can have digested some plan which would meet the views of all, to be brought before the legislature at its next session in 1842.

One important object to be gained, is a concert of action over the State, and this can be arrived at no way so well as through county societies. Some course then should be taken, that will have a tendency to bring about the organization of a society in every county in the State. To ensure this, the State must grant us some assistance.

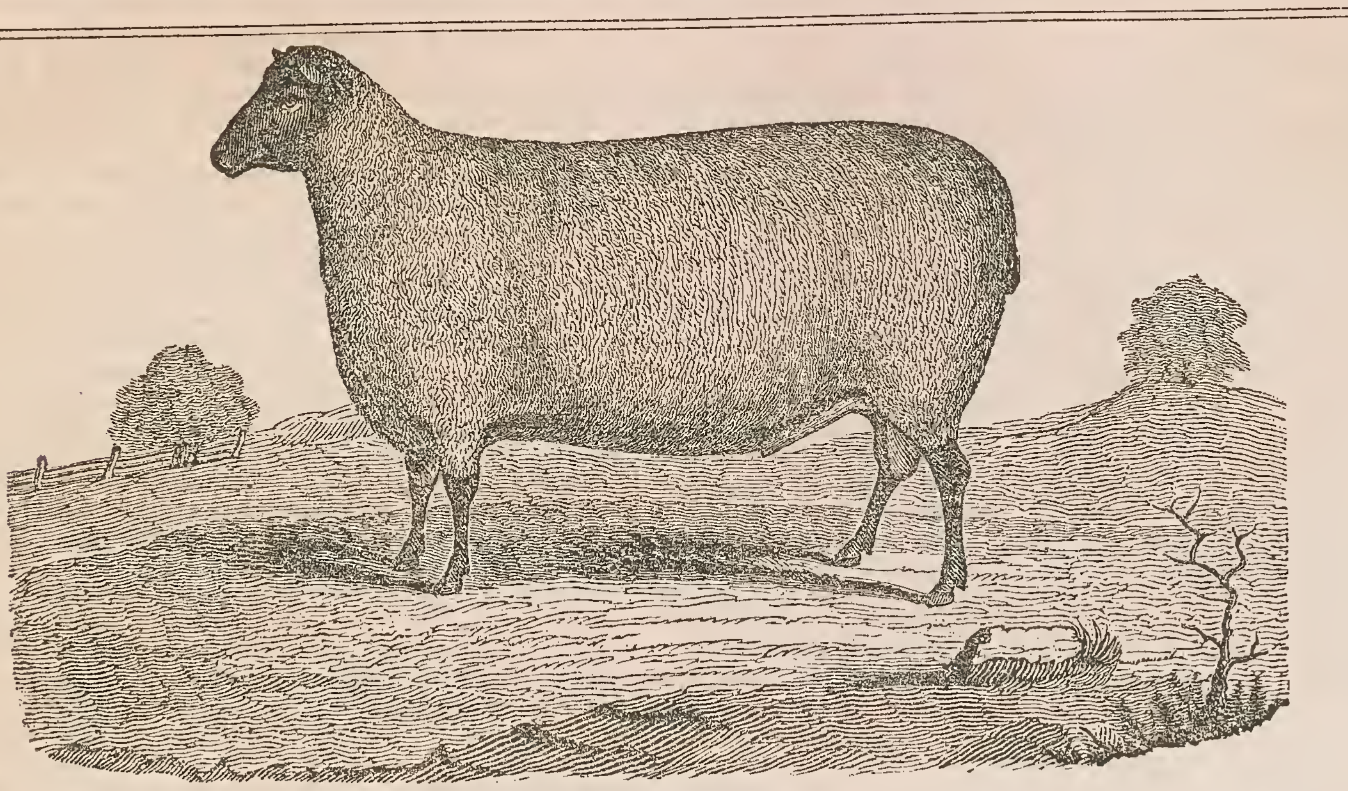
I would suggest that we ask for an appropriation of sixty dollars for each member of Assembly from the county, to the Agricultural Society of the county, as soon as the same is properly organized. Let the treasurer of the Society give a bond to be approved of and lodged with the county treasurer.

From my own experience, I am satisfied we do not require large sums in the commencement. It takes time to get the societies properly organized, and besides, as large sums are not required at first as after two or three years successful operations. We must have a small fund to serve as a nucleus. And the sum named, with what would be received from friends, as well as competitors for premiums, would make a very fair beginning for any society. Let us ask then for that and nothing more, and there can be no doubt but we shall receive it from the legislature without any trouble.

I have seen it suggested that we have a commissioner appointed to travel over the State, &c. With due deference, I would suggest whether we are in a sufficiently forward state to require one at present. Should not a thorough organization be effected before the services of commissioners (for we must have more than one,) could be of much service. Besides, in asking too much, we should lose the whole.

Permit me to make a suggestion to the different societies through the State, which if acted upon, will materially facilitate intercourse among the different officers; Whenever a society is organized, send the names of the principal officers to you, and with the names, their *places of residence*. Your paper then would become, without any extra trouble, an excellent directory. I assure you such a thing is very much needed, and would be of great benefit.

I hope petitions will be freely circulated, and the farmers with one united voice, ask for aid this winter. And if our demands are reasonable, I feel that we must succeed. *Darien, Dec.* 12, 1840. T. C. PETERS.



SOUTH DOWN BUCK.—(Fig. 4)

Messrs. Gaylord & Tucker—I hope you will not think me obtrusive, while I ask the insertion in your invaluable paper of the accompanying cut. It is one of the South Downs I imported in the fall of 1838, which, with several others brought out the year before,—all selected from some of the best flocks in Sussex, England,—now, with their descendants, no doubt make one of the finest flocks to be found in this country. They are, I think, perfection in shape, and entitled to hold the same relative position that improved Short Horns do among cattle and Berkshires among hogs.

Theirs is the celebrated "English mutton," which, with thousands of others having no particular predilection that way, I can testify is not "all stuff." They are in size between the Cotswold and our native sheep, and will weigh in ordinary flesh from 160 to 200 lbs. The one of which this is an engraving, weighs 180 lbs. They are of round, full, and beautiful form, and of great weight for their apparent dimensions, possessed of extraordinary vigor of constitution, fitting them for great endurance of keep and exposure. In our flock of about 50, I have never known an invalid for an hour, or one low in flesh, though their pasture has often been as short as I have ever known one on which sheep were sustained.

Their wool is about as fine as half blood Merino, and with them I have no doubt would cross to very great advantage, giving the Merinos greater strength of constitution, weight of carcase, and aptitude to fatten.

The Cotswold, of which we have several, I also think very highly of, and in some particulars, among which is weight of carcase and fleece, they are no doubt the South Downs' superiors, but they have been so lately fully described, I will not trespass upon your attention by attempting to do so here.

I am, gentlemen, with all due consideration
Truly yours, E. P. PRENTICE.
Mount-Hope, near Albany, Dec. 21, 1840.

THE HEREFORDS AND SHORT HORNS.

Messrs. Editors Cultivator—I recollect noticing in your paper some time since, a request that those who have any knowledge of the Hereford breed of cattle, would give their opinions of its relative merits compared with the improved Short Horn and other varieties. In Mr. Bement's communication, published in the August number, he says he thinks there has been no importation of Herefords excepting by Mr. Clay, Messrs. Corning & Sotham, and himself. This is a mistake. In the year 1825, if my memory serves me aright, the Massachusetts Society for promoting Agriculture, received as a present from Admiral Sir Isaac Coffin, of the Royal Navy, a bull and a cow of the true Hereford breed, selected either by himself or his agent in England. There came also with them, as a present from the same beneficent gentleman, an improved Short Horn cow, (Annabella)—a bull of that breed, (Admiral,) had before been sent.

The Hereford cattle were kept for one or two years in the section of the state where I then resided, on the farm of John Prince, Esq. of Roxbury.

The cow never had a calf after coming to this country, and it being supposed that she would never breed, she was slaughtered ; but I have been informed that on killing her she was found to be with calf. As to the quality of her beef, I cannot speak, but presume Mr. Prince can give information on this or any other point relating to these cattle. The cow was certainly considered one of the most extraordinary animals for shape and size ever exhibited at the Brighton (Mass.) Cattle shows.

I believe the bull was not patronized to a very great extent while at Roxbury, it not being a stock-growing neighborhood, and he was subsequently taken into the interior of the state, where, if I am not mistaken, he was sold. I saw many of this bull's progeny in the vicinity of where he was first kept, and have owned some of them. They were generally highly esteemed. They made prodigiously powerful and active draught cattle—there was a majesty in their gait, and an elasticity and quickness of movement, which I never saw equaled, and which, together with their beautiful mahogany color and strong constitutions, made them decided favorites with the Yankee teamsters.

For dairy qualities, the progeny of this bull were, as far as my observation extended, an improvement on the stock with which he was crossed. I am aware that the Hereford has not the *reputation* of a milking race, and though this may be generally correct, it is by no means certain that some *grade* of that blood, may not be superior milkers. I will mention an instance in support of this idea. Several years ago, some cattle of Bakewell's celebrated breed of Long Horns, called Dishleys or Improved Leicesters, were imported to different parts of this country. They were famous for fattening, but not for dairy qualities ; yet the half bloods were generally good milkers, and some of them were uncommonly superior in this respect. I know not how to account for this fact, unless on the ground of the constitution of the cross being so much strengthened that they were better able to resist the inclemencies of the weather, and to digest their food more perfectly and make the most of it.

I will here remark that I knew many and owned several of the progeny of the Improved Short Horn bull Admiral, before mentioned as having been presented to the Massachusetts Society by Admiral Coffin, and I have no hesitation in saying, that for the ordinary uses to which cattle are applied in the northern section of our country, I considered the stock of the Hereford bull above alluded to, decidedly preferable.

From 1830 to 1837, I resided in the state of Maine, and my business was the breeding of various kinds of stock. I had never seen any *full bred* Improved Short Horns, which appeared to possess sufficient hardiness of constitution to adapt them to so rigorous a climate and the hard labor of the yoke to which oxen are there subjected. Accordingly, on commencing operations, I purchased of Hon. John Welles, of Boston, a bull of a cross between the Hereford and the Improved Short Horn with a slight dash of the Bakewell. This bull was the easiest animal to fatten that I ever saw—was of very perfect symmetry, vigorous and active—and very heavy in proportion to the bone. His weight at six years old, after having been wintered on the coarsest fodder that the farm afforded, was 2000 lbs.

With this bull, I bred from selected cows of various grades of different families, my object being to *manufacture* and establish a breed, better adapted than any other, to the soil, climate and purposes of the section of country for which they were intended.

As my stock arrived at an age to have their qualities tested, they gradually got into favor ; but as the passion of too many was for stock of *enormous size*, and mine had been bred wholly with regard to *useful properties*, I had to wait till their superiority could be *proved* before their merits were generally admitted. I however took several prizes, on different descriptions of cattle, at the cattle shows of the Kennebec County Agricultural Society. On leaving Maine, I sold some of the best stock which I had bred, to Mr. J. W. Haines, of Hallowell. I am informed that it is now considered preferable to any stock ever known in that section. Mr. Haines carried several of the highest prizes at the Kennebec shows of '38 and '39—and at the recent show, he took the first on milch cows, with one which was bred by myself—the first on bulls, and the first on heifers, of the same stock.

The recent importations of Herefords by Messrs. Corning & Sotham, of your city, must by all accounts be very valuable. A gentleman from Boston and a good judge of stock, lately passed through here on his return from a tour to the west. He had seen the Herefords above spoken of, and also had just seen the fine herd of Durhams belonging to Mr. Sullivant, near Columbus, as well as much other fine stock. He pronounced the Herefords superior in fineness of bone and symmetry, to any thing he had ever met with.

Cannot some of your distant readers be gratified by a sight of some of these fine Herefords in the Cultivator. The portait of Mr. Bement's bull Dallimore, is certainly one of the best figures I have ever seen. His death must be a great public as well as individual loss.

The remarks of Mr. A. B. Allen, in the October number of the Cultivator, on the working and fattening properties of the Herefords, I have no doubt are correct; neither have I any doubt that wherever strong constitutions are required, and oxen are wanted for the yoke, the Herefords will be preferred to the Improved Short Horns, and perhaps to all other breeds.

Mr. Allen expresses some surprise that the lately imported Herefords have so wide hips and loins, and says the Herefords he had before seen, were narrow at these points. I cannot think the Herefords are generally deficient in this particular. Youatt, in his work on cattle, published under the direction of the British Society for the Diffusion of Useful Knowledge, speaking of the preference given by the Duke of Bedford to the Herefords, after repeated trials with nearly all other breeds in England, after mentioning some objections to the Herefords generally, says of the Duke's cattle, "they retain all the length of quarter, and much of the wideness and roundness of hip and fullness of thigh, which have ever been esteemed the peculiar excellencies of the Herefords. A few of them might in their fore quarters be mistaken for Devonshires ; but with a broadness of chime and weight behind, which the Devons have rarely attained."—[page 211.]

But in choosing stock, the grand object should be to obtain the breed best calculated for the particular situation for which it was designed. Each has its peculiar excellencies and defects, and the one which may be best for some locations and purposes, may be worst for others. The great error in public opinion of the present day in regard to all kinds of stock, is the passion for *great size.* The only correct medium, is, I think, that of your correspondent R., in the August number, that "the only desirable size is where we find the *greatest weight in the smallest relative compass.*"

I had intended to have added a word on the "quackery" of some of your neighbors' remarks and advertisements of "thorough bred Berkshire swine, unalloyed by black Siamese," &c. but your correspondent D. of Cambridge, Mass. has shown that matter off in so true a light, that I have but little to offer. In regard to the original color of the Berkshire swine, I will just observe, that in Dickson's Agriculture, a large quarto work published in England some thirty years since, colored engravings of a boar and sow of the Berkshire breed are given. *They were both of a reddish brown, with black spots.*

What has been the *modus operandi* in the improvement of the Berkshire breed of swine, I will not pretend to say ; but I think there cannot be a reasonable doubt that the *originals* were entirely too *coarse ;* and as has been said by some one, of the Improved Short Horn cattle, unless great care and judgment are constantly used in breeding, they will revert back and bring out the objectional points of the old stock.

SANFORD HOWARD.
Zanesville, Ohio, Nov. 7, 1840.

To Western Emigrants—No. 3.

First Night on the Prairie.

Messrs. Editors—In my last I proposed to give some account of the manner of making a new settlement. Although the subject is not exactly such an one as is calculated to add to the knowledge of those who are seeking for something new in agriculture, it may be one from which a numerous class of your readers may gather something new to them, and I hope sufficiently interesting to add to their amusement of a long winter evening. And that, you know, is a strong inducement towards causing many to read ; and that should always be a prominent object, to make a paper amusing as well as useful,—in fact the two should be constantly blended. The most useful articles are too often too dry to attract the attention of the hard laboring man. An occasional article then, which will amuse as well as instruct, and which will tend to "lighten labor" by adding an hour of enjoyment to the toil-worn laborer, will certainly have answered a good end—such is my present purpose—but if you consider it out of character for your journal, you know how to dispose of it without giving offence to a real friend. But to those who intend to set their faces westward, I think an old settler's experience will be interesting. I will begin with the First night on the Prairie.

It was the last day of October 1834, when I first entered this "arm of the Grand Prairie." It was about noon of a clear delightful day when we emerged from the wood, and for miles around, stretched forth one broad expanse of clear, open land. At that time the whole of this country scarcely showed a sign that the white man had yet been here, except those of my own household. I stood alone, wrapt up in that peculiar sensation that man only feels when beholding a broad rolling prairie for the first time—it is an indescribable delightful feeling. Oh what a rich mine of wealth lay outstretched before me. Some ten miles away to the south-west, the tops of a grove were visible—toward that, onward rolled the wagons, with nothing to impede them—the road was broad—the grass (which some think grows so high as to impede travel,) only a few inches long, except in creeks and wet places. Just before sundown we reached the grove and pitched our tent by the side of a spring. What could exceed the beauty of this spot! Why should we seek farther? Here is every thing to indicate a healthy location, which should always influence the new settler. And here let me caution the emigrant always to beware locating upon the banks of streams. After enjoying such a night of rest as can only be enjoyed after such a day, the morning helped to confirm us that here should be our resting place. In a few hours the grove resounded with the blows of the axe, and in four days we moved into our "new house."

"Dear me," do I hear some parlor-loving wife of an expectant emigrant say, "where did you get your boards to build it with?" My good lady, we were 40 miles from a saw-mill, and of course the house was built and finished off complete without a sawed board about it, and but very few nails, nor a brick or stone. The sides were round rough logs, not even the bark taken off, laid up by notching the corners together, the cracks well filled with clay, the chimney all clay and sticks; the roof, floors, and door, all made of split boards, and the tables, bedsteads, and cupboards, all of the same materials.

"Oh dear! I never will go to the west, if I have got to live in such a house as that. Why, it ain't as good as our hog-pen—and only one room!"

No mam, only one room—and we were very glad to get that just as winter was setting in upon us, 15 miles from neighbors, 40 miles from mill, store, farm, or post office. One room 16 feet square, in which have lodged 16 persons, other emigrants like ourselves, night overtaken in winter, without other shelter, and in which my family spent a happier winter than I ever expect to see again. And although not as costly, madam, as your aristocratic hog pen, yet I can assure you, that even you *could* live comfortable in such a house, and if you come to the west, as you are now thinking of, you will be very likely to live in a similar one—and you will be very comfortable too, and if I should happen to call on you, you must not think you could not make me comfortable too, although you had but "one room."

"No neighbors—so lonely"—do you say. No, I assure you, we were not lonely—never less so than that winter. In the first place, there is a dozen "honey-trees" to be cut and taken care of, and as there is no fruit nor vegetables, the deficiency is to be made up with cranberries. Then there is the venison, geese, ducks, grouse, quails, and squirrels, &c., to dress and eat; and once in five or six weeks we had "the news" from the post-office. There was no lack of employment in doors or out—no loneliness—no repining. We all came here with a full knowledge of what we had to do and expect, and so there was no disappointment.

And my dear reader, when you come to the west, don't expect too much; humble yourself to new and strange things that your new circumstances will induce. And take my advice, if you cannot humble yourself to make a beginning in a humble log cabin, you had better wait where you are, until some better pioneer has made a beginning for you. Don't come here to be miserable, for generally we are a happy race, "full, fat, and saucy;" and some of us, after we have got a "good beginning," get a little lazy. Corn and hogs will grow without much work, and "hog and hominy" will support life; and "who would work when he was able to do without it?" If you answer that you would, and that you and your family can "make a beginning" in a log cabin, you may start for the west. But don't forget the advice I gave you in my first number, and don't forget your well meaning old friend "the squatter."

SOLON ROBINSON.

Lake C. H., Ia., Nov. 1, 1840.

Legislative Aid to Agriculture.

Messrs. Gaylord & Tucker—As editors of the leading agricultural paper published in this state, you cannot have been inattentive observers of the efforts which have been made and are making in various parts of Western New-York, if not elsewhere, to organize Agricultural Societies, and to the success which has attended their organization in many counties; nor can you feel unwilling to lend your aid and influence in sustaining and supporting them, as their object is the same as that you are endeavoring to attain, through the instrumentality of your valuable and useful paper, that is, the advancement and improvement of our horticultural and agricultural interests; and my motive in addressing you is to solicit your consideration to some plan to accomplish so desirable an object; and what is more likely to do it than institutions, well regulated and conducted, of the kind above alluded to, and now struggling to claim public attention. If this view of their utility be correct, how easy is it for yourselves to invite that consideration for their support and aid, which the importance of the subject requires. If you would but only say to your many readers, "Now is the time for action. Petition your representatives for an appropriation for the improvement of Horticulture and Agriculture," the work would soon be taken in hand. A sum necessary to animate, strengthen and sustain these interests would be granted. A large sum from the state treasury would not be wanted; not much more, if any, than one hundred dollars to each member of Assembly, or in the aggregate twelve thousand eight hundred dollars, to be distributed countywise, throughout this great state, as each county shall organize a society, according to its representation, and raise a sum equal to its share of the fund appropriated, either by voluntary subscription or by assessment by a vote of its Board of Supervisors; which sum so to be appropriated and raised, to be expended and awarded by the county societies in premiums, payable in money, medals, agricultural periodicals, or such suitable evidences of merit as may be deemed expedient to encourage and improve the culture of such articles of horticultural and agricultural growth, as may be designated; and also of domestic manufactures; an interest equally worthy of encouragement and protection; and if this is too limited, ask a farther appropriation, so as to organize a Board of Agriculture, or if it is preferred, appoint a State Agricultural Commissioner, defining his or their duties by law, or even extend the application so as to be able to purchase two experimental farms, connecting a seminary with them, one to be located on or near the North river, and the other in some part of the Genesee country. There are various views of improving these great primary interests, which if legislated upon, might be brought into co-operation, to aid in advancing the general object. I cannot but think, if the legislature should be approached in this matter, that it cannot avoid paying attention to the reasonableness of such an application; urged as it would be by a decided popular voice in its favor. If a fund is required to be pointed out, from whence the necessary means can be spared, the revenue, unappropriated, of the United States deposite fund, might be indicated. But the sum necessary to stimulate and invigorate the great interests mentioned, can readily be found among some of the many fiscal pockets into which the redundant treasures of this great state are distinguished. I will not stop therefore to point out resources, but will close by simply asking of you to urge your readers, especially the agricultual portion of them, to make an effort worthy of their vocation for its encouragement and improvement, and as the interest and welfare of the whole state are involved in it, those to whom these trusts are confided will not disregard their reasonable claim.

Your ob't serv't, OLIVER PHELPS.

Canandaigua, Dec. 15, 1840.

Use of Ashes and Lime.

Messrs. Editors—If in your opinion the following account of successful and profitable farming will in any way benefit the public, you may make what use of it you think proper. In the spring of the year 1834, Capt. Moses Van Inwigin, my neighbor, sowed about 100 bushels of ashes on the quarter part of a field of about 10 acres of land, in rye, having previously seeded the whole field with clover and timothy. This field was part of a farm of fifty acres on the Neversink Flats, mostly a sandy alluvium, and in much of it the sand greatly predominating. The whole so exhausted that it would hardly pay the interest of $25 per acre. The part not ashed had been well manured the previous year. The result was, first, that on the part ashed the crop of grain was benefited to the full amount of the value of the ashes sown; and the next season he mowed from the part ashed at the rate of two tons of hay per acre, while on the residue there was a poor and stinted growth of grass, with much sorrel, hardly worth the expense of gathering. In the spring of 1835, he sowed on land in rye, and seeded with grass seed, about 900 bushels of ashes at the rate of 30 bushels to the acre. Here again he thinks the increase of his crop of rye paid all the expense of ashing, and it was followed the ensuing year with an equal growth of grass; since which he has ashed annually on his 50 acre farm from 700 to 1000 bushels of ashes—generally at the rate of about 30 bushels to the acre, until by this, and acting generally on the correct principle that a "*Judicious liberality is the only true economy of Husbandry;*" he has, by an outlay of not over $10 per acre, brought this poor and exhausted farm, which, before he commenced his system of improvement, would little more than pay the expense of cultivation, to yield an average net profit amounting to more than the interest of $200 per acre, and in the mean time realized a profit on the money expended amounting to several hundred per cent. The precise amount, or rate of profit, it is difficult to calculate. It should be borne in mind that the full amount of his outlays were generally returned within the year by the increased value of his crops. If, added to this, we consider that the profits of his farm have been increased from six to eight fold, it might at first view be supposed that its real value had been increased in that proportion; yet this is not actually the case, inasmuch as the intrinsic value of the land consisted in its susceptibility of being made profitable by being properly husbanded; in like manner as any other kind of property is estimated valuable, not according to the profit or advantage at any given time derived from it, but in proportion to the amount of profitable use it can be applied to. If this is a correct view, as I believe it is, then is not land, such as the Captain's *was*, though then yielding little profit, actually worth from one to two hundred dollars per acre? Yet much of equal value, can be purchased hereabouts for from $25 to $50 the acre.

But to show that this particular farm had no peculiar intrinsic advantages over others in *this valley*, I will notice the experience of Philip Swartwout, Esq. about three miles south, in the use and advantages of lime. His farm too, had been reduced by bad husbandry until it produced comparatively no profit. Grass could hardly be made to grow on it, of a good quality, even with manure. Except when tilled, it produced nothing valuable, and if tilled once in three or four years, it yielded very little, unless when dunged. With an expenditure, in liming, of from six to ten dollars per acre, it now yields good crops of wheat, and grass in abundance, of the best quality. Even on a sandy field, I visited when he was gathering his hay, on which he had hardly ever before seen grass enough to pasture a goose, he had now mowed a heavy burthen of excellent hay,—and this the effect of one liming at the rate of 60 bushels to the acre; and that without the use of any other manure. Now it may be well to remark that the part of *Shawangunk* mountain next this Valley is full of lime stone, with abundance of wood, while the Delaware and Hudson canal runs through the hollow, and affords abundant facilities for burning lime at a cheap rate. Fine coal adapted to the burning of lime in what are called perpetual kilns, can be furnished here very cheap. Slaked lime can also be brought on the canal from the neighborhood of Rondout, and delivered in the center of most of the farms for 6 or 7 cents per bushel. Now I would ask whether the profits that may be realized by the purchase and proper use of these lands are not enough to gratify the most greedy speculator. And in what business or by what device or management he could reasonably hope for a more favorable result. Not that I would encourage any to embark in farming from speculative motives. Farmers should be sober, working men—not visionary schemeists. But I do aver that there is no business I know of so well calculated to secure the greatest *sum total* of advantages and enjoyments as farming, if properly conducted.

HENRY VAN KLEECK.

Cuddebackville, Orange county, N. Y.

POUDRETTE.

To the Editors of the Cultivator—Will you allow me the privilege of answering, through the medium of your widely circulated paper, a few of the numerous inquiries made in relation to the value of *Poudrette* as a fertilizer, in comparison with other manures, as well as to the mode of application, transportation, cost, &c.?

Poudrette has been used in this country as a manure three seasons, by few persons and in small quantities only; of course its comparative value with other manures is known but to a limited number. There are many others, however, who, from report, entertain a favorable opinion of its virtues, yet who desire to obtain more definite information before they incur any expense in making experiments with it.

During the past season about one hundred and fifty persons have used poudrette, prepared by the "*New-York Poudrette Company,*" under my management—from many of whom I have received reports highly favorable and satisfactory as to its comparative value as a manure; and others have promised reports of the result of their experiments which have not yet come to hand.

It is my intention to publish, when I shall have received further reports, another pamphlet, giving the results of three successive years, on the same farms, by several gentlemen, whose aim has been to give it a fair trial; but I desire now to answer a few of the leading questions frequently put to me, that those who wish, may be able to make experiments next season. The following are more frequently asked than other questions, viz:

1st. On what soils is it most beneficial?
2d. On what crops may it be most profitably applied?
3d. How much per acre is commonly used?
4th. How is it applied?
5th. What is its cost per bushel?
6th. How is it ordinarily and most economically transported?

In reply to the first question, "On what soils is it most beneficial," it may be justly said that its beneficial influences are visible on all kinds of soils where it has been used; but most apparent on poor sandy or *barren* soils, where little or nothing would grow without powerful manure.

2d. "To what crops may it be most profitably applied?" I can only say that it has been used by many of the Long-Island and several of the New-Jersey farmers on wheat, corn, oats, buckwheat, turneps, and all kinds of garden vegetables, with great success; and it has been satisfactorily ascertained, by several experiments, that excellent crops of grass follow wheat manured with poudrette; and I am not aware that it has been found without value on any crop.

3d. Upon this question, "How much is commonly used per acre?" much may be said without answering it to the satisfaction of many. As, to answer it properly, it is necessary to know the character and condition of the soil where it is to be used; but the following comparative statement of its relative value with other manures, will enable every farmer to decide what would be proper on his fields.

One bushel of poudrette, prepared by the New-York Poudrette Company, is estimated to be *equal in value* to

18 bushels of city *street* manure—to
14 bushels of cow-yard manure—to
10 bushels of horse-stable manure—to
6 bushels of hog-pen manure—to
3 bushels of ashes—and to
1 bushel of crushed bones.

Some who have used it, estimate it much more highly than the above statement, as will be seen by a reference to the statement of Mr. L. Soper, at page 16 of the pamphlet sent herewith—where he says that he raised as good wheat with 40 bushels of poudrette on an acre, as he did with 40 *wagon loads* of barn-yard manure on another acre.

By these estimates of its comparative value it will be seen that there must be great economy in its use—where *transportation* enters into the cost of manuring a farm —as will be more readily understood by the annexed statement of the cost of manuring ten acres, for five years, in the town of Huntington, L. I., or in any other town where there is 40 or 50 miles of water transportation, or two or three miles of land carriage from the sloop landing, with stable manure from the city of New-York, and also with poudrette purchased annually of the New-York Poudrette Company, or with poudrette received as a *dividend* from the company.

4th. "How is it to be applied?" When applied to wheat it is usually spread on at the time of sowing, and harrowed in with the seed, at the rate of 20 to 40 bushels per acre—but some farmers have applied one-half the quantity at the time of sowing, to give it a vigorous start in the fall, and the other half in the spring; thereby ensuring an early and healthy growth in the spring. For corn, about a gill, or handfull in the hill at planting; and an equal quantity put on at broad cast, and worked in with cultivator and hoe at the second dressing; or 15 to 30 bushels to the acre has been found to produce an excellent crop—having a deep green color whilst growing, and coming to maturity earlier than when manured in the ordinary mode. For oats, 15 bushels, and for buckwheat 10 or 12 bushels to the acre has been found to produce excellent crops.

The 5th and 6th questions—as to the cost and transportation of poudrette, are easily answered. Present price of poudrette prepared by the *New-York Poudrette Company*, is 35 cents per bushel, heaped measure, or $1.65 per barrel of four bushels, including barrel. Where it is to be transported a short distance only, bags are the most convenient, as they may be returned at little expense for a further supply—but where it is to go some distance, and may have to remain one week or more in the packages, barrels, casks or boxes are the most suitable.

Of the superior value of poudrette where transportation enters into the account, as a fertilizer, over all other kinds of manure in use amongst us, *except bone*—and some who have used both do not even except bone—I have no doubt; and I cannot, perhaps, better illustrate its value than it is done in the annexed statement of the cost of manuring *ten acres*, for five years, by three neighbors whose farms adjoin, in the town of Huntington, Long-Island, and about three miles from the landing, or in any other town on Long-Island sound or Hudson river, or in New-Jersey, with from 30 to 50 miles of water carriage.

Three neighbors—A, B and C, whose farms adjoin—lying about three miles from the landing, and 40 miles by water from the city, wish to manure 10 acres of ground each year, for five years.

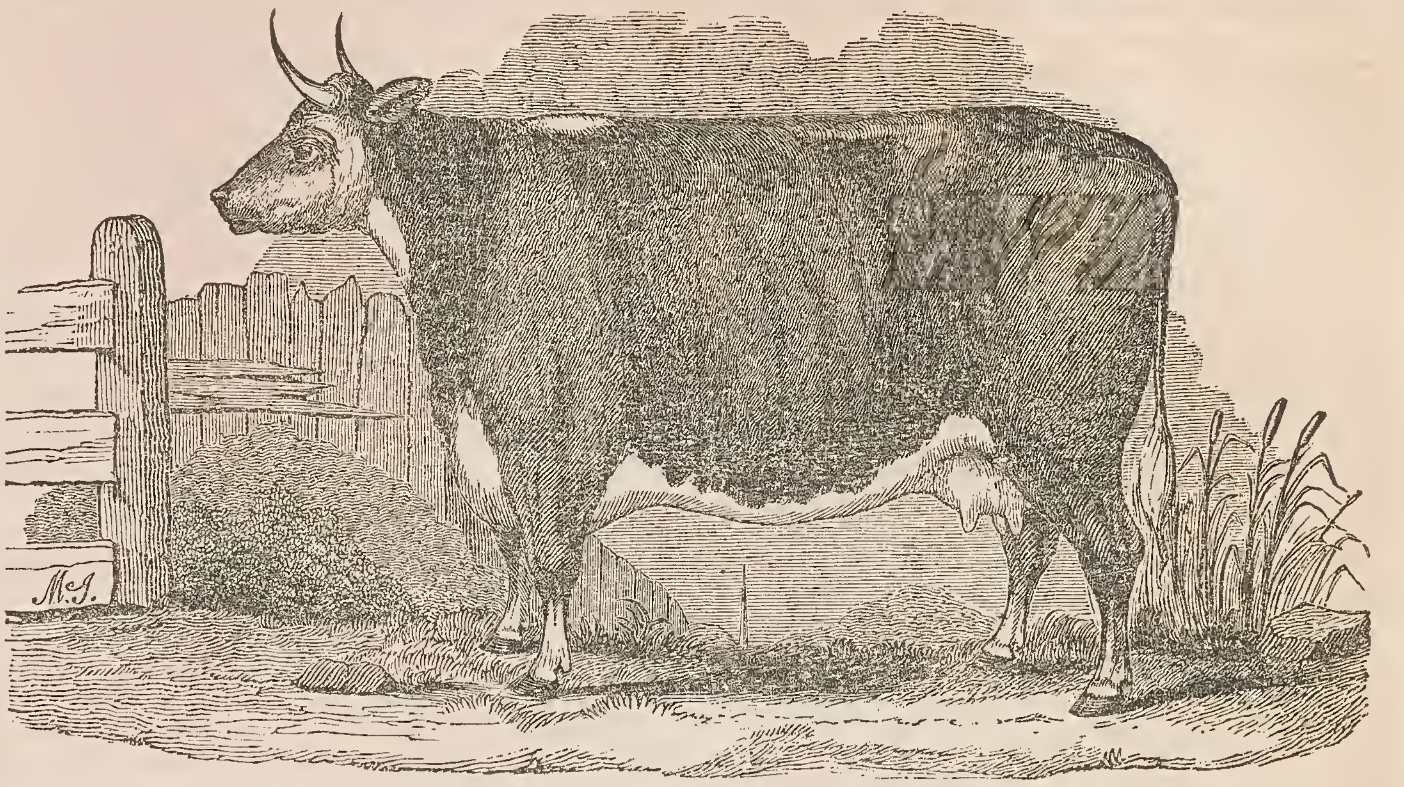
1st. A uses 20 city cart-loads of stable manure per acre, or 200 city cart-loads at 50 cents each,......	$100 00
Freight on 200 loads, at 20 cents per load,....	40 00
Haulage from the landing to the farm, three miles, 20 cents per load,..................	40 00
Total cost for manuring 10 acres, 20 loads per acre, per year,........................	$180 00
Total cost for do 5 do do	900 00
2d. B uses 30 bushels of poudrette, purchased annually at 35 cents per bushel, 300 bushels,..	105 00
Freight by water, 40 miles, five cents per bushel, 300 bushels,.....................	15 00
Haulage, three miles from vessel, seven loads of 43 bushels, at 75 cents per load,........	5 25
Bags to transport it in, 50 bags at 22 cents per year,..................................	11 00
Total cost for 10 acres, manure l one year with poudrette,............................	$136 25
Total cost do do five do	631 25
3d. Ten acres with the same quantity, 30 bushels of poudrette per acre, received as dividend on three shares of stock in the "New-York Poudrette Co." which costs,.........	300 00
Interest on $300, at seven per cent, for five years,..................................	105 00
Freight on 1500 bushels, at five cts per bush.,	75 00
Haulage of 1500 bushels, or 35 loads of 43 bushels per load, from vessel, at 75 cents...	26 25
Bags, 50 per year, five years, at 22 cents,....	55 00
Total cost of manuring 10 acres, for five y'rs,	$561 25

Thus you will perceive, that when shares are taken at present rates, B would be the gainer to the amount of $218.75 by *purchasing* poudrette at present prices, and C to the amount of $338.75, by taking shares in the company at present rates, *even if the company had but five years to continue*, over A who uses stable manure; this, however, is only a small part of the advantage accruing to the shareholder, as he will be able to manure ten acres for *eighteen* years, the period which the company has yet to continue by its act of incorporation. The farmer who uses stable manure will have to make a much larger outlay every *five* years, than the share holder in the "New-York Poudrette Co." in 18 years.

There are, at this time, over 60 share holders who have used the article during the past season, many of whom have used it successfully 3 years in succession.

Shares in the company may be had at one hundred dollars each—which are entitled to fifty bushels each *spring* and *fall*, or one hundred bushels annually.

D. K. MINOR, *Agent*, 120 *Nassau-street.*
New-York, November 25, 1840.



MR. M'INTYRE'S HEREFORD COW.—[Fig. 5.]

Messrs. Gaylord & Tucker—The cow, of which the accompanying wood cut is a portrait, is a full bred Hereford, descended from some of the best of that breed in England. She is one of the latest importation of the Messrs. Corning & Sotham in August last; and was purchased by myself in November. She was selected by Mr. Sotham, as a fair specimen of the breed in superiority of milking properties, and to show that the Herefords may, in that valuable quality, stand equally fair as in their generally acknowledged superiority in early reaching maturity and great propensity to fatten.

Yours, sincerely,
J. M'DONALD M'INTYRE.
Albany, Dec. 30, 1840.

Late Sown Wheat.

Messrs. Gaylord & Tucker—I see in the Cultivator, of July last, an inquiry concerning late sowing of fall wheat. On this subject I have some experience. In the fall of 1832, I had a fine large Irish potato field; we were late getting off the potatoes; immediately after which we had it sown in wheat. After sowing, I think the day after, there came on a severe freeze, and prevented the grain from vegetating until spring. In the spring it came up most beautifully, throve well, and produced as fine a yield and as good a seed as I ever had. This success induced me to try it again, and it succeeded equally to my satisfaction, so that I have adopted it as my system of sowing fall wheat.

There is but one objection to it in Illinois, and that I have never experienced until the present year, and I believe the same difficulty has attended early sown as well as late, but not perhaps to the same extent—that is, the blast or rust; but if we are more exposed to this evil, we are more than compensated for it (which will only be occasionally) in the security it affords against the fly and the severity of the winter; in both cases I believe it to be a sure protection, particularly in the latter, which is very fatal to us in this country. To effectually secure either or both of these ends, it should be sown late in the fall, or any time in open spells in winter.

Experiment with Potatoes.

Before closing this communication, I would beg leave to give you some of my Irish potato experiments, for since I had the good luck to fall in with your valuable paper, I have seen a number of experiments and theories in relation to the cultivation of this valuable root, some of which I believed, others which I doubted, and others which I wholly disbelieved; and as our country (American Bottom near St. Louis,) is not only destined to be, but now actually is, one of the greatest potato growing sections in the west, I thought that any information on the culture of this root would be necessary to myself and perhaps useful to others.

And first, I will say the potatoes were all planted the same distance apart both ways; the only difference is in the quantity in the hill, and the preparation and quality of the seed. The question among potato growers here is on these points—not on the quality of the ground, the newer it is the better—not on the variety of the article; the *large blue* taking the decided preference of *all* others, the Rohans not excepted—not on the kind or manner of manuring, for we scarcely manure our gardens here—not on the mode of culture; all plant and plow them like their corn, only nearer both ways.

I planted five rows side by side, and the hills I experimented on side by side; and

1st row, cut the common size, that is one large potato cut into 4 or 6 pieces, 4 pieces in a hill.

2d	row	4	pieces in a hill,	cut as small again.
3d	"	2	" "	smallest round ones.
4th	"	1	" "	largest, without cutting.
5th	"	2	" "	of same size potato.

I proceeded to dig two hills in each row, and count the number of potatoes in each two hills, and also to weigh them. The result was as follows:

1st	row,	counted	53	potatoes,	weighing	$10\frac{3}{4}$ pounds.
2d	"	"	62	"	"	$10\frac{3}{4}$ "
3d	"	"	36	"	"	$8\frac{1}{4}$ "
4th	"	"	37	"	"	$12\frac{3}{4}$ "
5th	"	"	31	"	"	$8\frac{1}{4}$ "

I observed that those in row 2, had the most small ones and the fewest large ones—the large whole seed certainly furnished the largest potatoes, without any small ones—the balance were pretty much alike in point of quality. What is the most surprising is that rows 1 and 2, should yield precisely the same weight of potatoes when only half the quantity of seed was used in the 2d row, and the only difference is being cut again, having the same number of pieces in a hill, they being only half as large; thus it seems that they ought not to be crowded in the hill. Row 3 with about the same quantity, produced but $8\frac{1}{4}$ pounds which is a bad yield. Row 5 a good yield for the quantity of seed—$\frac{1}{4}$th the quantity of seed and $\frac{2}{3}$rds the quantity of potatoes compared with the best row 4, (the large whole seed.) Therefore if we want a large yield of large potatoes, plant the large ones whole, although they will not go as far as to cut them.

We have cultivated the famous Rohans for the last two years, but they will not begin to compare with our Illinois blues, neither in quality or yield; the blues will, I am satisfied, beat them twenty-five per cent in both these respects.

THOMAS G. LOFTON.
Six Mile American Bottom, Illinois, Oct. 2, 1840.

Pedigree of Daisy.

Messrs. Gaylord & Tucker—The pedigree accompanying the engraving of the beautiful heifer "Daisy," appears imperfect, as does many of the pedigress published, giving *only* the names of sires, g. sires, gr. g. sires, &c. It is as important that the pedigree be given of the dam, dam of sire, dam of g. and gr. g. sire, &c. Daisy was by Leopard, dam Matilda by Red Jacket, g. dam *imported* cow Majesty. Majesty having been *imported* is no evidence of the purity of *her* blood. The dams of Red Jacket and of Young Regent may have been native or grade cows. It says: "White Jacket was got by Young Regent, whose sire was imported Regent, by Favorite the sire of Comet." Imported Regent was sold at the sale of Charles Henry Hall, Esq. in 1830, for 8 years old. Comet (155) was got by Favorite (252), and in 1810 was sold as six years old. The famous Durham Ox was got by Favorite (252), and in February, 1801, was sold as a five year old; of course Favorite (252), the sire of Comet (155), and of the Durham Ox, could not have been the sire of imported Regent, which was calved in 1822. Ajax the sire of Leopard was by Washington (1566), dam *Red Lady* by Washington (1566) g. dam Panzy by Blaize (76.)

Herd Book.
Connecticut, December, 1840.

THE CHINCH BUG AGAIN.

Messrs. Editors—Last spring you may recollect I addressed you on the actual and threatened devastation of the chinch bug in this section of our country, and offered a premium for a feasible remedy, (which was responded to by others till it amounted to a handsome sum.) I now inform you that "our fears were disappointed and our hopes exceeded" as to this pest, by the hand of an overruling Providence. The season turned off wet and very propitious to crops of all kinds, and the ravages of this bug were arrested. Even fields of wheat that had been greatly injured, suddenly revived and produced tolerable crops; and the corn crop, which last season in places here, was ruined, escaped uninjured.

Should next season in this region prove dry or propitious to this bug, it remains to be seen whether it will again make its destructive appearance.

Respectfully yours,
SIDNEY WELLER.
Brinckleyville, Halifax co. N. C. Nov. 24, 1840.

Letters from the West—No. 4.

The Sciota Valley—Virginia Farming in Ohio.

Perhaps one of the most beautiful and fertile regions to be found upon the face of the globe, is the Sciota Valley, stretching from north to south about two-thirds the distance across this great and most highly favored state, presenting in its whole length, varied and picturesque views of limestone precipices, bold gravelly or argillaceous bluffs, and deep alluvial banks, spreading out into wide rich bottoms, and bounded by rolling uplands of the most desirable and eligible kind. As described to me by those who first saw it in its pristine glory, of dense lofty forest, umbrageous parks, tall waving grass and flowery prairie, studded by high mounds and wide ruins of ancient fortifications, it must have been a sort of aboriginal paradise, that one might almost deplore was ever fated to be marred by the hand of civilized man; judging from appearances too, this Valley must have been densely populated by barbarous tribes, thousands of years ago, who had their happy days as we have now; and even when first discovered by the white man, it was the favorite residence of numerous and probably more savage bands than the inhabitants of the first epoch, the wide-spread and powerful Shawnee stock, and so great was their love for this delightful region, that they fought for and clung to it till the last, with the convulsive grasp of the child to its mother's bosom, that a hated and superior power would feign force away. Poor hapless race! Here from time immemorial, they gave chase to the wild deer, the shaggy bear, and huge buffalo; cultivated the golden maze, feasted on its roasted ears, boiled succatash, and pounded hominy; spouted their eloquence and made their wars, sung their songs, and danced to the music of the bowstring, the tom-tom and chichicon, and smoked to the Great Spirit of all. What themes were these for the imagination of the poet to revel in, or the pen of the novelist, or even that of the graver and more matter of fact historian* to trace, but they are not mine, and I turn to what is more likely to interest the readers of the Cultivator, that is, the growing of stock and management of farming lands.

Just above Columbus, the Sciota is joined by its largest branch the Whetstone, or according to its more euphonious Indian name, the Olentangy, where in fact commences the great corn region and Valley of the Sciota *par excellence*. Here a decided geological change takes place; the deep limestone quarries crop out a mile or two below, and are no longer found in the whole course of the Valley to the Ohio; the hills recede and the bottoms at once quadruple their width and become of the richest vegetable mold, of a depth from three to ten feet, resting on a bed of light yellewish clay, close sand or limestone gravel. The waters, also, become more sluggish, and with the exception of now and then a short shallow ripple, making a convenient ford, they wheel lazily along to their final mingling with those of the Ohio.

At the head of this lower Valley, on the right bank of the river, commence the almost princely domains of the Messrs. Sullivants, stretching a long distance down its clear winding stream, enclosing the village of Franklin immediately opposite Columbus, and running in parallelograms of about an equal width on each side of the National Road west, to the distance of between six and seven miles, making an aggregate of land, in one compact body, of upwards of eight thousand acres. This, however, is only called the homested, for in addition, I believe, there are some five and twenty or thirty thousand acres more of out-lots in this and the adjoining counties, of the best quality of farming uplands, much of which that is cleared is devoted to the growing of stock. But as the homested embraces all the varieties of soil to be found in this county, and as it is a fair sample on a large scale of Virginia farming in Ohio, I shall at present confine my observations to this, trusting at a future day to give a pendent to it, in the management of some one of the numerous hundred or two acre farms of my northern brethren, that have settled here and are adding so much to the populousness and wealth of this great state.

The bottom lands of this large estate are about two and a half miles wide, and till within a few years, from time immemorial, have been devoted almost entirely to corn, they having been found in this crop when first discovered under the sway of the aborigines of the country. The Sciota then occasionally overflowed its banks with back water, which left a thick rich sediment, that kept up the fertility of the land drawn out by the growing crop. But this overflow has occasionally been found to destroy the corn, and latterly an embankment or levee has been thrown up along the lower banks of the river, which serves to keep the water out, and the consequence is, that the same lands that would average with common attention 75 to 90 bushels per acre, do not now yield over about 65 bushels, when the stalks and corn are annually cut up and carried off. In order to recruit them then, under this exhausting system, as soon as the corn is glazed, say the fore part of September, it is cut up close to the ground, and shocked in straight rows across the field, and the ground between immediately plowed and sowed to wheat. In the course of the winter, the corn is husked out in the field, and the stalks carried off as wanted for fodder, and the narrow strips of land they occupied in shocks between the wheat in the spring is sowed to oats and the whole field stocked down with clover, and then fed off for two seasons and the land again put into corn till found to lessen its crop. In this way, with the application of a little lime, which can be made from the quarries of the estate at the trifling cost of eight cents per barrel, the Messrs. S. think they can keep up the fertility of their bottom lands to the end of time, and yet annually carry off all the corn and fodder when in crop, to be fed upon and fertilize the uplands.

The fields being very large, the soil light and friable, and no obstructions of stones or any thing else in the way, all the labor of planting, covering, and weeding is done by different made plows, harrows, and cultivators, drawn by horses, and with great care and rapidity, the details of which I will give hereafter, when I have fully witnessed them. I shall confine myself now to the manner in which the lands are farmed or rented. The first and most usual way, is for the tenants to find every thing and take one-half of the crop shocked in the field, or deliver neatly husked one-third in the crib. Second, pay a corn rent of twenty bushels to the acre, of sound bright corn, delivered in the crib. Third, find seed and cultivate the crop for three dollars per acre, to shocking it in the field, and two and a half cents more per bushel for husking, and cost of delivery according to the distance to be transported. Fourth, the owner of the soil hiring his own men by the day or the month, and doing every thing then within himself.

There are two ways of feeding off the corn and pumpkins here. One is to turn fatting cattle into the field, and let them eat at their own discretion, and then be taken out and followed by droves of hogs, who clean up pretty much all that is left. This, to a northern man, may be considered very wasteful, but it is a great saving of labor, and the corn being comparatively soft, is easily ground by the animals and digested. Besides it is the very principle adopted in Europe, where labor is much cheaper than with us, in feeding off their root crops, by cattle, sheep, and swine, and a bushel of corn costs the Ohio farmer no more, and I suspect on an average hardly as much, as the same quantity of turneps does an Englishman. Why then should we object to it on a larger scale, when every thing must be done at a high rate of wages, and the course returns nearly every thing back to the soil in the way of manure, and thus keeps it up in a state of everlasting fertility? The other manner of feeding it to swine, makes the very *beau ideal* of animal existence, fulfiling the assertion of Doctor Franklin's servant, that "de hog, he eat, he sleep, he lib like a gentleman." They have a large grass pasture to range through, with a running stream to wallow in and slake their thirst, beds of leaves to lie in, and mossy trees to shelter them from the hot rays of the sun. To this place loads of pumpkins and corn are brought out twice a day, and they are amply fed till fat enough to go to market, and it is amusing enough for a stranger to be present at the scene. In wheels to the hog pasture, a great heavy Dutch wagon with four stout horses, the driver astride on the near hind one, coolly whistling some animating air, and keeping time with the flourishing of his whip in loud pistol cracks, while another genius, standing on top of the load, commences pitching it to the right and left, stepping and standing up now and then to give the long drawn roll-call, at the top of his voice, of whōō-ōō-hōō, or perhaps more poetically from a horn slung by his side, he draws forth a clear tremulous blast that rouses the whole grunting field from their recumbent positions and sets them on the move, reminding one of the stanza in the old ballad:

> He took a horn of silver bright,
> And blew a blast so loud and shrill,
> Each bush it grew a warrior dight,
> Each rock a knight upon the hill.

The uplands are occasionally cropped, and will give an average yield of 40 to 50 bushels of corn per acre, 25 to 30 of rye, 20 to 25 of wheat, and 40 to 50 of oats, and finer and larger root crops I have never seen. The summers here, are long enough usually for the sweet potato to ripen, if cultivated with care, and they grow as large as in their favorite home, the sands of the Carolinas. Grass is first rate, and one and a half to two tons to the acre, with plenty of rowen or aftermath is not at all uncommon. But the great superiority of the south-west over the northern regions is its milder climate, the almost ceaseless growth of grass during the whole year, and the consequent ability of the pastures supporting stock well out doors upon it, any where in the latitude of 40° or below all winter, excepting some few short weeks, when the season happens to be unusually severe, as was the case in the cold snowy winters of '36 and '37.

For the summer, the stock have their range in cool open woodlands, or more properly parks formed by cutting out all the small growth and underbrush, and when too thick, of some of the larger trees of the original forest, and then sowing it to a variety of grasses. White clover, and the famous Kentucky blue grass,* and another tolerable fair variety for early and late pastures, called by the odd name of Nimble Will,† come in naturally. The early spring and late fall pastures are clear open fields, and for the winter, meadows fringed with belts of thick woods. Here the stock feeds through the day, even pawing up the light snows from the ground to do so, in preference to going to a stack, and at night they find a dry warm bed of leaves to repose on in the forest and close underwood around, and branches overhead to shelter them from winds and storms, making their coats look as sleek as a mole's. Most stock growers agree that cattle thus tended thrive and appear better than when housed in sheds and with straw yards to run in; and the saving in cost of buildings, cutting and securing hay, foddering, and the carting out of manure to the fields again is immense, for in this way of pasturing, only when the weather is severe, foddering from adjoining hay stacks and corn fields, one man will easily take care of 200 head of cattle during the winter, making real sport of his business.

Mounting a flashy galloper, or swift pacer, that will come up kindly to the opening and shutting of gates, take a big log and low fence at a flying leap, the horseman is soon in the field. The pasture may be from 100 to 500, and sometimes, though rarely, of 1000 acres. Of course he cannot see all without some trouble; he therefore leads off in the musical line, like our friend the pigman, with a regular Indian halloo, varying the whōō-ōō somewhat by a final ending in a higher key, of e pee, or whōō-ōō-ōō epe. At this familiar sound, the cattle raise their heads, and at a second or third repetition set off upon the full scamper in every direction for the herdsman, tossing their heads, kicking up their heels, and plunging to the right and left like a herd of wild buffaloes, and in the most joyous mood imaginable. They are then talked to in a petting way as if they understood every word that was said, thrown a little salt, seen that none is missing, and foddered from the stacks if necessary. Large fields of rye are sown in the fall, for early spring pasture, but really, since I have come to see the country, I am almost of opinion that in large stock farms, it is quite as profitable and as well to shut up the winter pastures all summer, and leave the grass to grow, reserving four separate pastures, one for December, one for January, one for February, and one for March; and by the first of April, the grass has got a fresh bite again in the summer pastures, ready to receive the stock. Too much hired labor for plowing, planting, sowing, and harvesting, will eat up the whole produce of the best of farms, when conducted on a large scale; those in a small way, worked by the owner himself and family, with a little hired help, can undoubtedly profitably pursue a different course, but of all this I do not wish to be understood that I have decidedly made up my mind, as I must be longer in the country before I can do so. But where thick belts of forest are not reserved for shelter, I would by all means recommend protection of cheap sheds to stock; even in a climate much more mild than this, snows and sleets, and cold winds, and drizzling early spring rains, cannot be borne by cattle without much suffering.

Leaving the brothers, with their highly cultivated minds, to their favorite studies of Botany, Natural History, &c., many a bland day, with the clear November sun shining warmly out, have I mounted horse with Mr. M. L. Sullivant, who is the great farmer and stock man of the trio, and bolted forth to view the numerous and varied animals, that grace his larger share of the estate. He does not allow a single scrub on his farm, but all are thorough-bred, or more or less graded, making a most gratifying show of cattle; and it is astonishing what a revolution a good Durham bull will create in a few years. Here were animals on the same food, fifty per cent larger than common cattle would have been of the same age, with broad loins, deep thick quarters, fine heads and short horns, and as fine and silky and sleek in their coats as a blanketed horse, and as fat as butter. Among so many animals, it will not do to particularize too much, or I should be calling a roll as long as the catalogue of Homer's heroes; it will therefore suffice to say, that his imported Flora is of great size, a good animal, and one that fleshes easily. She girths largely, and has a wide spread of the hips, measuring slightly over two feet six inches. Imported Bertha is fine and compact, and but a trifle less size than Flora; but one of the prettiest to my notion, is Jessica, out of my father's imported Rachel, got by Whitaker, brought out from England by the Ohio Company in 1836. Of the bulls, Talleyrand is long and large, with a lofty and well set head and neck, and fine flat arched horns. He was bred by Wm. F. Paley, Esq., of England, and took the premium there as the best yearling at the Wharfdale Agricultural Society. Red Jacket is a capital heavy snug fellow, and Niagara, of pure white, will yield to few in fineness of point, and to none in depth of pedigree. Aside from the above, there is a scattering of promising young ones of both sexes.

In mules, Mr. S. drives an extensive trade, often having a countless herd, and at other times is pretty well thinned out. They are of large sizes bred here, much more so than is usually found at the east; and as for Jacks and Jennies, I suppose I must not talk much of them till I get to Kentucky; but as Mr. S. sent a herd of crack females some two years ago, down among his half horse and half alligator brethren, they were returned him this fall with quite a progeny. Turning a sharp angle of a thick clump of woods, in a wide pasture one day, I unexpectedly came upon the whole posse, and as my eyes had not been blessed for a long while with a view of any *four* legged longears, I could not but give them a rapturous hail, and set up a broad laugh, that the droll sight of a regular built jackass scarce ever fails to inspire within me. To my great delight, they, *en masse*, took up the spirit of fun, and echoed back in my own coin, the head of the clan leading off with the short coughing grunt of a high pressure safety valve, and ending with a high broad cachination, that would have eased the lungs of the most gamesome darkey of the land.

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* Mr. J. Sullivant is now employing himself with the measurement, plans and views of the ancient mounds and ruins of this region, and I trust when completed, he will give them to the public, together with a history of their probable origin and relics, coupled with a geological, geographical, and historical memoir of the Sciota Valley, from its first discovery to the present time. His elegant pen could not be better employed, and would give an interest to all these matters that the public would highly appreciate. What is more valuable than the local histories of Europe? They are the treasures of the antiquary, and mines of the general historian.

* Poa trivialis.

† Muhlenbergia diffusa.

Tiger Tail and Big Thunder are a pair of imps not to be sneezed at—they were got by Mr. Clay's Big Warrior, that sold some two or three years since for the enormous price of $5,000! These may be matched by a full sister to Tiger Tail, Shawnee Girl, got by Camillus, a son of Mr. C.'s imported Ulysses, and two jennies by a famous large jack imported from Mogadore by the late Captain Riley.

Of fine sheep, Mr. Sullivant has only dabbled in Leicesters; they were selected by Mr. W. F. Paley, in England, and imported by himself at a large cost. His old breed of hogs are of a very good kind, and are generally a cross of the Grass and Leicester, but like most every other candid man that I ever met, he sees the superiority of the Berkshire, and is working into them as fast as possible. He has a few full breds, some of which are very choice. Long Canoe is a tremendous big fellow, and Sciota as fine a dark haired beauty as is often found.

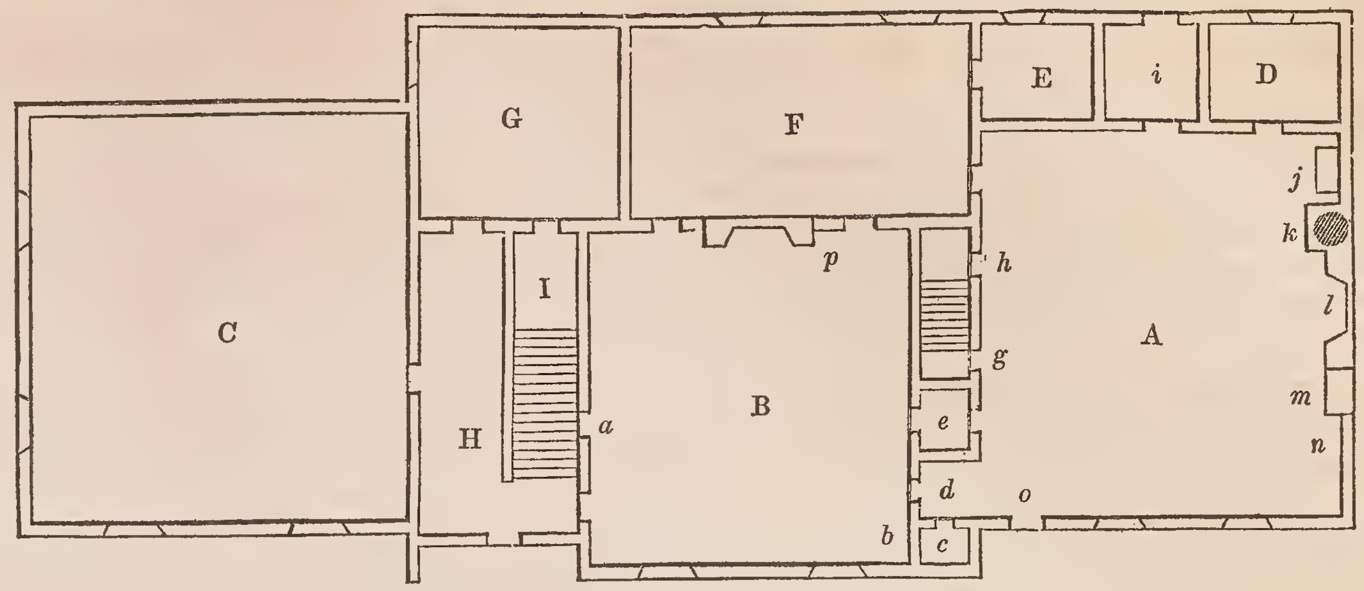
Columbus stands on an elevated plain of some 50 feet above the Sciota river, and is the seat of government for the state. It was located here in 1812, when its site was all a dense forest, with but a single log hut standing. It has now a population of about 7000, and is a handsome regular well built town. Its main streets run parallel with the river and are crossed by others at right angles, most of which are paved, and have wide comfortable side-walks. The stores are numerous and well furnished, and the town does a large and reasonably profitable trade with the rich surrounding country. I was surprised to find so large a book-store as is kept by Mr. Whiting; it has a fine assortment of all the best current literature, and would be considered respectable even in the city of New-York. It is said to be the best supplied of any west of the Alleganies.

Many of the private residences here are handsome, and the public buildings give an imposing air to the town. The State's Prison, with its extended wings and turreted walls, appears like a castle, and the Lunatic Asylum, with a noble Greek portico, spreads out to a great length, while the plainer edifices of the Deaf and Dumb and Blind Asylums, and Alms-House, show ample room for the unfortunate inmates, and the benevolent care of the state. But the new State House is to eclipse all, for on the present plan it is to be 370 feet square. I can't say, however, that I am over pleased with the proportions of its architecture; it is too low for its dimensions, and the dome and cupola are largely out of all proportion. I should hope to see some alteration in the plan before proceeding farther in the work. The State Library is a good one, and particularly rich in its law department, and with a proper introduction is open to strangers, rendering their stay here thereby much more agreeable than it otherwise would be. The hotels here are good, but one is now being built, which when completed, will be one of the largest and best arranged in the United States; it is five stories high, and about two hundred feet square, and is called after its wealthy and enterprising proprietor, the Neil House.

The National Road, from Cumberland to the Mississippi, passes directly through Columbus, and is constantly thronged by a moving mass of emigrants to the never ending west. In addition to good country roads, open to all parts of the state from this point, a cut from the Ohio and Erie canal at Lockbourne, 12 miles below here, intersects the Sciota, opening water communication to the north and south. The river forms a convenient harbor, and a beautiful covered bridge, built by the National Government, with high and finely chisseled massive stone abutments, and a middle pier, spans its waters, connecting Columbus with the opposite town of Franklinton. A. B. A.

THE FARMER'S PERFECT COTTAGE.

Friends Gaylord & Tucker—I cannot say that I have any great story to tell about large crops, or fine Durham cattle, or Berkshire hogs, though I have bred the latter a few years with good success, and have now on hand about twenty pigs, some fit and others fitting for the market. My object is to give a plan and description of a dwelling that I have been building the past season. Thinking that I might spend my days in it, have endeavored that neither pains nor expense should be spared to make it both comfortable and convenient. My family are now enjoying its convenience and comforts, much to their satisfaction. Were I to build again I could not think to alter my plan but very little. I have the judgment of many that they never were in so convenient a house, and could not see wherein it could be bettered. Therefore I think it worthy of the title of "The Farmer's Perfect Cottage."



(Ground Plan of the Farmer's Perfect Cottage—Fig. 6.)

It is situated on an eminence that overlooks the ground on which was fought the great and decisive battle of Saratoga, between the Americans and British, commanded by General Gates on the part of the Americans, and General Burgoyne on that of the British, which lies about one mile to the east and south-east. The ground descends considerably to the east, until it reaches the Hudson river, a distance of about three miles. We have a fine unbroken view of some 20 or 30 miles along the east bank of the Hudson, extending from 3 to 8 miles back, over a beautiful tract of rich and fertile country. Also a more broken view of the high lands along the western sections of Vermont and Massachusetts, and that of the Catskill mountains to the Highlands, an extent of at least 130 miles. The road passes my house running nearly north and south. The house is on the west side, with a fine descent towards the road and also to the north.

The plan that I am about to give is very near the same as the one that I have built. The main body is given 26 feet by 26, with posts 14½ feet, end to the road. Two wings, each set back three feet from the main body. Wings 18 by 18—north wing running as far back as the main body—posts 8½ feet—rooms below, 8½ feet between joints.

Ground Plan—(Fig 6.)

A. represents the kitchen, 17 by 18 feet—B. sitting rooms, 16 by 16—C. parlor, 18 by 18, arched from each way, with a centre piece run in the middle, carried up about 11 feet in the centre with a stove chimney coming down nearly to foot of the arch, on the south side of the room, and made to form a part of the same, with a sheet iron thimble made on purpose and fitted into the chimney—D. the pantry, 6 by 7 feet—E. clothes' room, 6 by 7—F. bed-room, 10 by 17, with folding doors to divide it into two rooms when wanted, calculated for a stove in case of sickness or any circumstance that might make it necessary—G. bed-room, opening out of front hall, 9 by 10—H. hall, 7½ by 14½ feet, the front door being set back, forming a recess of 1½ feet, lighted by side-lights and lights over the doors 4½ by 12 inches—I. clothes' room from hall bed-room under front stairs—*a*. small place under front stairs, not occupied by clothes' room I., with a small car 3 feet long, 2 high, and 1½ wide for wood-box, set on iron castors to draw out and in at pleasure; shut from view by a small door—*b*. secretary and book-case with three drawers, made fast, of black walnut—*c*. small space behind secretary, opening into pass-way from sitting-room to kitchen—*d*. pass-way from sitting-room to kitchen, with the door on the sitting-room side—*e*. double cupboard calculated to accommodate sitting-room and kitchen, with doors to open on each side, that victuals and dishes may be passed through, and save many steps when the table is to be set in the sitting room—*g*. door to go up kitchen chamber stairs—*h*. door to go down cellar stairs—*i*. pass-way to go out the backside of the house—*j*, sink drained by lead pipe to drain under cellar wall to prevent a disagreeable muddy place near the house—*k*. 15 gallon kettle set in an arch with a cover to it—*l*. fire-place—*m*. oven—*n*. cupboard over oven—*o*. front kitchen door—*p*. cupboard over right side of sitting-room fire-place, the chimney being carried up on the left jamb.

I have full size windows in both front and rear in my chambers. My chamber is divided into four rooms calculated to use two from kitchen stairs, and the other two from front stairs.

I have very superior walls, wanting only to be as white, to make them nearly equal to hard finished in point of smoothness and firmness. My lime for the last coat, after being carefully slacked, without being allowed to get dry in slacking, was when warm strained through a wire sieve (such as would be used for Indian meal) into a cask or box; then stir in the sand, which should be coarse and clean, (sift it if there is any gravel in it,) until it becomes as thick as a bedding, using care that it be strained as thick as may be. It is best, after standing some days before it is used. The mason should put it on as weak as he can spread it, and trowel it down very hard, which it will bear, if the wall has got sufficiently dry; it may be put on about one-fourth of an inch thick—the wall should be left rough as it is when the darby and float come off of it. If there is too much lime used, or it is not well troweled down, it will chip crack. On the contrary I think it is the very best finish that can be put on. We have washed some of ours, and they wash equal to a hard-finished wall.

I have a cellar under the whole house. That part under the north wing is converted into a room for washing, and such like work with two kettles set in arches—one a brass kettle set in a rim of iron, that it may be removed at pleasure. Also a milk room in the rear, with two good sized windows; the ground being low enough to admit of it.

I have examined my bills for lumber and other materials, and they, together with the labor done by carpenters and masons, will amount to about one thousand dollars that I have paid out. My carpenter's bill will be a little over three hundred dollars, having slit the most of the stuff with a circular saw propelled by horse power, a handsome saving for any one, more than the cost of the saw. My mason's bill was eighty-six dollars—did more than one-half of the lathing, and laid all the cellar walls with the exception of my work in company with them. I used unburnt brick for the body of one of my chimneys, and think it a saving of over one-half the first cost of the brick. I filled in all the first story with unburnt brick, (cost $2.25 per 1,000;) set them edgewise next to the siding, laid in lime mortar, which renders the house nearly as warm as a brick one. The upper story I boarded before siding, with rough boards, all of which stiffen the building much with but little expense. In filling in with brick, I laid the first tier of hard brick down flat to prevent the mice from passing up and down.

I have devoted the most of my time while the building has been going on in assisting wherever I could lend a hand. Have done nearly all my inside painting. I have one coat on the outside. I have not recorded any expense for teaming or work done by myself. Had the stone on my own farm, and found the hewed timber; boarded my hands, and paid my carpenters and masons by the day. I would not wish ever to let such work by the job. BENJAMIN CHASE.

Stillwater, 10th mo. 1st, 1840.

STABLES WITHOUT FLOORS.

Increase, Preparation & Application of Manures.

Messrs. Gaylord & Tucker—In the perusal of the Cultivator, my attention has frequently been drawn to the subject of manures. It is universally acknowledged an important point in agriculture, to make as much manure as possible; and also to preserve and apply it in the best manner. The urine of cattle and horses, all admit to be of great value as a manure. The quantity of this, it is reasonable to conclude, is greatly increased by giving juicy food. But is not the greater part of this lost, when cattle are kept through our long winters in the usual way, in stables with floors? I would recommend to all who wish to improve the value of their manure heap, to take out their stable floors, where the ground below will admit of it, and fill up to the bottom of the sills in autumn, with good earth. During the winter, the wet manure should be forked out, and fresh litter supplied as often as necessary to keep the cattle clean and comfortable. The dirt soon becomes so hard that the urine will not easily penetrate; and what does is saved in the spring by throwing out the dirt thus saturated. It is surprising how much excellent manure a single horse will make in the summer, kept upon the ground, and plentifully supplied with fresh cut clover to eat, and dry dirt and litter to stand upon. Manure made in this way, will not burn if it is thrown into a pile. Horses' hoofs are greatly benefited by standing on the ground. I have practiced the above method two seasons, (on a small scale it is true, but it can be made to apply on a large one with proportional benefit,) and can say from this short experience, that I would have no stable floors, could I have them at no expense. Stables without floors are easier for cattle to stand and lie upon, as well as warmer; dung seldom freezing, except in the most severe weather.

A good way to *preserve* stable manure, is to spread it about the yard where cattle will tread upon it. Much of the value is lost by keeping it in heaps under the stable windows where it is exposed to frost and wind.

Upon the application of manure, I have not much to say, as the subject has been fully discussed by able writers and practical agriculturists, who have come to widely different conclusions. When one writer says that manure should be applied to the surface, and another that it should be buried beneath the furrow, it will probably be safe to adopt a middle course. Let the ground be plowed, and the manure piled (that it may ferment slightly,) in April, and just before you wish to plant, spread the manure upon the surface, and cover it is as much as practicable with a harrow, cultivator, or light plow, not disturbing the sod.

If any part of the above may appear of sufficient utility to have a place in your valuable paper, and any farmer enabled to add even *one* load more of manure to his pile, I shall consider myself well compensated, and shall feel that my duty, as respects contributing my item, performed. Yoursr espectfully,

T. P. HUNTINGTON.

P. S. Since writing the above, I have read an article from the Boston Cultivator recommending the disuse of stable floors, which is the first of the kind I recollect ever to have noticed.

Richland Home, N. Hadley, Mass. Dec. 17, 1840.

Many Crop Experiments.

I have before made known in the columns of the Cultivator, my entire success in a double crop as to Irish potatoes and pumpkins; or that by planting pumpkins among potatoes after the vines of the latter were of some size, a fine crop of the former overspread the ground, rather to the healthful shading than to the detriment of the potatoes matured underneath.

Of late years I have sowed buckwheat and rye at the same time and on the same ground; and success attended. The buckwheat was cut in the fall, and rye the following harvest. Again, in our hot climate, and on on our light sandy soil, I have hit upon a plan that renders red clover of as certain growth and success as in the northern states, if not more so. It is by covering the ground with pine leaves after the wheat and clover are sowed; or cover the wheat in the winter and sow the clover in the spring. Last September a year, I sowed a piece of ground with wheat, and clover on the fresh earth immediately after the wheat was harrowed in, and soon after put over most of the surface pine leaves. The wheat and clover were both essentially benefitted by the covering, and a remarkable contrast to that left uncovered to test the utility of the plan.

The fifth of August last, I resolved upon a fourfold operation on a piece of ground, and after sowing thereon buckwheat and rye, and then clover, I covered most of it with pine leaves, straw, and green pine boughs, or with the different materials in different places, coated over about an inch thick. The result promises to be very satisfactory. And a most decided difference in favor of the ground thus covered. I had the curiosity, the 5th of October, to measure the buckwheat from a corner of the piece, less than a quarter of an acre, and the produce was five and a half bushels. Both the rye and clover look very promising for next years crops. Very respectfully yours, &c.

SIDNEY WELLER.

Brinckleyville, Halifax co. N. C. Nov. 24. 1840.

Calf from a Yearling.

Messrs. Editors—In passing on our journey through this world, we hear of many "freaks of nature," that we hardly believe, and see many that we almost doubt, although our eyes prove it. Such a case happened in my barn yard a few days since. The first morning after I put my cattle into winter quarters, I saw one of my yearling heifers laying down in the farther part of the yard; she did not come to the rack with the others when I foddered them, and I went to her, and to my great suprise I saw a calf lying by her side. I could hardly believe my eyes. I immediately drove her into the barn, carrying in the calf, which was no great exertion I can assure you. I set my thinking faculties to work, to find out the sire of this new comer; it took me sometime to satisfy myself, for I knew she had not been off my farm; even if she had, there was no bull that she could get too. The first of summer as fast as I weaned my calves I turned them into a lot together; during the summer I purchased a bull calf that was calved the 15th of April. I turned him in with my calves, and he is the one that did the mischief. He could have been but five months old at the time she became pregnant. The calf is a fine square built little animal, as playful as a deer, and grows finely. The heifer's teats are about the size of the end of your little finger, and to milk her, I cannot compare it to anything that would give you an idea of the smallness of the business, better than milking an ewe. Now this "freak" may serve a lesson to all farmers who are in the habit of letting their calves, both male and female, run together the first summer. It requires much extra attention to do the heifer justice; still she will look poor and meagre all the winter. B.

Pleasant Hill, November 25, 1840.

Circassian Mulberry.

This important and rare variety bids fair to form a new era in the silk sulture, on account of its extreme hardy character and profusion of foliage, of the largest dimensions.

The leaves are about the size of the famous multicaulis mulberry, but more fleshy and nutricious, and of greater weight, and this tree will consequently afford more food for silk worms than any other variety. The wood is remarkably firm and will withstand the winters of Quebec. Its growth is truly a subject of amazement, being 50 per cent greater than the rapid shooting multicaus.

Most of the trees raised from cuttings the present season now exceed six feet in height, being nearly double the height of all other kinds in the same field. It can not fail to be a great acquisition, and particularly so to New-England. WM. PRINCE & SON.

Flushing, December 30.

LARGE CALVES.

Messrs. Editors—According to promise, I send you the weight of the bull calf Bolivar, of the Short Horn Durham breed. He weighed when 4 months old, 640 pounds; at 5 months, 760 lbs.; gaining 120 pounds in one month. Bolivar was bred, and is now owned by Stephen Van Rensselaer, on his farm 2 miles north of Albany on the Troy road, where a few head of the same breed of both sexes can be had if applied for soon.

SANFORD BENNETT.

Watervliet, Dec. 16, 1840.

Messrs. Gaylord & Tucker—I send you the weight of a bull calf, owned by Mr. D. B. Litchfield of this town. It came the 16th of May last, and was weighed on the 4th of November, making the calf's age five months and 18 days, when it weighed 525 lbs., not "claimed to weigh," or guessed at, but weighed on scales. Color, deep cherry red; shape without fault. Keeping, it had only the milk of its mother, a small 4 year old heifer. Breed, a slight cross of Devonshire with the native. Cordially yours,

A. H. HALLECK.

Westmoreland, Oneida County, Nov. 24, 1840.

POUDRETTE.

The subscribers reside in the State of New-Jersey, many of us in the vicinity of the Works erected by Anthony Dey of the city of New-York on the Hackensack river in New-Jersey for the manufactory of Urate and Poudrette, called "*The Lodi Manufacturing Company.*" We have used the Poudrette on the spring crops this year, (1840.) We find it *a valuable manure, superior to any other kind* that we have ever used, and considering *the facility of its transportation to the field, the small quantity required in the application to the crops, the quickness of its operation on vegetable matter,* and *the ease with which it can be applied,*—all tend to recommend its use to the farmer and gardener, as the *cheapest and best manure*, and we recommend it accordingly. Those of us who have applied it to corn and potatoes, think that it ripens those vegetables quicker than any other manure by several weeks.

Jacob D. Van Winkle, John J. Newkirk, John Tise, Daniel Van Riper, George Demott, Henry Drayton, Josiah Hornblower, Cornelius Van Winkle, P. F. Welsh, G. C. Van Riper, George Tise, William Wood, John Duryee, George Newkirk, Garret Newkirk, Daniel Vreeland.

Dated New-Jersey, October, 1840.

Shares in the above Company are $100 each, and may be had by applying to Anthony Dey, No. 73 Cedar-st., New-York. The owner will receive 20 per cent per annum, payable in money, or 50 bushels of Poudrette. The price to those who buy Poudrette, is 40 cents a bushel. It costs the stock-holders 12 cents a bushel. One cent's worth, that is 20 gills, will manure 20 hills of corn, and the like quantity, 15 hills of potatoes.

Newspapers friendly to agriculture, will confer a faver on the farmers and gardeners by publishing the above.

Large crop of Carrots.

Messrs. Gaylord & Tucker—Having a yard containing 8 rods of ground where sheep had been yarded, I was induced to sow it to carrots. I plowed and harrowed it, raked off the lumps and stones, (it being of a gravelly soil,) and sowed it in the month of May, in drills one foot apart; but in consequence of the drouth which followed, the crop was materially injured. They were hoed twice, and harvested in the month of October, and measured from 6 to 15 inches in circumference, and from 9 to 18 inches in length; the produce was 53 bushels and one peck, equal to 1,065 per acre. I think them equal to the beet for cattle or sheep, and far preferable to the ruta baga, though not so easily raised. No roots fed in winter to milch cows, will give cream a finer color, or butter a richer flavor than carrots. A. M.

New Haven, Vt. 12th month, 1840.

CIRCULATION OF THE CULTIVATOR.

The following table shows the extent of the circulation of the Cultivator, last year, both as to numbers and territory:

New-York, ...	7,184	Rhode Island, ...	218
Virginia, ...	1,822	North Carolina, ...	158
Connecticut, ...	1,684	Wisconsin, ...	165
Ohio, ...	1,525	Tennessee, ...	156
Massachusetts, ...	1,245	Lower Canada, ...	138
Pennsylvania, ...	1,126	South Carolina, ...	121
Illinois, ...	872	Dis. of Columbia, ...	82
Vermont, ...	741	Delaware, ...	79
New-Jersey, ...	664	Alabama, ...	68
Maryland, ...	635	Maine, ...	59
Michigan, ...	593	Iowa, ...	53
Upper Canada, ...	563	Nova Scotia, ...	29
Indiana, ...	531	New-Brunswick, ...	18
Kentucky, ...	337	Louisiana, ...	14
Missouri, ...	335	Arkansas, ...	12
Mississippi, ...	262	Florida, ...	4
New-Hampshire, ..	254		
Georgia, ...	221		21,973

TO CORRESPONDENTS.

Those whose favors are laid over to next month, will see the cause of it in the fullness of our pages. No correspondent should consider his favor rejected, because it may occasionally have to wait a month or two for a place.

The letter of "J. C. H." of Iowa, though dated in June last, was only received last month. He shall have an article on the culture of Buckwheat in season for next year. We shall be glad to receive the promised account of his experiments in farming at the West.

The request of John Torbert, Esq. of Wilmington, shall be complied with, and he may depend on receiving the corn in season for planting. We shall also comply with the request of Mr. R. B. Martin of Connecticut, if the articles he desires can be procured.

Several selections have been furnished us for publication, for which we have no room. We could easily fill an additional sheet monthly, with capital selections from the many excellent Agricultural periodicals on our table, which we should be glad to lay before the public, all of which we are compelled by the press of original contributions, to lay aside.

Curing Hams.—We should be glad to receive from R. E. M. Esq., of Buckingham, Va., the promised account of his method of curing hams, alluded to in his letter of March last.

Silk Culture.—A correspondent in New-Jersey asks—"Do you desire communications in relation to the Silk Culture, which is really going ahead as rapidly as *root* culture?"—Certainly, we want all the facts we can obtain on this subject, and hope the writer as well as others, will furnish us with the results of their experience in this new business.

Hay Press.—A gentleman of Virginia wishes to procure immediately, a Hay Press,—a portable one if such there is, would be preferred. Can any one of our friends inform us where one can be procured, the price, &c.

Correction.—In 6th line from bottom, first column, page 174, vol. 7, for "*two and* a half inch pipe," read "a half inch pipe."

Transportation of Cattle.—A gentleman in Connecticut, wishes to comply with our friend Robinson's advice to take some blood stock with him to the West, whither he contemplates moving in the spring. He therefore wishes to know what would be the expense of transporting two Short horn cows and their calves from Albany to Chicago. He says—"Perhaps Mr. Allen of Buffalo, will take the trouble to ascertain and inform you, as I shall want a pair of his pigs to take along with me." We shall be glad to receive the information, as it may be interesting to many of our readers. The usual price of freight from Albany to Chicago is from $1,75 to $2 per hundred.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

TRIAL OF PLOWS.

Experiments in England and at Worcester, Mass.

(*Concluded from page* 11.)

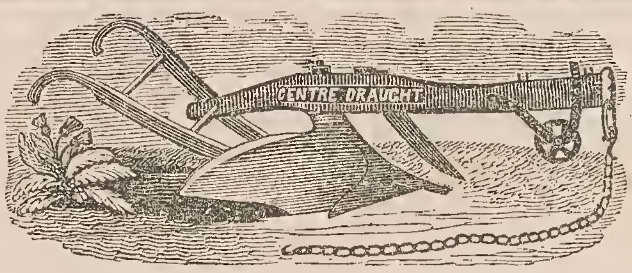
It has long appeared clear to us, that in all calculations on the power required in plowing, the important point of friction or adhesion was too much overlooked; a fact to be regretted, as it is plain that on adhesive ground the great point in the plow is to present the least surface, while in loose, light, friable, or sandy soils, surface forms no objection. The experiments of Mr. Pusey fully confirm the correctness of this supposition. The plow made on mathematical principles, (Ferguson's) which, setting adhesion aside, as is seen in trial 3, would require the least power, required the most, owing to its long wedge-like form, the great surface of its mold-board, and its wanting a wheel, which made its surface draft so enormous. In a clay soil, or one of great tenacity, the less surface there is exposed, the easier will the draft be for the horses. If any one doubts it, let him test the difference in the force required to draw a broad shovel or a narrow one over a bed of clay. The difference between Ferguson's Scotch plow and the short open one of Hart, is in this respect conclusive.

There is another error, we believe, quite common among farmers, and that is that the resistance to the plow increases with the rapidity with which the team moves, or in other words, that a team moving one and a half miles an hour, does not exert so great a force in plowing, as one that moves at the rate of two and a half miles an hour. This mistake arises from overlooking the fact that friction or adhesion is rarely, perhaps never, increased by increased rapidity of motion. In plowing, the resistance arises from the weight of the implement pressing against the bottom of the furrow, that pressure increased by the weight of the furrow slice, the rubbing of the plow against the earth on the land side, and the furrow slice rubbing against the mold board; a resistance not to be increased by additional speed. It is true the amount of resistance in an hour, is greater at a good pace than in a slow one, as a greater amount of earth is moved, but that does not affect the amount of resistance at any given moment. The following table, showing the force required at different rates of speed, in a series of experiments, made for this purpose by Mr. Pusey, will show the correctness of our position:

Rate of going per hour.	Time required to plow an acre.	Draft of plow.
1½ miles,	7 h. 20 m.	23 stone.
1¾ "	6 h. 30 m.	23 "
2¾ "	4 h. 0 m.	22 "
3½ "	3 h. 8 m.	24 "

Thus it appears that a pair of horses walking at a pace which will plow an acre in four hours, do not exert as much force as a pair that requires seven hours to perform the same work.

Mr. Pusey remarks, "In plowing an acre with the furrow 9 inches wide, the horse has to walk in the furrow 11 miles exactly; if then he plows three-quarters of an acre a day, he has to walk 8¼ miles only; if five quarters, or a Scotch acre, he must pass over 13¾ miles, but 5½ miles more than before." Where the furrow is twelve inches wide, as is generally the case here, the travel will not of course be as great; and whether he goes at the rate of one and a half or two and a half miles an hour, can make but little difference in the fatigue of the horse, as the severity of the draft is not at all increased. That the power of a horse to drag a weight decreases with his velocity is certain, but this is depending on circumstances that can rarely have application to plowing or other farm labor. The man therefore, who accustoms his young horses to step out freely (and all the movements of a horse in harness, are the result of habit,) will find a span will plow an acre and a half a day, ordinarily, with the same ease that they would an acre, or even less, if suffered to move at the snail's pace so common with many farm horses. In the hard labor, such as plowing, or heavy work on the road, the horse cannot be forced beyond his natural pace to any extent, without seriously distressing him; and as his rate of going is very much depending on his training, it is a point not to be overlooked in rearing farm horses, more than others.



[*Prouty & Mears' Premium Plow*—Fig. 7.]

There can be no question that the disposition or make of the harness in which a team is worked, has much influence on the ease with which their labor is performed. The draft must of course be performed by the muscular strength and weight of the horse, and the point from whence they draw must be the shoulder; but the line of draft, or suspension of the line of draft, may be much shortened, and in all properly made harnesses is shortened, by a wide strap of leather properly padded passing over the back and carrying the traces in such a direction or position, that when at work the weight of the whippletrees and part of the weight of the plow, where there is no wheel, rests on and is carried by the back of the animal, and so far lessens the weight of draft. In arranging a harness, allowance must be made for a high or low draft, on the wagon, or on the plow, for instance, so that the support rendered by the back strap may be effectual in both cases. In plowing, the traces should be as short, or in other words, the horses should be as near the plow as possible. This is desirable for two reasons; it gives a greater inclination to the line of draft, and makes the weight and muscular force of the horse act with greater efficiency; and by lessening the distance between the point of draft and the point of suspension of the plow which is the share point, it materially lessens the surface draft. A very long beam to a plow unless supported by a wheel, must of necessity act injuriously by increasing, owing to its lever-like power, the surface draft. A good exemplification of our ideas on this matter of harness and draft, may be seen in the figure of the Clydesdale horses and Scotch plow, which we have given from the English Journal alluded to.

Mr. Pusey speaks of producing an uplifting power, by shortening the point of suspension in the back strap, or placing that so far back that there will be considerable deviation from a direct line in the trace from the whipple-tree to the point of draft in the collar. We should not approve of any uplifting power, farther than what is required to sustain the weight of the beam, whipple-trees and traces, as mentioned above, since, as the plow acts only as a wedge, any uplifting force exerted more than this, must tend to throw the point out of the ground, and must be met by constant counteraction on the part of the plowman. All experience shows that a plow to run well, should be easy for both the team and the holder, and that any effort that is required on the part of the plowman to keep the implement in place while at work, adds proportionably to the heaviness of the draft, and consequently to the distress of the horses.

In the July number of the Farmer's Magazine for 1840, page 17, there is an account of some experiments made by an indvidual, which in the main, go to prove the correctness of the results obtained by Mr. Pusey and at Worcester. Several plows were tried; the ground was an oat stubble, hard from dry weather, and the result was as follows—furrow 5 inches by 9.

Hart's plow,	13 stone.
Wooden plow,	17 "
Iron plows,	19-20 "
Old Welsh plow,	20 "

Hart's wheel was then fitted to the wooden plow, and on the same ground the draft was at once reduced to 14 stone. In this instance, the Hart maintained its superiority as before; and this the experimenter attributed to its open mold-board, which so greatly reduced the surface exposed to friction; but he objects to the work of this plow, "that it leaves the furrow standing too much on its edge, whereby the surface grass and weeds are not sufficiently covered and destroyed." On the subject of the wheel, this experimenter makes the following remarks, which we think eminently just. "Of the advantage of a wheel, I think there can be no question, for, besides keeping the plow constantly to the same depth, it seems always materially to lighten the draft; and I think the reason is plain, for when at work, much of the surface draft is transferred to the wheel, from its resisting the tendency the share has to draw the plow downwards."

From the results of these various experiments, those of Mr. Pusey, those at Worcester, and those described in the Magazine, it would seem, in the first place, that the friction or adhesive power of the plow is much greater than has usually been allowed, and that consequently the less surface there is exposed, the less will be the draft. This opinion receives corroboration from the fact that the skeleton plow used in some parts of England where the clay is stiff, a plow in which the cutting part is narrow, and the mold-board of narrow bars of iron, runs easily with two horses, where three or four would be required to move the Scotch plow with its long, broad, smooth iron surface.

2d. That the shorter the working part, or that part of a plow exposed to friction, can be made, consistent with steadiness of motion in the ground, the easier will be the draft. This arises from two causes—the less weight of the implement itself; and the less space for adhesion of earth or friction. It is not to be inferred, however, that such short, square-breasted plows, will do the best work; on the contrary, the long plows invert the earth more completely; the advantage is only in the matter of lightness of draft.

3d. That a wheel plow is to be preferred to a swing plow, where lightness of draft is a great object. On smooth, or well cultivated lands, a wheel acts favorably several ways; it lessens the surface or friction draft in the same degree that a weight can be easier rolled than slid over the ground; and it regulates the depth without that constant attention of the plowman that some other forms of this implement require. The wheel, however, will not make a poor plow a good one, though it may obviate some of its deficiencies. On soft, clayey land the wheel plow is inadmissible, as the wheels clog and add to the weight to be drawn.

4th. That a harness should be so constructed, as to give the greatest effect both to the muscular force and weight of the horse, and hence the nearer he is brought to the point where the power is to be exerted, the better. Horses abreast have much more power than when in line; and experience shows that a team works more easily when part of the weight is supported by the back rather than wholly by the neck.

5th. That a pace of 2½ or 3 miles per hour, occasions no heavier draft than a pace of 1½ miles per hour. This is an important fact, where much plowing is to be performed, and it is clear the pace must add to or detract much from the value of the farm or road horse. The pace, however, when once established, cannot be essentially quickened without causing much additional distress to the animal; and the rate of traveling is in a great measure depending on the training of the colt. Neither man nor beast can exert themselves beyond their usual habits for any time without great suffering; but both man and animals have the power of accustoming themselves to movements and exertions, which, unless the result of habit, would be impossible or fatal.

6th. While the Worcester experiments show that in the same soil, some plows have more than 100 per cent advantage in the lightness of draft, the experiments of Mr. Pusey show that the difference in power required to plow loamy sand, and clay loam, is not less. By overlooking this important fact, and by not adapting the plow and the team to the difference in the soils, some farmers are guilty of the most cruel treatment of their animals. A pair of horses is expected to perform labor that would severely tax the powers of four, and this perhaps, is one way to account for the "villainous foundered and spavined" beasts that throng our streets, worn out in a few years, and turned over to the tender mercies of some barbarous master, when if properly treated they might have been relied upon for many years longer.

7th. It may, we think, fairly be inferred from these experiments, that there are two elements of resistance to be taken into account in the construction of plows, one arising from the weight to be moved, and the other arising from friction and tenacity. The first is the subject of mathematical calculation; and the best methods of obviating it may be ascertained with certainty. The last is continually variable, differing almost in every field, and therefore not to be met by any demonstrations of theory. The experiments of Mr. Pusey prove that the resistance from friction or tenacity is greater than that from the simple division of the soil, and it unfortunately happens that the very construction best adapted to divide and raise the earth, is the one that offers the most resistance by friction. Thus the Scotch plow, constructed on mathematical principles and of a most beautiful model, an implement that expends less power in moving the earth than almost any other, owing to the increased friction it occasions from its extent of surface acted upon, is one of the very heaviest draft plows to be found. This was proved not only by the experiments made by Mr. Pusey, but by those instituted at Worcester, in both which cases the Scotch plow worked heavier than almost any others. We think also that too little attention in constructing plows has been paid to the line of draft. It is well known that with a single exception, plows are so constructed that the point of the share is in that line, or in other words the landside of the plow coincides perfectly with the line of draft. This is evident by the birdseye view given of the most celebrated English and Scotch plows in the Encyclopedia of Agriculture, or by an examination of most American plows. The plow noted as an exception, is Prouty & Mears' Centre Draft plow, (fig. 7,) the one that obtained the $100 premium at the Worcester Fair, and which worked 100 per cent easier than some other plows on the ground. In this plow the coulter and the point incline to the land side so far, that the draft is equal on both sides of the beam, as was proved by its showing no disposition to deviate from its course, when left to its own guidance, and of course imposing no labor on the plowman or the team in their efforts to keep it in a proper position.

We make no apology for the length to which this article has extended. Great as has been the improvement in this important implement, since a plow consisted of a crotched stick drawn by an old woman and an ass yoked together, according to Pliny, there is still ample room for removing existing defects; and every effort at obviating difficulties and rendering the plow more perfect, should have the full benefit of promulgation and discussion.

NECESSARIES AND LUXURIES.

"THE luxuries of life must always be made subservient to its necessaries," is a remark of Bordley's, as just now, and as worthy of consideration as it was nearly one hundred years ago; yet how often do we see this order reversed, and the necessaries made to give place to the luxuries. By the term necessaries of life, is to be understood things absolutely essential to the health, comfort, and subsistence of mankind; by the word luxury, those things not requisite to subsistence, health, or comfort,—things, the want of which arises from accidental circumstances, and are usually possessed by few. Thus there are necessaries and luxuries in almost every department of life,—in food, clothing, literature, and education. The bread, the meat, and the water, are the necessaries of food; the mixtures, the condiments, the spice, and the wines, the luxuries; the clothing essential to decency, and protection from the effects of climate, are the necessaries of dress; the fine linen, the embroidered silks, and the laces, are its luxuries; in language, to an American, a competent knowledge of his good old mother English is a necessary; French and Italian, Sanscrit and Persian, are luxuries; and in books, those that relate to his business or profession are the necessary ones; those that serve only to beguile an hour, or assist him in killing time, are the pernicious luxuries.

The history of the world, however, shows that, in the progress of events, articles that once were deemed luxuries, or the property of the few, cease to be such, and are ranked among the necessaries when common to all. Thus meat, a few centuries since, and in many countries now, is by the common people deemed a luxury, as it is seen on their tables only once a week; and the well known extent of the wishes of Henry the 4th, for his people, was that every family should have meat on Sunday. Here, meat ceases to be a luxury from its commonness, and takes its place among the necessaries. So with clothing; all the finer kinds of goods, linens, woollens, and silks, on their introduction, were deemed luxuries, and some kinds of them may justly be considered so at the present time, but that is depending on other circumstances, rather than on the fact of their being woollen, linen, or silk. India cottons, fifty years since, were deemed a luxury, but now, when far superior cottons are the product of our own fields and manufactories, they have ceased to be such, and cotton cloths have taken their place among the necessaries of the household. Woollen cloths, made from the fleeces of our merinos, such as are now worn by almost every one, fifty years since would have been pronounced luxuries of the highest grade, and would justly have had that name, as only the rich and the great at that time could be dressed in broadcloth. Now, when we grow the fleece, and manufacture the cloth, it has fallen from the rank of a luxury into that of a necessary. So we imagine it will be with silk, if, as we hope, its production shall be fully established in this country. It is now perhaps the greatest, certainly the most expensive, of our luxuries; but, as in the case of meat, woollens, and cotton, let silk become a matter of home production, the growth of our own farms, and the production of our own manufactories, and it would at once take its place as one of the necessaries of life, because better adapted for the purposes of clothing than almost any other substance.

Some seem to apprehend that if the culture of silk is successful, the production of the other necessaries of life, the bread, meat, and wool, will be suspended; and the nation will suffer. The best reply that can be made to this, would be an examination of the effect produced on the great mass of the people by rendering meat, wool, and cotton so common as to deprive them of the name of luxuries. Can a single instance be pointed out where this has been done, in which the mass has not been benefitted, and their wealth and their comforts increased? Is there less bread raised in the country, or is meat more scarce, than it would be if broadcloths had remained a luxury, and one suit was now, as formerly, made to descend from father to son? No one will pretend it; on the contrary the means of production have increased with the causes that have led to this change in clothing; and we doubt not that should the attempt made to introduce the silk manufacture here succeed as has those of wool and cotton, the same beneficial results would ensue. The capital now sent abroad to purchase silks, would, the most of it, be invested in improvements of the soil, and both meat and bread would be found to be increased instead of decreased.

National Gallery of American Agriculture and Manufactures.

WE have received from the Hon. H. L. ELLSWORTH, Commissioner of Patents, a notice which will be found below, of the readiness of the spacious Hall that has been erected for the above purpose, for the reception of such articles as may be forwarded; and we are happy to believe that ere long a collection will be found at that place of specimens of American skill, and from the American soil, inferior to no museum of the kind in the world.

And what good reason, we would ask, can be given why we should not have in this country a National Board of Agriculture? Such a board as is to be found in many of the best governed European countries, and which are productive of the most beneficial effects. We have been in the habit of going abroad for lessons in banking, finance, keeping the public moneys, and various other matters, and we can perceive no good reason why a lesson in the promotion of agriculture, should come with a worse grace from them, than on the other topics named. A National Board, which should hold its annual meetings at Washington, during the session of Congress, which should furnish or receive Reports on Agriculture and the Crops of the several states, which should be composed of leading agriculturists throughout the States, would occasion but little expense to the nation, and be productive of benefits beyond calculation to the whole country. The United States are and must always remain an agricultural nation. For this the soil and climate has peculiarly fitted them, and it is the duty of the government to take all proper measures to secure to the citizens of this country, the full benefit of its ample resources. The Agricultural Museum, when filled and supplied, will form a nucleus around which objects of comparison may be collected, and measures of adaptation be successfully planned and executed. We merely throw out these hints in this place, but we firmly believe that the man who shall be the means of introducing into Congress and carrying through such measures as shall secure the formation of a National Board of Agriculture, will be remembered as a national benefactor, long after the present party feuds and struggles shall be buried in oblivion.

Mr. Ellsworth is deserving of much credit for the attention he has paid to these subjects, and for the valuable information which with the limited means hitherto at his disposal, and under many disadvantages, he has collected and given to the country in his various reports. We hope the call here made will be promptly and cheerfully responded to; and that the means and the information he has proved he so well knows how to render available, will be freely rendered.

Patent Office, Nov. 20, 1840.

Notice is hereby given that the Hall in the new Patent Office for the exhibition of manufactures, is now completed. The Hall is spacious, being 273 feet long, 63 feet wide, 30 feet high, and fire proof.

Agents whose names are annexed, will receive and forward free of expense, articles which may be deposited with them. These articles will be classified and arranged for exhibition, and the name and address of the manufacturer (with the prices when desired,) will be carefully affixed. Few, it is presumed, will neglect to improve the opportunity now presented of contributing their choicest specimens to the *National Gallery of American Manufactures*, where thousands who visit the Seat of Government will witness with pleasure the progress of the arts in these United States.

If fairs, in limited sections of our country, have excited interest, what must be the attractions of a national exhibition, enriched by daily additions.

The Agriculturist may be gratified to learn, that commodious rooms are provided for the exhibition of agricultural implements, and also for the reception of seeds for exhibition or distribution.

The Commissioner of Patents, being authorized to collect agricultural statistics, avails himself of this opportunity to solicit information of the condition and character of the crops in the several sections of the country. These data will aid him in presenting with his annual report, the aggregate amount of products of the soil, and it is hoped that the public may be guarded in some measure from the evils of monopoly, by showing how the scarcity in one portion of the land may be supplied from the surplus in another.

Names of agents who will receive and forward packages for the Patent Office. Collectors of the Customs at Portsmouth, N. H., Portland, Me., Burlington, Vt., Providence, R. I., Philadelphia, Baltimore, Richmond, Charleston, Savannah, New Orleans, Detroit, Buffalo, Cleveland. Surveyors of the Customs—Hartford, Ct., St. Louis, Pittsburg, Cincinnati, Louisville, R. H. Eddy, Boston, Mass., David Gardner, (Custom House,) New-York. HENRY L. ELLSWORTH,

Commissioner of Patents.

'Notes on European Agriculture.'

UNDER this title, an intelligent writer in the Charleston *Southern Cabinet*, has published a series of papers on the agriculture of the various European countries, which are of a most interesting character, as showing the principal points in which their farming differs from ours, and the various ways in which ours is susceptible of improvement. We can give only a few extracts, where we should be pleased to quote columns.

Of Scotch farming, he says: "A farmer by the name of Thomas Oliver, residing five or six miles from Edinburg, leased a farm for the last twenty years of 150 acres, paying annually a rent of 10 guineas per acre ($7,500) on which he raised hay, grain, and vegetables for the market of Edinburg. This lease he has recently renewed for fifteen years (the usual time to which leases run) on the same terms, and from a poor man he has become independent in his circumstances, and now rides in his carriage. What American farmer could make a profit that would enable him to pay such an enormous rent? All may be accounted for on the principle of judicious management, and careful industrious cultivation."

Good management and good cultivation, will doubtless perform wonders, but we think there are other causes operating to prevent the farmer of this country realizing the profits of the old, and of these the two most prominent are the difference in the price of labor, and the difference in the price of products between that country and this. These two items are of vast importance in an estimate of comparative profits, and we have reason to think are too frequently overlooked by travelers and others.

He gives the following lively and just picture of the agricultural Fairs in some parts of Germany; and there is no truth more conclusively proved, than that an improved agriculture and fairs usually accompany each other.

"On the continent, especially in Germany, their annual fairs bring together the farmers and peasants of all the surrounding country, where their ambition and industry are stimulated by a variety of fetes, the distribution of prizes to successful competitors; and while princes, dukes, and barons are engaged in awarding prizes to those who have been most successful in the cultivation of grains and cattle, their lovely wives are occupied in a humbler, but much more lively scene, in complimenting and distributing premiums to the industrious housewife, for her fine specimens of fruit—her butter and cheese—her linen cloths, weaving, knitting, and other manufactures. I have no doubt I shall be ridiculed for my want of taste, when I state, that to me, the Grand Dutchess of Baden, presenting a silver cup to a peasant girl, before an assembled crowd of farmers and nobility, for the finest specimen of manufactured gloves, was a more interesting sight than that of the gay Queen Victoria racing through St. James Park, with fifty fools at her heels, striving not to be distanced by their lovely mistress."

Speaking of the great attention paid to seeds in Europe, and the necessity there is for this where good crops are expected, and the extended nature and importance of the seedsman's occupation, he remarks: "I noticed at Edinburg, in the collection of Lawson and Son, Seedsmen and Nurserymen to the Highland and Agricultural Society of Scotland, 83 varieties of wheat, 62 of peas, 51 of turneps, 146 of potatoes, and an immense number of species and varieties of the grape."

To England he awards the palm of high and neat cultivation, 'its neat cottages adorned by the eglantine, honeysuckle, and ivy, chequered here and there by the park and lordly palace, rendered the whole land a picturesque garden.' The soil of Belgium is better than the English generally, and the excellence of the wheat of Denmark surprised and gratified him. To the grumblers about our country and its institutions, we recommend his remarks on the taxes and grinding oppressions of the old world, and think the result will be the same that the sight of these things were on him, a more fervent attachment to our Republic and our American home.

WORKING TO BE IDLE.—There is many a person who has such an abhorrence of every thing that goes by the name of labor, that to avoid it, they actually incur more effort and trouble than they would to labor strenuously the same number of hours. The shabby genteel man or woman, will despise an honest laboring person, yet will spend more time in striving to render a threadbare half worn garment passable, than the laborer, or they themselves if they would shake off their dread of work, would in earning a new one of good quality. Prudence from proper motives, is a virtue, but when it arises from false pride and a scorn of labor, it is a curse.

CANDLES.—Candles altogether superior to the common tallow ones, are made in the following manner. Melt together ten ounces of mutton tallow, one-fourth of an ounce of camphor, four ounces of bees wax, and two ounces of alum. Candles thus made, burn with a clear brilliant light.

VERMONT BUTTER.

THE county of Caledonia in Vermont, has long been celebrated for its dairies, and its butter and cheese has frequently carried off the prizes from places where the competition is open to the whole union. Caledonia, as its name imports, was chiefly settled by Scotch families; and the thrift of the country is strongly observable in that agricultural district. The editor of the Farmer's Visitor spent a few days in that county not long since, and has given some interesting notes of his visit connected with the agriculture of the place. In the best dairies. those from which the butter that took the high premiums of the Massachusetts Society came, the milk is allowed to stand about 48 hours before the cream is taken from it. It is then churned in the old fashioned wooden hand-churn, worked in cold water, which is repeatedly drained off until the milk entirely disappears, and the less the butter is worked, the better it is deemed. Working, in the manner commonly practiced to free it from the milk, is condemned in these dairies as injurious to the quality of the butter, leaving it tough or stringy, and causing it to adhere to the knife. In the dairy of Mr. W. Bachop who has obtained five premiums at Boston for butter—two of $100 each, and three of $50 each; the milk in warm weather stands thirty hours, and in cold, forty-eight hours. In the hot season in this dairy, 6 pounds of salt is allowed to 100 lbs. of butter, and in cold weather, 4 pounds. No saltpetre is used, but about a pound of finely powdered loaf sugar is sprinkled into each hundred pounds of butter. The butter in these dairies, when made, is packed in firkins which hold from thirty to fifty pounds. It is packed so as to be very solid, and the surface of the butter in the firkin is covered with a thin white cloth, over which fine salt is spread. Some cover the surface with a pure brine and clean cloth. Caledonia butter always commands a high price in market; and that from the premium dairies ranges from twenty-three to thirty cents per lb. The summer yield of butter from a cow, varies from 100 to 125 lbs. each, taking the whole dairy, heifers and cows. That the dairy business, even at such a distance from market is profitable, is shown by the fact that nearly all the principal families engaged in it for any time, have, from small beginnings, risen to opulence. The agricultural products of Caledonia, independent of the dairy, are described as ample; and from every part of the country proofs are accumulating of the excellence of the crops, and the rich reward which has waited on the labors of the husbandman.

Comparative Profits of Small and Large Farms.

WE have received from D. W. GRANT, Esq., of Bloomfield, (Conn.) an estimate of the comparative expense, crops and profits of two farms, one of 20, and the other of 100 acres; the most material points of which will be found below. In the note which accompanied the estimate, Mr. G. remarks:

"I commenced farmer 12 years ago, with 500 acres of improved land, on the old system of farming. As I have been unable to personally labor, I have been under the necessity of hiring all my labor done, and I found by cultivating middling lands, and sending men to a considerable distance to work, that the expenses absorbed the income. I began to change my mode of practice some years since, and sold one half of my acres, and by improving the remaining half, I have now the pleasure of seeing them produce more than the whole formerly did; and I have no doubt but that I could sell the one half I now have, and in time, with labor judiciously applied, make the remaining half produce as much as the whole does, and with greatly increased profits. If you wish, Messrs. Editors, to stop our young men from going from the old States to the West, advocate the system of small farms. On this depends in my opinion, the future wealth of the old States. There is no necessity for emigration from the east to the west for one hundred years, and I have no doubt by diminishing the size of our farms, and giving them a more thorough and better cultivation, our wealth and population can be doubled in twenty years. Our Agricultural Society of Hartford County, have offered a premium for the best farm containing not less than twenty acres. If you will examine the statements I send you, I think you will agree with me they are about right."

Mr. Grant, in his estimate supposes the capital invested in the two farms to be the same, viz. 100 acres at $40 per acre, and 20 acres at $200 per acre, in both cases $4,000. His estimate of the crops and their value on the 100 acres, is as follows:

Twenty acres in mowing, (1 ton to the acre, average produce of the land in Bloomfield,) worth to feed stock $7 per ton, 20 tons,...	$140 00
Ten acres corn, 30 bushels to the acre, at 50 cts.	150 00
Ten loads of corn stalks at $3 per load,.......	30 00
Three acres potatoes, 150 bu. per acre, at 16 cts.,	72 00
Seven acres of rye, 12 bu. per acre at 75 cts.,	63 00
Ten acres of oats, 20 bu. to the acre, at 30 cts.,	60 00
The mowing and cultivated crops take up 50 acres of the farm, leaving 50 acres for pasturing, which will keep, and keep well, 1 yoke of cattle, 7 cows and a horse, 10 head at $6 each,..........	60 00
Produce worth to feed to stock,............	$575 00

Mr. Grant's estimate of the expense of cultivating each of these crops is drawn up with great minuteness, and a careful examination has convinced us with a close approximation to the truth; but our limits oblige us to omit the items, and we only give the aggregate of the expenses, which, on the whole 100 acres, amounts to.............................. $454 80

Leaving a nett profit on the large farm of.... $120 20

Statement of the produce and expenses of 20 acres of rich land:

Four acres of mowing, 5 tons to the acre, at 2 cuttings; 20 tons of hay, worth to feed to stock $7 per ton,....................	$140 00
Two acres of wheat, 30 bu. to the acre, $1 per bu.	60 00
One acre of corn, 90 bushels, at 50 cts. per bu.	45 00
Four loads of corn stalks, $3 per load,.......	12 00
One acre of sugar beets, 800 bushels at 1 shilling per bushel,......................	134 00
One acre of potatoes, 400 bu. at 1 shilling per bu.	67 00
Half an acre of ruta baga, 450 bushels, at 12½ cents per bushel,......................	56 00
Half an acre of carrots, 440 bushels, at 1 shilling per bushel,......................	73 67
The mowing and cultivated crops take up 10 acres, leaving 10 acres for pasturage, which will keep, and keep well, 7 cows, a yoke of cattle, and a horse, 10 head, at $6 each,............................	60 00
Produce, worth to feed the stock,...........	$647 67

As before, Mr. Grant's estimate of the expenses is made for each crop, but we omit them, with the exception of the corn, which we give as a specimen, and to show that he has not omitted or underrated any important point.

Cost of cultivating an acre of corn:

Carting and spreading 30 buck loads of manure,....................	$6 00
Plowing turf once,................	2 00
Harrowing thoroughly,.............	1 00
Planting, ...	2 50
Hoeing three times,...............	10 00
Gathering, husking and shelling,.....	8 00
Labor in cultivating one acre of corn,	$29 50

The aggregate of the expenses on the 20 acre farm, including labor, seed, repair of fences, &c., is......................... $206 14

Nett profit on small farm,................. $441 53

To our western friends it may seem somewhat strange to see the product of 20 acres of grass put at 20 tons of hay, and that as well as the other crops on the 100 acres may appear to them underrated. To us, however, who remember the average crops of common farms in the New-England States, Mr. Grant will seem very near the mark, and his estimate of crops under the old system, a liberal one; and we have seen no estimate which places the results of good and bad farming, of applying capital to land, instead of drawing it away from it, in a more forcible, and as a whole, indisputable manner than Mr. Grant's. Those of our readers who have the Genesee Farmer, or the last volume of the Cultivator, will see that we have always been the strenuous advocates of small farms, not so much for the reason that it would keep our young men from going west, but because we believe it would add most essentially to the profits of agriculture. The most profitable part of every man's farm is his garden, and Mr. Grant's 20 acres is but a garden on a large scale.

"American Society of Agriculture."

THE attention of the reader will doubtless be arrested by the communication in another column, from that able writer and unwavering friend of agriculture, SOLON ROBINSON, on the subject named above. The same subject has by others been pressed upon our notice, and it is one to which we have, both before and since receiving the *commission* of Mr. Robinson, given much attention and consideration. To show what the opinions of others, as well as Mr. R. are on this matter of national interest, we give the following extract of a letter, from a distinguished farmer near Boston. After alluding to the error into which he thinks, Judge Buel and Mr. Garnett have fallen, in expecting Legislative aid, he adds: "Now let us be sober and rely on ourselves, and our own resources. If we are to have a National, or American Agricultural Society, it must be got up by the Farmers themselves, and if it becomes POPULAR by their agency, then, sir, mark, you will see the Legislature creeping from their dark retreat, and aiding it with all the posts of honor and their speeches, to the death. * * Please, gentlemen, move in the cause, and you will soon be seconded. Mr. ROBINSON and Mr. GARNETT, will be at the place appointed for the meeting, without doubt, and if I am alive, and in the country, I will be there with some of my friends."

We are perfectly aware there are *some* such men as those we have named, men of public spirit, friends to agriculture, and alive to the prosperity and honor of the country, but we have not sufficient evidence that there are *enough* of such men to be found to render such an enterprise certain of success; and all must admit that a failure would be a most serious calamity to the cause of Agriculture in the United States. In declining to act as individuals, or to assume the responsibility which our friends have been pleased to assign us, we must be permitted to give a few of the reasons which have brought us to this conclusion.

In the first place, the whole experience of this country is against the probability that such an association, would, at the present time, be worthy of its name and object. With the exception of Massachusetts and Rhode-Island, where state societies are supported by the state, there is not we believe, a state society in the union in active, vigorous, *effective* existence, although many have been organized, and are perhaps, still, legally existing. Such results prove to our mind, that the farmers themselves, are not ready for the undertaking, and we fully concur in the opinion expressed, that for such purposes, they can rely on none but themselves.

In the second place, the wide spread nature of our country opposes serious obstacles to such associations, obstacles which, though they must always remain in part, are yearly diminishing. Of fifty or a hundred individuals, who would be willing to move in the matter, some are to be found in Maine, Massachusetts, New-York, Indiana, Tennessee, or Georgia; not as in Great Britain, which some have named as an example, where the whole are crowded into a space about the size of New-York or Virginia.

Again, we think the public mind has not been sufficiently instructed, and does not sufficiently appreciate the advantage of such an association, to render it successful. There are many who read, but there are many who do not, and this last class must be diminished, before in such a country as ours such societies can prosper. Men in this country are not so much influenced by example as in others; considerations of self interest have more weight; and when farmers can feel that their individual interests would be advanced by combined effort, (as we certainly believe they would) then such associations would spring up and flourish.

We are further of the opinion, that in the present condition of the country, with its scattered population, and the distance that necessarily intervenes between the most efficient friends of agriculture, well conducted Agricultural Periodicals are in a great measure performing the part here, that Farmer's Clubs, Associations and Societies, do in the more densely populated farming districts of Europe. We believe there are but about half a dozen agricultural papers in Great Britian; and the price of periodicals generally there is so great, that they are inaccessible to millions. The mass therefore, if they wish to improve, must rely on the few that are rich, and are informed, and Clubs and Societies are the natural result. Here every farmer can receive his weekly or monthly journal, and by his own fireside avail himself of the experience and the experiments, which the European farmer must spend hours, and walk miles to obtain, if he is to be benefited by them at all.

The result of the whole matter is, that we must, for the present at least, decline the duties our friends have so kindly assigned us. When the time arrives in which such an association can be organized, with a reasonable certainty of success, we trust we shall not be found backward in aiding the enterprise to the extent of our abilities.

Agricultural Journals.

ONE of the most conclusive proofs of the greater attention paid to farming in the United States, and the greater estimation in which husbandry is held, is to be found in the increase of Journals devoted to the use of the Husbandman, the tiller of the soil, or the breeder of animals. Only a few short years since the establishment of a single Agricultural Journal was deemed a hazardous experiment; now nearly thirty are in existence, and those of the most limited circulation probably have one greater than the pioneer publications received for years; then few men could be found in the country who would condescend to pen an article on agriculture; now the most able, talented, and influential are among the contributors to agricultral papers. Of these our own journal, The Cultivator, numbers some three hundred in the last volume; then men of standing were ashamed of being farmers, and the one who ventured, in mixed society, to speak of agriculture, was set down as an ignoramus or a bore; now it is a theme fit to be introduced in palaces; and to understand the science or to be practically acquainted with its processes, is a sure passport to consideration; then to promulgate the idea that farmers could be benefited by reading on the topic, or that agriculture could be taught in books, was considered a mark of mental aberration, and a disgrace that few were willing to encounter; then book farming was a term of reproach; now the book farmer is looked up to with respect, and prejudice itself, through the compelling power of self-interest, is constrained to acknowledge that a good thing may come out of Galilee; then to read an agricultural newspaper was the acme of absurdity; now not to read one marks the man of ignorance and prejudice, the man behind the spirit of the age.

Whatever may be a man's business or his occupation he will feel an interest in that, and if he is a man of sense, will endeavor to make himself master of the pursuit. The merchant reads on the subject of trade; the friend of education on subjects connected with the interests of learning; the mechanic or manufacturer on their respective avocations; the divine on questions connected with theology; and the farmer will naturally feel an interest in matters connected with agriculture. All these classes, and many others, have journals devoted to their own pursuits, and that the farmer should so long have been an exception, is now, when the benefits arising from such papers have been so fully developed, a matter of astonishment. It may in truth be said that a well conducted agricultural paper is at this time as necessary to a successful prosecution of farming, as the political journal is to the statesman, or the publications devoted to science, to the astronomer.

Means for the Improvement of Agriculture.

We invite the attention of the readers of the Cultivator to the following extracts which we make from the letter of an eminent individual, and one of the most intelligent and thoroughly practical farmers in our country. The opinions of such men on the subject of agriculture, and the best means of advancing it, deserve and will receive consideration :

" As to legislative aid, whenever farmers shall be convinced that it is for their advancement and interest, whenever they shall wake up to the importance of their pursuit, and its intimate connection with the prosperity of their country, they will have it ; their petitions will command immediate attention, and what *we* are now craving as a boon, *they* will require as their right. But with all due deference to others, I would suggest that on this point we are premature ; we are in advance of the times, and are trying to force on the farmer what he has not yet been taught to appreciate. With these views, I would rather turn the attention of the Society to the more extended circulation of Agricultural Periodicals, as the great preparative step to improvement ; for myself, I feel it a great individual gain whenever I can induce a neighbor to subscribe to a periodical—he becomes to me a more intelligent and valuable associate —our minds have been occupied with the same subjects, and are prepared to converse of them when we meet, and exchange our views, opinions and experience, upon whatever has been presented to us. I also believe that occasional lectures, adapted particularly to the agricultural community, and having in view certain prejudices which might thus be overcome, would be of infinite service, and would go far to convince them of the great advantage to be derived from reading. The moment the great body of agriculturists consent to *read*, they will become the most intelligent portion of society, and I need scarce say, the most influential. Let the farmer *read*, and he will soon understand what will most conduce to his interests, and will learn how best to promote and secure them. I think then there will be no difficulty in supporting an agricultural school in various districts of the State, and I am strongly inclined to believe that they would be more useful than one large institution as was formerly contemplated. * * * *

" It may be said that these are subjects for individual action. I am aware of it, and most sincerely do I hope that every friend of agricultural improvement will so consider them, and if they view them as I do, that they may be induced to act upon them. There are those in every community, who by a small sacrifice of time and attention, and with a very trifling expenditure in aid of the objects to be desired, may in a few years revolutionize the present miserable state of agriculture around them, and thus become identified with the best interests and most enduring prosperity of their neighborhood."

This appears to us to be sound doctrine. Make men intelligent, make them to understand the subjects that are of the most consequence to them, place in their hands those works that relate to their business and their interests, and they will soon act understandingly and decisively. We believe, and we doubt not all well informed men will concur with us, that the most effectual means for the advancement of agriculture in this country, and placing the farmer in the position which the genius and institutions of the land allot to him, is the diffusion of agricultural knowledge—teaching the farmer to *read*, and thus disabuse his mind of the prejudice which still lingers with so many, of the inutility of science, knowledge, and general learning, in connection with agriculture.

It may easily be shown that there is no single occupation or business in life, where extensive knowledge is more necessary than it is to a full understanding and proper practice of agriculture. There is none so intimately blended with all the important branches of the natural sciences as this ; none to which geology, chemistry, botany, and entomology, are such important contributors and invaluable auxiliaries. The earth, the air, are full of instruction to the farmer ; the pebble, leaf, insect ; the composition and decomposition of matter and its causes, are all before him, all constantly going on around him, all inviting attention as part of the processes he must produce if he is a successful cultivator of the soil. He must read ; and if he feels the value of knowledge himself, he will be proportionably anxious that those around him, his neighboring farmers, his friends, should read also. A community of knowledge constitutes one of the strongest ties that can bind society together ; whatever may be the topic, it is a bond of feeling and interest not easily broken or destroyed. An intelligent practical man may change the whole course of agriculture in a neighborhood, and give an impulse to its prosperity, which may endure long after the cause is forgotten. We have seen a man go into a neighborhood of farmers, respectable men, but who did not read, and felt the old fashioned contempt and aversion for those who did. This man was a reader of agricultural papers, and when an improvement was pointed out that his good judgment showed was adapted to his means, his farm, or his circumstances, he adopted it at once. He improved his farm by draining his lands, and nearly doubling the ordinary crops, by skillful cropping and rotation. He improved his stock by purchasing at great cost, superior animals to breed from. His neighbors at first called him a *book farmer*, and sneered at his management. They soon found the laugh was on the wrong side, and began to inquire the causes. If he could get a neighbor to read, his periodicals were always at their service ; and if he met a brother farmer, some proposition was made or some inquiry started which he was sure would lead to useful results. Soon they found agricultural papers necessary, and became subscribers themselves ; an agricultural paper has become as indispensable as a political one, and its arrival is always looked for with interest and pleasure. The prominent farmers of that neighborhood are now *readers ;* several different publications are received ; and when they meet, the comparative merits of the different modes of husbandry are freely and intelligently discussed. We would wish to see such examples as this more frequently imitated. When they become common, it will be a proud day for American agriculture. In such instances, we trace the true secret of improvement, for although the looker on may at first sneer at the reader, he is sure eventually to imitate, first the improvements he makes, and lastly his course of reading. We ask it then as a favor, of every friend to agricultural improvement, to bring a knowledge of farming periodicals to the notice of his neighbors—let them be induced to become subscribers—to read, to reflect on the means of improving their cultivation, and a point will be gained, which will afford a rational hope of rapidly increasing and permanent prosperity.

Indian Corn--a Request and Acknowledgment.

We wish to collect for the use and examination of the public as large a collection of the numerous varieties of Indian corn, as can be conveniently made. To do this, we ask the aid of our friends in every part of the country ; and hope they will forward us as opportunity may offer, such specimens of this valuable grain as they may have, noting the name by which it is known, the latitude in which it is grown, the time of ripening, and such particulars relative to its origin and history, as they may be able to give. Albany offers such facilities of communication with all parts of the United States and with Canada, that the transmission of ears of corn, and it is the *ears* we wish, can be effected with little trouble and great certainty. It would be agreeable to have two or three ears of each kind, where they can be had ; and as we shall at intervals acknowledge the receipt, should any be received, it will save any the trouble of forwarding the varieties so named. Dr. Brown some years since made a collection of 42 varieties, which he presented to the king of France ; and in his work on this valuable plant he enumerates 36 varieties, yet there are several, well known, which he has omitted.

We have the pleasure of acknowledging the receipt of the following varieties from Theron Cowles, Esq. of Onondaga Co. Two varieties of the *Canada Flint*, middle size, yellow and white, a very hard, bright and sound corn. This ripens early, and will yield from 40 to 60 bushels per acre. Two varieties of the *sugar* or *sweet* corn, the white and the red cob kinds. Two varieties of the *Rice* corn, (this is omitted by Brown,) the pointed and the round kernel. The *Blue* corn, (Brown's No. 31.) Mr. Cowles informs us that the Rice corn, and the Blue corn adjoined at the ends of the rows, and the rice corn shows the effect in some of the kernels of the mixture of the pollen.

We have also received from H. M. Gaylord, Esq. of the same county, a bag of the *Brown* corn, for the benefit of our friends. These varieties of corn may be seen at the Cultivator office. Any favors of this kind, will be reciprocated as far as possible.

Production of Silk.

It cannot be disguised, even had any one an interest in misrepresenting facts, that many have been disappointed in their expectations the past season in the growing of silk. Many deemed a failure almost impossible ; they made no allowance for inexperience, and the disadvantages inevitable to the commencement of a new business, and when they find the expected hundred pounds of silk reduced one half or three-fourths by want of foliage, or disease of worms, or defective cocoons, denounce the business as unprofitable, and the attempt to grow silk in this country as chimerical. Others with less sanguine expectations went to work more carefully ; secured an abundance of foliage, procured eggs that had not been half hatched, and then chilled some three or four times, and these, by proper feeding have had good success, no loss from disease, and no difficulty in the formation or quality of the cocoons.

We find from the various notices of this subject in the public journals of the country, that many have repeated the experiment of Mr. McLean of New-Jersey, in seeing how much silk could be produced from one-fourth of an acre of mulberries, and some express an opinion, that they shall equal or exceed his crop. From a variety of notices of the culture in the New-England Farmer of Dec. 23, 1840, we extract the following from a silk grower in the county of Franklin, Mass.

" One person fed 30,000 worms, consumed 1,200 lbs. of multicaulis leaves, and had 70 lbs. of cocoons ; another fed 35,000 worms, consumed 1,327 lbs. leaves, and had 100 lbs. of cocoons ; another fed 25,000 worms, consumed 817 lbs. leaves, and had 75 lbs. cocoons ; another fed 45,000 worms with the white mulberry, (leaves not weighed,) and had 105 lbs. of cocoons ; another fed 8,000 worms with multicaulis (leaves not weighed) and had 10½ lbs. of cocoons ; *four pounds* of these last reeled *half a pound* of raw silk." It was the opinion of these feeders, and is that of many other persons who have tried the methods, that chopping the leaves for the worms in the feeding, promotes the health of the worms, prevents waste, and lessens the labor of feeding. It is also the mode followed by the Chinese in producing their silks.

The readers of the Cultivator for 1840, will remember that we gave some account of the manufactures of silk at Mt. Pleasant, Ohio, by Mr. G. W. Gill ; and we are glad to see by an extract from a letter of that gentleman in the western papers, that his labors the past year have been eminently successful. Mr. Gill says, respecting his manufactures :

" We have increased our variety of goods. Our stock now consists of plain and figured Terry, English, Dutch and Genoa velvets ; hat, tippet, and cap plush ; Gros de Naples, and other dress silks ; black corded aprons ; Italian cravats, silk tassels, and silk lace, super silk hats, and super silk caps. Our stock of goods is large, and I can fill orders (accompanied by cash) on very reasonable terms." Mr. Gill purchases all good cocoons at $4 a bushel ; keeps six looms in operation, and is confident the silk business must succeed in this country, and partiularly in the great west. To command the above price, the cocoons must be killed by suffocation with camphor, sulphur, or charcoal ; if killed by baking, the price is $3 per bushel ; if the floss is taken off, the measure is level ; but if not, the bushel is heaped.

From the evidence which is already before the public, it seems most probable that the failures which have been noticed, were rather the result of mismanagement of the eggs or the worms, than of any inherent difficulty in the business ; and that when these obstacles are surmounted, as they may be by experience, there will be no more difficulty in growing a crop of silk, than one of potatoes, and the labor and expense will be far less.

Flour Trade of the Erie Canal in 1840.

We have condensed, from Governor Seward's Message, the following account of the flour and wheat trade on the canal for the last year. It is interesting as showing that the agriculture of the country west of Oneida, has sent to tide water through this channel alone, and in a single article, property to the amount of twelve millions of dollars. We are but just beginning to reap the benefits of the Erie canal, as the rich tribute which the Great West must eventually pour through this channel to the sea, has hardly yet began to flow :

Flour through the canal,...... 1,805,135 bbls.
Wheat through the canal,..... 1,395,195 bush.
Entered the canal from Lake Erie, 646,970 bbls. flour.
" " " " " " 1,467,904 bu. wheat

The following will show at a glance the States from which the wheat and flour which entered the canal at Buffalo was derived, and the quantity from each. When we remember that it seems but a few years since some of these states or territories were first the abode of civilized men, and that but a single year has elapsed since one of them at least was obliged to import flour for the use of the first settlers, the transportation of flour produced by them the present year, can only be regarded as a specimen of what may be expected when the fertile west is peopled, its prairies converted into wheat fields, and the rapids of its beautiful rivers occupied as they soon will be by merchant mills :

Where produced.	Flour—bbls.	Wheat—bush.
Ohio, ...	505,262	725,025
Michigan, ...	112,215	97,249
Indiana, ...	13,726	48,279
Illinois, ...	2,259	10,634
Wisconsin, ...	166	

Mr. Coleman's Agricultural Addresses.

We have received from our respected friend, the Agricultural Commissioner of Massachusetts, a pamphlet containing the Addresses delivered by him the past year by invitation, before the three Agricultural Societies of New-Haven, New-London, and Hartford, in Connecticut. We find them to be, what indeed every one acquainted with the author would infer them to be, papers of the first order, abounding in excellent directions, interspersed with abundance of valuable facts, filled with an ardent love of country, and particularly of New England, and thoroughly imbued with that love for the great cause of agriculture, for which he has been so long and honorably conspicuous. Those Societies did honor to themselves in the choice they made of an individual to address them, and the confidence bestowed has been most honorably and satisfactorily redeemed. We shall hereafter have occasion often to avail ourselves of the facts here condensed and accumulated. For placing them in our possession, he has our unfeigned thanks.

Transactions of the N. Haven Ag. Society for 1840.

We have received from the publisher, Mr. Storrs of New-Haven, a phamphlet bearing the above title. It contains an address to the members by the President of the Society, Constitution, Officers, &c. ; a list of the working cattle and other stock exhibited, premiums awarded, and farm reports. These last form an important and instructive part of the publication. The society of New-Haven county appear to be actuated by the right spirit, and we are confident they will find themselves much aided by the Farmer's Gazette, published in their beautiful city. We are also indebted to Geo. Sherman, Esq. for a second copy of the Transactions. We should be glad to receive No. 1.

Legislative Aid to Agriculture.

The important subject of state aid to agriculture we are glad to perceive is again agitated, and we hope a full expression of the will of the people will be given in the matter. If this is done, we have little fear the public voice will be disregarded. Aid is not asked as a boon; it is claimed as a right, and the man who looks at the sources from which the revenue of the state has been derived, will have little difficulty we think in coming to the conclusion that the claim of the farmer is well founded.

Different propositions are before the public, as to the way in which such aid, if granted, would be the most effectual. We think the influence of a *small* sum would be most felt in the establishment of a State Board of Agriculture, but if ten or twelve thousand dollars is granted annually, then its division among County Societies, according to the ratio of representation, to be used for premiums and nothing else, would we think produce the greatest good. It is not the amount received by the county society from the state, that is the great object; the sum secures the existence of the the society; it is a nucleus around which action and effort can be concentrated and directed, and which experience has proved produces the happiest results. An appropriation of twelve thousand dollars annually, would give us an efficient Board of Agriculture, one thousand dollars to be expended in premiums at the semi-annual meetings of the State Agricultural Society, and aid to the county societies at the rate of 50 dollars to each representative. We do not now, as we never have, advocate any appropriation of the money of the state, in such a way as to supersede the efforts of the county societies. No money should be paid to any society which had not actually raised for the use of the association, at least one half as much as it was entitled to receive from the state. We would not render individual or associated effort unnecessary; we would only by legislative aid encourage and direct it.

Let the farmers then speak out, and we are certain they will be heard. The great state of New-York will not refuse to the interest which, while most others are falling off, is fast increasing the golden stream it is pouring into the treasury, the few thousands required to give it renewed life and activity. It is demonstrated that the state must rely on her soil, and the true question for the legislature to consider is, how can its products be most effectually increased, and its resources most fully developed.

We learn with pleasure that the subject has already been taken up in the Legislature, a resolution having been passed, on motion of Mr. Fuller of Onondaga, instructing the Committee on Agriculture to inquire into the expediency of making an appropriation for the encouragement of Agriculture.

"State and Condition of Agriculture

In the United States, compared with Commerce, Trade and Manufactures."

Under this head, a correspondent (W. J. of Boston,) has addressed us some remarks on the causes of the low state of agriculture in this country, as compared with some other branches of national industry and business, which we are compelled to present in a condensed form.

The first cause assigned by our correspondent, is "The unproductive nature of this branch of industry, and the small returns of profit usually derived from capital invested in agriculture." This arises from the expenditure required to keep land in good condition, and from the high price of labor. From 4 to 6 cords of manure is deemed requisite, which is stated to cost, delivered on the ground, $6 per cord, or on an average, the cost of manuring an acre is $30. The expense of labor per acre on a farm is estimated at $6 per acre on the average, making the annual expenditure on each cropped acre, from $30 to $40. Our correspondent then estimates the average crop of potatoes at 150 bushels per acre; for corn 25 to 30 bushels, and other crops in about the same proportion. This is, in truth, rather a disheartening view of agriculture, and as the writer resides near the emporium of New-England, we think the high price of materials for enriching the soil there, has led to rather a too general application of his expenditure per acre. Under a skillful course of cropping, or an alternation of roots and grasses with grain, manures could scarcely fail to cost less than the price named, and the amount of product be greatly increased above the average named.

A second cause is, that "while the farmer is unable to realize more than 3 per cent on the capital invested, the profits derived from trade, commerce, and some branches of manufactures, have hitherto been much greater, varying from 10 per cent up to 20, 25 or even 33 per cent."

A part of our friend's statement is probably correct. Fortunes occasionally have been made much quicker by trade, manufactures or commerce, than by farming; but if it be true, as has been stated on good authority, that of those individuals who commence trade or engage in manufactures, three-fourths sooner or later become bankrupt, we must be permitted to think that a certain 3 per cent, (and this we think too low on well cultivated lands) is better than ten or fifteen per cent subject to such reverses or contingencies. Besides we have the authority of Mr. Colman, (and better cannot be had,) that "at present agricultural labor is as well paid as any kind of labor of the same description; perhaps all circumstances considered, better than any other, excepting where an expensive profession or trade has been learned."

It is true, as our correspondent asserts, "that the great profits which trade and commerce are *thought to afford*, have a direct tendency to draw our young men from the country to the cities, from agriculture to trade or speculations, as a more direct way to wealth and honor, an impression only to be corrected by inculcations of the truth, making honest industry honorable every where, and discouraging habits of luxurious and expensive living, to which all classes of people in this country are so prone."

For the cure of the evils indicated, we expect little aid from national or state legislative action. Improvident legislation frequently gives birth to evils that time only can cure. Our hope is on the people, the farmers themselves. Merchants will not import, foreigners will not deluge us with their trash, only as long as the people buy.

Comparative Value of Pigs for Cutting up.

That there is a very great difference in the value of pigs of equal weight, when fattened and killed, is known to every buyer and packer of pork, and should be well understood by every farmer. There are certain parts of a hog, such as the hams, lard and mess, much more valuable than other parts, such as the head and feet, and those hogs that give the greatest weight, where it is of the most value, other things being equal, are the best animals for both seller and buyer. Weight, however, without reference to the place where it is found, is generally the standard of value, and a hog that will weigh three or four hundred, even if one third of it is in the head and legs is by many considered first rate. A breed of hogs then having large hams, thick sides that lard well, with short necks, small heads, and slender legs and feet, is the one which is to be preferred, if there is sufficient weight of carcass and aptitude to fatten. Perhaps with an exception in a single point, that of weight, the Chinese hog comes nearer the standard of perfection than any other; and this defect in size, while the other valuable points have been retained, has been best corrected we think by the cross with the Berkshires. The great thickness of these hogs gives a weight of ham unequaled in any other, and their round capacious carcass furnishes ample room for lard, which experience shows is usually fully occupied. Many have been disappointed in killing Berkshire pigs, because they looked smooth and round when compared with the alligators, and it seems to have been supposed they they should weigh without feeding, as much as the latter after months of stuffing. No one has a right to expect this; the true point at issue is, which pig with the same food will make the most meat, and of the most valuable kind? and tried by this rule we have no fears for the Berkshire. Our pen of hogs this year consisted of five hogs of one of the best common breeds, and one Berkshire. The lot was from 18 to 24 months old, the Berkshire the oldest. They were none of them in high order when put up, and were fed wholly on steamed apples and potatoes, with the exception of about 20 bushels of screenings, refuse wheat and oats mixed together and ground. The average weight of the whole was 375 lbs. each; that of the Berkshire alone was 430 lbs. Several of the common pigs were longer than the Berkshire, but the weight in the latter was on the most valuable parts, and we have never seen a hog that exceeded him in the hams and lard, while the weight of the less valuable parts was proportionably less. They were fed little more than two months.

Since writing the above, we have been favored with a copy of the Report of the Committee on Swine, made to the Tompkins Co. Agricultural Society, in which are some very just remarks on the subject discussed above, and on the relative value of the several varieties of pigs now generally grown and fed in the country. From this report we make the following extract, as illustrating more fully the opinions we have expressed:

"The following experiment made by the chairman of this committee last December, in cutting up his pork, will show that the Berkshire pig cuts up well, and has less offal than other breeds in proportion to the valuable parts. The first example is a sow, common breed 2½ years old—had raised one litter of pigs in July and August, 1839. She weighed as follows in parcels, whole weight 235 lbs. The second is a half blood Berkshire sow 18 months old; had raised two litters of pigs; one in March and April, and the other in September and October, 1839—slaughtered in December. Whole weight 204 lbs. in parcels as below. The third example that we will give is a half blood Berkshire barrow, 18 months old, killed at the same time, and all fattened in the ordinary way, whole weight 336 lbs. In parcels as follows:

	No. 1.	No. 2.	No. 3.
Lard,............	26	16	31
Hams,............	32½	31	52
Tenderloin,.......	5½	3¼	5
Feet,............	8¾	6¾	9
Mess Pork,.......	96	103	176
Prime,..........	28¼	16	26
Head,..........	18	16	21
Spare Rib,........	20	12	16
	235 lbs.	204 lbs.	336 lbs.

The following from the same report, is commendation strongly expressed, but we think facts will fully bear out the writer in his remarks:

"The Berkshire is a hardy hog, and a good feeder, and is as well adapted to consume the coarse food of the farm, as any other breed; and it is believed they will make a greater return in flesh for the food they consume, than any other breed, except perhaps the China, and as large a return as they will. They are also remarkable quiet hogs, which is a very desirable quality with the farmer. They keep out of mischief, and save their flesh by their gentleness. Their skin is white when dressed and very thin. Their pork is firm and solid, and of the very best quality. Their hams are unrivaled; and possess a higher character, where known, than the ham of any other breed of hogs in existence."

Agricultural Soiree.

Where is the farmer in our country, who would not be glad of the privilege of setting down, and spending an evening in the society of such men as Allen, Bement, Garnett, Howard, Jewett, Rotch, Randall, Robinson, and numbers of others of the most skillful, scientific and practical farmers of the country, and listening to the instructive results of their experience?—and would not the pleasure be greatly increased, if the same rational enjoyment was to be monthly placed within their reach, the meetings to include, within the course of the year, besides the gentlemen above named, some two or three hundred of the most able and influential farmers of the Union.

In such a meeting, which may with propriety be termed an 'agricultural soiree,' every subscriber to the Cultivator will be a welcome participator, and a partaker of the benefits. Through our columns we shall monthly convey to our friends, the collected wisdom and experience of some thirty or forty of our ablest agriculturists, men who have done the most to advance the cause of improved husbandry, and as a necessary result increase the wealth and prosperity of the nation. To soirees of this kind, we invite the farmers of our country to be present by thousands. Our rooms are open, and the year has opened upon us most prosperously. None of the thousands who have favored us with a call have been dissatisfied, and we trust the thousands we are yet to meet, will have equal cause for satisfaction.

Young Men's Agricultural Society of Dutchess.

Old Dutchess, by the skill and enterprise of her farmers, the excellence of her soil when properly cultivated, the promptitude with which the leading farmers have adopted obvious improvements in husbandry, and the means they have made use of by a liberal circulation of Agricultural papers, and by associated effort, has obtained the honorable distinction of the Pattern County of New-York. She seems, however, to be aware that this distinction can be only retained by a diligent use of the same means and effort that acquired it, as both in the east and the west other counties are following her steps closely, counties for which nature has done as much or more than for her, but for which the farmers have done as yet far less; and we have accordingly the notice of the formation of the "Young Men's Society of Eastern Dutchess," the spirited resolutions adopted, and a copy of the well written and appropriate address delivered before the Society by the President, Edward Merritt, has been forwarded us. All this indicates the right feeling. It shows that the farmers of Dutchess are not content with having done well; it proves they mean to do still better. Let other counties and sections of our country imitate their example.

USEFUL RECIPES.

To Cure Poisoned Lambs.—I send you a recipe to cure lambs when poisoned with *Withey*, so called here. It grows on low lands, about one foot high, and is green the year round. To half a pound of black tea, put one quart of water, boil it until you get the strength of the tea, sweeten with molasses, and give two table spoonfuls at a time. One dose is in most cases sufficient.

Great Falls, N. H., Dec. 1840. Isaac Chandler.

To Color Madder Red.—For 10 lbs. flannel or yarn, take ¾ths lb. cream tartar and ¾ths lb. alum—pound them fine and boil 15 minutes in sufficient rain water—then add a little cold water and put in your cloth and boil it 3 hours, stirring it often—take it out and air it well, throw away your alum water—put in a sufficient quantity of water so as not to crowd your cloth; then put in 3 lbs. madder, and heat it over a moderate fire as hot as you can bear your hand in; then put in your cloth and keep it stirring 3 hours at the same heat. Then take out your cloth and add 2 quarts of soap and stir it up well, put in your cloth for 20 minutes, and then it is ready for scouring. The cloth or yarn should be well washed and put in the alum water while wet. The cost will be but 6 cents per yard. J. Parker, Jr.

For Bots in Horses.—A junk bottle full of strong sage tea, made very sweet with molasses. Two or three doses is generally sufficient for a cure.

Trenton, N. Y. Jan. 4, 1841. J. Parker, Jr.

Cure for Bloated Cattle.—In the month of August last, I discovered that a yearling of mine was very much bloated, groaning at every breath. After cutting off the end of her tail, I boiled a strong dose of thoroughwort with a little tansey, poured it down as soon as it was cool enough, and on application of the first bottle, it started the wind. I gave the second, then turned the animal into the yard, and drove it about a few moments, when the bloat disappeared and the groaning subsided.

New-Haven, Vt. 12 *mo.* 1840. A. M.

WORK FOR THE MONTH.

Look well to Your Stock.

February is a trying month for your animals, therefore look to them well. It is altogether easier to keep an animal from becoming 'spring poor,' than to raise him after he has sunk to that point. Sheep and calves are usually the first to exhibit the effects of our hard winters; and should therefore be well looked to. If you see any of your sheep declining to eat, lingering behind the others when fed, and exhibiting the other well known symptoms of decline, the animal should be separated at once from the others, and put on better and more nourishing food; if it remains with the others it is sure to perish, but with a little care may now be saved. Sheep are apt when they cannot come to ground, and do not receive plenty of salt and green food, such as turneps, potatoes or carrots, occasionally to become costive, have the stretches, as it is called from its prominent symptoms, and die. Roots and salt will prevent this, but if the disease appears, in its first stages a spoonfull of castor oil will generally effect a cure. A division or hospital for weak or diseased sheep is indispensable, and not to be overlooked by the sheep farmer. See that your calves, and indeed all your animals have salt frequently; next to good food and shelter, it is one of the surest preventives of disease.

Settlement of Accounts.

The winter is a capital time to look over your accounts, reckon with your neighbors and your mechanics, and make a thorough settlement for the year. The farmer should on no account, deviate from the practice of annual settlements with all he has dealings with. If there is money due him he needs it; if he is indebted to others, let him pay them, or at least let a settlement be made. Many disturbances arise among neighbors from a neglect of this rule. Accounts run for years; things are forgotton or misunderstood, and when at last reckoning comes, all is uncertainty and contention. Pay your debts, and settle all your accounts annually, and you will get through the world much easier than if you neglect these points.

"Keep the Door Shut!"

Is an admonition that in these days of frost and snow needs to be frequently repeated. There is undoubtedly a great pleasure felt by children, and we may add by those who are older, in seeing their way clear into the house, when compelled to go into the wintry air; but such do not remember, that every such leaving the door open, will require at least one or two sticks of wood in the stove, to raise the room to its former temperature. A little oil applied to the hinges of a door will greatly facilitate its movements, and prevent the wailings which some farmer's doors send forth whenever opened or shut. Dante makes the heavy doors of his 'Inferno,' as they move on their massive hinges, to "grate harsh thunder;" but such an example we think is more honored in the breach than in the observance.

Examine your Implements.

It is well in this month to make a careful examination of your farming implements; ascertain what are wanting, what new repairs, what new ones are to be introduced, &c. that all may be ready when required for use. It is not good policy when the seed is sown, to find you must wait until a harrow can be constructed or your neighbor has done using his, before you can cover it; or when you are ready to plant or mow, to find that you have hoes without handles and broken snaths to your sythes. All are more or less dependent, but the practice of borrowing agricultural implements should be discountenanced as much as possible, since they are all so cheap that where they are wanted frequently, the old adage, that it is better to borrow than to buy, is fully reversed.

Destroy Lice on Animals.

It is very probable that about this time some farmers who winter their cattle on straw, and trust for shelter to the leeward side of a fence, will find some of their cattle falling away, particularly the young ones, and it may be well to examine them, to see whether there are not lice about them. If any are found, take some mercurial ointment, or *unguentum*, and parting the hair around the neck, apply the ointment to the skin, so as to completely encircle it with a strip of the application. Some prefer filling a string with the ointment, and tying this around the neck closely. In using such mercurial preparations, they should never be applied in places where cattle can reach them with their own tongues, or be liable to be licked off by others.

Preparation of Hot Beds.

Those who have hot beds, or are intending to provide one for themselves, (and we advise every farmer, or mechanic, who has a garden, to construct one,) should now see that his sashes are made and his frame for their reception provided. Arrangements should also be made for a sufficient supply of horse manure for the heating process. Farmers who use abundance of litter in their stables, frequently find it in too great a proportion to the droppings to make good beds, as we have found by our own experience; and it is therefore necessary that the quality of the manure intended to be used, should now be seen to. We can assure our friends, that the successive crops of radishes, lettuces, and cucumbers, that may be brought forward in a forcing bed, long before they can be produced in the open air, will be found most acceptable after our long winters.

Collection of Cions for Grafting.

Grafts or cions may be cut the latter part of this month, and preserved until wanted for setting. Where circumstances admit, it is better to omit cutting the grafts until March, as the later they can remain without the circulation of the sap commencing in them, the more likely they will be to succeed when set; still, as the winter offers great facilities for transmitting them uninjured, from one part of the country to another, it should be improved, only using great care to prevent the cions from becoming dry before they are wanted. There is more attention paid to the propagation of good fruit than there used to be; but much less now, than there should be where the difference in the profit as well as pleasure, in growing good apples over poor ones is taken into consideration.

Examine your Wheat Fields.

When the snow is off from your wheat fields during the month, it is well to examine their condition, and see that the water furrows, which are necessary on almost every field, are not choked up, and the water they should carry off spread over the wheat. Nothing is more destructive to young grain than standing water; and there are many of the grasses, and the chess plant in particular, that will survive a submersion fatal to wheat or barley. See then that no water is allowed to accumulate on your wheat fields.

To do Good and Communicate, Forget not.

Every farmer should remember that he is under obligation to add something to the common stock of agricultural knowledge, by communicating the results of his experiments, or his experience, for the benefit of others. The winter season is the time for this work. The farmer, during the summer months, or the months for field labor, usually has so much on his hands that he can find but little time to use the pen. Now is the time then for him to give the results of his practice, or his experiments in husbandry. The hints, brief as they may be, can scarcely fail of being useful; "and he who has skill enough to practice experiments, is able to state it so that another can comprehend it."

ANSWERS TO INQUIRIES, &c.

Preservation of Timber.

Messrs. Gaylord & Tucker—Answers to the following questions are solicited through the Cultivator. What is the best method of preserving the sills of buildings? Can salt be beneficially applied for that purpose? How should it be applied, and in what quantity? What kind of timber is most durable, when thus prepared? Can any other substance be applied to timber to preserve it? Answers to the above inquiries, and any information relating to the subject embraced in them, would be thankfully received. H. Janes.

Cornwall, Vt.

As to the use of salt in the preservation of timber, we think some of our friends at Salina or Syracuse might give us information that would be satisfactory, as it has been somewhat extensively used in that vicinity for that purpose; and we would thank any of them that would furnish us with replies on this point, to our correspondent. In ordinary cases, timber kept perfectly dry may be said to be indestructible; and the best method of laying sills would be the one which should secure this object most effectually. Timber perishes soonest where it is alternately wet and dry, and no water should ever be allowed to touch the timbers of a building if it can be avoided. Dry rot is at times very destructive to timber, but it is found that impregnating it with corrosive sublimate will destroy or prevent this disease of wood. Of all American timber used for building, good white oak is the best and most durable.

To prevent Hogs from Rooting.

George H. Chrisman, of Harrisonburgh, Va., says, "I find my hogs are seriously injuring my farm by rooting out the grasses, and rooting the soil where it is wet; and I am anxious to learn if there be any effectual method to check their depredation. I have tried putting rings through their noses, but from not knowing perhaps the proper mode of ringing them, the rings come out, so as to defeat my object. Is there any plan for making the rings so that they will remain in the nose? or will cutting the tendons of the rooter answer the purpose without injuring the hog?"

There can be little question that the pig, when wild, or in a state of nature, or when as Abernethy would say, he was obliged to live on a dozen ground nuts a day and root for them, found certain implements or appendages of great value, which, now that he has been "civilized," are more or less nuisances; and among others the half ossified rim of his nose is not the least troublesome. There are three methods of counteracting this innate propensity of the pig's nose to evil: ringing, paring, and cutting the tendons of the snout. Ringing is generally practiced, and if well performed, is effectual. Failures arise from making the rings too large, and using too small wire. If too large they will catch and tear out; if of small wire they will bend or break out. Rings of the size of a two shilling piece, or half a dollar, are large enough, and if the ends are properly bent, and the wire of the right kind, they will last as long as desired. Fatting hogs will do better for having rings, as it sensibly abates their pugnacious propensities, and ensures comparative quiet in the pen. Some catch their pigs, and with a keen knife pare off the rim of the nose, which frequently effects a remedy; certainly it will for a while. By examining the nose of a pig, it will be found there are two strong muscles running down the nose, and terminating in the rim. It is these muscles which give the power possessed by the pig's snout, and a separation of these (in the manner the tendons of a horse's tail are divided in the barbarous and unjustifiable practice of nicking) near their insertion in the rim, will render the nose harmless. On the whole however, we think ringing is preferable to either of the other modes.

Clearing and Improving New Land.

We give place to the following, in the hope that some of our many subscribers who are acquainted with the subjects alluded to, will furnish some papers of the description desired by our correspondent. If the settler of a new farm can be furnished with any useful hints towards the first clearing and cultivating of his land, they can scarcely fail of being acceptable to a large class of individuals. "*Canborough, U. C.* 1840.

"For myself, I can truly say, I have been delighted and instructed in the perusal of your valuable paper, and could you occasionally give us an article calculated to throw light upon the best methods of clearing land, and general subjects suitable to settlers in the bush, it would be still more highly popular and useful.

John Kirk."

Hedges.

"I perceive in the last No. of the Cultivator, a notice of the native Buckthorn hedges becoming quite common in the vicinity of Boston and Salem. I was not before aware of there having been any successful experiments made in hedging with any of our native thorns. I should be pleased to see in the Cultivator (and many other subscribers, I presume, would be no less so,) a description of the variety of thorn used, sufficiently minute to enable one to understand who is not a botanist, and particularly the nurseryman's process of sprouting the haws or seed. *Collins, N. Y. 1 mo.* E. M."

It is rather difficult to describe a plant, not widely differing from a numerous class so as to have a person unacquainted with the botanical marks, detect them easily. The principal points in the Buckthorn, are its thorns, which are *terminal*, or growing on the ends of the branches or stems; its leaves which are *ovate* or egg shaped, instead of being lobed and irregular, and the edges are notched like a saw, or *serrated*. It is a rare tree in Western New-York, and to procure it, it would be necessary to purchase either the seeds or the sets from Salem or Boston. We do not find or know the mode of sprouting the haws, but presume it to be the same as that pursued with the other thorns, and with these the following mode has been successful. "Gather the leaves or berries, put them in a vessel with some water, and set them out doors, where they will freeze and thaw during the winter, and then, if planted in the spring, they generally come up. Without this management they are two years in sprouting, and many of the seeds never come up at all." Buckthorn plants may be obtained at Salem or Boston, at $2.50 per hundred, 22 plants being enough for a rod. The seed may be had at the same places, and perhaps elsewhere at about $1 a lb. At the present time, the Buckthorn bids fair to excel all other plants for hedges in this country; growing remarkably vigorous, and enduring the climate perfectly.

Furze for Hedges.

While on the subject of hedges, we would reply to our correspondent who signs himself an "Iowa Irishman," and who inquires "if there is any thing in the nature of our soils or climate incognate to this valuable plant, or which should prevent its use here as in England and Ireland for hedges?" that we have never known the cultivation of furze attempted in this country, but believe it is not sufficiently hardy to withstand the severity of our winters; another obstacle may be found in the greater dryness of our summers, which has hitherto prevented the growth of the English thorns generally, in the United States. That the west, especially in the prairie districts, must rely on hedges for fences, is evident, and we think experiments on the various kinds to ascertain those most suitable and certain of growth, should be instituted at once. Loudon remarks that furze hedges are usually grown on mounds or ridges thrown up from a ditch, on which the seed is sown.

Horse Rakes.

"Messrs. Editors—Permit me to inquire whether the improvements on the common *Revolving Horse Rake* give it any advantage over the original one, on uneven grounds, and if so, to describe it through your paper sufficiently definite to enable an ordinary yankee mechanic to construct one, and oblige a number of your subscribers. *Redding, Ct.* Henry Sanford."

We know of no very essential improvements effected in the revolving horse rake over those figured in the last volume of the Cultivator; if any of our friends are making such as are considered superior in the points required by our correspondent, and will give us a description, we will publish it with great pleasure.

Mr. Elliott's inquiry respecting corn planters, drills, &c., shall receive attention in the March No. of the Cultivator.

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

FAT. The oils and the fat of animals differ only in fluidity. At common temperatures the last are concrete or solid, while the former are fluid. The principal varieties of animal fat, are spermaceti and whale oils, butter, tallow, lard, and suet. Whale or train oil, is extracted from the blubber of the whale, and is originally solid fat. It is prepared by melting in large copper vessels. Spermaceti is the oily substance found in the head of a particular kind of whale, and is separated from the fibrous part by pressure. Whale oil is composed of carbon 68. oxygen 16. and hydrogen 15. Spermaceti contains of carbon 78. oxygen 10. and hydrogen 12. Butter is an animal oil or fat, and like the other oils is apt to become rancid by the absorption of oxygen. This is owing in a great measure to the fluids or buttermilk remaining in it; and the way to preserve it is to free it from buttermilk, exclude the air, and keep it at a low temperature. The name of tallow is usually given to the fat of cattle and sheep. That of pork, is called lard or suet. Strictly speaking, lard is the name of the fat of swine prepared by melting or *trying;* and suet is the pure or leaf fat which does not require this process. With farmers, however, the whole of the fat taken from the animal is usually submitted to the trying process, and is all called lard or suet indiscriminately. The animal oils are used for a variety of purposes, principally for burning, domestic cookery, and making soap. Animal fat is composed of two different substances called *stearine* and *elaine*, the former of the greatest consistence, the latter more fluid, and on the relative proportions of these, is in a great degree depending the texture of the substance. Fat is accumulated on animals by good feeding, rest, and quiet; and is of good quality only in those creatures that are in good health. The butter or the lard of a diseased animal, should always be rejected as unfit for domestic uses, particularly cookery.

FECUNDATION. This is that process of nature by which the germ of the animal or plant is vivified, or excited from the dormant state in which it would remain, to a progressive development of its peculiar form and organs. The fecundation of the germ or ovum in the animal is involved in obscurity; we only know that it is accomplished by the application of a fluid called the seminal fluid. Generally the organs of fecundation are confined to different animals, but in some, as in the snail, the organs of reproduction usually given to separate individuals, are found in the same animal. In the Batrachian reptiles, (frogs, lizards, &c.,) the ova are impregnated after their expulsion from the body; in all other cases, the fecundation is internal. All animals that produce their young from eggs, having a calcareous covering as birds, &c., are termed *Oviparous*. The eggs of the viper and salamander are never laid, but hatched in the body; such are termed *Ovoviviparous*. Animals which are not produced from an egg, properly so called, but which for a time remain attached to the interior of a cavity in the body of the parent, are termed *Viviparous*. Animals of the class of the Opossum and Kangaroo, are called *Marsupiala* as soon after fecundation, the young are received into a pouch, and nourished with milk by the parent. The fecundation of plants is accomplished in very different modes in the several classes. In one class, the *Phanerogamous* plants, the whole of the double apparatus required for reproduction is contained in the *flower*. The fecundating organs are the *stamens*, placed near and usually parallel to the *pistil* or central column, which is terminated by a glandular organ called the *anther*. This organ furnishes a fine powder called the *pollen*, and this, received by the stigma, conveyed through the tube of the pistil, impregnates the seed by the fluid the powder contains. In some plants, as in Indian corn, the fecundating organs are on different parts of the same individual; and in a limited number of others, as the date, the reproductive organs, as in the higher classes of animals, are on separate individuals.

FEEDING. The preparation of cattle for the butcher is usually called feeding; while the same process with swine, is termed fattening. All animals delight in a change of food; and nature has supplied this variety in abundance; but in the domesticated state they are frequently confined to one kind of food; and in feeding, or fattening, this is most generally the case. Many experiments have been made to test the value of numerous kinds of food employed in feeding animals, both by analysis and by weighing, but the results have been very unsatisfactory, if not in some instances contradictory. This will be accounted for, when we remember that the quality of some species of food will often vary from 1 to 20 per cent in the course of an experiment; that different breeds acquire various proportions of flesh from equal quantities of the same food consumed by them; and that scarcely two individuals of the same breed can be found that will gain equal weights of flesh from equal quantities of the same kind of food. The value of any article for feeding, does not wholly depend on the quantity of nutriment it contains, but also on the nutriment being combined with some substance that shall properly distend and excite the stomach; and experience abundantly proves that the most nutritive foods are not the most healthy, or the best adapted to the animal system. In feeding animals it is necessary the supply of food should be abundant; that it should be given regularly; that there should be a sufficient variety to promote health; and that it should be so prepared as to lessen the labor of digestion as much as possible. The grinding or breaking of grain, the steaming of roots, and the cutting of straw, corn fodder, and even hay, has been proved useful on the above principle, and important on the score of actual saving in the expense of feeding.

FELDSPAR. With the exception perhaps of quartz, there is no mineral more widely diffused than feldspar. It is an essential ingredient in all the primitive rocks, is found in granite, gneiss, porphyries, greenstone, trap and other rocks, in lavas, and in most meteoric stones. The principal use to which feldspar has been converted in the arts is in the manufacture of china ware, of which it constitutes the principal and most important part. In China, this decomposed feldspar is called Kaolin. Beds of it are found in Saxony, in France, and in the United States. Unlike some of the other primitive rocks, the decomposition of feldspar aids in fertilizing the soil, a fact explained by its composition, which is nearly that of some of the best earths, the vegetable mold alone being wanting. According to the analysis of Vauquelin, 100 parts of feldspar contain 64 of silica, 20 of alumine, 14 of potash, and 2 of lime. There is reason to believe that were it necessary, the extraction of potash from this rock might be profitably pursued, and eventually we may derive this important salt from this source.

FENCES. Next to a good soil, good fences may be considered one of the most indispensable conditions of good farming. Without them the crop is never safe; cattle are sure to become unruly and troublesome; and neighbors too become vexed, and at last quarrelsome. In some countries, as in France, there are few or no enclosures. The inhabitants principally live in villages, and the animals of all kinds, are kept under the charge of individuals who prevent their injuring the crops. In England, stone walls and hedges are used for forming enclosures; and the last are so abundant, as to form one of the most prominent and beautiful features in the landscape. In the United States, rail fence of some kind is principally used; the most common being the post and rail, or the Virginia worm fence. The hedge fence is as yet scarcely known among us, and the attempts that have been made to introduce them, either owing to unskilfulness, the selection of improper materials, or the peculiar nature and dryness of our climate in the summer months, have not been very successful. It is probable, however, that these difficulties will eventually be surmounted, and hedges become common. At present, where stone can be procured suitable for wall, fences partly or wholly of this material are the best that can be made. A stone wall of five feet, is a better security against unruly animals than a rail fence of seven; and though generally costing more at first, is not unfrequently the cheapest in the end. Where stone for a whole wall cannot be had, a good fence is made by laying a wall of three feet, placing a rail on the top of this, then staking it, finishing with another rail.

FERMENTATION. The most active agent in the decomposition of vegetables and the production of mold, is fermentation. While life remains in the plant, the tendency to new combinations and chemical changes, is controlled; but when the vital principle is extinct, it becomes subject to the unrestrained influences of chemical affinity. The result of this is fermentation, which has been divided into four kinds;—the saccharine, the vinous, the acetic, and the putrefactive. The first produces sugar; the second, alcohol; the third vinegar; and the fourth, vegetable mold. It is with the last, therefore, that the farmer is principally interested; as on this process depends the advantages he derives from manures, from green crops used as dressings, and from the preparation of composts. As active agents of fertilization in the shape of gaseous matters are given off by vegetables during their fermentation, it is clear that this process should always be conducted with reference to this fact; and when it can be conducted beneath a covering of earth that will absorb the escaping gas, the earth becomes impregnated with these fertilizing agents, and is most valuable in increasing the crop to which it is applied. Fermentation goes on the most effectually between 70° and 100°; when it exceeds the last, the fermenting vegetable matter is injured, and its power of aiding vegetation seriously impaired. Those farmers, therefore, who are in the habit of piling their barn yard manures, should protect them with a covering of earth, to absorb the escaping gas, and if the heat in the fermentation rises above 100°, the pile should be opened and the ingredients mixed to retard the process.

FILTRATION. In agriculture, this term means the same as *leaching*, and is applied to that process by which the finest and most valuable parts of manures, sink below the reach of the roots of plants, and are thus partially lost to vegetation. It can only occur in very deep porous soils of sand or gravel, and from this property of thus swallowing up manures with little or no permanent benefit, such lands are in many parts of the country, known by the name of "hungry." This liability to infiltration is only injurious when the mass of porous sand or gravel is of great depth, as every farmer knows that a soil friable to the depth of some three feet, but based on a tenacious subsoil, constitutes one of the best soils in the world. But when the earth is porous to such a depth that every rain carries the soluble parts of applied manures beyond the reach of the plants cultivated, it becomes one of the worst soils to cultivate. The fact of filtration is of some consequence in connection with manures. That the soluble or most valuable parts of manures do descend to great depths, is proved beyond doubt by the analysis of earths taken from great depths; and on soils liable to filtration, the method of preventing it becomes a question of the first importance. The readiest, and perhaps the only way, is to combine with the porous earth, some other more dense and tenacious one, and which by having a greater affinity for water will prevent its descent with the manures it holds in solution beyond the reach of the plants. Clay here comes to the aid of the farmer; and many instances are on record where dressings of clay, or still better of clay marl, applied to sandy barren soils, have totally changed their character, given them the power of retaining moisture, and by imparting more firmness, prevented the sinking of manures. Soils so corrected, have proved capable of the highest state of cultivation, and in situations which will warrant the expense, prevention of filtration should receive the prompt attention of the husbandman.

FIRING. Where an inflammation occurs on the limbs of a horse which threatens to be of long continuance, or by the deposition of bony matter, produces permanent lameness, recourse is sometimes had to blisters; or where these are not easily applied, or are not efficacious, recourse is had to firing. The principle is the same as in blistering, namely, by creating an external inflammation and discharge, to cure and remove the internal one. It is performed with an iron heated nearly or quite to redness, which is passed more or less rapidly over the skin (which is first divested of the hair by shaving) until it is of a light brown color. Great care must be taken that the skin is not penetrated by the iron, which should be rounded and smooth. The horse, during the operation, must be fully secured by casting. It is recommended that a little lard or oil be rubbed over the part the day after the operation, as having a tendency to soften the skin, and render it less liable to crack or ulcerate. In order to derive the full benefit of firing, the horse must be kept from service some three or four months. The process of firing is most advantageous when performed in parallel lines over the diseased part.

FISTULA. This name is applied to certain sores on animals, most commonly on the horse, in which inflammation, resulting most usually from some injury, ends in suppuration and a deep seated ulcer, extremely difficult to heal.

Fistula of the eye is occasioned by the obstruction of the canal that conducts the water or tears used for cleaning the eye into the nose. This canal bursts, and the irritation of the tears produces a sore, which in man is only cured by the insertion and long wearing of a metal pin in the duct; and in the horse may be considered nearly incurable. Fortunately, this fistula is uncommon.

Fistula of the head or neck, called *poll evil*, is a serious disease, occasioned by injury from a blow, rubbing the manger, or pulling the halter. It is best treated by introducing a seton at the orifice of swelling, and following the canal or pipe to its source, bringing the seton out at the very lowest part, thus allowing the matter to escape readily. As the natural opening is usually at the upper part of the tumor, the matter is confined below, and corrodes the muscles, and finally causes caries of the bone; unless an opening is made for its escape from the lower part, in which case there is not commonly much difficulty in a cure.

Fistula of the withers, is usually caused by an ill constructed harness or saddle pressing on and bruising the withers or top of the shoulder. If the inflammation and swelling cannot be quickly dispersed, the suppuration should be hastened by poultices and stimulating embrocations, as the quicker the matter is formed, the less extensive will be the injury to the surrounding parts. When matter can be detected, a seton should be introduced, and passed from the top to the bottom of the tumor, so that the matter already formed, or that forms after opening, may be freely discharged. If neglected fistulous withers become the worst and most disgusting disease which afflicts the horse, and end by the bones becoming carious and the consequent death of the animal.

FLAIL. An instrument used for thrashing grain, and composed of two parts, the one held in the hands, called the staff, and the other used to give the blow, called the beater. The flail has been generally superseded by the thrashing machine; and where large quantities of grain are used, some aid in thrashing was indispensable, but we much question whether on small farms, and where labor is abundant, the flail may not still be used to advantage. Cattle are apt to fare better, where newly thrashed and sweet straw is daily flung out to them, and the yards and stalls littered with it, than when it is all thrashed at a time and stacked or piled in great masses to become weather beaten and rotten. We have made some calculations and experiments which show that so far as expense alone is concerned, an active man will thrash out four or five hundred bushels of the several kinds of grain, cheaper than it is usually done by machines. Where grain is to be sold, however, machines must be used, as wheat cannot be thrashed with the flail until cold weather, without much loss.

FLY WHEEL,—in mechanics is a wheel usually a heavy one, attached to the machinery, in which the power not wanted at one moment is accumulated to be used when required, and thus an even motion is secured. In thrashing, the cylinder itself performs the part of the fly wheel; attached to a circular saw, the power which would be lost in the intervals of cutting the wood is accumulated to act with more force; and its effect is seen in the straw cutters which turn with a crank or rotary movement, giving greater efficiency to the action of the knives

NOTES FOR THE MONTH.

The New-England Farmer.—Mr. Colman, who has been the principal contributor to the editorial department of this paper for a year or two past, having found it inconvenient to continue his assistance, Mr. Breck, the publisher, has engaged the Rev. Allen Putnam, a well-known agriculturist and writer, to take the entire charge of the paper, and we doubt not that under his care the reputation and usefulness of this long established favorite with the agricultural public, will be well sustained.

"The Agriculturist."—We are gratified to learn that a union has been effected by the *Tennessee Farmer*, *Southern Cultivator* and *The Agriculturist*, the three very valuable journals heretofore published in Tennessee. All these papers were well conducted, and we believe received a respectable patronage. We cannot doubt, however, but the value of the united work, which is to be issued at Nashville under the title of "The Agriculturist," will be much enhanced to the subscribers, over either of the old ones. There will be a gain also in the matter of contributors. The man who devotes his occasional hour as a contributor to a public journal, wishes to do good and be read, and he feels more certain of this when the circulation is 10 or 20,000 than where it is only one 1 or 2,000.

The Union Agriculturist.—This is the title of a monthly journal, recently established at Chicago, Illinois. It is published by the "Union Agricultural Society," an incorporated association embracing the counties of Cook, Dupage, Kane, Lasalle, McHenry and Will, and is edited by J. S. Wright, Esq. the Corresponding Secretary. Its appearance is promising, and we doubt not it will prove worthy an extensive patronage, which we should hope the farmers of the west will be wise enough to extend to it. The object of the society is to bring into those counties improved breeds of stock—to purchase a farm for experimenting in agriculture—to effect the organization of County Agricultural Societies—to establish fairs and shows—to publish an agricultural paper, and generally to take such measures as may be deemed expedient to promote the interests of agriculture within their boundaries.

The Southern Agriculturist.—The publication of this work, which last year gave place to the Southern Cabinet, is to be resumed by J. D. Legare, its former editor, who we trust will receive the encouragement and patronage so justly due to such a publication, which we cannot doubt will prove an honor to the Palmetto state.

The Western Farmer is the title of a semi-monthly, the first number of which was issued at Detroit, last month, by Josiah Snow, editor and publisher, at $1.00 a year.

The Spirit of the Times.—This capital sporting journal is well sustained by its talented and indefatigable editor, W. T. Porter, Esq. The number of the 9th January is accompanied by a splendid portrait on steel, of *Monarch*, a famous high-bred horse, owned by Gen. Wade Hampton, of South Carolina, who purchased him when a year old from the stud of William IV., for $1,300. He is now seven years old, and Gen. H. has several times been offered and refused $20,000! for him. He never lost a heat as a racer, but having received an injury in one of his feet, he has been withdrawn from the turf, and made his first season last year. He has been sent to Mr. Clay, and will be kept next year near Lexington, Ky. The "Spirit" is published weekly at $10 a year.

The Turf Register.—A new volume (the 12th,) of this work commences with the present year. Each number is embellished with a steel plate engraving—the one for January representing a "Winter Scene on the Kaaters-Kills." It is edited by W. T. Porter, Esq. the editor of the Spirit of the Times, and published monthly at $5 per annum, at No. 1, Barclay-st., New-York.

The Garden.—Our thanks are due to Alexander Walsh, Esq., that most indefatigable friend of Agriculture and rural improvement, for his ready compliance with our request in furnishing us with the plan of a garden which we publish this month. It is, with some few additions, but a plan and description of the beautiful and tastefully arranged garden adjoining his residence at Elm Place, Lansingburgh. Though few of our readers may wish to improve their gardens to the extent of the plan described by Mr. W., we think all who have any taste for rural decorations, will find in it more or less which they can appropriate to their use, as by having a suitable plan and arrangement, and every farmer should make one appropriate to his premises, whatever labor is bestowed, be it more or less, may be done in accordance with the general design, so that every additional tree, or shrub, or flower, that is planted, may show to advantage, though it be but a part of a whole view, which it may take years to complete.

Postage.—Gentlemen who have occasion to write us on matters exclusively their own, are requested to "take particular notice," that hereafter no such letters will be attended to unless they come to us *free of postage*. We always cheerfully answer, either by letter or through the paper as the case may require, all inquiries addressed to us; but there seems to be no little injustice in taxing us with postage on letters which it frequently requires hours of labor to enable us to answer. Several letters the past month, remain unanswered for this cause.

A Cow worth Having.—The Syracuse Western State Journal says, "Mr. Storrs Barrows, a little west of this village, on the railroad, is the owner of one of the most valuable cows in this county, if not the very best. She is a mixed breed—Durham and Leopard: and is now about eight years old. Last summer she produced over 21 lbs. of butter in one week, besides supplying the family with what milk was needed. Mr. B. brought us last week one of two rolls of nearly equal size, just made, which we found weighed 7 lbs. 14 oz.—being nearly 16 lbs. per week this winter. He has been offered $150, and refused the handsome sum. She is undoubtedly worth, taking all things into consideration, half a dozen common cows." As there is no such distinct breed as the "Leopard" known, this cow undoubtedly owes her milking properties to a fortunate cross of the Durham with some of the many varieties of our common stock. The celebrated Cream-pot breed of Col. Jacques had a similar origin.

Disease of Swine.—In the West and South, says the Farmer's Gazette, great losses have been sustained within a year or two by a disease which has not, so far as we have learned, yet appeared at the North. It is called "*the thumps*," from a violent internal action or beating, which destroys the animal in a few hours or days. It has been hitherto found very difficult, if not impossible to cure, when fully developed, but some experiments made by Dr. Shelby, of Tennessee, would seem to hold out some hope that calomel may master the disease. The cases in which he had tried it proved successful.

Good Doctrine.—In the following extract, which we make from Mr. Biddle's Address before the Philadelphia Agricultural Society, in October last, there is much truth and good sense. In these respects the great banker speaks like an experienced man:—"A farmer who has made any money spends it not in his business, but in some other occupation. He buys more land when he ought to buy more manure; or puts out his money in some joint stock company to convert sunshine into moonshine; or else he buys shares in some gold mine or lead mine. Rely upon it, our richest mine is the barnyard, and that whatever temptations stocks or shares may offer, the best investment for a farmer is *live stock* and *plow-shares*."

Fine Honey.—Mr. Curtis of Stratford, Conn. has been very successful in the management of bees, and in securing their honey without destroying them. In a communication to the Farmer's Gazette, he mentions that he prefers placing boxes on the top of the hive for the bees to fill, when the hive is replenished; and that last October, when the bees had descended forom the box to the hive, he took off one box containing 45 lbs. of virgin honey, and another swarm yielded 30 lbs. in the same way. This we think far preferable to the barbarous method of killing these laborers for the sake of the honey.

Large Yield of Oats.—Mr. Kent Jarvis, of Jefferson Co. N. Y. states in the Northern Journal, that he sowed 2½ bushels of horse-mane oats on the 25th of May last, on 154 rods of ground, which was the previous year in potatoes, from which he harvested on the 8th of September, 123 bushels, being at the rate of 127 bushels to the acre.

Sewing Silk.—Mrs. Spann of Sumpter District, S. C. the past season, made from silk of her own raising, 25 lbs. of beautiful sewing silk; and this without any other instruction than what she derived from books and periodicals accessible to all. This amount was independent of floss, silk pierced cocoons, &c., amounting to a considerable quantity. Well may the Editor of the Farmer's Gazette remark, "Of one such daughter has South Carolina more reason to be proud, than of ten thousand, whose chief pride is to thumb the piano, or or skip across a dancing room."

Protection to the Feet from Frost.—Capt. Parry, in his attempt to make a N. W. Passage, found great difficulty in keeping his men's feet from freezing while wearing boots or shoes; and he was obliged to substitute coverings made of the thick woolen blankets and cloths brought with them from Europe. With this covering of the feet his men would bear without injury an exposure, which with the best covering of leather would have frozen their extremities fatally. Those in our latitudes who are exposed to great cold may take a useful hint from these facts.

Western Pork.—We find it stated in the western papers that up to the 10th of December, 150,000 hogs had been slaughtered at Cincinnati, and 40,000 at Louisville, making some 200,000 at these two places alone. Besides those killed at these markets, many hogs are packed at other places, so that it will not be extravagant to estimate the number killed for market this year at 300,000. At Cincinnati the increase in hogs killed over last year is more than one-half, and the western pork crop of 1840 has been very productive.

Peas among Corn.—Col. J. W. Clay, contends that his pea crop is worth more this year, than his corn on the same land, and he informs us that his corn crop was this year very heavy. From our little experience in this matter, and what we have gleaned from others, we are satisfied that peas can be advantageously raised in every cornfield.—*Agriculturist*. It would unquestionably be better to raise a crop of peas among corn, than the enormous growth of weeds which many farmers allow to mature in their corn fields every year, but we should question whether with our close planting at the north, the crop of peas would counterbalance the injury the corn must receive. We hope some of our friends will make an experiment in the matter the coming season and report the results.

Good Stock.—A full blooded bull calf of the Durham breed, owned by the publisher of the Western State Journal, Syracuse, was weighed on the 16th of January, when one year old, and his weight was *eight hundred and ninety-six pounds!*

A Good Example.—The Macon Intelligencer states that at the late court term of Macon county, Georgia, one of the Judges, A. E. Earnest, Esq. appeared in a *full suit of silk* (including coat, vest, pantaloons, stockings, pocket handkerchief, and stock,) produced and manufactured wholly and entirely in his own family. Judge E. is of the opinion that domestic silk will, before many years, be found the most economical article for negro clothing, as well as for ladies and gentlemen. When such examples become common, we shall have hopes of our country.

American Flour Machinery.—We have gathered the following facts from the New-York Herald. In 1836—7, a quantity of wheat was sent from Trieste in Austria, to the United States, and when ground in our flouring mills, the quantity and quality of flour was found to be greatly increased over home ground wheat. As the wheat could not be sent to this country to be ground, it was determined to convey the American mills to Austria, and an agent from Trieste has just shipped the entire machinery, burr millstones and all, for a first rate flouring mill of eight run of stones, and a first rate millwright and miller go out to superintend the putting up of the machinery. We have no doubt the mill when put in operation will do honor to American mechanics.

American Plows Abroad.—American plows are becoming celebrated abroad, and if the various trials made at home and abroad of the power required to move them may be relied upon, they are superior in ease of draft and perfection of work to any others. Our plows have found their way to Russia, are creating a new era of agriculture in Turkey, are to be seen at the Agricultural Schools in France, and at the late meeting of the English Royal Agricultural Society, an American plow was exhibited which elicited the greatest admiration; and though not allowed to enter into competition with the English plows, was tried by many distinguished and noble persons, and pronounced a most superior implement.

Western Reserve (Ohio) Farmers.—It is estimated that the Western Reserve dairies sell annually, cheese to the amount of a million and a half of dollars, besides large quantities of butter, and a great amount of beef and pork. To this must be added a surplus of a million bushels of wheat annually, and it will be seen that the farmers of such a district can scarcely fail of becoming independent. It must be remembered that New-England peopled the Ohio Reserve.

Keeping Bees.—A correspondent of the Farmer's Gazette on the subject of keeping bees says—"Dig a hole about ten feet under ground, then put a layer of straw on the bottom, and then put down your hives on that; then bind straw round the hives, and throw in dirt even with the top; then put in another layer of straw on top, and fill it up with dirt. The bees in this way will not eat any honey during the winter, but will lie perfectly torpid, and as soon as they are taken out, about the first of May, they will go immediately to work." Such a method would only do in soils that are very porous and dry; as the access of water in any position would be fatal to bees.

TO CORRESPONDENTS.

The package about which "*L. B.*" of Hartford, inquires, was duly received, and we should with pleasure have given place to the extracts from the Connecticut Courant of 1817, could we have done it without excluding the original contributions with which we have been the year past so liberally supplied.

The *Meteorological Tables* from Leonardsville, N. Y. would occupy more space than we can spare for that purpose.

We will make room for "*B. S.*" on the study of Meteorology as soon as we can.

The correspondent who was so kind as to furnish us with the article on "*Epidemic among Cattle*," has our thanks.

It is our intention to avoid as far as possible the things to which objections are taken by *H. N.* of Putnam, O., and by *G. R.* of Monticello, Mo.

"*D. B.*" unquestionably owes the loss of his plums to the Curculio, an insect he will find described at p. 70, vol. 7, of this paper, to which he is also referred for a description of the best means of avoiding their depredations. We do not think the locust trees in his orchard could have injuriously affected his fruit.

We have some ten or a dozen communications on the *Rohan potato*, for the substance of which we shall try to find a place next month.

The favor of "*L. A. M.*" on Legislative Aid, was received too late for this month. It is difficult for us to make room for communications received after the 20th of the month, as we always have by that time, more than enough original contributions to fill our sheet.

We have some dozen or more communications filed for next month—among them are those of D. T., A Western Farmer, R. Sinclair, Jr., S. W. Jewett, S. B. Shaw, Wm. Penn Kinzer, L. A. M. and others.

New-York State Agricultural Society.

The annual meeting of the New-York State Agricultural Society, for the choice of officers, &c. will be held in Albany, on Wednesday, the 10th of February, 1841. The members will meet at the City Hotel at 11 o'clock, A. M.

WM. COOPER, Rec. Sec'y

COMMUNICATIONS.

"Those nations which have been most distinguished for their love of Husbandry, whether of the garden or the field, have been the most prosperous."

Remarks on Ornamental Gardening,

WITH A PLAN OF A FRUIT, FLOWER AND VEGETABLE GARDEN.

Horticulture, after all that has been said and written, deservedly, in its commendation, is but an embraced department of the more enlarged science of Agriculture. It is the *great*, on a *reduced* scale: to a certain extent, it is the practical cyclopedia, as well as the model-farm of the agriculturist.

Alas, how few properly study, how few in our country through want of merited reflection, duly appreciate the value of the kitchen garden. It has not been so in all places or times; though necessarily imperfect, because, like mathematics, its utmost point of excellence seems forbidden to human attainment. Our great proto-father enjoyed in his first garden, a satisfaction denied to the most fortunate of his descendants, a happiness unattainable by his children; for the garden of Eden was made, not by human hands,—it was the work of God. When Adam was driven from his first home of indescribable bliss, he, by the labor of his hands and the sweat of his brow, made his little garden in other and less fruitful soil. In all times, and by all generations since, the hardy husbandman has had his garden. It is a matter of surprise, that while sciences of later birth have advanced almost to perfection, horticulture, perhaps the most necessary to man, has been comparatively so neglected and unimproved, and to our shame, so especially in this land of freedom. "Sat prata biberant," said the Mantuan bard, in allusion to the practice of irrigating land, which prevailed in Italy, near two thousand years ago, as a means of fertilizing the soil; yet how little is it at this day pursued, even in the land of Cincinnatus.

The inhabitants of Holland, proverbially industrious, have indeed almost made their country a garden; and to the application of irrigation, above all other causes, they owe that great abundance which is the almost invariable reward of great assiduity. The Hollanders have brought their industry to the land of their adoption, but they have left much of their skill at home.

In Britain, the attention of the people, is by the peculiarity of the general policy of that nation, much diverted from the cultivation of the soil, yet agriculture has not been much neglected there; and, so far as attended to, it has been honorable to the nation. Industry has been greatly aided by the application of scientific principles. In the application of these principles to horticulture, the Englishman has, in very many instances, approached a perfection worthy of the imitation, and still more of the rivalry of the American.

How happens it, that so little attention is given to Horticulture in the United States? The people are industrious; they are intelligent; and much is done for the promotion of science in its various departments; but it must be confessed, although it may cause a blush, that horticulture is shamefully neglected. True, every farm-house has as its adjunct, a kitchen garden; but what a garden? Would you walk through it? There is no walk there; or if there be, it is hidden by the crops, perhaps of vegetables, perhaps of weeds, or more probably, an unseemly commixture of both. Would you partake of some desired portion of its fruits, the chance is, you cannot reach it without trampling on some other fruit which you do not need. Over beds of earth carelessly piled up, seeds of various kinds are frequently thrown, as if the entire crop, like that of the field, were to be reaped during a single gathering time. Neither ornament nor convenience, nor even actual profit, seems to enter into this *garden without a plan*. The farmer acts as if he would not waste on the "*little patch*," the labor which would be more profitably employed in the wide extended meadow, or the large corn-field. Here rests the error. There is no other acre on the farm, which produces so large a return as that of the kitchen garden, nor is there any other acre on the farm, which will produce so large a return of profit in proportion to the labor and capital expended. The farmer instead of saying, "I am expending too much on this spot," might better say, "I am expending too little." The kitchen garden in truth, is the proper school of the Agriculturist. There he will learn the great value of properly prepared compost, without which his garden will produce a scanty crop; he will there learn that manure, in order to secure its utmost benefit, must be buried beneath the surface, and not thrown loosely on the surface; he will there learn the great value of irrigation. The principles of the kitchen garden, are in many instances applicable to the farm generally, and may often be adopted with great advantage.

A well furnished garden embraces the choice specimens of both nature and art, carefully selected and judiciously and harmoniously blended together—assisting nature to improve her own productions.

The amateur will not only collect from every quarter, the beauties of nature, and arrange them to the best advantage; but, calling to his aid the ornamental arts, he will heighten their effect by suitable displays of rural architecture—he will embellish his garden with jets and fountains,* and with appropriate specimens of sculpture; and the pencil of the artist will give delight to his evening walks with pleasing transparencies. He will also avail himself of the treasures of Conchology—"perhaps none but the department of Flora, can vie with this in variety, symmetry of form, and in richness of coloring."

The head of a family, if he cherishes the social virtues, will prefer his home to any other place. It is like a center of gravity to all his pleasures and attachments to life. If you see a good vegetable, flower and fruit garden, attached even to an otherwise humble cottage, there can scarcely be a doubt but that that cottage is the abode of happiness—that home is the most pleasing place to its occupant.

The God of nature paints the flowers of the field most exquisitely, and gives us powers to discover and admire their inimitable beauty. "Do you know," said the amiable Wilberforce, as he was sinking under the infirmities of old age, opening on some flowers shut up in a book, "Do you know that I am very fond of flowers?—the corn, and things of that kind, I look upon as the bounties of Providence—the flowers I look upon as his smile."

"Your voiceless lips, oh flowers! are living preachers,
Each cup a pulpit, and each leaf a book,
Supplying to my fancy numerous teachers
From loneliest nook!"

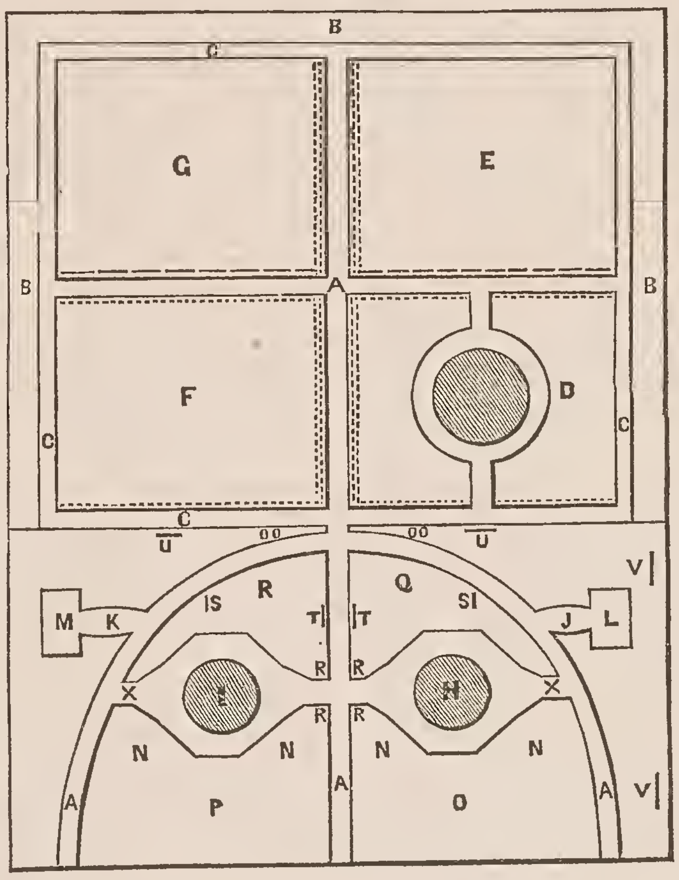
To conclude:—In gardening, as in all other subjects, a plan is necessary to success, and having been frequently solicited by Messrs. Cultivator, and by other friends in this and the adjacent counties for something of the kind, and considering this the proper season to commence preparatory operations, I herewith present a diagram and description of a garden, which, if it answers no other good purpose, may be the means of procuring a better from some other source.

Little has been published in our country on the subject of gardening as an art of design and taste; and the publications of Europe not being suitable to our wants, it is proper to make a beginning and devise that which may suit ourselves, our country, and our climate.

ALEXANDER WALSH.

Lansingburgh, February 1, 1841.

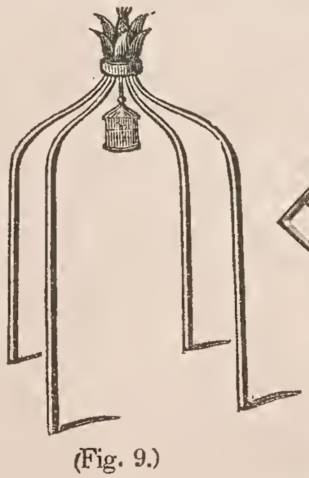
(*Plan of a Garden—Fig.* 8.

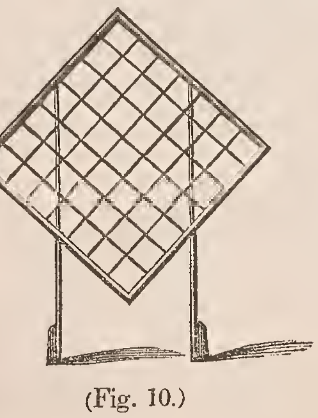


DESCRIPTION.

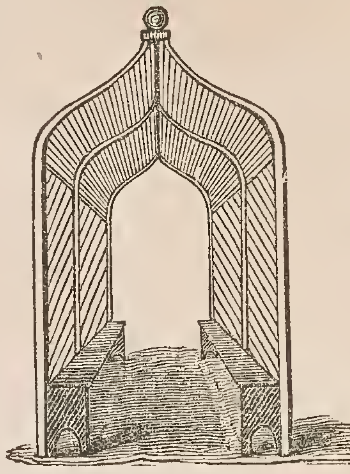
The garden and pleasure ground I would describe, is of an oblong form, 165 feet by 120 feet, with one end next the north side of the house, (fig. 8.) A walk 5 feet in width, A.A. of a semi-eliptical form, passes from the north hall door to the principal rear building on the west, extending in its course to the north 60 ft.; a walk of 5 ft. in width extends through the center from south to north, 159 ft. A.A. and is crossed at right angles by another of the same width 47 feet from the north edge of the elipsis; walks of 4 feet width C.C.C.C. surround the four squares. The walks graveled; formed rising at the centre to the height of the beds, with a descent each side, of an inch and a half to the border, which border is composed of bricks laid edgewise, the outer side flush with the soil, the inner side an inch and a half above the lowest part of the walk. H. and I. two mounds 12 feet diameter, 3 feet 6 inches high, enclosed by octagons, leaving a walk 4 feet in the narrowest part, with openings of 6 feet to the centre walk and elipsis; the mounds enclosed with brick, placed endwise, inclining to the centre, and sunk 3 inches in the ground; the enclosure filled with soil; each mound has growing in its centre, an evergreen tree. H. covered with evergreen periwinkle, *Vica minor;* and I. covered with variegated periwinkle, *Vica minor fl. alba.*

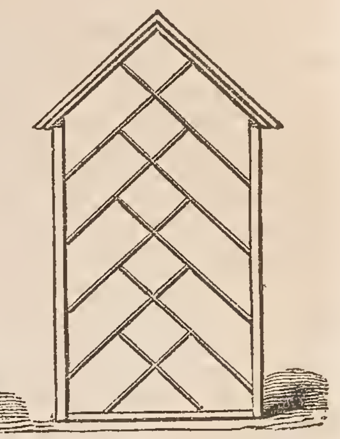
At the proper season, green-house plants, and also shells, will be prettily accommodated around the mounds; of the latter, I would recommend, *Strombus gigans*, *Triton variegatus*, and *Haliotis asisna.* The more rare and beautiful shells may be appropriately assigned to the summer-house.


(Fig. 9.)


(Fig. 10.)

X. X. two seats, each occupying two feet—J. and K. passages leading to summer-house and green-house—L. summer-house—M. green-house. (Designs for summer-house and green-house, as also plans for ornamental gates, &c., in a future number.) N. N. N. N. four Grecian pedestals for urns, statues, and heavy mineral specimens—R. R. R. R. four small columns, 9 feet high, connected in the centre at the top, with a hook under the centre (fig 9,) for suspending a lamp or bird-cage—grapes trained over the frame—S. S. two fixtures for transparencies—T. T. two seats (fig. 11,) surrounded by an arched arbor 10 ft. high, thrown over the walk, ornamented on one side with honeysuckle, on the other by climbing Boursaut rose—U. U. two ornamental frames, the square 4 ft. 6 in. by 4 ft. 6 in. (fig. 10,) may be covered with a variety of our native clematis—V. V. two structures 9 feet high, and 3 feet six inches wide, (fig. 12,) 4 feet from east fence, covered with American Bitter-sweet, *Celastrus scandens.*


(Fig. 11.)


(Fig. 12.)

The ground on the outside of the eliptical walk, east, a grass lawn, diversified with fruit and ornamental trees, commencing next the walk with the lowest shrub, and rising to the east in gradation to the largest tree. Many of our beautiful native flowers and shrubs are found to thrive under the shade and drip of lofty trees, and may here be planted in occasional groups.

The ground on the west side of the eliptical walk, grass lawn, shrubbery and filbert bushes, to the extreme west of the green-house.—O. & P. fruit and ornamental trees and native shrubs—R. native flowers—Q. tulips and late flowering exotic plants—O. O. diminutive rustic alcoves from thrifty growing plants of upright privet, *Ligustrum strictum*, formed by placing a platform of light boards two feet six inches from the ground, and three feet long, and one foot six inches wide, on the twigs of the privet; those in the centre of the platform to be trimmed off close to its under side, and those on the back and sides to be led up round the platform, entwined and arched; the door to be constructed from the twigs in front, and an opening left two feet six inches high, which is the height of the dome.

This described ornamental pleasure ground, containing some hundreds of trees and shrubs, possessing the color of green in common, yet differing in both the shape and shade of the leaf, add much to adorn this spot by their variegated moving foliage, light and shade.

D. E. F. and G. four principal compartments, each 43 feet 6 inches by 43 feet—D. has a circle in the centre 26 feet in diameter, a parterre for annual flowers; in the centre, a sun dial; a walk 4 feet wide surrounds the circle, and from it north and south; the residue of the ground D. allotted to Dahlias, &c.—E. F. and G. compartments for culinary vegetables, strawberries, and an occasional plum tree—B. B. B. outside borders 6 ft. wide for currants, gooseberries, raspberries, &c.; in the centre of the north border a small board supended, labelled, "*Waste not, want not,*" near which bee-hives.— ...... borders for small flowers on the south and north side of D. and F. — — — — borders south side of E. and G. for foreign grape vines and herbaceous perennial flowering plants. On each side of centre walk, :::::::::::::::::: trellis for native grape vines; posts 7 feet high with 5 rods of wire crossed at equal distance; at the southern extremity of trellis, a light arch, on the back or north side of which, may be inscribed, "*With clustered grapes He crowns the vine.*" At the northern extremity of trellis, an arbor thrown over the walk 12 feet long, more for ornament than use; grapes in our northern latitudes ripen better on the open trellis.

Candytuft, *Ibris umbelluta*, a good annual border flower; Dwarf Iris, *Iris pumila*, and yellow flowering stone crop, *Sedum aizon*, pretty biennial bordering.

On a subject embracing such variety, it is not best to be more minute on border or other plants, as the collection and selection of plants, and the invention of other ornamental decorations will afford amusement to the man of taste, and to him this pleasing occupation must be left.

"Oh sages! think on joy like this,
And where's your boast of apathy."

"American Society of Agriculture,"

"*To elevate the character and standing of the cultivators of the American soil.*"

Messrs. Gaylord & Tucker—My worthy friends—You and many of your readers, will recollect the article published in No. 3, vol. 5, May, 1838, upon this subject. It was designed to call the attention of the public to the subject, and Judge Buel, in a note says—"*Mr. Robinson's proposition meets our hearty approbation; and should it be favorably responded to by our cotemporaries who conduct agricultural journals, and whose opinions upon the subject we respectfully solicit,—we shall give it our cordial support,—and devise some means if others do not do it, to organize an association,*" for one of the noblest purposes ever devised, having in view the sole object "To ELEVATE THE CHARACTER AND STANDING OF THE CULTIVATORS OF THE AMERICAN SOIL."

Well, so far as I am able to judge, the proposition met with an almost universal approbation. The article was extensively published in the papers of the country. The comments of many editors were highly flattering. From the tone of the press, and numerous private letters, I felt strongly encouraged that this great beneficial project to this nation was about to be accomplished. I pictured to myself one of our happy meetings, when the friends of agricultural improvement from every State, county and principal town in the United States, should be joyfully interchanging heartfelt greetings with each other—not only exchanging sentiments, but valuable information, rare and curious productions of nature, and valuable seeds—storing up in our minds a fund of happiness for all our after life. But alas, that one year has gone, and another is fast going, and not one mighty spirit has stepped forward to say this thing *can*, this thing MUST, this thing SHALL, be done. Even the encouraging echoes that responded from all parts of the Union to the first proposition, have died away, until not one faint echo meets my ear. Shall I despair to wake them again, under such discouraging circumstances? No—I am well aware that the whole energy of the public mind, has lately been engrossed by another and exciting subject. But now there is a calm, there is room,—room to do good—and should I meet with one single echo to my second attempt to awake the public to the importance of this great proposition, that will some day assuredly shower blessings upon this agricultural nation, I shall not feel as though I had written in vain.

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* The subject of hydraulics in domestic economy, is but recently beginning to be developed in our country; but it is to be hoped that the great interest which every one must feel in possessing a supply of water, both for use and ornament, will awaken the attention of the public more extensively to the subject.

Messrs. Editors, let me reiterate my first text—" something *can*, something MUST, something SHALL," may I add, something *will* be done, and that speedily, " to elevate the character and standing of the cultivators of the American soil ;" for such is the object and aim of the " American Society of Agriculture,"—" as I understand it." * * * *

An oasis in a desert! Not with greater pleasure did ever weary traveler over burning sands, meet with an oasis, a bright, green, shady spot, abounding in cool springs, than I met with the letter of that good old Virginian, in your last number, just as I had written thus far. His invocation shall not be entirely in vain—I will " once more sound my trumpet," and before the echoes die away, I will sound it again and again, until its blast shall wake up " all the true lovers of American Husbandry, to a cordial coöperation in the promotion of a project, which I verily believe, if once achieved, would become more and more popular with the American people, in all time to come."

How true it is, my worthy friends, that " the bonds of that cordial brotherhood which should forever unite us, would be strengthened, by annually bringing together the distant members of our great agricultural family." How much they have already been strengthened through the columns of agricultural papers. How does my heart yearn to take that good man by the hand whose letter I have just been reading, and am now commenting upon. There is no kinsman among my numerous clan, whom I would sooner meet, or from whom I should expect a warmer welcome, than from such a man, as his writings indicate JAMES M. GARNETT to be. If the perusal of a letter from a stranger produces such feelings, surely " our bonds of brotherhood would be strengthened," by a closer communion. This alone should be cause sufficient to encourage us to persevere in the formation of a National Society.

How to begin, is the only obstacle. I disagree with Mr. Garnett, about looking to members of Congress to make an organization ; they never would do it. How then shall we begin ? We need not wait for a farther expression of public sentiment ; for as Mr. Garnett says, " the project received such high commendation throughout the country," it is evidence to my mind that the majority are in favor of its " speedy execution." Thus, then, let the *beginning* be. I will take the responsibility to order it, and you, gentlemen, must endorse it, or suggest a better one. You must name a committee of 20 of the most active friends of the cause in the vicinity of Albany, to meet at your office on that memorable day, the birth-day of Washington, to nominate the officers *pro. tem.* of the American Society of Agriculture ; such committee *will not* fail to attend. Such men as they will nominate for officers, will not refuse to act. These officers, so far as may be convenient, by meeting, and otherwise by correspondence, will organize the Society. They will draft a " bond of union," and bye-laws for the orderly conducting meetings and uniting members. They will fix upon a time and place for the *first meeting*, and publish an invitation to all the friends of agriculture to meet. At that meeting, a constitution would be adopted, and officers elected.

The residence of the first officers is not important, so they are men who will lend their energies to put the ball in motion, for once in motion, it will never cease to roll. Each one should be immediately apprised by the nominating committee, of the appointments, and in his turn should accept the appointment, that it might be published. A small fund will be necessary to defray postage and printing expenses ; and as soon as the treasurer is appointed, I shall forward ten dollars as a contribution, and I hope a few others will do likewise. If you, or any of your readers have aught to say against this plan of organization, say it now or never. But above all things, let my friends Gaylord & Tucker, bear the fact in mind, that the whole responsibility now rests upon them to make a beginning of the organization. Let them not shrink from the honorable responsibility with which I have autocratically invested them ; but proceed at once to name and publish the names of the committee, including themselves.

When the officers are nominated, should they fail to perform their duty, they must expect to hear loud blasts from the trumpet of friend Garnett, and your most humble, though devoted friend of American agriculture.

SOLON ROBINSON.

Lake C. H. Ia. Dec. 27, 1840.

NOTE.—Information—Many persons having read my communications, have written to me private letters, and often taxed themselves with postage. To persons so disposed, I would say, that I do at present, and have for many years past, held the office of Post Master.

HORSES.

MESSRS. EDITORS—In this age of canals and rail-roads, the utility of the horse is materially diminished ; and should the predictions of Mr. Biddle be verified, it will soon sink much lower, by the substitution of the steam engine for the horse, in field labor.* This may be a desideratum to the mere utilitarian, but I am ready to confess, that to *me*, the proposition is far from being a grateful one. Without being precisely a stickler for old habits and customs, against *all* innovation, I would nevertheless retain *some* of the ancient landmarks. I am willing to be whirled along over the rail-roads, and even to trust myself in a steam-boat, provided it is on our eastern waters. Apropos, will not coroner's juries begin to bring the verdict of " deliberate suicide" against all wayfarers blown up, scalded to death, or drowned, by the explosion of steam-boat boilers on our western rivers ? I would not object to the performance of our chopping by steam, as Mr. Biddle further suggests ; and should it see fit to pull flax, dig potatoes, weed turneps, clean out cattle stables in the winter, and do up various other such little " chores," why let it !—but do our plowing—supersede our horses ? Never, say I !

What pleasanter picture does the whole round of rural avocations present us, than that of the farmer driving his sleek bays to the field on a bright spring morning, fastening them before a No. 5, whose mold-board gleams like burnished silver, and then turning those long straight furrows, which one cannot help fancying yield better crops than crooked ones ! The air is soft and fragrant around him ; the ground bird and sparrow hop about, peering down into the furrows with curious little eyes, after their insect prey ; while the bobolink, shooting up suddenly over his head, comes fluttering down, overcome (as unfeathered musicians sometimes are,) with ecstacy, at his own tinkling minstrelsy. While the eye and the hand of the plowman almost mechanically guide his implement, his thoughts wander " wheresoever they wilt." His business, his pleasure, meditation, or even study, may engross his thoughts—but one thing I'll warrant you, that ever and anon he casteth a look of peculiar complacency upon those glossy and powerful beasts, which with arched necks, springing step, and an occasional playful uptoss of the head, are hurrying the plow around the receding " land !" Compare all this with a great n———y machine traversing our fields, puffing out clouds of pitchy smoke, stifling the vernal fragrance with the rank odors of greasy machinery ; and in the place of the quiet contemplations of the plowman, the creaking of wheels and rollers, the fume, fret, and hurry of men and boys. Poh ! what a contrast !

But in sober seriousness, who would like to see the horse banished from our operations of husbandry ? Who that has once enjoyed the privilege, nay luxury, would like to be deprived of the command of one of these noble animals, to bear him fleetly or slowly, whensoever and wheresoever he listed to go ? If you can find one such man, I envy neither his taste nor his judgment. Yet while all admire the horse, who is there in this country, with now and then an exception, who bestows any care on his breeding and improvement ? We have companies formed to import Short Horn cattle ; hogs and sheep of every variety are constantly arriving. The most unwearied pains are bestowed on their improvement ; newspapers are filled with controversies on the subject ; and we have essays written to prove how many white feet, and how many white hairs in the end of the tail, marks the genuine Berkshire porker ! Not a word however on the subject of horses—nor is this the worst of it—there are not a dozen good stallions in the State, except of the Arabian or racing variety. The thorough bred horse is a beautiful animal ; and crosses with this blood produce the most spirited, active, and enduring saddle horses. Puckler Muskau says of an English hunter, I have galloped him for four hours over hill and valley, and yet he continues to move on like a machine of steel, and not a bead of sweat has started from his hide ! The hunter is a cross with the Arabian. But are not the mongrels between the blood horse and our common American mares, a little inclined to be vicious ? I do not assert it, but my observation goes to establish the fact. I have known many capital roadsters of this cross, but a large proportion of them were of a wild and irreclaimable temper. I well recollect one, owned in our family, which no human arm could quell. Many a bold fellow bestrode him ; some were projected aloft like rockets ; some were hurled forward like a bolt from an arbalist ; others shot off rearward and sideways in all sorts of tangents —*all* were brought to an embrace more violent than loving, with their mother earth. Another difficulty has followed the blood horse and all of his crosses, so far as my observation has extended, viz. *contracted feet* ; and sooner or later it ruins or greatly impairs his value. What can be more painful than to witness a noble horse in his full strength and vigor, crippled by this incurable disease. Expanding shoes, standing in clay, a run at grass, and various other expedients have been resorted to ; they may palliate or remove the difficulty for a time, but it returns.

Besides, there are few blood horses with sufficient size and bone, to produce those large, showy, sixteen hand horses, which in a country where the carriage is so generally preferred to the saddle, will always be the favorites. The farmer also wants a horse large enough for field labor. A pair of them should be able to break up green sward—not on the loose sands around Albany—but on our tenacious western soils ; and do it without that violent effort, that wear and tear, which always accompanies the performance of what is termed a " smart little" team. They also should possess activity—for marketing, milling, going to church, and " traveling," call the horses of our independent farmers, during portions of the year, as often on to the road, as into the field. That a cross with large and comparatively speaking, heavy boned blood horses would be far preferable to the common practice of breeding dunghills, not one in five of which makes a horse fit for the carriage, the saddle, or for farm work, I freely admit. But is there no variety not subject to the defects of the Arabian, and which possess his fire and activity ? What were the trotting family of Bellfounder horses ? Report speaks of a splendid animal of this variety, which is or has been in Buffalo.* Were they in part, or wholly of the Arab stock ? How did they, or more particularly Mr. Allen's horse, cross with good common mares ?

Some have recommended the heavy English dray or cart horse. I am inclined to think he would not prove sufficiently a beast of all work for the farmer ; and for the carriage or saddle, one would as soon think of driving or bestriding a Rhinoceros ! Good for slow and powerful draft, he is but a snail on the road ; and he is a terrible consumer of hay and provender ! Two such horses will consume as much as four mules, and they cannot do so much labor. The mule is quite as fleet too, on the road, as the dray.

I would ask if there are any well bred Cleveland Bays in this country ? It strikes me they would be precisely the animal wanted. They have size, style, endurance, and are excellent roadsters. What say our breeders of valuable horses ? What says *Ulmus ?* Myself and many others would be glad of his opinion. Yours truly, H. S. R.

Cortlandville, Jan. 1841.

RESULTS OF EXPERIMENTS.

Sommeiller Potato, Whittemore Pea, &c.

MESSRS. EDITORS—I believe I partly promised last spring on the receipt of the package of seeds, &c. from you, that when the season of cultivation was closed, I would communicate to you the result of the experiment ; and I now sit down to fulfil partially at least, my engagement. And

1st. THE SIBERIAN KALE OR COW PARSNEP.—Part of the few seeds I received from you, I sowed in an open border of rich light earth, and part in a forcing bed ; but not a single seed vegetated that I was able to discover. I regretted this, for though I had not formed high expectations of the plant, as one suitable to our climate and modes of culture, I was anxious to give it a fair trial.

2d. THE GIANT RHUBARB OR PIE PLANT.—These I distributed among several of my friends, in order to multiply the chances of success in their propagation, reserving enough to seed a few rows in the open garden, as well as in the forcing bed. Several of these seeds vegetated, and are now thriving plants. Among those I distributed, some succeeded, but many failed. The Pie plant is an excellent vegetable, and well worthy of cultivation in every garden ; though not perhaps of quite as much consequence among farmers who have or may have fresh apples for pies, nearly or quite through the whole year, as to the city gardener ; and I hope the kind produced from these seeds will prove a good variety. I should think it rather questionable however, whether plants from seeds would be invariably like the original stock, the experiments of Loudon and Knight, proving that the Rhubarb is subject to the same laws of improvement or deterioration by crossing, that govern most other plants. Last spring as soon as the snow was off, I placed empty barrels of which one head was out, over some of my rhubarb plants, and around these, piled fresh horse stable manure as high as the barrels. The plants gave a succession of fine stems for cooking, very tender, and much earlier than those not so treated.

3d. THE WHITTEMORE PEA.—Of the few seeds of this newly imported pea I received from you, I sowed one row of some 30 feet in length in my garden, and the remainder in drills in the field. Those in the garden I bushed at the usual time. They grew very tall, but did not blossom early or freely. The Washington pea was ripened before a mess could be gathered from those in the garden ; and when cooked, those who tasted them did not consider them equal in richness and flavor to the Marrowfat, and they were much inferior to that pea in size. There was one thing however, decidedly in their favor ; there were no worms or bugs in them. As they came recommended for the field, rather than the garden, I still hoped to be able to give a good account of those drilled in the field ; but they continued to grow and blossom sparingly through the whole season, and at this time (Oct. 14th,) show no symptoms of ripening. I have therefore come to the conclusion they are not adapted to our use as a field pea, since the pea with us usually precedes wheat, and must ripen so as to be removed from the field in season for seeding for that important crop.

4th. THE SOMMEILLER POTATO.—This new variety of the potato, of which a very few were introduced into this country last winter from France, is a seedling resembling the Rohan very much in its general appearance except that it is more rounded, has fewer eyes, and those not so deeply indented. Some of those I have grown however, in color, shape, eyes, and every point, so closely resemble the Rohan, that placed side by side, would with difficulty be distinguished. The potato I received from you, had become so dried and bruised in its passage from France, that of the twenty-one sets, one eye each, into which I carefully divided it, and which weighed between eight and nine ounces, only eleven grew. These twenty-one sets I planted in a row across a rich part of my garden, one eye in a hill, and about two feet distant from each other, in the row. As an object of comparison, I took at the same time a Rohan potato, and cut from it the same number of eyes, which I planted in a parallel row, at the distance of three feet from the Sommeiller. Of these every set grew, and from the first with manifestly the greatest vigor, as the sets were fresh and uninjured. I gathered these potatoes on the 11th instant, the tops still green, and took from the row planted by the Sommeillers forty-seven pounds of potatoes ; and from the row planted with the Rohans, one hundred and twenty-four pounds. The sets of the Rohan took about two-thirds of a potato, and weighed between nine and ten ounces. When it is remembered that but half of the Sommeiller sets grew, and some of these owing to their damaged condition, but barely survived, the yield must be considered a good one. In size they were not as uniform as the Rohans ; but the largest weighed three pounds two ounces. The yield of the Rohans must be considered an extraordinary one, quite equal to any on record. When cooked, the Sommeiller in taste, smell, and appearance, would hardly be distinguished from the Rohan ; it is perhaps a little more farinaceous or mealy, and a shade whiter ; and I have come to the conclusion that the seedling was produced from a cross of the Rohan with a variety rounder in form, a less deeply indented surface, and perhaps a little preferable for the table. Next year I shall be able to give the new potato a much fairer trial, than from the circumstances named, it could this year receive.

As the potato is in many respects one of the important crops grown by the farmer, I will add a few remarks on their cultivation and their produce the present season. In this town, this year, where the soil is very uniform in quality, some very extraordinary crops have been grown, while others have proved as great a failure. This may in part be attributed to the season, which at the best time for the growth of potatoes was quite dry and hot, and in part to the mode of planting. For instance, one of my neighbors planted on land very heavily manured two years since, and of course that and the soil was fully incorporated. As the land had a tenacious subsoil, and was liable to suffer from wet, he threw his potato ground into ridges and planted on these. From an acre and a half he has dug nearly six hundred bushels of most beautiful potatoes. On the farm adjoining, the owner prepared his ground, which was in good condition, and gave it a heavy manuring in the hill at planting. His potatoes have yielded scarcely one hundred bushels to the acre, and are small and inferior. In this case the extra dung applied to the hill evidently had a bad effect, by increasing the injurious effect of the drouth. My land received no manure this season, but was very well manured last year. Naturally heavy, it was thrown into ridges, and on these the potatoes were planted. The crop was a very fine one, though not equal to some others.

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* Address of Nicholas Biddle, Esq., before the Philadelphia Agricultural Society.

* Owned by Lewis F. Allen, Esq.

I have long been convinced that an occasional "recurrence to first principles" is as necessary in the cultivation and perfection of plants, as in any thing else. Production from seed is the original law of nature; and though the potato can be propagated for an indefinite length of time from the tubers, I think there is abundant evidence to prove that the variety will eventually become exhausted, show more and more a tendency to produce blossoms and seeds, grow more and more liable to disease, and finally become unfit for cultivation. My experience this summer has had a tendency to strengthen these opinions. Last spring my Rohans were planted with Pink eyes on each side of them. The soil, the planting, and the treatment was in every respect the same. The pink eyes early showed a disposition to dry up; some few hills were attacked by the disease called the *curl*, and blossoms were every where abundant. On the contrary the Rohans were very vigorous, not a stalk dried in the piece planted, there was no disease, not a blossom in the field, and from about half a bushel planted, I dug fifty bushels, while the pink eyes gave but a very poor yield. I have noticed the same facts in regard to blossoms in most of our oldest varieties, and consider it a hint thrown out by nature herself, that it would be wise at once to adopt the simple and original law of producing potatoes from seed. The necessity and propriety of this course is seen in the astonishing vigor and strength of shoots from these new seedling varieties the Rohan and the Sommeiller. As a mere matter of curiosity I examined some of the vines I pulled from the Rohans I planted in the garden. From one of these sets, not larger than a dollar, a shoot had grown an inch in diameter, and which at the distance of three feet from the surface of the earth, had subdivided into thirty-four parts or vines, many of which were over six feet in length; and the whole of which would not have measured less than one hundred and sixty or seventy feet; and in the row there were many others, scarcely if at all, inferior.

For several years past I have found much difficulty in raising good melons, that is, in getting them forward so early as to ensure them perfect growth and ripening, but this year have succeeded in growing some very fine ones. My forcing frame or bed was made by placing a box of boards 5 feet by 8, and 18 inches high, on the ground of the garden, and piling into this to the depth of three feet, good horse stable manure. When the mass had settled together, but before it had begun to heat to any extent, a second box, half a foot smaller each way, and of nearly the same height, was placed on the manure, and within this last, the surface was made level, and then filled to the surface nearly, with good garden mold. The sashes of an old window in their former frame were fitted to the top of this box, the whole having an inclination to the south, to give it the advantage of the sun. The fixture was rather an awkward one, but my hot bed was fully occupied, and this was the best, circumstances permitted. In this I brought forward quite a variety of plants for early setting besides those before alluded to, and when so late that I thought the plants would not be crowded by the sashes before the weather would permit their removal, I planted in this bed several seeds from a first rate Long Island melon. Three of them I allowed to stand, and in June I took off the sashes, removed the upper box, with the addition of more earth gave a rounded surface to the top, and left the melons to run as they pleased. As the earliest melons that showed themselves, fell off, I had recourse to Armstrong's method of artificial impregnation, (by placing the unfertile blossoms on the fertile ones, and shaking them or turning them on each other in such a manner as to secure from the contact of the pollen their fecundation,) and soon had the satisfaction of seeing that their growth was as rapid as could be wished. These three plants spread over the whole mound, and yielded more than a dozen excellent melons, some of them of very large size. All the trouble was an occasional watering during some of the hottest, dryest days of the season.

There is one thing more to which in this place I wish to call the attention of my brother farmers, and that is the necessity of adopting a different course in the cultivation or growing of spring crops. There is, it is well known, a large portion of our country in which winter wheat is considered an uncertain crop, and in which the growing of the spring grains, such as spring wheat, barley and oats, extensively takes the place of autumn sown grain. So far as the actual profit is concerned, where the husbandry is good, there is not perhaps much to choose, but the culture of the spring grains in our common method acts most injuriously to our farms by filling them with noxious weeds, such as the Thistle, Johnswort, Charlock, Daisy, &c., which in a course of summer fallows and wheat rarely make much progress. It is a truth so obvious that no one can dispute it, that unless this spread and increase of weeds can be checked, the productiveness of our farms will be as much lessened, and the difficulties of cropping so much increased, as to materially lessen the value of our lands. The man who travels through almost any section of our country, will see thousands of acres of land, which under the course I have mentioned, is so completely stocked with the Canada thistle, as to be worthless for pasture, and unfit for cropping unless previously subjected to a thorough summer fallow. In a country where root or hoed crops take the place of summer fallows, they may be dispensed with, as in checking the growth of weeds hoed crops are very efficacious; but it is well known, that such crops are grown among us to only a limited extent, and hence the necessity of summer fallows as a check to weeds is the more imperious. Draining our lands thoroughly, and then subjecting them to deep plowing, would unquestionably do away much of the difficulty now experienced in the cultivation of winter wheat, as well as admit of such a rotation as would counteract the spread of these pests of the farm, to any considerable extent; but at present there seems no course remaining to our farmers who own retentive soils, (and such are those on which spring crops and weeds are the most common as well as injurious,) than summer or autumn fallowing for spring crops. The common practice of giving land intended for summer crops, but one, or at most two plowings in the spring, following as they must in quick succession, cannot kill a root of any weed, but on the contrary is precisely the course best adapted to spread them and make them grow vigorously. It is true two plowings in autumn after the spring sown crops come off, and at as wide an interval as the season will admit, would add to the cost of cropping; but it may well be questioned, whether by the better preparation of the ground, the partial destroying of weeds and the check surviving ones must receive, and the destruction of insects consequent on late plowing, the crops would not be so increased as to give as much or more profit than the present system affords. H. M. GAYLORD.

Otisco, October, 1840.

The Rohan Potato.

Messrs. Editors—That there is a great deal too much praise bestowed on the introduction of a new plant, root or animal, is a fact not to be passed over in silence; and it is becoming so notorious that in the minds of the practical farmer—the farmer who makes his living by farming; and when he is in debt for part of his farm, pays for it, and all he honestly owes besides, from the proceeds of his farm—it creates a just and merited suspicion of the correctness of many statements in the agricultural papers. I have often heard the farmers comment upon it, and times without number heard them say "*it is done for speculation*," and in many instances their good practical sense decides correctly. But I have at present particular reference to the Rohan potato, of which we have had so many accounts of great and extraordinary yields; for a year or two past, hardly an agricultural paper came to hand but what had some great story in it—all true I suppose—and the disappointments that followed in consequence of it, were as numerous. And as the thing has taken very extensively, I think it my duty to contribute my mite to place their true character before the public. With this view, I will give you the result of one year's experiment, and disappointment too, if you please, and compare them with some other kind, namely, the Merino, a flesh colored long potato.

When I set out, I intended that the Rohan should excel all my other potatoes in product; and those in my neighborhood too. With this view, I prepared two acres of land of an excellent quality, which was moderately manured and planted with Ruta Baga and potatoes last year; and this year it was again manured at the rate of ten cart loads to the acre. On the 17th and 18th of May, this piece was planted two-thirds of an acre with the Rohan, and one and one-third with the Merino potato. The ground was in excellent order for planting. The Rohans received two weedings and one hilling; and the Merinos one weeding and one hilling. The ground on which the former grew, I considered the richest part in the field. In October, soon after the frost had killed the tops, the potatoes were gathered and put into cellars. The Merinos were gathered first, and the Rohans last. I was particular, and kept a correct account, and the result was as follows: Of the Rohans from two-thirds of an acre, I gathered 175 bushels, being at the rate of 263 to the acre; and of the Merinos from one and one-third of an acre I gathered 735 bushels, being at the rate of 550 to the acre. The test was fairly conducted; if there was any advantage, the Rohans had it, for they were on the best ground and received one more weeding.

Thus far I have spoken of the quantity, but I have also a word to say as to quality of this potato. I have tried some experiments in feeding them to my sheep, and find that they do not like them so well as the Merinos; the delicate taste of the sheep soon discovered which was most palatable; and I take it that they are good connoisseurs of potatoes, and that their decision may be relied upon in this matter. They eat the Rohans to be sure, and even with avidity, but as long as they can get the others, they leave these to the last. I agree with your correspondent, Mr. Guthrie, of Sackett's Harbor, that as a table potato they are abominable. They are, moreover, a potato which does not keep as well as other kinds; many of mine are now rotting, and some are entirely rotten already. I have opened two hundred or more for the purpose of examining them, and found many of them hollow, some filled with water, which emitted an offensive smell. These of course, must soon decay.

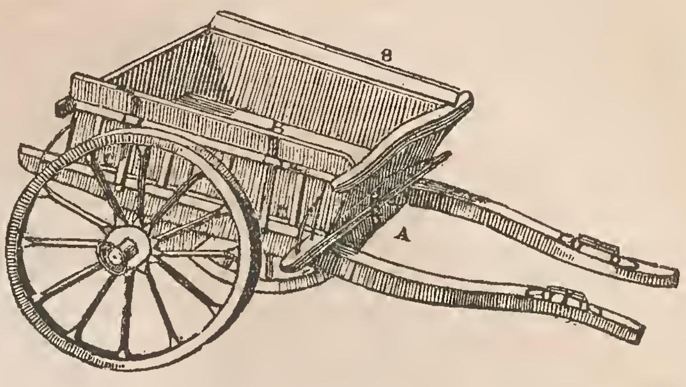
I would however, by no means discourage others from raising them. I shall continue to raise them on a moderate scale, and if any thing occurs to alter my opinion hereafter, will communicate it. It would be singular, if among the bad qualities, it had no good ones. I think I have discovered one already; it is this: if sheep are fed plentifully with them, they will require no water, for this potato is fortunately so constituted as to be "*victuals and drink*" both.

Yours, &c. H. D. GROVE.

Buskirk's Bridge, Dec. 1840.

I planted part of an ear of the famous tree corn in my garden. It fell much short of what it was recommended to be.

UTILITY OF HORSE CARTS.



(*Scotch Cart.—Fig.* 13.)

Messrs. Editors—I do not recollect of noticing in any of the former numbers of the Cultivator, nor in any other agricultural journal, any thing regarding the utility or superiority of the horse cart over the wagon for many purposes of the farm. Having used them myself for the last seven years, enables me to form some opinion of their comparative usefulness on the farm. The following are my views on the subject, which you can publish if you deem them of sufficient importance to occupy a space in your columns.

I have been led to these remarks in consequence of noticing the ease and rapidity with which I got in my sugar beets last fall. I commenced pulling and topping my beets in the afternoon, when a sudden change in the weather indicated a storm before morning; I immediately started my two one horse carts, and in less than three hours we had 246 bushels securely in the cellar. It must be observed, however, that the cellar door is so situated that the loads could be "dumped" into the cellar at once.

"Although the wagon," says Low, "under certain given circumstances, possesses advantages of its own, it is yet inferior to the single horse cart, for the more common purposes of the farm."

The advantages the cart has over the wagon, are, that it can be turned in a much smaller space, and backed, and otherwise managed in much less time, and for moderate distances, a greater comparative weight may be moved by an equal exertion of animal force. In the cart, the horse partly bears the load and partly drags it. It is generally conceded, where carts have been used and attentively compared with wagons, that they have many advantages. A single horse, before a cart, will do half as much more work, as when he acts in conjunction with another. A horse harnessed singly has nothing but his load to contend with, whereas when harnessed with another, he is sometimes embarrassed, by the other moving quicker or slower than himself.

The great ease too, in which a cart may be loaded with any heavy substance, is another very important consideration, as well as the rapidity with which they can be unloaded. In removing earth or manure, and depositing it in heaps, the load can be displaced at once by raising the fore part of the body and sliding it out of the back part, when a load in a wagon would have to be thrown out with a shovel or fork, which consumes considerable time.

I have also found the cart very convenient and useful when planting potatoes—one horse answering the purpose of two, and, by keeping the cart in front of the men, the seed is convenient and at hand. So, too, when digging potatoes, it is easily filled. The box of a cart should contain from 16 to 18 bushels of potatoes, which a common sized horse will draw any where on dry ground, except up very steep hills.

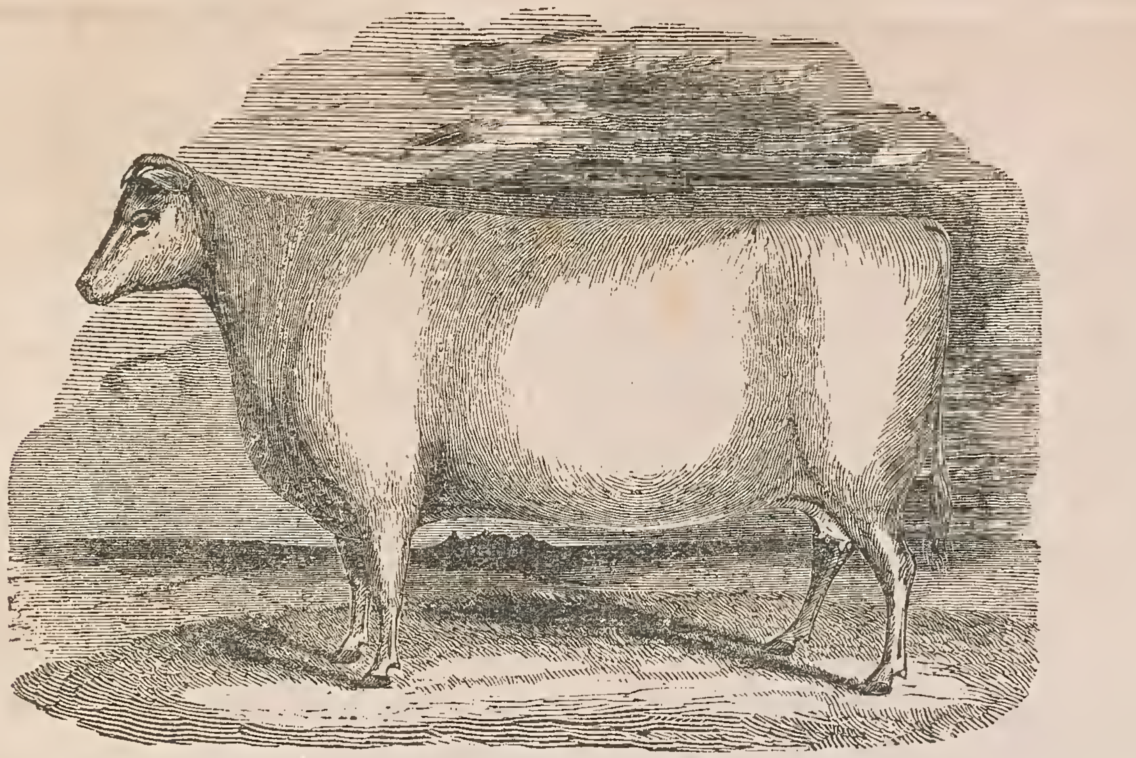
The objections to the use of horse carts I conceive to be as follows: First, the expense—a good cart with iron axletree, and a suitable harness, cannot be obtained for less than from $60 to $65. Second, in long distances, and on roads, they cannot be moved with the same degree of speed without galling or distressing the horse much more than the wagon; and third, each cart would require a driver. This, however, could be obviated, as in some sections of England, one man often manages two, three, and sometimes more, one horse carts, without any difficulty; for horses once in the habit of going singly, will follow each other as uniformly and steadily as they do when harnessed together.

"Carts drawn by one horse or by two horses," says a writer of unquestionable authority, "are the only farm carriages of some of the best cultivated counties; and no other are ever used in Scotland. Their loads depend upon the strength of their horses and nature of the roads; but in every case, it is asserted, that a given number of horses will draw a great deal more, and according to some, one third more, in single horse carts, than in wagons. Two horse carts are still the most common among farmers in Scotland; but those drawn by one horse, two of which are always driven by one man, are unquestionably preferable for most purposes. The carriers of the west of Scotland usually load from one to one and an half tons, on a single horse cart, and no where does it carry less than 12 cwt. if the roads are tolerable."

Carts, like other implements, vary in their forms and modes of construction, according to the nature of the business for which they are wanted; but for the purposes of farming, the Scotch cart, figured at the head of this article, appears to be of a good and substantial form, and one that would be durable.

C. N. BEMENT.

Three Hills Farm, 1841.



MR. PRENTICE'S SHORT HORN COW MATILDA.—[Fig. 14.]

Messrs. Gaylord & Tucker—In the last No. of the Cultivator, I observe a criticism over the signature of "Herd Book," on the pedigree of "Daisy," in your November No.—also in the "American Farmer," published at Baltimore, on her form as there given. Both I acknowledge are very just, nor is there any thing in the matter or manner of either to complain of; on the contrary I confess I was glad to see them, as they were evidence to me that the caricatures in which our agricultural papers have so much abounded, and shall I say generally with impunity, were not further to be tolerated; for while I admit that in both particulars, this was vulnerable, I can but believe that very few I have seen, are less so, and besides in just so far as this does not come up to the life, it is against the animal, and consequently safe, while generally, I think it has been otherwise.

In relation to her form, will you allow me now to say, rather by way of explanation, than justification, that when I said the engraving was a good likeness, I was presuming upon the high reputation for general correctness of the artist, having only seen the drawing, which I still believe was true, and though any one would recognize the animal from the cut, yet you will recollect I complained at the time that it did her great injustice.

In regard to her pedigree, a mistake occurred in my transcribing it from memory; and this I should probably not have ventured to do, but that I had seen so many and such glaring errors pass unnoticed, I thought it of but little consequence; but in order now to correct it, I will give that of her dam "Matilda," whose likeness accompanies this communication.

Matilda, then, is white, was calved in 1834, and bred by C. N. Bement, at Three Hills Farm, near this city. She was by "White Jacket," (bred by Anthony Dey, Esq., of New-York,) her dam Majesty, formerly "Heart," imported by the late Mr. Hollis, from his own yard in Blythe, England, on his removing to this country for settlement. She was a remarkably fine cow, for which he refused $700, on landing; and Mr. Bement says in a letter I have from him on the subject, "Majesty, the dam of your cow Matilda, was a large splendid animal, and had all the points and appearance of a thorough-bred improved Short Horn Durham; and although considerably advanced in years when I bought her, she still possessed great vigor of constitution. In color and general appearance, she very much resembled the Patroon's stock; and were I to venture an opinion, I should say she originated from that of Mr. Champion of Blythe, England, near whom the late Mr. Hollis lived before removing to this country."

That she was well bred, seems to be proved by the character of her stock, for without an exception, nothing finer has perhaps ever been seen in any country; among the six heifers she now has, I am persuaded there are those which would in England bring very great prices. I have been told by others, and good judges, a thousand dollars.

It was only after the death of Mr. Hollis, that "Majesty" was sold by the estate, and only in consequence of his death, is it, as I believe, that her perfect pedigree has not been found.

White Jacket was by "Young Regent," dam the imported cow "Hazel," bred by Samuel Scotson, of Toxteth Park, England, his g. s. imported Regent, whose dam was out of the thorough bred cow, Susan by Favorite—his g. g. s. was Regent by Favorite, a son of old Favorite, the sire of Comet, sold for 1000 guineas.

The dam of young Regent was Beauty, formerly "Flora," (also imported from England,) by "George,' a son of Phenomenon, by Favorite, a son of old Favor ite, out of Phillis by Petrarch. E. P. PRENTICE.

Mount Hope, near Albany, January 20, 1841.

Preservation of Root Crops.

Messrs. Gaylord & Tucker—The perusal of each new number of your highly useful paper affords me so much, both of entertainment and instruction, that I always feel as if I should be making some other return for such gratifications, than the usual yearly payment of one dollar. But the fear of seeming to your readers to be "*zealous overmuch*," frequently restrains me from making communications for your Cultivator, when the spirit moves me to make them. I must beg you therefore, once for all, never to publish any thing I may send, unless you believe it will render sufficient service to some of our brethren, to make it worth reading. Of this, I wish *you* always to be the judges; and rest assured that your failure to publish will never "break any squares between us," since my chief motive for writing, next to the hope of doing some good to our cause, *is*, the desire I constantly feel to contribute my mite of communications towards sustaining a paper which has already rendered great services to American Husbandry, and bids fair to render still greater.

The subject of my present offering will be *the preservation of root crops;* in regard to which, although enough has been written, probably to fill a large volume, yet long experience has convinced me, that much of it is totally useless, or rather unnecessary, in all latitudes south of the Potomac River, and east of our mountains.

Some of the various modes recommended, would cost nearly as much as the value of the crop for one year; while the least expensive among them require a portion of time and labor in their construction, that might easily be saved. Cellars in dwelling houses are sometimes used; but every physician will tell us, (and they say what is perfectly true,) that the gas which constantly exhales,—even from sound roots, and still more from those which are decaying, as a portion always will be, in such places, is highly pernicious to health. Indeed, I once knew nearly a whole family to be destroyed by such a cause. But rooms are occasionally constructed for keeping roots in barns, wherein cattle and horses are kept; although good air is nearly as essential to brute beasts as to human beings. The only safe plan then, seems to be, to take care of your roots out of doors. Here also a variety of plans have been proposed; in regard to most of which I can truly say, from my own experience, that, in our latitude, say about 38°, and of course in all lower degrees, they are,—to say the least of them,—unnecessarily troublesome.

A very slight covering of earth seems quite sufficient to protect any of our roots from being injured by frost in our latitude. Some of them indeed, are the better for not being taken up; for instance, the carrot and the parsnep. Those I have cultivated in my garden, for more than twenty years, and during the greater part of that time have suffered them to stand where they grew, without any cover whatever, because I found they were the sweeter for such exposure, and I have never during the whole period, found one of either kind injured by frost. Early in February, with us, it is best to take them up, in order to check the new growth which commences then, and destroys their sweetness. Even turneps, both ruta baga and other varieties, I have suffered to stand uncovered, by way of experiment, and have lost very few, comparatively speaking. But to protect them effectually, I have found it quite sufficient, after twisting off the tops in November for stock, to plow a furrow on each side the drill, with the mold-board next the turneps, so as to make the furrows meet in a ridge. In this situation they were dug as we wanted them, and were always found perfectly sound. It has generally been said, that when buried in trenches or large separate mounds, a kind of chimney should be left to ventilate them. This may be necessary in higher latitudes than ours, where it is deemed essential to draw over them a thick covering of earth; but this, even with us, where we bury in trenches or mounds, is never more than five or six inches thick, and often less. The trenches too, or the mounds, are not more than eight or ten inches deep; the first about two feet wide, and the second three feet in diameter. In these the roots are piled so as to form a ridge in the trenches, and a point in the round mounds. Both are sometimes covered with straw, and then the earth is raised over them; but no ventilation is left in either, as the roots keep well without any. In regard to Irish potatoes, a still thinner covering of earth than the one just mentioned, suffices with us to preserve them from rotting. Indeed it would seem as if they could freeze and thaw several times, during winter, without being destroyed, provided they are covered with earth all the time; for we often find them near the surface and perfectly sound, in the spring, when spading up the ground in which the crop had grown during the previous season. There they must have undergone freezing and thawing whenever the earth was in either state, as it often is to a much greater depth than the potato roots ever extend. Why those roots should always be destroyed when they freeze *above ground*, and not suffer equally when frozen *under ground*, is a matter of which I have never yet seen any explanation; it is among the numerous mysteries in vegetable physiology for the cause of which we have still to search.

Before I quit this subject of roots, permit me to offer a few comments on the letter of your correspondent, Mr. Guthrie, dated 24th of October, 1840.* This gentlemen, if I mistake not, is the same who informed you and your readers, in May last,† that he had fed away some fifty ton of French sugar beet, during the previous winter, to his hogs and cattle; not only without any apparent benefit, but to the manifest injury of both, unless in augmenting, for a time, the milk of his cows. But he endeavors to account for his failure by asserting that the French sugar beet contains "*no starch*," which he assumes to be the most nutritious of all the component parts of vegetables; although many writers of high reputation maintain that sugar is quite equal, if not superior, to starch in this respect. But be this as it may, your readers who have not tried the sugar beet must still decide that it is a very valuable root for stock, unless indeed, they can believe that Mr. Guthrie alone is *right*, and all your numerous correspondents *wrong*, who have communicated to you the highly favorable results of various experiments which they themselves have made with the sugar beet. Why, therefore, it failed with him, cannot have been caused by its deficiency in nutritive properties; but by something else which he has not noticed.

He concludes his letter of May last, with the following sentence: "Mr. Thorburn has my thanks for introducing this excellent article, (the Chinese tree-corn,) and when its merits and demerits are well understood, I believe he will have the thanks of thousands of others, as a public benefactor." Yet, this same gentleman tells you, in his October letter, that in "his catalogue of humbugs this year," (next to this corn,) "he places the Rohan potatoes at the top!"

Now, although I cannot rank myself among the thousands who will thank Mr. Thorburn as "a public benefactor," since the public, in my opinion, paid him most amply for his corn, in giving him at the rate of about forty dollars a bushel for it; yet I must think that it detracts much from the authority of Mr. Guthrie to find him now calling the same thing a humbug, on which he had bestowed such high praise only six months ago.

It is truly unfortunate for young farmers, and not a little perplexing to many old ones, that this vulgar term "*humbug*" should have been so indiscriminately applied within two or three years past, as nearly to have lost its original meaning; which is, "a deception, a cheat." For it is now affirmed of every new thing, if—upon one or two trials, it happens not to answer the most sanguine expectations of those who try it. That Mr. Guthrie is one of these indiscriminate appliers of the term seems very evident; unless indeed, we can believe that all the numerous individuals who have published accounts of the great produce both of the Chinese tree-corn, and of the Rohan pototoes, designed thereby to deceive and cheat the public. I have no doubt that such was the design of some who sold the corn at 50 and 100 cents per ear, and the potatoes at 18 or 20 dollars a bushel. But that the great majority of the planters and farmers who have communicated the highly favorable results of their experiments had no intention of the kind, seems equally certain, for they were not *sellers*, but disinterested *recommenders* of these articles. I myself am one of this number, having twice succeeded equally well, both with the corn and the potatoes, which I have found highly productive. For this recommendation, however, I should deem no defense necessary—(having so many backers,) even if I were classed with the humbuggers for making it. But Mr. Guthrie has brought the fearful charge of *insanity* against all who venture to eat the Rohans; and moreover, has established himself as dietetic physician both for man and stock, in this particular. His words are, "*the quality of the potato is abominable: no man would eat them in his right senses; and they are undoubtedly as poor for stock as the table.*" Now, it has so happened,—shall I venture to confess it? that I dined twice last fall, with six or seven gentlemen and ladies, who determined, on each occasion, to compare the Rohans with two other common varieties of potatoes which are considered good among us, but not the best. Mark you, gentlemen, I verily believed, at the time, that we were all as much in our senses as we ever had been; and yet all pronounced the Rohans quite as good as the other two kinds; indeed, one of our company preferred them to both. Although I have no hope that this fact will convince Mr. Guthrie, that it is possible for men to eat Rohan potatoes and still be in their "right senses;" yet,

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* Cult. vol. 7. p. 194.

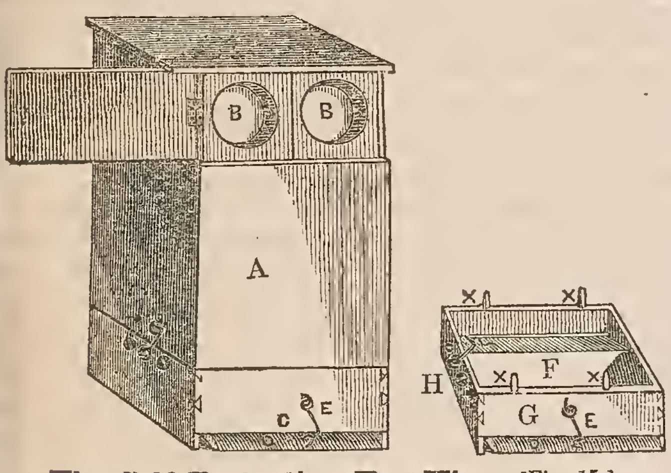
† Cult. vol. 7. p. 113.

I confidently trust, that it will suffice to satisfy you and most of your readers of its actually having been done in the two cases stated.

But to be serious, Mr. Guthrie writes sufficiently like a practical farmer to justify the belief, that he knows better than to suppose that the cause of American Husbandry can possibly be benefited, either by uttering extravagant opinions in regard to mere matters of taste, which can never be settled; or by positively asserting, on no better authority than such opinions, that the Rohan potatoes "*are undoubtedly as poor for stock as they are for the table.*" If he will take the trouble to analyze them carefully, and thus prove that they contain, either none at all, or very small proportions of the highly nutritive properties discovered in all the other varieties of this very valuable root heretofore analyzed, *then indeed*, we will listen to him and thank him for his information. But, until then, I believe most of his readers will think that his denunciations of the Rohan potatoes might as well have been reserved for table-talk among his friends.

I remain, gentlemen, your friend and constant reader. JAMES M. GARNETT.

Essex county, Va. Jan. 12, 1841.



The Self-Protecting Bee-Hive.—[Fig 15.]

Messrs. Gaylord & Tucker—Enclosed, you will receive a drawing of the hive which I left at your office a few weeks since, and if agreeable to you, you will confer a favor on me, by giving it a place in your very valuable periodical.

The hive at your office, is of the exact form, and of the most suitable size and workmanship for use; and it contains all the principles of my patent. By the construction of this hive, three very important principles are brought into operation. 1st. The communication from drawer to drawer, thereby enabling the bees to pass freely from one drawer to the other, making as it were, but one drawer, when in fact there are two, thereby producing the most happy effects, and causing the bees uniformly to build in both drawers at the same time, when without the communication, they usually nearly fill one drawer, before they commence in the other. These drawers are removed by means of two right angled metalic slides. 2d. A perpendicular hive is obtained which should always be the case; without which the economy of the bees is much disturbed. It is well understood among apiarians, that bees always build their combs in perpendicular sheets, without regard to form or size of the apartment, consequently if the bottom of the hive is contracted, some of the filth must lodge in descending, thereby causing much derangement in their operations; but if the hive be perpendicular, all filth disengaged by the bees, immediately falls to the bottom, when it is at once discharged by means of the inclined plane. 3d. The base or protector. The base is the best possible discharger of worms and other filth. The planes may be constructed to any degree of inclination desired, without injury to the hive or bees; they furnish an opportunity for the bees to alight and enter both at front and rear sides of the hive, at the same time, enabling them to *crawl* to any part of the hive without again flying. Bees on returning to a hive, at a cool season of the year, partially benumbed, if obliged to fly after once alighting as from a suspended platform, frequently die for want of strength to rise; and that too at a season when their numbers are more wanted to produce animal heat sufficient for the wants of the brood. It is not unfrequently the case, that whole colonies when thus treated, perish in the month of April. The hive is ventilated by closing the planes more or less as circumstances seem to require.

I describe the construction of the Self-protecting Bee-hive, as follows. Observing that my improved hive consists of three parts, viz: 1st. A perpendicular hive thirteen inches square more or less, as seen in the accompanying drawings, fig. 15, A. 2d. The chamber with communicating drawers at the top of the hive for extracting the surplus honey, without destroying the bees, as seen in fig. 15, B. B. 3d. The base or protector. The base is a square frame of the size of the body of the hive, about four inches deep, without top or bottom, on which the hive rests, as seen in fig. 15, C., being connected and held in place by dowels, as seen at X. X. and hooks as seen in the figures. The front and rear sides of the base are narrower than the other sides by about an inch, leaving room at the bottom, for the play of the inclined planes, which form a bottom for the hive; consisting of two inclined planes slanting from the top of the base to the bottom. These inclined planes consist of boards hung within the box of the base, on pivots passing through the sides near the top edge of the center of the sides, and extending below the lower edge of the base in front and rear, with a play of about an inch, as seen at F. which represents the plane inclining to the front. G. the front of the base. H. The pivots on which the inclined planes hang. D. The projection of the inclined planes at the bottom of the base. E. The hook to close it tight against the bottom of the base when required.

The base or protector should be separated from the hive during the process of hiving, when the bees have entered the hive, it may again be added, and the planes hooked up, when it may be carried to any situation desired, without injuring the bees. The base may also be added to any hive of suitable size and form already containing bees.

Individual rights for constructing and using the above described hive may be obtained at five dollars each, by addressing the subscriber. WILLIAM M. HALL,

Wallingford, Ct., Dec. 9, 1840. Patentee.

The Farmers' Agricultural Society.

Messrs. Gaylord & Tucker—In concurrence with a suggestion made by Mr. Peters, in the last number of "The Cultivator," I forward to you the names of the officers chosen for the current year at a meeting of the "Farmers' Agricultural Society," held at Butternuts, Otsego county, January 6, 1841:

Francis Rotch, President, Butternuts.
Uri Jackson, jr. } Vice Presidents, Butternuts.
Wm. S. Bowne, }
Addison M. Snick, Secretary, Butternuts.
Thos. Hollis, Cor. Secretary, Gilbertsville.
Hezekiah Gregory, Treasurer.

Wilson B. Pearsall, David S. Bundy, Lewis G. Collins, John A. Davis, Wm. Musson, John Alexander,—Executive Committee.

The Society also received the statements of crops entered for premiums, which were examined and decided upon, and all premiums paid. The first premium for *carrots*, was awarded to Sutton Pearsall, for 10,680 lbs. of good, clean, sound roots, obtained from 44½ rods of land. Mr. Pearsall seemed to think they were not a much more expensive crop than the ruta baga, provided they were grown on a suitable soil. They are unquestionably more nutritious, but will not perhaps be so securely kept through the winter, without greater care than is required for ruta baga, nor is the richness of the carrot more than an equivalent for the greater weight of ruta baga that may be obtained from the same quantity of land. This root by chemical analysis is found to contain 98 parts of soluble matter in 1000; of which 95 will be sugar, and 3 starch.

The first premium for *turneps* was awarded to Wm. S. Bowne, for 515 bushels of ruta bagas, weighing 60 lbs. per bushel; grown on 67 rods of land. They were thoroughly topped, tailed, and cleared from dirt—30,900 lbs. Here is nearly a third more weight than of carrots on the quarter acre, but the soluble matter, which is the nutritious portion, is only 64 parts in 1000, of which 51 are sugar and 9 starch; so that for feeding purposes these two crops are about alike. But how is it with the land? The turnep crop has returned a much larger amount of vegetable in the tops than the carrot, nor is it quite so fastidious as to its soil, nor does it claim quite such nice culture, but then it is not so valuable as feed for dairy cows.

The first premium for *potatoes* was awarded to Francis Rotch, for 1616 baskets of 71 lbs. weight, making a total of 114,736 lbs., grown on two acres and seven-eighths of an acre of land; being at the rate of 604 bushels per acre, at 66 lbs. the bushel. Part of these were the Merino or South American potato, and part of them were the Rohan; it was, however, ascertained by measurement that the Rohan did not yield as well as the Merino, by 17 per cent, though planted upon the same soil, and receiving precisely the same culture, which was chiefly done by the plow, the hills being sufficiently wide apart to allow cross plowing between them; this was deep, and made the hills large and full. For a time the vines were so luxuriant as to create some doubt about the crop, but in consequence of ample space between the hills the tubers were matured and grew to a large size. The land was a light soil, broken up the year previous for corn, which was a light crop; the following spring it was manured with leached ashes, after which it was twice plowed and planted with potatoes. In point of labor this crop, I presume, is much less expensive than either turneps, carrots or beets, and is perhaps as easily saved as either of them. The potato affords about 230 parts of soluble matter in 1000, of which 175 may be starch, perhaps 17 sugar, and the rest gluten. This is a large yeld of nutriment; but the potato in its raw state is not I think so valuable for cattle as either of the other roots; for sheep, horses and pigs, it answers well without being cooked.

The second premium on potatoes was awarded to Hezekiah Gregory, for one half acre of Rohans, producing 183 bushels, of 66 lbs. to the bushel; making 12,178 lbs. This crop was very materially affected by the drouth; still I am rather inclined to question the superiority of the Rohan over the Merino as a general crop for feeding.

These premiums are the first offered by the society for the better culture of root crops, and the products show how imperfect we are in this department; and now allow me to pass to a subject somewhat connected with the foregoing, and offer you my experience on steaming roots.

Strongly impressed with the great advantage of cooking the potato, I resolved on erecting a steaming apparatus, and accordingly had a wooden boiler made with a sheet iron bottom, which was carefully set in brick work. A leaden pipe conducted the steam into a large cask (holding about 12 bushels) slung in the center on two pintles, so as to turn out its contents with great ease. I put about three pails of water into the box, and soon had my fire burning; a little Indian meal stopped any trifling leak that might be;—and I waited the moment of boiling. Never was truer saying, than, "the watched pot is slow to boil." There I stood, hour after hour, philosophizing upon the whys and wherefores—every thing was cold, the brick work hardly dry; the chimney too had never been heated; and then I decided the draft was too strong; this however was soon checked, and at length the water *did* boil, and the room to my satisfaction soon became a perfect vapor-bath. I made all safe, shut up the apartment, and left results for the full experiment of the next day. I could not however, get rid of certain misgivings which were strengthened by recalling to mind a casual remark of the late Judge Buel, "that *he* had returned to the old fashioned way of boiling potatoes, and on the whole was best satisfied with it." But then the more *modern improvements* of a wooden box and sheet-iron bottom; and then, to top all a little "go-cart," and a railway might materially alter the case, and it was all described in the Cultivator. Moreover, Mr. Bement, one of the committee on modern inventions, approved it; indeed he had one erected on this scientific principle, of exposing the least possible surface to the action of the fire, to procure in the smallest space of time and with the least expenditure of fuel, the greatest quantity of steam. "To-morrow" came—my wood was all split up fine and was dry—the boiler was nearly filled—the cover admirably secured and calked tight—the lead pipe of about 18 inches, attached (which entered the cask below the false-bottom,) the potatoes were put in, an old piece of carpeting laid over them, and then came the cover which fitted on to the cask. I now looked at my watch, lighted the fire, regulated the draft, took care that the flame struck this said sheet-iron bottom at the very mouth of the arch, and that it could only escape into the chimney by an opening just the size of a brick; put on more wood and attended to that part of the business with all the skill and diligence of a regular "furnace-man." My journal runs thus:—"Lighted the fire at 2 o'clock—turned the steam into the cask at half past 3—by half past 4 the cask felt warm, and the steam showed itself at the top—at half past 6 the potatoes were still hard on the top of the cask—shut up shop in despair and left the fire to burn out—at 9 o'clock report was made that some steam was still generated—and the *next morning* I found twelve bushels of potatoes admirably cooked! My man looked on in utter contempt of "book farming" and its science; for he has been in the habit of boiling on the very snow, with a good bed of logs, eight bushels of potatoes in about two and a half hours, and this too with a common cauldron in the open air! "*Thinks I to myself*" it may be more *scientific* to steam; but boiling is more practical—and it would seem that some others are adopting the same opinion; and now we are to have the *ne plus ultra* in "Mott's Agriculturist's Furnace." I do not quite understand the engraving; and hope Mr. Bement will favor us with another report, on further trial, and if there are any objections or difficulties, state them at once.

I am inclined to think there is too often a morbid sensibility on this subject, and that an undue consideration for the inventor may withhold from the public a knowledge of defects, not at first discovered, but which a further trial of the article may have subsequently betrayed.—Query? Would it not be an advantage to have the rim of the cauldron so cast as to admit a close cover or a steamer to set close over it? and why not have points of attachment cast on the boiler so that it may, with a small crane or lever, be raised from the stove, and its contents "up-set" into a "receiver." I hope to hear more of this said furnace, for such a convenience is very much wanted by farmers. I once saw a boiler with a large discharge pipe cast on to and with the bottom; why would not that save time and trouble, and allow of the potatoes being dried off after boiling, by drawing away the water. Yours, &c. R.

Butternuts, Jan. 17, 1841.

The Mulberry—Inquiry.

Messrs. Editors—I have a few Italian Mulberry trees that are on the point of being destroyed by a worm seven-eighths of an inch in length, white, with a red head; wherever a tree is bark-broken, it commences and works along under the bark, and unless it is dug out and killed, it soon destroys the tree. I have tried lime to no effect. If any of your correspondents know a remedy, I should be obliged could I learn it through your invaluable paper. C. M. L. ANDREWS.

Macedon Center, January 2, 1841.

Feeding Silk Worms—Inquiry.

Messrs. Editors—I wish to inquire through the Cultivator, whether silk worms, partly reared on the white mulberry, may be fed with safety on the large leaf Canton, or multicaulis, and also whether they may be fed with these kinds together or alternately with an advantage; and if not, what is the best method to be pursued, where these different kinds are to be used? Some information, drawn from actual and fair experiment, would be useful at the present time. Yours.

Ashfield. Mass. Jan. 11, 1841. B. G.

Short Horns vs. Herefords.

Messrs. Gaylord & Tucker—I have read with care the recent observations of Mr. Sotham, in the two last numbers of the Cultivator, and really I must say I have read nothing in them that is calculated to remove the impression that I received from his first communication, "that the Herefords he has imported, have been bred, with a strong cross from the Durham." In his last communication he appears to have selected my observations in the October number of the Cultivator, particularly, to which to address his reply. I can truly say I was rather sorry to see that, as the communication of Mr. Randall, had he selected it, to frame his reply to, would have opened to him a larger field, and given him much more matter to work upon, than did that from me. No doubt Mr. S. acted in that matter according to the first law of nature—he selected his weakest adversary, confident of an easy victory. I am pleased, however, to see that Mr. R. has again resumed his pen, and truly he has wielded it to some purpose in the last Cultivator; he has there made a reply to Mr. S. that will answer for himself, me, and all others who have given views, to which Mr. S. has taken exception; and I should be disposed to let the matter, so far as I am concerned, rest where he has placed it, were it not for some observations particularly made to me by Mr. S. I have acted upon his suggestion, and reperused the remarks I quoted from "Youatt," and I see nothing more in the quotation than I did before. Mr. S. asks with confidence, "If a good ox can be bred from an inferior dam?" In reply to him, I would say, that according to his own showing, "many a good ox has been bred from an inferior dam." I take it from the little experience I have had, that it is much easier to raise a good ox, than to raise either a good bull or a good cow. This remark may appear strange to many persons, but will be easily accounted for and understood by every breeder. It would be considered now, a work of supererogation for me to prove "Youatt's History of British Cattle," a standard work—every breeder considers it such—and so I have no doubt, does Mr. S., except so far as their views with regard to the Herefords antagonize. English breeders are celebrated for their skill, and a great portion of that skill has been exhibited in the success which has attended the different crosses they have made with the different breeds of cattle. It is matter of history that a most important improvement has been effected upon the Devonshires by what has been termed a "stolen cross with the Herefords." The animals bred from this cross were called Devonshires, and so have continued to be called.

Another and still more important cross was successfully effected between the Durhams and the Galloways. The result, no doubt, of these crosses was much owing to the skill with which the animals with which they were effected, were selected by the spirited breeders who had the courage to venture upon them. Such an experiment made under the direction of a man of no practical experience or skill in his business, nine times in ten, would be a complete failure. The friend of Mr. Sotham in England, from whom he procured his stock, I have no doubt possesses much skill and experience in his business as a cattle breeder, and really I see no harm in the fact of his improving his Herefords, by a "stolen cross" with the Durhams; the harm lies in his selling and passing them for pure Herefords, and not giving the proper credit for the improvement to the Durham, by whose agency it was effected.

I would ask the cattle breeder to examine the portrait of the Earl of Egremont's cow, given by Youatt in his history, called too a beautiful specimen of the Hereford; then examine the portrait of Mr. Sotham's cow "Matchless," given in the November number of the Cultivator, and then say in all candor if there is one single solitary point of identity in "Matchless" with the Hereford cow of Earl Egremont, except the color!! and yet all this astonishing change has been effected in seven or eight years!!

One argument used by Youatt, to prove that the Herefords are an aboriginal breed, is the largeness of the head and the thickness of the neck, when compared with the Devon cattle, and he says, "were it not for the white face, and the somewhat larger head and thicker neck, it would not at all times be easy to distinguish between a light Hereford and a heavy Devon." Now where is even the most remote degree of similarity between "Matchless," and the portrait of the Devon cow? True, they are both the portraits of cows, but so were Allen's portraits of "Seneca Chief" and "Alligator" both hogs, but the similarity was done with when you had called the name common to the genus. It may be asked by some if Mr. Sotham's Herefords *are really Durhams*, how do you account for the color? That, I answer, in the hands of a skilful breeder is easy—the color of the Devon is very tenacious when crossed with any other breed; so say men of experience in the matter; so doubtless is the color of the Herefords; and a small degree of attention to the selection of animals retaining the color to breed from, would easily retain that point, when every other one was gone. Mr. S. has mistaken my remarks when he says I talked of "showing spirit in selecting a breed of our own," "and would be pleased to hear my suggestions in commencing the breed." My observation was, and I am pleased to have an opportunity to repeat it—"See what the Herefords were—hear what they are now—then say if there is impropriety in charging their admitted recent improvement, in points in which the Short Horns excel, to an admixture with them. If such is the fact, and we have a number of the finest specimens of the Short Horns to begin with; cannot we, by judicious crossings, and proper attention, form *for ourselves*, if I may be allowed the expression, a breed of grade cattle, without expending enormous sums of money, to pay our trans-atlantic neighbors for doing work that *we ought now to do for ourselves?*" Mr. S. thinks it would take a century to do any thing of importance in such a matter. I beg leave to differ with him, and in answer to his argument of time, would only say to him, see what Mr. Hewer has done in eight or ten years. I can give him an example nearer home; see what Col. Jacques has done!! The truth is we have breeders of as much skill and as much spirit as England can boast of. Col. Jacques has done as much for a milking breed of cattle as ever Bakewell or Collins has done for a beef breed. True he had the benefit of their experience as far as it went in his road, but this we can all have if we take and read the Cultivator, and it perseveres in the course it is now taking. Let me press it still further upon the community, foster your own country and let every effort be made to advance her general interests, in agriculture and stock raising. Keep the pure blood pure, and purify the scrub stock by admixture with it; keep nothing but a full blood bull, and let all your cows to him, and in a few years, by proper management, our stock will compare with England's best. J. H. HEPBURN.

Jersey Shore, Lycoming Co., (Pa.) Dec. 16, 1840.

REPLY TO "N. N. D."

I love the application of science to the practical purposes of life, and am free to admit that it is one of the greatest improvements of this utilitarian age; but I am strongly inclined to believe, that the practice of upbraiding and decrying those who follow the dictates of their own understanding, and value the wisdom and experience of past ages, is not calculated to advance the interests of true philosophy or improve the agriculture of the day. It is too much like a controversy between common sense and learning, which invariably ends in a victory of the former over its best friend, a friend with whom it will always harmonize when both are understood; and is one cause why learning makes little progress among those who put a high estimate upon the value of their senses. For my own part, I frankly acknowledge that I would not give up a single faculty of my understanding, nor the power of drawing a single deduction fairly from its exercise, for all the knowledge of Aristotle, or all the discoveries of Sir Humphrey Davy. "My Lords," says the Earl of Chatham, in one of his eloquent defences of American resistance, "I am often led to distrust the refinements of learning, when I so frequently see learned men suffer their minds to be misled by it; how lamentable indeed would be the condition of mankind, if science and learning, which fall to the lot of so few men, were necessary for our successful progress. Providence has taken better care of our happiness, and has given us in the simplicity of common sense, a rule for our conduct that will never deceive us."

I have been led to make these remarks from reading in the Cultivator, (page 197, vol. 7,) the *opinion*, (for there is no evidence that the conclusions are drawn from experiment,) of your scientific correspondent, N. N. D. of Stockport, that "some lands which contain a large per centage of the oxide of iron, are remarkable for their fertility; these are *injured*, and in fact *ruined*, by the application of manure." And he goes on with considerable display of chemical learning to fortify his fact with reasons. I should not call public attention to this opinion if it did not appear to be authenticated by a scientific and popular writer, whose object is laudable; but I lay down the broad position, that *no land* intended in the economy of nature for the purposes of residence and cultivation, was ever injured by the application of manure. Plants require only a determinate quantity of manure; an excess is detrimental. And so a man requires only a certain quantity of food; an excess is injurious; but, that land was ever seriously *injured* and in fact *ruined*, by the application of manure, is a new theory in agricultural science; it is one of those hypothetical opinions drawn from the refinements of learning, that serve to bring it into disrepute. Hypothesis non fingo, says Newton, in his Principia; and "jé ne vois jamais science s' avancé par hypothesis," says Cuvier in his *Ossemens Fossils;* but the opinion of your correspondent, who can't give up manure in all cases, is said to be the result of practical experience, and is probably like another opinion sometimes advanced in the Cultivator, "that draining is a great improvement, but we cannot entirely give up irrigation." The truth I take to be, that *all lands* from which crops are taken, require the application of manure, and the omission to apply it must end in sterility; but lest we should be supposed capable of misrepresenting your correspondent, let us have his own language: "Some farmers have actually denied the efficacy of animal manures and have asserted that their *frequent use* would make the land barren; in *their experience this was literally true:* and chemistry explains why it is so; experience shows us that *all the soluble salts* of iron are pernicious to vegetation; all the *insoluble oxides* of iron are harmless. Some soils which contain a large per centage of the oxide of iron are remarkable for their fertility; *these* are *injured* and in fact *ruined* by the application of manure. Animal manures all contain more or less of sulphur; according to the irreversible laws of combination, sulphureted hydrogen is one of the products of their decomposition; this unites with the oxide of iron in the soil, and by a play of double affinities, *water* and *sulphuret* are formed from their union; this sulphuret of iron by continued exposure to the atmosphere absorbs oxygen from it, and hence results another chemical transformation, and *sulphate of iron* is produced; this is another very *soluble* salt, most pernicious to vegetation, and absolute sterility must result." It is perhaps not intended by N. N. D. to take any distinction between *animal* and other manures as they are used indiscriminately in the above extract, and it is probable that sulphur exists in them all, and besides it is the *sulphate of iron* that does the mischief. But while the iron is *only* hurtful in its *acid* combinations, Dr. Jackson is quoted to show, that "one of the methods of improvement employed extensively in Belgium, is to spread iron, copper, sulphur, &c. upon the surface for the purpose of generating *sulphate of iron*, a substance that liberates carbonic acid gas, and forms gypsum from calcarious soils."

If I understand this reasoning, (which my readers must excuse me if I admit I do not) it is this: that *sulphate* of iron which is *always* pernicious to vegetation, when applied to calcarious soils—is fertilizing! and although the *oxides* of iron are harmless, they ruin *manured* land! and why? Because the manure generates sulphureted hydrogen, which, uniting with the oxide forms *water* and *sulphuret* of iron; the sulphuret absorbs oxygen from the air and produces the sulphate.

What quantity of calcarious matter is necessary to change the iflnuence of the sulphate and form gypsum from the soil, is not explained to us; but I suppose any soil that will effervesce with acids, is entitled to the epithet calcarious. If we can from such a combination obtain gypsum, we should be happy to see the proofs.

Now admitting the fact *which is not proved*, that there is a small quantity of sulphureted hydrogen gas evolved by the decomposition of manure, it would seem from Du Hamel's experiments, that it was highly useful in vegetation, and most assuredly it would require a *double* play of affinities to produce *water* and sulphuret of iron, from a union of the *oxide of iron*—in the soil—with sulphureted hydrogen gas; certainly there must be some double dealing in it, for it cannot be done as far as our experience goes, by any honest simple process. The affinity of iron for hydrogen gas is well known, but in this instance there are still stronger affinities to overcome. The gas immediately on its development would become dissipated in the atmosphere; if there was any water in contact with it, it would immediately absorb the whole of the gas, and instead of uniting with the oxide and forming the substances usually distinguished among mineralogists by the names of magnetic pyrites and cubic pyrites, which I suppose to be the sulphurets of iron; it would, according to all the rational deductions that can be drawn from its nature, perform the other functions of aerial phenomena upon the surrounding vegetables. If, however, it should not escape, but unite with the oxide and form water, how long has this been considered detrimental to the growth of plants? We know, if it comes in a deluge like Noah's flood, it would destroy "every living thing," but even then it would not "produce sterility;" but perhaps it is not the same water as that usually produced by the union of hydrogen and oxygen gases; it may be a kind of mineral water.

I am not a man of science, but a plain country farmer, and therefore, not disposed to dispute with your learned correspondent upon scientific subjects, but when he tells me that *manure* is pernicious to land; that the water formed by *any* chemical combinations *in the soil* is injurious to vegetation; that oxide of iron mixed with manure by various transformations, becomes pyrites or *green vitriol* or *copperas*, I feel as if I wanted to ask him for the proofs. Let us have the proofs; we don't dispute the facts, but let us see the experiment.

The writer of this article has been for many years familiar with land containing large quantities of the oxide of iron, upon which manure has been applied without stint or measure for ages, with, unhappily for this new theory, a continued increase of fertility. Holkham.

Friendsville, Pa. 12 *mo.* 25, 1840.

Raising Potatoes from the Seed.

Messrs. Gaylord & Tucker—During the past season I have reared potatoes from the seed; as the product far exceeded my anticipations, I will state the course of culture I pursued, and the result. As it has been generally supposed, that it required about 3 years to perfect the growth of the potato from seed, many have been deterred from making the attempt. Last fall I plucked from the stalk of a Mercer potato, a single cluster of four seed balls; these were preserved during winter from frost. On the 11th April, the seeds were sown in a hot bed; on the 18th June, the plants being from four to five inches in height, were taken up; twenty-five of the strongest plants were transplanted to the garden in rows fifteen inches apart, and six inches distant in the rows; they were once earthed or hoed slightly. Some of the tops were small, but generally as large as ordinary field potatoes; consequently they became somewhat smothered under their own foliage, and would doubtless have done much better had they been planted the same distance apart usually given in common field culture. The whole were gathered on the 17th Oct.; the tubers weighed 18½ lbs.; one potato weighed 8½ ounces, several 6 ounces, and half of them large enough for the table; they were generally kidney shaped, various in color, and in their general appearance a marked difference, the product of one plant only partaking of the parent. WM. W. VAN LOAN.

Catskill, Oct. 28, 1840.

HOT AIR FURNACE.

Editors of the Cultivator—I observe with pleasure, a communication in your Dec. number, (vol. 7, page 195,) from Levi L. Lowell, describing a hot air furnace erected by him some years since. Every experiment of the kind is calculated to lead to the improvement of this new and excellent mode of warming rooms.

Since these furnaces have become a little known, a very erroneous impression has prevailed with some, in relation to the amount of fuel consumed by them. This has doubtless arisen from the enormous quantity of heat wasted by those usually built in cities. A gentleman from the town, endeavored to dissaude his friend in the country from erecting one, asserting that "it would soon burn up all the wood on his farm." Now, nothing can be farther from the fact; indeed it is one of the most striking excellencies of this furnace, and that which peculiarly recommends it to the farmers of our country, that it consumes so little. From actual experiment, *it is certain*, that our large two-story farm houses, may be warmed throughout, day and night, with *ten cords* of wood a year.

Error exists also relative to their healthiness. Years of trial, however, have removed all doubt on this point. It has been proved that better health, especially freedom from catarrhs and their attendant symptoms, is enjoyed, not only by those who keep within doors, but by those whose business causes them to be exposed to the weather through the day. For invalids, the furnace is invaluable. The writer has recently had an opportunity of testing this with great satisfaction in his own family. And it is believed that West India voyages, for consumptive patients, would be more rarely required than at present, if it was in more general use. The peculiar feeling of summer air, and the entire freedom from the unpleasant sensation of stove heat, is such, that few who have once tried the furnace, will relinquish it willingly. In all weathers it is the same. While I am now writing, enjoying the advantages of a summer atmosphere, while "winter, in his roughest mood," is raging without.

The chief advantages of the furnace I described in a former number, appear to be in the broad, square, flat drums, which, by breaking short the smoke in its course, and exposing its heat to the air without by large surfaces, suffers little to escape. A sufficient number of these, and *large hot air tubes*, will commonly insure a good furnace. The latter should be so large, that air of a temperature of 140° Fahrenheit, rising through them, will keep the rooms at 70° in the most intensely cold weather. For this, the diameter cannot be much less than one foot.

This furnace originated with and was first erected in the year 1834, by William R. Smith, of Macedon. Perhaps some of your readers may be glad to learn, that complete castings for the stove, drums, and the circular revolving grates for the hot air pipes, of large size and improved construction, are furnished to order by Elbridge Williams of Palmyra, Wayne County, New York. Very respectfully, J. J. THOMAS.

Macedon, Wayne Co. 12 *mo.* 1840.

The Chinese Tree Corn.

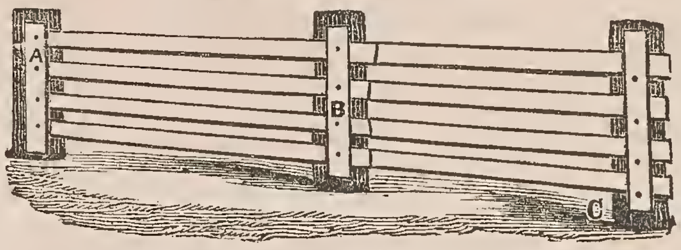
Having several communications on the culture of the Chinese Tree Corn, we have thought best to condense them as much as possible, and arrange them all under one head.

Mr. Henry Van Kleeck of Cuddebackville, Orange county, N. Y., says: "I send you two ears of what I have cultivated for China tree corn, wishing to know if this is like that which has generally been sold under that name. From the plat of ground mentioned in my communication, (p. 196, vol. 7,) being a scant acre, I had 120 bushels of ears; and from two separate bushels of ears, shelled at different times, I had each time more than 20 quarts when shelled. This you will perceive would be at the rate of 75 bushels of shelled corn from the acre. In the whole, there was not one bushel that was not perfectly sound and fit for seed. When it is considered that much of this was injured by the presence of a number of old apple trees—that three-fourths of it had had no manure for many years, except one plastering in the year 1836, and that a part of that on which the manure was put was very sandy, and consequently much injured by the drouth, I think we ought to be pretty well satisfied of its extraordinary productiveness, and the more so as it yielded twice as much per acre, as four or five acres of another kind in the same field where the land was equally good—although part of its extra yield may be ascribed to better cultivation, the other being cultivated on shares." ☞The ears of corn sent us with the above, are the same as the Chinese tree corn sold by Mr. Thorburn, of this city.

Mr. J. W. Poinier, of Morristown, N. J., says: "I planted six acres of the tree corn, and obtained nearly 500 bushels of corn in the ear, or about 90 bushels to the acre. It was planted on sod ground, plowed in the spring, and manured with poudrette, about one gill to the hill. I dropped the corn on the top of the manure. In the same field, I raised from 2½ acres of White Flint, 250 bushels, and a very superior corn to the Chinese. I made a large experiment with the tree corn for the express purpose of testing it with my other corn, and I have come to the conclusion that no more of it will grow on my farm"

"T. A." of Flushing, L. I. says: "I will briefly state the yield of my crop of this year. From a piece of ground containing about 2½ acres, we gathered 280 bushels of ears, which is at the rate of 112 bushels to the acre; it is generally allowed that two bushels of ears will yield one bushel of shelled corn; the Chinese will yield two quarts over the bushel. It is a 12 rowed indented corn, weighing 56 pounds per bushel. There is generally two ears on a stalk, sometimes three, and there has been four found on a stalk, although the last mentioned number is more rare. We have raised the above corn for several years, and I think it is more profitable than any other. I have no doubt there has been other varieties of corn sold for the Chinese, which having failed in answering the expectations of those that have cultivated them, it has led many intelligent farmers to believe that the Chinese corn is all a humbug, which is indeed far from it."

Board and Stone Fence.



(*Section of Board Fence.—Fig.* 16.)

If a poor farmer happens to have a good fence it is good luck, but it is considered an indispensable item for a good farmer to have a good fence. In my travels I have frequently noticed in the construction of board fences a failure both for cheapness and durability. The common practice of putting a post at the center of the boards and of making the fence too high, and of using common rails and wide boards for fences are material objections. Where three posts are set to one board and one or more are raised by frost or gets out of place, it must give way either by splitting the boards or breaking the nails; on repairing it, the board must be taken from the posts, and a loss sustained, in breaking of boards and nails. High fences and wide boards will sooner get out of order by the action of every wind.

The above cut (Fig. 16,) will better illustrate the plan that I would recommend for the construction of a common field fence. Such an one may be racked about or forced up by frost, then replaced with despatch, and drove home with a beetle or other weight without injuring the fence or nails materially.

I have my logs cut from ten to eleven feet long, boards from seven to eight inches wide, an inch and one-fourth thick; battens A B C to each post of the same material, four feet long; oak pins suitable for inch and one-quarter bore, or that which is cheaper, cat spikes, weighing about four to the pound; three spikes or pins may be drove through the battens and boards as at A B, or under the board as at C, each end of the board should extend by the post. A fence of this description made of four boards, eight inches in width, six inches asunder; from the ground to the first board, four inches space, will raise a fence four feet four inches high.

I use the same kind of boards, posts and fastenings, for a half wall, laid three feet high; the first board should be placed close to the wall, the space between this and the upper one should be eight or nine inches, that sheep may the sooner attempt, but in vain, to creep through, instead of elevating his mind any higher, which he will do, if the boards are near together.

For those who may have a stout fence thrown up by frost, I will suggest an idea of replacing it; first block up the fence, then dig down by the side and under the posts the depth required; then with a few hands it may be carefully let down to its former position.

To prevent frost from raising a post of any kind, first sink the hole from two and a half to three and a half feet deep, sufficiently large to admit cobble stone around the post, which must be drove with an iron bar until the space is filled, and use no dirt except about four inches to cover the surface.

A farmer near me says that posts should be set with the top down. If thus more durable, I can account for it only by supposing that the moisture at the bottom is not conveyed upward so readily through the pores of the wood. I have set four white oak gate posts four feet deep, two of them with the top down, and marked them for an experimental trial; it possibly may be of some use to the rising generation, if not directly for my benefit.

Churning Milk in Mexico.

Many patents have been granted for various kinds of churns in our yankee land, which probably in most cases originated from those who were accustomed to the "good old way," but it strikes me that the Mexican churn beats all your yankee inventions for ease, pleasure, and saving of time. The method as communicated to me by Joseph Greenham, a merchant of Vera Cruz, is: to enclose two tin cans in a green cow hide, the size of them to correspond to the quantity of milk; the hide will shrink on drying and adhere tight to the cans, and being placed one on each side of a trotting horse, it has the appearance of saddle-bags; when filled nearly full with milk, the Mexican has only to mount the steed and ride into town from Mediling to Vera Cruz, the distance eight miles; the motion of the horse effects the separation of the butter from the milk, and the rider has only to pocket the cash for his buttermilk and butter and at his leisure wend his way home.

Yours, S. W. JEWETT.

Weybridge, Vt. Jan. 1841.

On the Culture of Wheat.

Messrs. Gaylord & Tucker—I have for some time past, observed several complaints in the papers, of the injury done to the wheat crops by the "*Hessian fly*," and from what I have seen, I am induced to think that it is the *farmer's fault if that "fly" does his wheat an injury*. As you now have my opinion, I will show you how I came to that conclusion.

When I began to manage the farm whereon I now live, twenty-one years ago, I had read and heard a great deal of the ravages of the fly, and of the different "soaks" for the seed to prevent the injury. Some would find a certain preventive in lime water; others in a solution of nitre; others in strong brine, &c. &c. *and all said to be from actual experiment*, and all based on the idea that the egg or nit from which the fly came, was carried into the ground, in the fuzzy end of the grain. For the purpose of trying the different soaks, I prepared some seed wheat in each kind of soak that I had heard or read of; a part of all the seed I had so prepared, I sowed in a lot near the house, (about the middle of September,) keeping each kind of soak by itself; the remainder of the seed I sowed on cotton, which I had floating on water in glass vessels in my house. That on the cotton came up about the same time as that which was sown in the ground. I let it all stand until about the 25th of Oct. when I took up nearly an equal quantity of the plants, from the different kinds of soaks that was sown in the lot, and of those that were sown on the cotton. I then split the plants from the root to the top, and placed them successively under a strong microscope, and to my surprise, nearly every plant that came from *the lot* was perforated near the top of the ground, and had from three to eight eggs or nits in each, while those taken from the cotton had no perforation nor nits about them. This satisfied me that the cause of the fly *was not* carried into the ground by the seed. I then tried some of the wheat under the glass, but could not find any thing like an egg or nit about it, and I came to the conclusion that if I kept my wheat out of the ground till after a few good white frosts, (which would likely destroy what flies there was,) I should not be troubled by them, and from that time to this I have never sown my wheat *until in October*, and I have never found my grain hurt by the fly, although I have not omitted sowing wheat for eighteen years. From this I conclude, that the farmer who sows his wheat before some good frosts, and thereby makes his wheat fields look very fine in the fall, offers the fly a fine shelter for their eggs, and invites them to destroy his grain.

Respectfully yours, L.

Hamburgh, N. J. Jan. 1841.

Culture of the Sugar Beet.

Messrs. Gaylord & Tucker—I have tried during the four years past, various modes of cultivating the Sugar Beet. On our soils, which we call red land, but which I suppose you would call alluvial, the following plan I find the best. I work my ground until it is well pulverized, with a good supply of manure if it is poor. I then draw furrows about two feet apart, into which I put a reasonable quantity of manure. I then run my plow around both sides of the furrow, which will cover the manure and raise it on a ridge. I plant the seed from ten to twelve inches apart on the ridge. In this way I have been tolerably successful. Last year I had an extraordinary crop, but I did not take time to ascertain the number of bushels or tons to the acre. This year I had two acres, and got twenty-six tons, though I do not call it more than half a crop, it having been a very dry season. PETER DIEHL.

New Oxford, Pa. Dec. 21, 1840.

LARGE PIGS.

Messrs. Editors—Mr. Jabe Pierce of this place, a few days since killed a pig 9 months and 10 days old, which weighed 272½ lbs. It was one quarter blood Berkshire. Its grand-father on its mother's side, must have been, I think, the original from which Mr. Allen drew his picture of the Land-pike; he weighed when killed, between 3 and 400 lbs., with very ordinary feed. The only way his owner could keep him confined, was by tying his hind legs and putting him in a pen 8 or 9 feet high. What do you think of crossing the Berkshire with the native—will it not produce a larger, and for ordinary farmers, a better breed? The experiment of Mr. Pierce would lead one to form this theory.

I observe conflicting communications in regard to the value of sugar beets as a food for hogs. We used about 100 bushels last year, and were so well pleased, that we raised some 4 or 500 bushels this year, which we are now feeding to our hogs, 13 in number; we commenced feeding the first of December, and thus far have found no reason to condemn the beet; our hogs not only live, but gain finely. In the spring we will communicate the result of our experiment. M. Y. T.

New Lebanon, N. Y. Jan. 4, 1841.

Messrs. Editors—I killed a pig the 8th inst. which was ten months and eight days old; he weighed 266 lbs. neat. He was half Bedford, one-fourth Chester, and one-fourth what is called no-bone. I did not commence feeding him until he was four months old. It is the opinion of my neighbors, if he had been half Berkshire and half Bedford, he would have weighed upwards of 300 lbs. I fed mostly on slops. W. L. SMITH.

Smithsville P. O. Powhattan Co. Va., Dec. 23, 1840.

Qualities of the Sugar Beet.

Editors of the Cultivator—Your friend Mr. Caton, who hails from Illinois, is most ably and very opportunely answered in his inquiries concerning the nutritive qualities of the beet root, by your able correspondent of the Three Hills Farm; but the great importance of the subject at this time, induces me to trouble you with a few other remarks. Much money has already been expended, and very uselessly as I believe, in this country in raising beets, both for feed and for sugar, and much more in all probability will be expended as uselessly. It is, therefore, highly important that the merits and demerits of the beet root should be fairly laid before the agricultural public as early as may be.

In the spring of 1839, I purchased a large amount of seed, believed to have been recently imported from France; much of this I planted, the residue was disposed of to others, who had acquired as exalted ideas of the value of sugar beet as I had. My own experience I have already detailed; recently I have seen most of those who embarked with me in the enterprise, not one of which could be induced to repeat the trial in 1840. I asked one what was the effects of long continued feed of the beet to cattle? His answer was, "the cattle, the latter part of winter become so weak and feeble that they can scarcely rise upon their feet, or stand when they are up." Another,—one of the best judges in the state on such a subject, says "he fed out a considerable crop of beets to his cattle and hogs, and that they did most miserably on them, and that he would never repeat the experiment." I said to another gentleman, Sir, I understand you have fed your crop of beets to your hogs; will you inform me of your success? He replied, "that his hogs loved the beets *dreadfully*, and after filling themselves as full as they could hold they would squeal for more, and what was the worst of it, they gained nothing during the whole time," and added his opinion, "that the French sugar beet was the meanest article ever fed to a hog." One gentleman, who raised many hundred bushels for distilling, told me that there was so much woody fibre in the beet that he could do nothing with them—that he could as well distill a bundle of hay.

I have said that cows, well fed otherways, would give a large supply of good milk, when fed on beets. My cows were well fed on dry fodder, with a limited supply of water, and in that case it might reasonably be expected that full feed of beets would promote a large secretion of milk; but now I am satisfied that I gave them more credit than they deserved, for I make as much butter this winter from the same cows, on dry fodder alone, as I did last with the addition of beets.

But here is one consideration to which I wish to call the attention of those who may be disposed to enter upon the cultivation of the beet. Without starting the question, whether sugar is or is not nutritive, as an article of diet, it is perfectly obvious that it is sugar, in some form or other which we are in pursuit of when we raise a crop of beets. Now, if it shall prove, as I think it will, that in adopting the French analysis of sugar beet, we have committed a most egregious blunder in applying it to the beet raised in this country, and that instead of our beets containing 10 per cent or even 6, that they contain, especially in a heavy growth, scarcely 2 per cent, and I know that I could have showed tons that would not have given 1 per cent of pure sugar—then the root must of necessity be worthless. It may prove, and probably will, that beets raised in France are as much richer than ours, as are their grapes. In order to raise sweet beets a profuse supply of vegeto-animal manure is, I think, indispensable, and I have doubted if the western prairies would not give beets more destitute of sugar than ours. I have taken some pains to ascertain if such be the fact. One friend in St. Clair county, Ill. writes me that "his beets grew to a great size, but that they are destitute of sweetness." Yesterday I completed a series of experiments, instituted with the view of ascertaining the precise quantity of sugar contained in a small crop of beets raised the last season in my garden. I have tried nearly every process that has been published; but I gave preference to one, detailed in a memorial by Fleishman, presented to Congress some two years ago. This directed that the beets be dried and powdered, and soaked in warm or hot water, until the water should have taken up all the sugar contained in them. The water was then to be poured off, and in the course of being evaporated was to be cleansed by aid of eggs, animal charcoal, &c. The process has been conducted with the utmost care possible, and the result is a waxy, rank flavored, sweetish mass, in which I am positive there is not sugar equal to 1 per cent of the beets used. In another experiment I availed myself of the fact that boiling alcohol takes up one-sixteenth of its weight of sugar. I dried the beet and powdered it, and boiled it in alcohol. The solution was then dried down and gave me much the best result I have ever obtained; but it was not sugar, nor was there one per cent of sugar obtained from the beet by this process. For a confirmation of the ground I have taken, I need only to refer to the frequency with which we have occasion to know that the beets brought upon our table are totally destitute of sweetness.

In conclusion, I have no hesitation in saying, that the French sugar beet raised in this country, is so destitute of sugar, and the manipulation so tedious and difficult, that it cannot be raised with the view of supplying the place of sugar from the cane; and further as an article of food for animals, it will be found to be greatly inferior to any other root raised for that purpose, if not absolutely worthless. S. GUTHRIE.

Sackett's Harbor, N. Y. Jan. 20, 1841.

Management of Salt Marshes.

Messrs. Gaylord & Tucker—Mr. Fairbanks inquires through your paper, what kind of grass seeds are best adapted to salt marshes. I have made some few experiments with salt marsh, without attempting to keep off the salt water, (I mean the heads of creeks, that are frequently overflowed by salt water,) by scattering the seeds of Herds grass, (known to some persons as red-top,) over the marsh, and leave them to vegetate as they might. I have also sowed wheat upon the mud and turf thrown out of a ditch, cut through the same kind of marsh, and it has flourished and produced well, and so did the herds grass; and I have no doubt that good crops of hay and wheat might be raised upon reclaimed salt marshes, if they were ditched and the tide kept off. I think the best way to prepare such marshes would be, to burn off the grass, cut narrow and deep ditches, and spread the mud over intervals, for the purpose of making a bed for the seed, although they could not be long cultivated in wheat, as by destroying the grass roots, (turf,) the marsh would settle too much and perhaps become miry, but they would not become so if kept in grass. Marsh mud and turf, when dried and pulverized, make excellent manure for every kind of crops raised in this part of the country. No doubt it would vastly improve by lime. Herds grass seed can hardly be sown too thick; about two bushels to the acre is the usual quantity, but three would be better; it may be scattered upon the ground, and covered by dragging a rough bush over it, or if the ground be not prepared, by permitting cattle to trample it in.

Yours respectfully, HENRY WHITING.

Hampton, Va. Dec. 12, 1840.

Hints to Correspondents.

Messrs. Gaylord & Tucker—When I am at a loss for something to interest me, I hunt up the numbers of the Cultivator, and this resource hardly ever fails me. In this way, I have read some of the articles of your paper half a dozen times, and always with unflagging interest. The secret of this is, that they are in the line of my business; and at every reading some new idea is suggested that may profit me in my profession. Your articles on draining have taught me how to drain my lands, from which I have derived some profit, and from which I expect to derive more. From your disquisitions, I am in hopes I shall learn the proper mode of applying, as well as the most economical mode of making and saving manures. Certain it is that many sources of obtaining manures have been pointed out, of which I had not dreamed before; and from your various publications, I have been made acquainted with modes of culture and farming implements, and improved breeds of domestic animals, of which I had no previous knowledge. Some other things I have learned, and I hope I shall yet learn many more from the columns of your paper. Among the many articles which I have read with interest is Mr. Garnett's of Virginia, in favor of applying manures to the surface of land; and it would seem that the experiments with his cow-pens, &c. as detailed by him, go a good way to prove that manures should not be buried in the earth; an opinion to which my mind has been brought, in opposition to my preconceived opinions and my previous practice, by an observation of facts. But in the experiment detailed by Mr. Garnett, there is one material fact omitted. Mr. Garnett has not told us the character of the soil upon which his experiments were made. If it were a sandy porous soil and subsoil, it is obvious that the necessity of keeping the manures near the surface is greater than if the soil be a more retentive one; if, indeed there be any truth in the opinion that sandy, porous soils lose more from solution and infiltration than retentive clays. If this shall meet the eye of Mr. Garnett, he will oblige me and perhaps others of your readers, if in some future communication he will state the character of the soil and subsoil upon which his experiments have been made. If all those who give us accounts of their experiments, would uniformly state the character of the soil upon which they are made, they would be more satisfactory and more useful.

In your October number there is some sensible remarks on rolling land, and an experiment is mentioned of a field of corn, one half of which had been rolled, and the product increased by the roller. Upon reading this, will not every one naturally ask, what was the character of the soil? For if it were admitted that all soils are benefitted by rolling, yet it will not be contended that all are equally benefitted; and indeed, it would seem somewhat paradoxical that a soil which is too heavy, and a soil which is too light, should both be benefitted by rolling. Light sandy porous soils are improved by the treading of cattle, but stiff tenacious clays are as much injured by it.

There is another omission on the part of your correspondents, that occasions inconvenience, and frequently abates the value of their communications to distant readers—in failing to mention in their address, the state from which they write. Communications are addressed to the public from places, whose locality is unknown to many of your readers. In all experiments in agriculture, it is important that the character of the climate and the character of the soil should be known,

GEORGE H. CHRISMAN.

Harrisonburg, Va. Dec. 20, 1840.

Transportation of Cattle.

Messrs. Editors—In your January number I notice the wish of a correspondent, who contemplates moving to the west, for the probable expense of transporting some cattle to Chicago. I think I can enlighten him some on the subject. Two years ago last fall, I took a trip to Indiana via Chicago. I took with me a bull, two cows and a calf. From Albany to Buffalo it cost me ten dollars a head for the grown cattle, and five for the calf; I took care of the cattle myself, and purchased hay along the canal as I wanted it, which saved the expense of freight. At Buffalo I shipped for Chicago on board of a steamer, and they charged me sixteen dollars a head for the grown cattle and eight for the calf.

By shipping in the summer when freight is scarce, probably they might be shipped for one half of the above expense; or much might be saved by procuring young animals.

Having been through the *mill* myself, perhaps a few hints would not come amiss. My first would be to secure the hay on board of the steamer, especially if there are horses or other stock on board. I purchased enough hay at Buffalo to carry me through to Chicago, but it was all gone when we arrived at Detroit. The first night after we left Buffalo, I thought, before I *stowed* myself away, I would see how my cattle liked the forward deck, and while up there I found some of the steerage passengers making very free with, and filling their ticks with my hay. I put a stop to that by giving the hand on watch, a *scale* to keep a sharp look out for my hay. I found before I had been out long that I had in addition to my cattle, a span of horses to keep, the owner having shipped them without hay. I told him that he must return as much hay as he had taken, when he landed. It chanced to be night when we arrived at Detroit; he got his horses off, and I had to *whistle* for my hay.

I presume, as I said before, cattle could be shipped to Chicago cheaper than it cost me, for when I arrived at Buffalo the season had so far advanced, that there was but one more steamer to go through the upper lakes; I had no alternative but to go by that vessel and pay their price, which I think was rather more than would have been charged had there been competition.

At Albany some difficulty may be had in not finding the right kind of a boat. I could find no boat to take them except a scow—though perhaps in the summer the line boats would be willing to take cattle, as they would not have freight enough to take up all the room. Before starting on my journey, I halter broke my cattle, and could lead them as you would a horse. I would recommed this to your correspondent, as he will find it very convenient, and save him a vast deal of trouble. *Pleasant Hill*, 1841. WM. BEMENT.

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THE CULTIVATOR:

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Meeting of the State Agricultural Society.

The proceedings of the New-York State Agricultural Society at its annual meeting in this city on the 10th and 11th of February, will be found in the present number of the Cultivator. The meeting was very respectable in numbers, and the best spirit prevailed among the gentlemen present. All seemed determined the Society should go on, and go on effectively; and such we trust will be the result. We have space only to call the attention of the reader to the new and more efficient organization of the Society, and the resolution adopted making it incumbent on the Society to hold annual meetings or fairs for the exhibition of cattle and other animals, farming implements, products, &c. the time and place to be designated by the Executive Committee. There can be no question that the successful progress of this Society would prove of immense advantage to the state, and there can be no good reason why the Empire State should not have an Agricultural Society on the most liberal and efficient scale. We are confident the funds can be raised for the annual and semi-annual fairs, and thus an impetus be given to the cause of agriculture throughout the state. On the whole we think it right to expect much from the energy which it is hoped the new board of managers will infuse into the affairs of the Society, and that its friends in all parts of the state will feel the importance of giving it their effective aid and support. The time and place of the Annual Fair, with the list of premiums, will be fixed upon at as early a day as possible, that the friends of agriculture throughout the state may fully understand the matter.

American Journal of Science and Arts.

We perceive in the latest number of this valuable Journal, that a change in the terms of publishing, most favorable to those subscribers who receive the work by mail, has been made, by which those subscribers who send in their names and pay in advance, receive the work *free of postage*, thus reducing its cost some one dollar and twenty or thirty cents.

The Journal of Science, which has been so ably conducted by Prof. Silliman, has few equals in merit in the world, and no superior; and has become so identified with the progress of science all over the globe, and so well known in all countries, that its possession may be considered necessary to every one who takes an interest in the rapid advance and surprising discoveries of science. Some of the most valuable papers on the subject of agriculture yet published in the United States, have appeared in the Journal, and there is scarce a subject of interest in any branch of Physical or Natural Science which does not here find its appropriate notice and place. The Journal has done more to make the science of this country known in Europe, and consequently to elevate the character of the United States among foreigners than any other American work, and it is one of which every citizen of this country may justly be proud. It is published quarterly, making two handsome octavo volumes annually, illustrated with drawings and engravings, when the subject treated requires them, at the price of six dollars a year; (postage being now deducted.) We take a pleasure in inviting the attention of the readers of the Cultivator to this Journal, and hope that such of them as wish to possess the most complete record of the progress of science extant, will send in their names as subscribers to Silliman's Journal at once.

Legislative Aid to Agriculture.

We are gratified to learn that the Agricultural Committee of the House of Assembly have reported a bill for the benefit of Agriculture. Its provisions are such as will, we are inclined to believe, meet the approbation of the great mass of our farmers. It appropriates the sum of seven thousand dollars, to be distributed to the County Agricultural Societies in the ratio of $50 to each member of Assembly, and the balance of the appropriation, $600, to the State Agricultural Society—the money not to be paid to the several Societies until they have raised an equal sum. If this bill shall be passed, and we cannot doubt but what it will be, it will give a new and powerful impetus to agricultural improvement. Small as the sum appropriated is, it will have the effect to bring into existence associations for the advancement of agriculture in all our counties, and their action will be extended to every town, so that, more or less, every individual may participate in the benefits to be derived from these associations.

"Low's Illustrations."

We have received the first four numbers of Prof. Low's splendid "*Illustrations of the Breeds of British Animals*," a series that in its progress can scarcely fail to throw much light on the origin and improvement of the various races of domestic animals in Britain; an inquiry scarcely less interesting here than there, as it is from the same source our domestic animals are derived. The Illustrations is a magnificent work in folio, the numbers published every two months, each containing four engravings of the folio size, of some of the most distinctive races of animals of the older breeds, most beautifully drawn and colored from life. We think this method is a very good one, as it will show more clearly than any other the improvements which have been effected in the breeds, and the sources from which the improvement has been derived. The letter press description is by Prof. Low, and his extensive acquirements, the great advantage he enjoys from his position, and his intimate acquaintance with the subject on which he writes, gives the greatest assurance to the breeder or the agriculturist, that the opinions expressed may be fully relied upon. The publication price of the work is one guinea a number. Of the numbers before us, No. 1, is devoted to the Ox—No. 2, to Sheep—No. 3, to the Hog—and No. 4, to the Ox.

It is impossible to look over the portraits of some of the original breeds here given, without being struck by the development of qualities that have given the greatest value to some of the improved breeds. Thus it is well known (see Cultivator, vol. 7, page 94,) that the present beautiful Short Horns are the result of a successful cross of the Durhams and Galloways, effected by Mr. Collings. Now we think no one can look at the Galloway heifer in one of these engravings, without perceiving at once the origin of the square form, heavy quarters and fine points, which are so characteristic of the Improved Short Horns. The color of the Galloways in the Illustrations is indeed black, but the cross was effected with a *red* Galloway cow, which may account for the product of the cross being free from all colors excepting white and red.

So with the Hog; no one can look at the figure of the Siamese sow given in this work, and compare it with the Berkshire in the same number, without tracing at a glance those peculiar qualities, the union of which render the improved Berkshire the most valuable breed of the age. The clean head, short ears and neck, round chest, and heavy hams and shoulders, are those of the Berkshire mainly, while the color, quiet nature, short legs, and aptitude to fatten, have in a great degree been derived from the Siamese or China pig, for, according to Prof. Low, these are identical. We believe an examination of these portraits would have materially aided our southern and western agricultural friends in disposing of that vexed question, the color of the Berkshire pig. Prof. Low has given the original English Berkshire, a sandy color, dashed with black spots, and the Siamese is perfectly black. That the improved Berkshire should have white feet, and that invariably or nearly so, is seen from the fact that in both figures, *all the feet* and part of the leg is white; even the white hairs in the tail, which have elicited so much criticism, are not wanting. Of the Chinese or Siamese, Prof. L. says—"The individuals are of small size, and have a cylindrical body, with the back somewhat hollow, and the belly trailing near the ground in consequence of the shortness of the limbs. The bristles are soft, approaching to the characters of hair; the color is usually black, the skin externally of a rich copper color." Again, "the varieties of this widely extended race, with which we are chiefly conversant in this country, are derived from China; they have usually the dark color characteristic of the race, but they are often also white." Of the Berkshire, he remarks, "Many of the modern breed are nearly black, indicating their approach to the Siamese character, and sometimes they are black broken with white, showing the effects of the cross with the white Chinese." To us, the black, or nearly black, color of the Improved Berkshires, with the sandy tinge of the extremities of their hair occasionally, and their white feet, appear satisfactorily accounted for by Prof. Low's statements and figures. That the color should not have been black, or nearly so, would have been contrary to the well known results of crosses in other animals, and to what must have been rationally expected here.

Imported Seeds and Implements.

We have received from James Ronaldson, No. 200 South Ninth-st., Philadelphia, a pamphlet containing a list of grains, grass seeds, implements, &c. imported by him from England and Scotland for the use of American farmers. Among these we notice the Oxford White Prize, Pomeranian Red, and Golden Drop Wheat; Scotch and Chevalier Barleys; Hopeton Oats; Rye; Rye Grass; the celebrated Don Potatoes; Sugar Beet; Weed hooks; Hand Mills; Subsoil Plow, &c. Mr. Ronaldson has also brought a great variety of articles in extensive use abroad, as examples to artists in this country, and as worthy of introduction in some of the many processes connected with agriculture.

We think the undertaking of Mr. Ronaldson a praiseworthy one. There can be little doubt that some of the new varieties of grains that have been introduced by either skill or accident into European agriculture will be found very valuable in this country, and well worthy the attention of our farmers. Some things may not be adapted to our climate or our culture; there will be doubtless some failures, but the introduction of a single valuable grain, or grass, or root, into cultivation would compensate for many such. Letters, *post paid*, addressed to Mr. R. will receive prompt attention.

Agricultural Address.

We have received by the kindness of our friends of the Kentucky Farmer, the address of the Hon. Chilton Allan, delivered before the Kentucky State Agricultural Society, at its annual meeting in January. The main proposition of Mr. Allan in his Address, is that "the direct action of government should be brought in aid of individual industry, in promoting the great interest upon which our individual and social prosperity so much depends."

This position is most ably illustrated and enforced, by a reference to the history of agriculture in past ages, its present condition in this country, and the vast importance it has in connection with the prosperity of the United States. We have room for only a single extract:

"I have satisfied myself by much observation and reflection of the truth of the following statements:

1. That at least two-thirds of our arable land is annually becoming poorer by unskillful husbandry.
2. That it is practicable to make our lands annually more fertile.
3. That both our arable and pasture lands may be made to produce twice as much as they have done.
4. That at an inconsiderable expense the cattle in our state can be made worth annually upwards of four millions more than they have been.
5. That with the same amount of food, our swine may be annually advanced in price $2,000,000.
6. That there is yet in use among us, in a large part of the state, very imperfect agricultural implements.
7. That two men with the best plows can perform more work in a day, than three with those in common use. * * * *

There are 490,613 cattle in the state, their average value is but $5.87, while the average value of those in three counties that have improved their stock is $15. The aggregate value of the whole is but $2,882,218, but if all the counties had given the same attention to improving the stock as Fayette, Bourbon, and Clarke, the aggregate value would have been $7,359,195. The experience of the few counties that have given their attention to swine, has demonstrated that the improved breeds can be brought to maturity upon half the food required by the old sorts; and a proper rotation of crops on exhausted fields, has restored them to their primitive fertility."

Kentucky has a most fertile soil; sons that always make their mark in whatever they undertake; and if the impulse already given to her agriculture is increased or perpetuated, the best results are sure to follow.

WORK FOR THE MONTH.

System.

System is as essential in farming, as in any other occupation of life. Let the farmer, therefore, who has never reduced his methods to order, commence now; let him examine his farm, make a map of it, number each field, and having provided himself with a memorandum book, (a few sheets of paper doubled will do, if a better one cannot be had,) and a regular debt and credit kept with each field. Charge to the field the manure, labor, seed, &c., and credit to it the crop taken from it, whether of grass or grain. It is only in this way that any thing like an estimate of profit or loss can be correctly formed. In another part of your book, enter in separate columns all the cash received or paid out by you. Look it over occasionally, and see if any purchases have been improvidently or needlessly made. This will be particularly necessary if you are in the habit of purchasing articles on credit, one of the very worst practices in our opinion, into which a farmer can fall.

Fruit.

March, of all the year, is the best for securing cions with which to improve our fruit orchards. Where the trees from which the desired grafts are to be taken stand in the same orchard or neighborhood, the cutting may be delayed until the time of setting arrives; but as a general rule it is far better in all cases to cut them before the spring circulation of sap commences. Budding in the cases of peach, plum, cherries, &c., is more commonly practiced than grafting; but, unless in small trees, grafting is better for the apple. We think there is too little attention paid to fruit among farmers. When it is recollected that a good fruit tree costs no more than a poor one, that it occupies no more space, and that for eating or for feeding, the fruit of one is infinitely superior to the other, the general prevalence of inferior trees is surprising, and can only be accounted for, except on the supposition of extreme negligence. A good paste may be made for grafting by melting together three parts of beeswax, three of rosin, and one of tallow; and working them together into rolls in cold water, after the manner of shoemaker's wax. Some place the wax directly on the tree; but the better way is to spread it on common cotton, and then it may be cut into such strips or pieces as are wanted. Warmed in the sun, or by the hand, they are a much neater as well as better application than the old fashioned method of applying the paste directly. Those who are intending to graft next spring, will do well to prepare a quantity of cotton cloth in this way now, or while there will be more time than in the hurry of spring work.

Maple Sugar.

March is the month for making maple sugar; and no one who has a sufficient number of these valuable trees should neglect to supply his family with sugar from them. The quantity of maple sugar made in the United States, when unfolded by the Agricultural census, will surprise all. The full returns are not yet made out; but in many districts of the northern States it is ascertained to amount from 40 to 80 pounds to each individual. To make *good* sugar, the greatest neatness in every thing is requisite. The sap must be boiled as soon as possible after it is drawn from the tree, as delay renders it partially sour, and prevents the syrup graining. If from any cause the sap when gathered, cannot be boiled at once, a quart of lime to a hundred gallons should be added, which will prevent the acidity, and render the formation of good grained sugar certain. The sugar maple is one of the most beautiful as well as valuable of our forest trees; and we think that for ornamental purposes it is exceeded by none. If therefore each farmer would plant a few hundred trees, either as a grove, or by the road side, but a few years would elapse before he would find himself independent of the Brazils or Cuba for one of the most indispensable articles of domestic consumption.

Preparation.

In the field, little or nothing can be done in this month to advantage, especially at the north; but much may be done to forward the labors of the year and ensure success to the farm husbandry. If it is not already done, let the farm implements be thoroughly examined and repaired; a list of such as are to be purchased made out; the seeds necessary for the season secured; and in short let every thing be done now, that must be done now or hereafter. True agricultural forethought is essential to the proper employment of time.

Care of Animals.

The stock of the farmer requires his utmost care and attention during this month. In the severe climate of the north, animals are more liable to diseases in the spring months than in any other; and as it is besides the usual time of bringing forth their young, additional reasons for attention are furnished by this fact. Cows should have daily supplies of bran or shorts in water, with roots if they are to be had, for some time previous to dropping their calves, as good nutritive food gives them strength, and besides secures a better flow of milk. Sheep now, especially the ewes, should have a good supply of turneps or other roots daily, with a good portion of salt, and, if not as necessary now as in the summer, an occasional covering of the trough with tar, will conduce to health. On the treatment of his animals much of the farmer's success in his business is depending, and it is one of those things to which his attention cannot be too frequently urged. Every dairyman is aware of the great difference in profit there is between a cow that is in good condition in the spring, and one that does not recover from the effects of the winter until the summer is half past. So with sheep. A flock of well kept ewes will raise more and better lambs; and their wool will be ten per cent better than that from half starved, weak and feeble animals.

Sowing Grass Seeds.

If there is one point of husbandry more than another in which farmers are generally defective, it is the niggardly way in which they use grass seeds in their tillage. If any seeds are sown, not more than half the quantity required is often used, the fields are left bare, and the unoccupied ground becomes a fit place for the vile weeds that are ever ready to spring up, where the husbandman does not anticipate them, by giving the earth something more valuable. *Something* must grow on our rich lands; it remains for the farmer to say whether the product shall be valuable or useless; whether it shall be the grasses, clover, &c., or Johnswort and daisies.

Plaster.

Let a good stock of this invaluable aid to the farmer, be laid in this month, if it has been neglected to this time. Plaster alone will not restore exhausted lands, or prevent the deterioration of others; but applied to clover in a rotation of crops or to meadows, it is of the greatest importance to the farmer. Some have apprehended that its use was injurious; but on some of our best cultivated districts fifty years experience has shown that such apprehensions are groundless.

ANSWERS TO INQUIRIES, &c.

Thin Rind Hogs.

Messrs. Editors—I should be pleased if you would give us some information respecting the hog called with us the "thin rind hog," as I do not recollect that this breed has been noticed in the Cultivator. The thin rind hog has a small head and ears, is straight in the face, short in the legs, and in other respects is very well proportioned. There are a few of them in this county, and I have purchased two with an intention of improving my stock of pigs. Those that have tried the breed are very well satisfied with them. John Young.

Iredell Co. North Carolina.

The hogs alluded to by our correspondent, are doubtless the breed called the "Norfolk Thin Rind," and were introduced into New-Jersey in 1830, by H. Degroot, Esq. of New-York. Mr. Townsend of New Haven, obtained some of them, and in 1834, he sold numbers of them to go to the Middle and Southern States. They are doubtless a valuable breed, and very far superior to the old breeds so common in this country. Mr. Barnett of New Haven, killed a pig of this breed, lacking one day of nine months old, that weighed 360 lbs. The Norfolk has however, generally yielded to the Berkshire both in this country and in England, although in many of the most essential points, they much resemble each other.

Lime, Apple Trees, &c.

Messrs. Editors—As I wish to try an experiment in liming land, you would oblige me by giving in your pages a description of the cheapest and most efficient mode of burning lime, and also your opinion of its value if applied to ground intended for corn. Also, whether apple-trees of a small or medium size blown out at root last spring, yet some of the roots remaining in the ground, and the others mostly green, can be topped, replaced and grafted with an assurance of doing well afterwards, or will their place have to be supplied with new ones?

Greenville, Tennessee. E. Link.

Lime is a valuable manure, and without its presence in some form in the soil, there are some plants that will not succeed. The easiest way of making some lime for an experiment, where wood is plenty, would be to make, as is often done, a pile of hard wood logs, and on the top of this spread the limestone broken small. The heap is then fired, and when burned out the limestone will in most cases be ready for use. This is a barbarous practice, however, and where much lime is wanted, regular kilns must be used, of which figures and descriptions have been given in former volumes of the Cultivator (VI. 153.) The best method of using it for corn has been to make it into a compost with manures, vegetable mold, swamp muck, &c., and apply this to the soil before planting, either by spreading over the surface, or by depositing it in the hill. In this way, from fifteen to twenty bushels will be sufficient.

Apple trees in the condition spoken of by our correspondent, may doubtless be preserved in the manner alluded to by him; but grafting would not be apt to succeed if performed before the roots had obtained firm hold of the ground, and the circulation of the sap become vigorous. If good trees from a nursery were at hand, we should plant anew; but if not, or if any of the trees were of a particularly valuable kind, we should restore and secure them in their former position, until by the aid of new roots their former hold on the ground could be regained.

The picture given by our correspondent of the agriculture of that district, is not very flattering, but if with their fine climate, and excellent soil, they will pay more attention to the growth of grasses and roots, introduce the Berkshires and the Short Horns, make more manure and practice the scourging system of cultivation less, and that of rotation more, they cannot fail of all the success they can reasonably desire.

Hatching Chickens.

"A Subscriber" at Newburgh, N. Y. who wishes for more information respecting the "Eccaleobion," noticed at number 1, vol. 7, of the Cult. is referred to the last volume of *Chambers' Edinburgh Journal*, for a full account of the hatching process; in the mean time we condense from that article such parts as may best meet his wishes.

The "Eccaleobion" at Pall Mall, London, is a room, on one side of which is a large oblong case placed against the wall, divided into eight parts, each one of which is warmed by steam pipes, and which are used for hatching the eggs. These divisions are exposed to view by means of glass doors. The bottom of these boxes or parts, and indeed the whole is lined with cloth, and is covered with eggs lying at a little distance from each other. There is a jug of water in each part to preserve a proper degree of moisture to the air in the divisions. The meaning of having eight boxes, is to insure a batch of chickens every two or three days. Each part holds some two or three hundred eggs, or about two thousand in the whole. From twenty-one to twenty-three days are required to hatch the eggs, and as these are purchased in the markets, from one-third to one-half prove worthless. None but new eggs should be used for the Eccaleobion.

When the chickens appear, they are not immediately removed from the oven, but remain a few hours until dry, when they are taken from the oven and put into a glass case or box, made shallow and the sash lid easily removable. They are not fed for twenty-four hours after hatching, and the material then used is a coarse meal or grit, which they pick up with great eagerness, instinct in this case supplying the want of the mother. They are kept in this case two or three days when they are put into divisions on another part of the floor of the same large and warm apartment. At dusk they are put into a coop or box with a flannel curtain and covering, where they rest with as much quietness as under the wing of the mother. In the morning they are turned into the yard, which is cleaned and strewed with seed. When three weeks or a month old they fetch in market one shilling each. It thus appears that all that is necessarry to form a chicken establishment is suitable rooms, a steady supply of the proper heat, fresh eggs, and constant attention.

Diseases of Swine.

Messrs. Editors—Is there no remedy for diseases in swine? I have lost 20 valuable pigs in the course of the last 6 months, by blind staggers, consumption, (sometimes with and sometimes without cough,) obtruding of the rectum, and many without apparent cause. I have looked to books in vain for information. Last week three beautiful healthy Berkshire pigs, as handsome as I ever saw, and two emaciated, unhealthy animals, in three different pens, were attacked on the same morning, and all the remedies known, which I considered as mere quackeries, were resorted to, and in a few hours some, and in 24 hours, *all* fell victims to it. I wish every man that takes the Cultivator, would send all his pig and cattle remedies for general condensation and arrangement, and see if we can learn any thing by it. I conceive the appointment of scientific men by the State to note the different diseases and experiments for cures, would be of more service to us, than the bestowal of the same amount of legislative aid in any shape whatever. R. L.

We have found charcoal one of the best preventives of disease in swine. They will eat it freely, if placed within their reach, and we have never known hogs attacked with disease when occasionally fed with it.

Disease of Sheep.

Mr. Clarke of Chenango Co., inquires respecting a disease of his sheep new to him, and which he thus describes: "First apparent symptom of the complaint, a severe teasing cough, next a rapid loss of flesh, and in a few days, death; followed in an hour by a mortification around the head and shoulders. It has as yet been confined to my lambs, of which I have lost 8 out of 126, and some 20 more have been attacked by the cough."

The disease of which our correspondent speaks, is fortunately a rare one in this country, and is not indeed common in England. It is known by the name of *Peripuneumonia, coryza, glanderous rot, inflamed lungs, &c.*, and the general symptoms of cough, stoppage of the nose, inflammation of the throat and bronchial tubes are in the main the same; the violence and fatality of the disease is very different in different seasons or cases. It generally occurs from the exposure of the animal to intense cold or sudden chills, after having been heated, but it sometimes appears as an influenza or epidemic without any readily assignable cause. According to Blacklock and Youatt, if the cough is severe and the fever high, purgatives and bleeding must be resorted to in the beginning of the disease, and then ten grains of the following powder, dissolved in a tea cup full of warm water may be given:

> "Powdered digitalis, half a drachm;
> Tartarized antimony, fifteen grains;
> Nitre, two drachms."

"Rub well together, and divide the whole into fifteen powders. Half an hour after a powder has been given let the animal have a bason of warm gruel, and in six hours repeat the powder, if the symptoms are not considerably abated." In the epidemic form it is a dangerous disease, and it does not seem to be fully decided whether it is contagious or otherwise.

Straw.

Messrs. Editors—In looking over the 4th volume of the Cultivator, I find an article from Chaptal's Chemistry applied to Agriculture, which contains the following sentence: "I do not believe that there is in the whole vegetable kingdom an aliment affording so little nourishment to plants or animals as the dry straw of grain; serving only to fill the stomachs of the latter; and furnishing to the former but about one hundredth part of its weight of soluble manure." I am in the habit of transferring annually large quantities of injured straw to my farm pens, not merely for the comfort of my stock, but chiefly from the impression that the straw thus brought into contact with the stronger manures will greatly increase the quantity and value of the general bulk. If the scientific author is correct, however, in this opinion, I have but little reason for continuing that course, as the straw could be removed at once to the field which it is designed to benefit, with much less labor and trouble. I should like your opinion on this subject."

We have long been aware of this opinion of Chaptal, but our experience has led us to distrust the soundness of his conclusion. The chemist, however skillful he may be, is very apt in his laboratory to overlook or not understand some of the processes used by nature to accomplish its purposes. It has appeared to us that when nature has once formed a straw out of nutritive matter, she can decompose and reconvert that substance to nutritive matter again, and actually does it, although the process cannot as yet be accomplished in the chemist's laboratory. Both straw and wood have since the time of Chaptal been converted into most nourishing bread, and the solulable product of straw has been increased to some 14 per cent by Madden. While, therefore, we do not consider straw as very valuable as a manure compared with some others, we have always preferred using it in our yards to applying it directly to the soil for two reasons; it furnished a litter for the yards that renders the animals more comfortable, and is trodden and made fine by the feet, a process greatly aiding its decomposition; and it seems to absorb and retain a large part of the most valuable part of the manures in the yards, (the liquid and soluble parts, salts, &c.) which would otherwise be in a great degree lost to the farmer. For these reasons we prefer that our straw, even if the animals were not benefited by it as a food in the least, should pass through the cattle yards and the pig pens before it goes to the field.

Beet Sugar.

Mr. Stanly of New Milford, inquires as to the easiest method of making beet sugar, or where directions for the manufacture can be had.

The simplest mode of manufacture we have seen, may be found at page 167 of the last volume of the Cultivator; but the most ample, and we presume correct description of the process we have yet seen published in this country, is to be found in Mr. Child's book, which can doubtless be had in any of the cities.

Change of Timber and Soils.

Messrs. Editors—Some thirty years since, I resided in a part of Chenango county where the ridges that bounded the valleys were covered with pine, on a soil deemed capable of producing nothing more valuable than whortleberry bushes and sweet fern, and which could not be made to repay the expense of cultivation. At that time, some of these pine ridges in a very dry season, were burned over with a conflagration truly dreadful; every thing on the surface that could burn was converted to ashes. An entire new growth of timber speedily sprung up of maple, beech, some oak, &c., but no pines. A short time since, I had occasion to revisit that neighborhood, and found the farmers were clearing the second growth of timber, and were putting in fine fields of wheat on these once pine hills, it being their best soil for growing that grain. Now I wish to know the nature of the changes which took place to destroy the tendency to the growth of pine, and fit it for the culture of wheat. A Farmer.

All soils where pine grows spontaneously, is found to abound in acids, whether derived from this substance which is known to exist in the leaves of this tree or originally in the soil, is not certainly known; but it is found that close pine lands on first being cleared, rarely produce much grain, and all ordinary vegetation is usually scarce in such places. All close timbered hemlock lands are similarly conditioned. There are two ways in which this acid may be neutralized or destroyed; the first by the application of lime, and the second by burning over the vegetable matter on the surface of the earth; the alkaline matter thus formed, would have the effect of neutralizing the acid of the soil, inducing a new variety of vegetation, timber trees or plants; and thus preparing it for crops to which it was once unfit. It is well known that the practice at the south is to clear the pine lands, cultivate them with tobacco or cotton as long as they will pay the cost of culture, and then abandon them. They are speedily covered with a dense growth of other kinds of timber, which in its turn is again cleared for cultivation. Repeated cropping the ground in this case seems to have done what burning over did in the other. The complete change of timber that thus takes place on lands, and the manner in which they may be said to be seeded, constitutes one of the most curious questions in the whole range of vegetable physiology, not to say the most perplexing.

Saw Dust.

J. S. of Little Britian, Pa., who is the owner of a saw mill, wishes to know if saw dust can in any way be converted into manure, so that the cost of doing it will not be greater than the value of the manure. If he has not abundance of straw, he may use saw dust to advantage as a litter for stables, piggeries, &c., where, by absorbing the liquids of such places, it will make a valuable addition to the dung heap. It is used in this way by the Shakers at Canterbury, N. H., who think it preferable to straw as a litter for stables.

Canada Thistles.

Mr. Wm. Hotchkiss, Jr. of Pekin, Niagara county, in a note says, "You will oblige your subscribers in this section of the country by ascertaining through your numerous correspondents what will effectually destroy the Canada thistle, which is rapidly spreading over many farms in this county. We should like to hear something from you on this subject."

We are convinced that to effectually destroy the Canada thistle is one of the most difficult processes of farming; and that it is impossible to keep tilled lands free from its presence, while so many thousands of acres are annually allowed to go to seed, and thus spread the mischief as far as the winds can blow. The surest way to extirpate the thistle is to attack it, and dig it out thoroughly, for if the roots are not killed, all remains to be done over again. We have known thistles killed by mowing them closely three or four times in a season; by hoeing crops planted among them as often as they appeared; and by repeated plowings for summer fallows. Where there are only a few plants, cut each one a little below the surface, and apply a spoonful of salt; but we can assure all those who have the thistle on their farms, that unceasing vigilance will be required to check their progress. If any of our correspondents can point out a way to effectually destroy this greatest of pests, we shall be most happy to lay it before our readers.

Building Mill Dams.

"W. J. W." of Milford Mills, in a letter to us says, "Having recently lost my mill dam by the late freshet ice, which frequently happens in this county, I should be pleased to avail myself of the experience of some of your valuable subscribers, upon the subject of the best mode of building mill dams, with reference to durability and cheapness, together with any useful information on the subject."

The immense losses sustained the present season, by the loss of dams connected with mills and public works, shows that the topic suggested by our correspondent is an important one, and we hope some of our friends competent to the task will give the desired information through our columns.

Benj. Clinamen of Lancaster county, Pa. thus writes us respecting the progress of agriculture in that district. "Andrews' Bridge, 1st mo. 1841.—The appearance of stock is much better than it was a few years back. A slight intermixture of Devon and Durham is improving the cattle, and a few Berkshires lately introduced are destined, as I hope, to revolutionize our hogs. Spring wheat has been sowed to some extent, but without very flattering success. Dutton and Sioux corn, I and some others have tried, but with us the yield is inferior to the yellow gourd. Ruta bagas have succeeded well in some cases but not with me. I last spring planted 40 for seed, and four-fifths of the whole were destroyed by a small white worm at the root; and a patch I planted for winter use shared the same fate. Do you know of a preventive?* The sugar beet does well, generally, and many are beginning to esteem it a matter of interest to grow it. White is considered the best variety, the white or the yellow?† There are a few hereabout who are firm believers in the plan of putting manure under the soil in the spring; but the great majority can only be persuaded by demonstration that the '*good old way*' can be superseded by a better one."

Specimens of Indian Corn.

Catalogue of several specimens of Indian Corn, cultivated by C. N. Bement, *and presented to the Editors of the Cultivator, Jan.* 1841.

No. 1.—Dutton.—This variety of yellow twelve rowed corn, is so well known that it requires no description.

No. 2.—King Philip.—So called from the celebrated Indian Chief, "Philip, King of the Wampanoags." It is a yellow, eight rowed flint variety, small kernels and very small cob. It is a hardy plant, belonging to a high latitude; grows to about nine feet in height; stalks small; ears from 9 to 12 inches in length. It has always ripened, with me, as early as the Dutton. I obtained the seed some four years since, in Farmington, Conn. where it has been cultivated time immemorial. Meal made from this corn is much esteemed for its bright yellow color, high flavor and sweetness.

No. 3.—White Flint.—This is an early eight rowed variety—excellent for the table, when green; is extensively cultivated in this country for a crop; grows about nine feet high; stalks of medium size; cob not large, yields well, ripens early, but makes indifferent meal.

No. 4.—Michigan Dent.—This has a large sized cob of medium length—sixteen rows—kernels long and indented, somewhat resembling the horse-tooth or gourd seed corn of the south—color inclining to lemon—grain light; stalks large and reaching twelve feet in height; does not yield well, nor did it ripen with me.

No. 5.—Trieste.—This is a twelve rowed variety; ears from five to seven inches long; large at the butt, and tapering to the point; of a bright orange color; the ears are covered with more and a tougher husk than any other variety I know of.

The seed was obtained from a cargo brought from Trieste—hence its name, "Trieste Corn." I have only cultivated it one season, and cannot, therefore, form an opinion, whether it would, after being acclimated, prove a profitable variety or not. My impressions are unfavorable to it. It grew high, stalks large and much inclined to fall.

No. 6.—Sqaw or Pop Corn.—This is a very small twelve rowed, fancy variety, of a brown color—cob short and conical, kernels small and hard—stalks small and grow from five to six feet high; is generally cultivated for parching or "popping."

No. 7.—Variegated.—This appears to be a mixture or cross of the squaw corn with some other variety of yellow corn.

FARM IMPLEMENTS.

Drills and Drill Culture.

In pursuance of our intention to lay before our readers in successive numbers of the Cultivator, examples of the most useful implements in their most approved varieties, we this month present specimens of the drill, which, though it has not come into as extensive use in this country as in Europe, has been sufficiently used to establish its claim to being one of the most important labor-saving machines yet invented for the farmer. Two causes have conspired to prevent the general use of the drill among us; first, the little attention root culture has received from the great mass of our farmers; and secondly, the imperfect state of our tillage, both which causes must gradually disappear, as a more perfect and profitable husbandry is introduced.

Jethro Tull considered himself the inventor of Drill Husbandry, but the drill was known in Britain 200 years before Tull, and applied at that time to a use to which Tull was a stranger, but which gives it its greatest value, the drilling in of manures with the seed sown. The system of Tull and his followers, however, maintaining as they did, that by sufficient working and pulverization of the soil, its fertility might be kept up for an indefinite period, was admirably adapted to the use of the drill, as its efficiency is always in a great measure depending on the fineness of the soil. The drill made but slow progress in Britain, and it was not until the extensive introduction of the turnep culture into Norfolk, and the splendid success of Mr. Coke, now Lord Leicester, that its merits as an agricultural implement were generally allowed.

It is but quite lately that its value as a distributor of the powerful modern manures, such as rape or oil cake dust, bones, animalized carbon, and particularly poudrette, or prepared night soil, has been understood or appreciated. The assertion of Lord Kaimes "that the time would arrive when the farmer could carry the manure for a field crop in his pocket," has not yet been fully realized; but it seems to be in a much fairer way for its accomplishment than the prediction of John, his lordship's plowman, which was, "that when the manure was carried out in one pocket, the crop could be brought home in the other;" as the increase of crops has thus far kept pace with the concentration and direct application of manures.

The drill has been of late used extensively in some parts of Britain for sowing broadcast, and a figure and description of the implement used for this purpose may be found in Prof. Low's Practice of Agriculture. The machine is made to sow a breadth of sixteen feet, and distributes the seed with an evenness and regularity not easily attainable when the seed is scattered by the hand. Every farmer is aware that much of the goodness of the crop is depending on the proper distribution of the seed, and it is found that a much smaller quantity of seed put in with the drill, although not in drills, will give an equal number of thrifty plants, with a greater quantity put in more irregularly; and that the ground will be occupied more fully in the former than in the latter case.

The great desideratum in a drill, is the power of delivering the seeds regularly; at the precise distances required; in no greater quantities than are required for fully seeding the ground; not failing in depositing the seeds; and simplicity and durability in its parts. Drills are very apt, either to deliver too great quantities, and thus waste the seed sown; or to clog and not deliver any, thus rendering the plants irregular, or perhaps wholly disappointing the hopes of the planter. In some of the improved drills, this objection, especially in sowing seeds round or regular, has been mostly overcome, and the planting is performed with a precision and regularity which could not be reached by the hand alone. In sowing turnep, beet, carrot, or other small seeds, that are cultivated in drills, or where the soil is favorable, in planting corn, the drill has become a favorite implement, and when well constructed, a most valuable and labor-saving machine.

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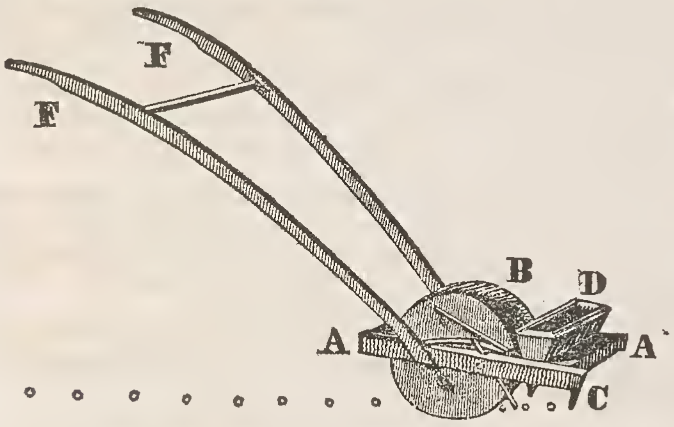
* Our turneps have never suffered in this way, but as the worm is probably the small white one found in highly manured ground, it is likely that a handful of new ashes stirred in with the soil around the roots would operate favorable.

† The *White Siberian*, is usually considered as containing the most sugar; and this is doubtless the proper test of value.

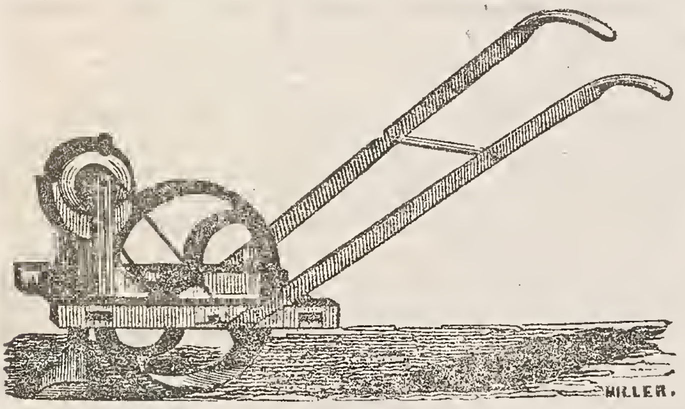
We give here engravings of some of those drills that in this country have been received with most favor, adding short descriptions as furnished by the inventors or improvers.

The most simple form of the drill with which we are acquainted, is shown in the subjoined cut of an implement invented by Mr. Merchant of Chenango county, N. Y. It is a good machine for sowing turneps, but not generally adapted to other seeds; it is very cheap, costing only two or three dollars, and is in extensive use in some parts of the country. It may be had at the seed stores in Albany and Rochester.



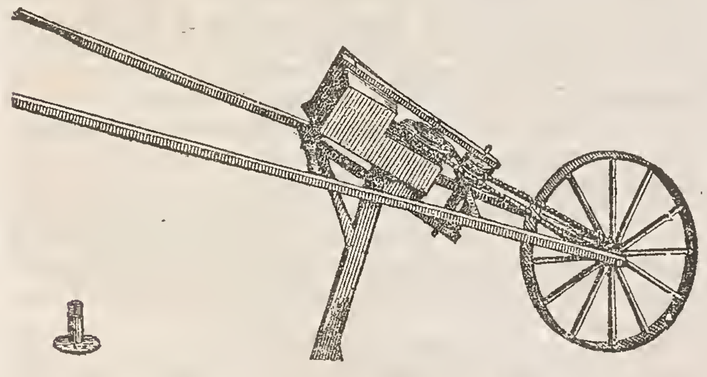
(*Merchant's Drill Barrow—Fig.* 17.)

A. A. are the two sides of the frame, 16 inches long, connected at each extremity by cross-pieces. B. is a wheel 10 inches in diameter and four inches broad, made of wood. C. is a coulter attached to the forward cross-piece. D. is the hopper in which the seed is placed. F. F. are the handles by which the machine is impelled and guided. Back of the hopper is a roller, attached to which is a metal slide, not perceptible in the cut, perforated with a hole of the size of the seed to be sown, which slides close to the bottom of the hopper. The roller is moved, when the machine is in motion, by stout wires seen in the drawing. When the machine is in motion, the coulter C. makes a drill into which the seed immediately drops; two pieces of round iron project down diagonally from the sides, which throw the mold upon the seed, and the wheel then passes over and operates as a roller."



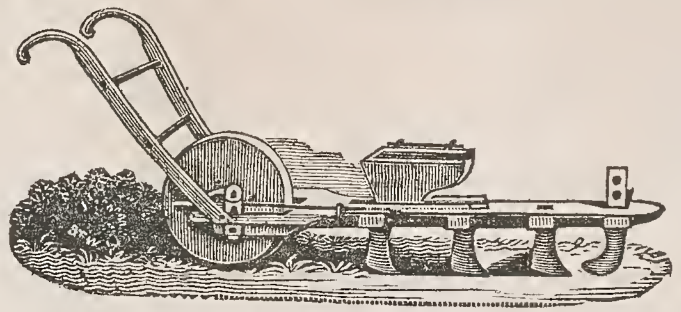
(*Bement's Improved Drill—Fig.* 18.)

Mr. Bement's Improved Drill is one of the best implements offered to the public, simple in its construction, and sure in its operations, and large numbers of them have been sold. It consists of a tin cylinder in which the seeds are placed, and through holes in which they are dropped, and has the advantage of exhibiting the seed when dropping. There are two or more sizes of holes, one set intended for beets, &c. and others for smaller seeds, such as turnep, onion, carrots, &c. When not in use, one or the other of the rows of holes are closed by a band which prevents the escape of the seed. It is made in a substantial and durable manner. Since the above figure was taken, an improvement has been made, by placing the seed dropper behind instead of before the wheel, and adding a roller which follows and covers the seed. For sale by Wm. Thorburn, Albany. Price $10.



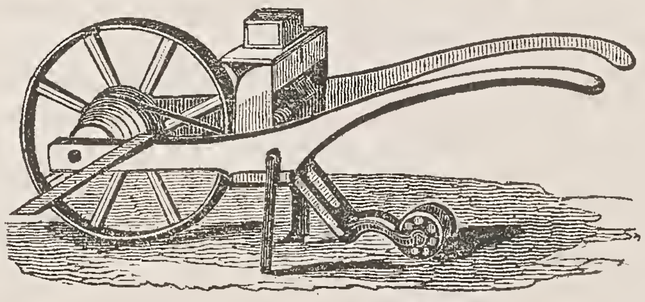
(*Robbins' Corn Planter—Fig.* 19.)

Robbins' Corn Planter has been extensively introduced into use among farmers. This drill has "six droppers, with different sized holes, and will plant corn, beans, peas, broomcorn, beets, turneps, onions, carrots, &c. &c., with great precision." In a communication to the Cultivator in 1836, Mr. Bement says, "the corn I planted with Robbin's Machine last season on my farm, exceeded that planted with the hoe, by the acre, at least fifteen bushels, under circumstances equally favorable as to soil and cultivation."



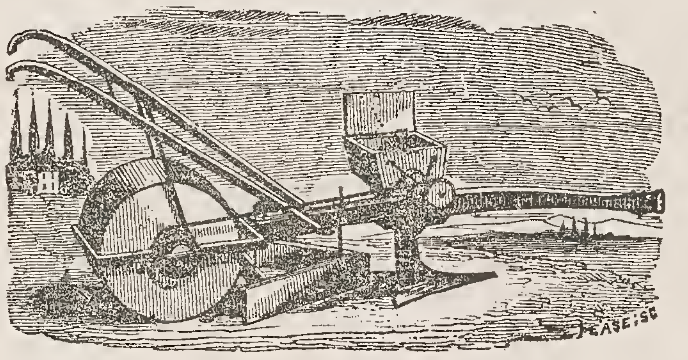
(*Buckminster's Corn Planter—Fig.* 20.)

Buckminster's Corn Planter is a machine invented by Mr. Buckminster of the Boston Cultivator, for planting corn and other seeds, and has a good reputation with those who have used it. It is manufactured by Mr. Prouty of Boston. Unlike the foregoing, which are all worked by hand, Mr. Buckminster's is drawn by a horse, and an acre is well planted in one hour. The quantity of seed delivered, and the depth to which it is buried, is regulated by screws; and the teeth in the beam pulverize the soil for the seed while the roller presses the earth upon it as soon as it is covered.



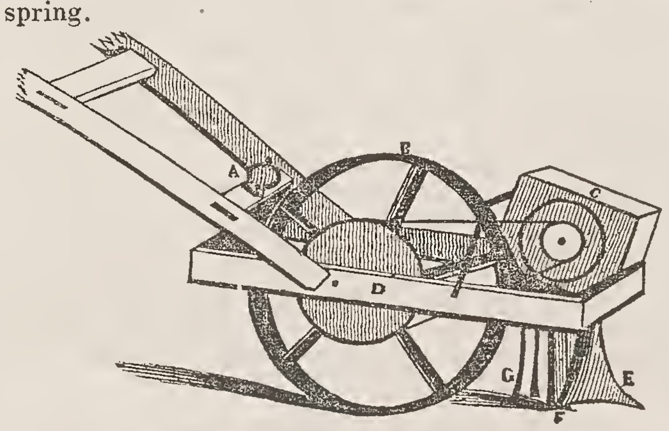
(*Cole's Corn Planter—Fig.* 21.)

Cole's Corn Planter and Seed Sower, invented and patented by Mr. Cole, editor of the Yankee Farmer, has a high reputation among those who have used it, for the celerity and certainty of its operations. "One of our most intelligent farmers," says the inventor in a notice of the implement, "who has used it, says that he saved the whole expense of the machine in one season. He planted eight acres of corn, opening the ground, dropping the seed and covering it, in less time than it could have been dropped by hand, and with as much exactness." For sale by N. P. Willis, Boston, and will be for sale by Mr. Thorburn in this city in the spring.



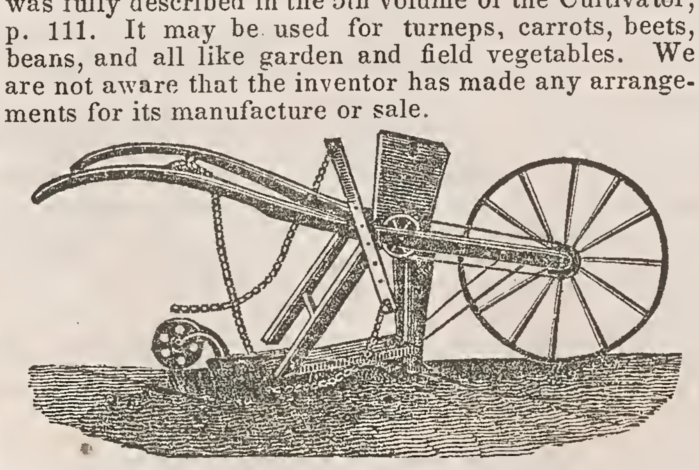
(*Bachelder's Planting Machine—Fig.* 22.)

Bachelder's Planting Machine, was described in the last volume of this paper, page 141, to which we refer our readers. "It is calculated to plant all kinds of seed usually planted in hills or drills." It is made and for sale by T. G. Goodrich, Haverill, Mass. Price $15. Mr. Thorburn expects to have them for sale in the spring.



(*Hoyt's Improved Drill Barrow—Fig.* 23.)

This implement, invented by Mr. Hoyt of this city, was fully described in the 5th volume of the Cultivator, p. 111. It may be used for turneps, carrots, beets, beans, and all like garden and field vegetables. We are not aware that the inventor has made any arrangements for its manufacture or sale.



(*Willis's Improved Seed Sower—Fig.* 24.)

Mr. Willis of Boston is also the maker of some excellent drills, and his late improved one has few superiors. It will be seen that the general principles of these implements cannot vary greatly, although the manner of distributing the seed is accomplished by somewhat different means. The great object is to place the seed at proper distances, at the desired depth, and cover it so that it may be sure of germination. The great danger in the use of the drill, and one which the operator must guard against, is the clogging of the implement and consequent failure of the seed.

None of the American Drills as yet have any apparatus added for distributing manure with the seed as is practiced in Europe, although as the use of these artificial manures becomes more common, the necessity of such a course will be apparent. All the small seeds, which require a quick germination should be brought in immediate contact with the manures applied, as the more rapid their growth, the sooner they are beyond the dangers which always attend cultivated plants when young. Bone dust and Poudrette must be sown in this way if their full value would be realized. Broadcast, they certainly are valuable; but one bushel applied directly to the plants in drilling has been found to produce a better effect than four times the quantity applied broadcast to the same surface.

This is a proper place to make one remark on the general character of American agricultural implements, particularly our drills, chaff or straw cutters, threshing machines, &c. *There is not attention enough paid to their strength and durability.* Without these qualities a farming implement is worse than useless; always out of order or broken, they only serve to prejudice the farmer against labor-saving implements of all kinds, prejudices which when once formed, all experience shows it is difficult to obliterate. The tools of a farmer are not holiday things, or used for holiday purposes; they require strength and firmness; and these things should always be kept in view by the manufacturer. Good implements and fair prices, are what the farmer wishes, and which would prevent all complaints on either hand. There has been a decided improvement in this respect within a few years; but a little experience on the farm will show there is room for still more.

Organic Chemistry, in its applications to Agriculture and Physiology.

Under this title, Prof. Liebig, of the University of Giessen, has given to the public one of the most important contributions science has ever made to agriculture; and we are pleased to learn that it is soon to be presented to the American farmers by Wiley & Putnam of New-York, under the supervision of B. Silliman, Jun. of New Haven. Prof. Liebig has availed himself of the latest improvements in both chemistry and in agriculture, and has applied the former to an explanation of the results on the latter, with a success hitherto unequaled. Chaptal and Davy are justly regarded with the greatest respect for the services they rendered the farmer, by dovoting their great powers to an elucidation of the processes of agriculture; but discoveries in the operations of nature have been made since Chaptal and Davy wrote, which have materially modified some of the positions taken by them. As an instance of the advance which has been made, we copy from a notice of the work in Silliman's Journal, the following paragraphs on that much disputed question the action of Gypsum:

"The existence of Ammonia as a constant constituent of the atmosphere, had never been proved, or even suspected, before the researches of Prof. Liebig, and the great importance of the discovery in a practical point of view can be justly appreciated only by a careful perusal of the present treatise. * * * It is shown that rain water and snow always contain ammonia, and it may be proved to the satisfaction of any person, by adding a little sulphuric or muriatic acid to rain water, and evaporating it nearly to dryness, in a clean porcelain capsule, when the ammonia will be detected by adding to the residuum a little powered lime, which will liberate the ammonia; thus produced, it always has an offensive animal odor, fully indicating its origin. *It is an interesting thing, that in the discovery of ammonia in the atmosphere, we have also discovered the true cause of the great fertilizing effects of Gypsum or plaster of Paris, a key to which has so long been sought in vain.* The fertility arises exclusively from the fact that the sulphate of lime fixes in the soil the ammonia dissolved in the atmosphere, which would otherwise be voatilized with the water in its evaporation. * * * Soluble sulphate of ammonia and carbonate of lime are formed, and this salt of ammonia possessing no volatility, is consequently retained in the soil. The action of gypsum, or chloride of calcium (muriate of lime) really consists in giving a fixed condition to the nitrogen or ammonia which is brought into the soil, and which is indispensable to the nutrition of plants. The decomposition of gypsum by carbonate of ammonia does not take place, however, instantaneously; on the contrary, it proceeds very gradually, and this explains why the action of gypsum lasts several years."

New Cotton.—A new variety of Cotton has been introduced into Alabama from Rio, in South America, and is called the Rio Cotton. It is said to be superior to the Sea Island. The staple is about three inches long, and of glossy silk texture.

N. YORK STATE AG. SOCIETY.

Albany, Feb. 10, 1841.

Pursuant to public notice, the New-York State Agricultural Society met at Knickerbocker Hall in Albany, this day at 11 o'clock A. M. The President being absent, Alexander Walsh, Esq. one of the Vice-Presidents, took the chair, and Jesse Buel was appointed Secretary pro tem. A quorum being present, the minutes of the last meeting were read. The Report of the Treasurer, C. N. Bement, Esq. was then received, read and accepted.

The Constitution of the Society being called for, was read, when several amendments were proposed by Messrs. Tucker, Nott and Fuller, which, after discussion, were adopted, and the revised Constitution directed to be published as follows:

Constitution of the N. Y. State Ag. Society,

As Amended Feb. 10, 1841.

The style of this society shall be "The New-York State Agricultural Society;" its objects shall be to improve the condition of agriculture, horticulture and the household arts.

Sec. 1. The society shall consist of such citizens of the state as shall signify in writing their wish to become members, and shall pay on subscribing not less than one dollar, and annually thereafter not less than one dollar, and also of honorary and corresponding members.

The presidents of county agricultural societies, or a delegate from each, shall ex-officio be members of this society.

The payment of fifty dollars or more, shall constitute a member for life, and shall exempt the donor from annual contributions.

Sec. 2. The officers of the society shall consist of a president, eight vice-presidents, one to be located in each Senate District; a recording secretary, a corresponding secretary, a treasurer, an executive committee, to consist of the officers above named and five additional members, of whom three shall constitute a quorum, and a general committee, the members of which shall be located in the several counties, and be equal to the representatives in the house of assembly.

Sec. 3. The recording secretary shall keep the minutes of the Society.

The corresponding secretary shall carry on a correspondence with other societies, with individuals, and with the general committee, in furtherance of the objects of the society.

The treasurer shall keep the funds of the society, and disburse them on the order of the president or a vice-president, countersigned by the recording secretary; and shall make a report of the receipt and expenditures at the annual meeting in January.

The executive committee shall take charge of and distribute or preserve all seeds, plants, books, models, &c., which may be transmitted to the society; and shall also have the charge of all communications, designed or calculated for publication, and so far as they may deem expedient, shall collect, arrange and publish the same in such manner and form as they shall deem best calculated to promote the objects of the society.

The general committee are charged with the interests of the society in the counties in which they shall respectively reside, and will constitute a medium of communication between the executive committee and the remote members of the society.

Sec. 4. There shall be an annual meeting of the society on the third Wednesday of January, in the city of Albany, at which time all the officers shall be elected by a plurality of votes and by ballot, with the exception of the general committee for the counties which may be appointed by the Executive Committee, who shall have power to fill any vacancies which may occur in the officers of the society during the year. Extra meetings may be convoked by the executive committee. Fifteen members shall be a quorum for the transaction of business.

Sec. 5. The Society shall hold an annual Cattle Show and Fair at such time and place as shall be designated by the Executive Committee.

Sec. 6. This constitution may be amended by a vote of two-thirds of the members attending any annual meeting.

A committee of fifteen was appointed to nominate officers of the society for the ensuing year, to report to a meeting to be held at the Senate Chamber, at 3 o'clock, P. M. to-morrow. Adjourned to 3 o'clock, P. M.

Feb. 10, 3 o'clock, P. M.

Met pursuant to adjournment, for the purpose of complying with the invitation of Ezra P. Prentice, Esq., to visit Mount Hope Farm near this city, to view the beautiful and extensive herd of Improved Short Horns owned by Mr. P. The company, some fifteen or twenty in number, after an examination of the Short Horns and South Down sheep at Mount Hope, with which they were highly pleased, were taken by Mr. Prentice to Mr. Corning's farm, where they had an opportunity of viewing a portion of the Hereford cattle and Cotswold sheep imported by Messrs. Corning and Sotham the past season.

Senate Chamber, Jan. 11, 3 o'clock, P. M.

Met pursuant to adjournment, H. D. Grove, Esq., one of the Vice Presidents, in the chair. The committee appointed to nominate officers, made their report, which was read and accepted; and the following gentlemen were unanimously elected officers of the Society for the ensuing year:

Joel B. Nott, of Albany, President.

Vice Presidents.

1st district, Jeromus Johnson, of Kings,
2d —"— Robert Deniston, of Orange.
3d —"— Caleb N. Bement, of Albany.
4th —"— Edward C. Delavan, of Saratoga.
5th —"— Benjamin P. Johnson, of Oneida.
6th —"— Lewis A. Morrell, of Tompkins.
7th —"— Willis Gaylord, of Onondaga.
8th —"— T. C. Peters, of Genesee.

Additional Members of the Executive Committee.

Alexander Walsh, of Rensselaer.
George Vail, of do.
Henry D. Grove, of do.
A. L. Linn, of Schenectady.
John McD. McIntyre, of Albany.
Henry S. Randall, of Cortland, Cor. Sec'y.
Ezra P. Prentice, of Albany, Treasurer.
Luther Tucker, of Albany, Recording Sec'y.

The following resolution was introduced by J. J. Viele, Esq. of Rensselaer:

Resolved, That a committee of five be appointed to prepare, and present a memorial to the Legislature, now in session, praying for an appropriation of $7,000 annually, for the benefit of Agriculture, to be distributed to the several County Agricultural Societies in the ratio of $50 to each member of Assembly, and the sum of $600 to the State Agricultural Society; the money to be paid to the several Societies when they shall have raised an equal sum.

After an animated and interesting discussion, in which Messrs. Viele, Johnson, Root, Fuller, and others, took part, the resolution was unanimously adopted, and Messrs. Viele, Tucker, Bement, McIntyre and Van Bergen, were appointed a committee to memorialize the Legislature for the purposes expressed in the resolution.

Several Reports were received from Committees appointed at the last meeting, to report on various matters of practical agriculture, which will be published hereafter.

On motion of C. N. Bement, Esq. it was

Resolved, That the Executive Committee be requested to procure reports from different members of the Society, on the following subjects, to be presented at the semi-annual meeting.

1. On the most approved method of stall feeding oxen and other neat cattle.
2. On converting green crops and other vegetable matters into manure.
3. On the best method of increasing manure and forming a compost.
4. On the proper time to cut Timothy and other grasses, and the most approved method of curing the same.
5. On the comparative economy of employing oxen and horses in the usual business of the farm.
6. On the comparative economy of potatoes, ruta baga, carrots or beets, as food for cattle, sheep and swine.
7. On the relative value of apples as food for swine, or other domestic animals, compared with making them into cider.
8. On the best means of eradicating Canada thistles.

A resolution was adopted, requesting the President elect to deliver an Address in the Assembly Chamber, in furtherance of the objects of the Society, on the evening of the 23d inst.

Adjourned to meet at the Assembly Chamber on the 23d inst.

Assembly Chamber, Feb. 23, 1841.

The Society met pursuant to adjournment at 7 o'clock, P. M. The Hon. Jeremiah Johnson, Vice President from the first District, took the chair and called the Society to order, when the President, J. B. Nott, Esq. delivered an Address, replete with eloquence and instruction, which was listened to by a large and attentive audience with great satisfaction. The thanks of the Society were tendered to Mr. Nott, and a copy of his Address solicited for publication.

Meeting of the Executive Committee.

The Executive Committee of the New-York State Agricultural Society, met at the office of the Cultivator, Albany, on the 23d of February—the President of the Society in the chair. A letter was read from P. B. Johnson, Esq. Vice President, expressing his regret that he should not be able to attend the meeting. Mr. J. says—"It will afford me great pleasure to communicate with you at all times in relation to the interests of the Society, and to unite with the officers in such measures as shall be best calculated to promote the best interests of Agriculture in our State. I hope something will be done in aid of our objects by the Legislature; and could County Societies be established and sustained, it appears to me that great good will result."

A letter was also read from Col. H. S. Randall, Cor. Sec'y, accepting the office, and assuring the committee that he will devote himself zealously and untiringly to the cause. He says—"I wish you would express to the committee the deep regret I feel in not being able to meet them. Say to them, that as one of their body, were I present, I would counsel *action*,—decided energetic ACTION. A mere formal organization—a nominal Society merely, is useless—nay, the next thing to ridiculous; and unless I greatly mistake the signs of the times, effort on our part will be met with more of corresponding spirit, than it has been in preceding years."

After the appointment of a part of the County Committees, the business was postponed, and a committee appointed to make the necessary inquiries and report suitable names at the next meeting.

A committee, consisting of Messrs. Tucker, Prentice, and McIntyre, was appointed to report a code of By-Laws and Regulations for the better management of the affairs of the Society.

The following resolutions were unanimously adopted:

1. That the Executive Committee will hold regular monthly meetings on the *Third* Wednesday of each month, at the room No. 7, Exchange Building, Albany, at 3 o'clock, P. M.
2. That to enable this Society to carry into effect the great objects of its formation, it is necessary to raise the sum of $1,500, in addition to the aid expected from the State.
3. That as one means of increasing the funds of the Society, the Corresponding Secretary address a circular letter to the members of the Executive and General Committees, urging upon them the necessity of immediate and persevering personal exertion to increase the number of both life and annual members of the Society.
4. That the Recording Secretary prepare and report at the next meeting a correct roll of the members of the Society, specifying those who have paid their annual dues, and the sums due from those in arrears.
5. That the Executive Committee will decide upon the place of holding their First Exhibition and Fair, at their regular meeting in April; and that a committee of nine be appointed to report on the Premium List, so far as practicable at the March meeting. The committee consists of Messrs. McIntyre, Walsh, Bement, Randall, B. P. Johnson, Grove, Gaylord, Morrell and Peters; and it is expected they will report individually, their views in relation to the objects which should be be made subjects for premiums.

Tobacco.

The culture of tobacco constitutes one of the most important items of the agriculture of the Middle States; and is the great disposable crop of Virginia, Maryland, Tennessee, Kentucky, and part of Ohio. As an article of export it is second in value only to cotton; and were it not for the enormous duties foreign governments compel it to pay, amounting in some cases to 800 per cent upon its cost, the amount might be vastly increased, and with the greatest benefit to the producing districts. The state of matters in relation to our tobacco abroad, is one which should receive the prompt attention of those interested. Free trade is beautiful in theory, and would the whole world, or the principal commercial powers, practice it, the results would no doubt be happy; but that state of trade in which all the freedom is on one side, and the restrictions on the other, will assuredly benefit one at the expense of the other. It is a law of nature that we should protect ourselves, and we are glad to see the tobacco growers moving in this matter. There can be no possible reason given why the productions of Great Britain should be admitted duty free into Virginia, and the products of Virginia be charged with a duty of 6 or 800 per cent by the former. The inequality is too gross to be tolerated in any country.

The convention of tobacco planters held at Washington City in December last, was numerously attended; Gov. Sprigg of Maryland, was appointed President, with other officers. Mr. Jenifer made a very able Report showing the state of the tobacco trade with other countries, particularly Great Britain and France. It stated that the duty on our tobacco in Great Britain was $72.75 on every 100 lbs., or 800 per cent on its prime cost; and that France derives a revenue of *ten millions of dollars*, from a reduced importation of only some six or seven thousand hogsheads; and this at a time when the average duty on British goods in this country is only about 12 per cent, and France is draining our country annually of some 30 millions for her silks and wines, which are poured in upon us at rates of duty, merely nominal.

As the culture of tobacco is yearly becoming a subject of greater interest to thousands of our subscribers, we hope some gentleman, practically acquainted with the culture and the curing of the plant, will furnish us with a full account of the methods most approved. Such an article would doubtless be well received, and be productive of benefit to a large class of agriculturists.

Durham District U. C. Ag. Society.

The annual meeting of this spirited agricultural society among our Canada neighbors, was held at Port Hope, on the 15th of Jan.; and the following gentlemen were appointed officers for the year 1841: President, David Smart; Vice-Presidents, Alexander Broadhead, R. W. Robson, John Knowlson, and John Smart; Treasurer, William Sisson; Secretary, Morgan Jelerty. It was found there was in the hands of the Treasurer, one hundred and two pounds. This is as it should be; to render an agricultural society efficient, to enable it to do good, there must be money, and the members of the Durham County Society have shown the sincerity of their professions, by their works. There are many agricultural societies in the United States, the members of which might with advantage emulate the liberality of their agricultural friends in Durham County, and by so doing give their association an impulse which could not fail of producing the happiest effects.

Gen. McDuffie's Address.

The anniversary meeting of the South Carolina State Agricultural Society, was held at Columbia, on the 26th of November, 1840, and the address was delivered by Gen. McDuffie. It is unnecessary to say it is able; and although exclusively southern, or rather local, in its recommendations, there is much in it to interest the friends of agriculture every where. The object proposed in the address is to point out some of the most prominent errors in southern agriculture and to suggest remedies. We shall make a few extracts from the copy of the address now before us:

"The greatest, most prevailing, and most pernicious of all the practices which distinguish and deform the agriculture of this and the other cotton planting states, is the almost exclusive direction of the whole available labor of the plantation to the production of our greatest market staple, and the consequent neglect of all the other commodities which the soil is capable of producing or sustaining, and which are essential to supply the wants of the establishment. No scheme of reform or improvement can produce any great and salutary results, which does not lay the axe to the root of this radical vice in our husbandry."

It is not a little singular that the great staple of the south should be an article of which the more the planter produces the worse off he is, and of which a great crop generally should be considered a public calamity. That such is the fact is perfectly evident from this address. There is not a recommendation of any means by which the cotton crop can be augmented; on the contrary the importance of diminishing the aggregate product of that article is constantly kept in view. Indeed, Gen. McDuffie says, "If I could now reveal a process by which our common soils could be made to produce two bales of cotton to the acre, I should have great doubts whether the revolution would be a blessing or a curse to that great interest."

Perhaps there cannot in the whole history of trade be found a more signal instance of the impolicy of interfering with the natural laws that regulate supply and demand, than the cotton business of the south, within the last few years. In the fore part of this century, the demand for cotton exceeded the supply, and the prices gradually rose to 25 or 35 cents per pound. The consequence was, the whole productive energy of the south was turned into one channel, and nothing was grown but cotton. The annual product rose from one million to two millions of bales. The supply exceeded the demand, and as the crop increased, prices fell from those mentioned above, to 10 or 15 cents per pound. In this state of things, in 1837, the wild project was conceived of holding on to the crop, and thus forcing the article in foreign markets up to its former prices. The banks of the south, aided and stimulated by the United States Bank of Pennsylvania, entered the field, and by large discounts to the planters at long dates, enabled them to keep their cotton at home. Had production ceased, this plan might have been a feasible one; but there was no attempt to check production, and the inevitable result was, the planters found themselves with two crops on hand instead of one; the foreign demand had but slightly increased, and both planters and banks found themselves involved in the greatest distress. Both were compelled to suspend, and the shock, to the financial interests of the country, was so great that they have not fully recovered from it to the present time. The necessity of the cotton growing states turning their attention to something besides that crop, has been further enforced by the fact that a great cotton growing country is opening around the Gulf of Mexico, which is every year adding to the supply, without materially adding to the demand.

The following paragraph from the address is as applicable at the north as at the south, and we wish every farmer and every reader would fix in his mind these four little words and govern himself accordingly. Let every man adopt "PAY AS YOU GO," for his motto, and the individual and the country would soon reap the benefit:

"I have known many men, who were considered bad planters, and who made small crops, yet in a series of years have grown wealthy by this very simple rule which I once heard laid down by a friend. He never made large crops, and when asked how he got rich so much faster than his more energetic neighbors, he replied, 'my neighbors begin at the wrong end of the year. They make their purchases at the beginning of it, on a credit; I make mine at the end of it, and pay down the cash.' And here I am reminded of a saying of the late John Randolph of Virginia; a man not more remarkable for his genius and eccentricity, than for the profound philosophical truths which sometimes escaped him, like the responses of an inspired oracle. In the midst of one of his splendid rhapsodies in the Senate of the United States, he paused, and fixing his eye on the presiding officer, exclaimed, 'Mr. President, I have discovered the philosopher's stone. It consists in these four plain English monosyllables: '*Pay as you go.*' Now I will venture to say, that this is a much nearer approach than alchemy will ever make to the great object of its visionary researches."

Gen. McDuffie most strenuously urges upon the planters of the south, the necessity of growing their own corn, and making their own pork or bacon; of raising their own horses, hogs and mules, and points out the way in which, in his opinion, and from his own experience, this may be done. That the way thus marked out, is the true one for the planter seems scarcely to admit of a doubt, for the present system is clearly a ruinous one.

Head of the Horse.

There is a singular disease of the horse's head, prevalent in some of the northern and western states, called the "Big Head," from a general enlargement of the lower part of the head, or between the eyes and nose, giving him a most disagreeable appearance. This disease we have never known originate in the north, and it is rarely or never seen unless in horses from the south. It is singular that no distinct notice of such a complaint can be found in English works on the horse, neither Lawrence or Youatt describing any similar disease.

In a late number of the Southern Cultivator, there is an article upon it, from which we extract the following: "Its symptoms are a general enlargement of the part of the head between the eyes and nostrils on both sides of the nose—a subsequent enlargement of the lower jaw—sometimes an inflammation of the washer of the eye—hidebound, stiffening of the joints of the limbs and back, general debility, sluggishness, and if not cured, death. * * * * * * As to its cause, one opinion is that it is hereditary—another, that it is produced by excessive feeding on Indian corn, bad treatment, &c. Some farmers view it as simply an inflammation and swelling of the tendons in the region affected—others assure us that the bone is enlarged. Colts are more liable to the disease than full grown horses. A friend who has paid much attention to the raising of horses, ascribes it to the existence of what he calls 'blind teeth'—small pointed teeth which make their appearance in the upper jaw just in front of the grinders; and on examining a colt affected with symptoms of big head, a few days since, we found he had these blind teeth. To knock them out is said to be a remedy. Others sear with a hot iron the enlarged part of the head, and we have incontrovertible evidence that a cure is thus effected, but a scar is left which disfigures the horse, and of course impairs his value."

Hessian Fly--A Lady Observer.

In the "Proceedings" of the American Philosophical Society for November and December, 1840, is a report made by a committee consisting of Messrs. Nuttall, Lea, and Coates, all eminent in the natural sciences, on a paper presented to the Society by Miss Margaretta H. Morris, of Germantown, on the subject of the Hessian Fly, the Cecydomyia destructor of the entomologist, and perhaps the greatest pest the wheat grower of the middle states is called to encounter. The paper was ordered to appear in the "Transactions" of the Society, and in the mean time Dr. Coates prepared an abstract of it for the Farmer's Cabinet, in the January number of which it appears.

The researches and observations of Miss Morris have led her to form a new theory of the action of this insect, and if her positions can be substantiated, the discovery is of immense importance to the country. The following extract from the "Proceedings" will show the principal facts in the case, and put other observers in the way either to correct or confirm the observations of Miss Morris:

"Miss Morris believes she has discovered that the ovum of this destructive insect is deposited by the parent in the seed of the wheat, and not, as previously supposed, in the stalk or culm. She has watched the progress of the animal since June, 1836, and has satisfied herself that she has frequently seen the larvæ within the seed. She has also detected the larvæ at various stages of its progress, from the seed to between the body of the stalk and the sheath of the leaves. In the latter situation, it passes into the pupa, or 'flax seed state.' According to Miss Morris, the recently hatched larvæ, penetrates to the center of the straw, where it may be found of a pale greenish white semi-transparent appearance, in form some resembling a silkworm. From one to six of these have been found at various heights from the seed to the third joint. They would seem to enter the pupa state, about the beginning of June. The fly was not observed by Miss Morris to inhabit any other plant than wheat."

The researches of Drs. Mitchell and Pascalis had thrown much light on this intricate subject, and their labors were well followed up by the Entomologist Say. Still there were some things which their account of the changes, or transformation, of the insect did not fully explain, particularly the destruction of the crop by the fly and the sowing of the same year. This fact, which was not of uncommon occurrence in districts where the fly prevailed, seemed to render the admission of two appearances of the perfect insect in one season, a rare if not an unknown occurrence among depredators of this class. On this subject, Dr. Coates remarks:—

"According to the facts believed to be ascertained by Miss Morris, the difficulty at once disappears. The fly lives only ten days; during which time it deposites its eggs in the wheat. The eggs remain unaltered until the wheat sprouts; and the young worm is then below the surface of the earth, in a substance which is not frozen, and which supplies him with food."

Should the theory put forth by Miss Morris be sustained, and it appears very reasonable as well as plausible, nothing more will be necessary to prevent the Hessian fly, than to sow seed from uninfected districts. Pure seed would gradually become contaminated from the neighboring fields, but a recurrence to this mode of seeding would again remedy the evil. "It would seem," says Dr. Coates, "that the farmer who uses seed wheat from a district ravaged or infested with this animal, actually commits the absurdity of *planting Hessian flies* for the benefit of his next year's crop." The theory of Miss Morris also explains the reason why spring wheat frequently suffers from the fly; since if the fly ova is in the seed, the young worm is ready at the sprouting of the seed, to follow the growth of the plant, and pass through its several transformations in season to deposit the egg again in the seed, and thus perpetuate the mischief.

Some farmers have supposed that the Hessian fly was identical with the one that produces the wheat worm of the Northern States, and which in many districts for a time compelled the cultivator to abandon the growing of that crop. The observations of Miss Morris, however, show that such an opinion is formed in error. The ovum of the wheat worm, whether deposited in the berry or merely within the sheath of the kernel, changes to the larvæ state at once, destroys the berry by feeding upon it, and leaves the head of the grain for its winter quarters, most usually before the grain is harvested. The Hessian fly on the contrary leaves its ovum in the berry, where it remains until the seed is sown; and germination furnishes it a suitable food as well as residence. Few things can more forcibly demonstrate the importance of entomological research than such discoveries, and it is honorable to Miss Morris, that she has unraveled a mystery which has long perplexed men of science. We are pleased to hear that she is continuing her observations, and we shall doubtless learn more of them in good time.

Underdraining with Wood.

The following extract of a letter from the Hon. James M'Call of Allegany County, N. Y. will be read with interest by many who wish to drain lands, but find it expensive or impracticable from the want of stone, or where the soil is of such a nature that stone drains sink, or fill, so as to be useless. We had the pleasure two years since, of examining the improvements making by Judge M'Call in this respect, and the change draining had effected in some of his fields was great indeed. Since the letter of Judge M'Call reached us, we have received the latest number of the Quarterly Journal of Agriculture, and find an article in that on the same subject, in which wood underdrains are highly spoken of. Cross sections of such drains are given; one square, or wood top, bottom and sides, and one of three pieces, a bottom and two side pieces, meeting at the top in a triangle form. To admit the water to the tube, the sides are bored full of holes, and when made of larch, they are estimated to last 20 years. Unless the nature of the soil is very peculiar, the tubes would be better, we think, without the bottom piece, and the method practiced by Judge M'Call, of notching the edges, is peferable to boring:

"*Rushford, Allegany Co.* 1841.

On the subject of underdraining, I have tried various ways; such as small or pounded stone, brush as recommended by Judge Buel, and small alder poles; but in all cases where there was quick sand, or soft clay, or decomposed vegetabe deposites in any considerable quantity, they soon filled up so as to hinder the filtration, or prevent the flow of the water. I had so much land that needed draining, and regular stone drains cost so much, that I fell upon the plan of putting in plank, one on each side, from five to six inches wide, and one and a half inches thick, cutting notches half an inch deep on the upper edge, driving down stakes on the inside so as to prevent their turning or falling inwards, and then covered them with a good durable slab or plank, and then filling in the earth thrown out. I have made several hundred rods of this kind of drain, and am satisfied, that while it lasts, it will be equal if not superior to the best stone drain; and if made of white oak or other durable wood, it will last twenty or thirty years. If there should be any soft places at the bottom of the ditch that might let the side plank settle down, I put some pieces of board down at the bottom crosswise; and where there is likely to be water running on to the top of the ditch, it is best, if you have stone, to fill up the drain above the plank with them; if not, put in brush, especially if the earth is adhesive clay.

I had last year a good crop of spring wheat, (where one year before, the soil produced little else than the coarse wild or water grasses) and at the rate of 25 bushels to the acre. I have learned that underdrains have made my swamps good plow land, and the most productive part of my farm: I have learned also that the earth which is obliged to drink up more water than naturally falls upon it from the clouds, is as unfitted for the production of valuable vegetation, as is the besotted drunkard for benefiting the society in which he lives.

With respect, yours, &c. JAMES M'CALL."

We add here that as Judge M'Call was one of the first to carry into effect successfully the conversion of winter into spring wheat by freezing and sprouting, we shall be pleased to learn the result of the experiment he has this year instituted, of winter sowing.

The Weight of Five Hogs, sold by Dr. S. D. Martin, Colbyville, (Ky.) November 26, 1840.—No. 1, weighed 640 lbs.—No. 2, 630 lbs.—No. 3, 660 lbs.—No. 4, 748 lbs.—No. 5, 824 lbs.—Two of them were 3½ years old, and three 2½ years old.

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

FOLIAGE. The leaves of trees and plants exercise a most important part in promoting their growth; and the functions they perform, have several analogies in the human system. In the leaf, the ascending sap undergoes the changes that fit it for the formation of wood or fruit; it there undergoes the process of aeration, and receives the carbon, which in the form of lignin or wood, constitutes the main structure of the plant. According to Roget, the ascending sap loses two-thirds of its quantity in the leaves by exhalation, and one-third remains to nourish the plant. The part thus evaporated is perfectly pure, all the foreign materials contained in the ascending sap remaining in the part retained. The quantity of sap exhaled in a given time, depends in a great measure on the intensity of the light to which the leaf is exposed. A large portion of the sap not exhaled in the leaf is actually decomposed, and its separate elements, the oxygen and the hydrogen, are combined with certain proportions of carbon, nitrogen and various earths, metals and salts, which form the proximate vegetable products found in the returning sap. It was Dr. Priestly that made the important discovery that the leaves of plants give out oxygen gas during the day time, which could only be done by the decomposition of carbonic gas, in which process the carbon goes to form the plant, and the oxygen to renew the waste made by the respiration of animated nature. Leaves then, are the lungs of plants; and it is in the green substance of them only that these changes are performed. Strip a flourishing tree of its leaves, and its growth is checked at once, its fruit ceases to ripen, and a repetition produces death. This is frequently seen in the case of plum trees, which in favorable seasons for fruit, sometimes suffer a premature fall of the leaf, in which case the fruit never comes to perfection, but remains immature and worthless.

FOOD. The substances taken into the stomach to support life in the man or animal. The proper supply of food and its quality, is one of the most important subjects that come under consideration. If it contain too much nutriment it clogs and overloads the digestive organs, and is productive of a formidable class of diseases; if deficient in nutriment, the muscles become soft and flabby, the strength fails, and if long continued, emaciation and death ensues. The food, then, to produce its proper effect must possess two conditions; one is, that of sufficient bulk to keep the stomach properly distended, without which its functions are impeded; and the other, that of sufficient nutriment or substance that can be converted into chyle and appropriated to the repair of wear and tear of the system. The best food for man or for animals, is that in which these conditions are best united. Thus some kinds of grain are unfit for the horse, given alone, as they contain too much nutriment in proportion to their bulk, and are apt to render a horse feverish and diseased. Wheat and barley are not as good feed for a horse as oats, because in the latter, the proper proportion of nutriment and bulk is nearest obtained. A smaller quantity of wheat or barley with sufficient cut straw or hay to make the equivalent of bulk, would probably render one as good as the other. Indian corn alone has too much nutriment in proportion to its bulk for the horse; but fed with cut straw, it is one of the best, as thousands know by experience. Pure wheat flour has too much nutriment for the health of man; and experience shows that fine flour and fat meat are to man what a diet of wheat and sugar is to the horse. The bran of wheat however, is deficient in nutriment, and unfit for the purpose of subsistence. Plain, common food, in which the extremes of bulk and nutrition are avoided, is doubtless the most conducive to health, and those that subsist upon such, are the best able to labor, or endure severe exercise. Much of the value of food is depending on the ease with which it can be digested, and applied to the purposes of nutrition, and the experiments of Dr. Beaumont on the living stomach, furnish the best guide in this respect that can be found. The following table is copied from a long list of substances experimented upon by him, giving the time required for the digestion of the substances named:

Article.	*h.*	*m.*	*Article.*	*h.*	*m.*
Boiled rice,	1		Veal,	4	
Sago, tapioca, barley and boiled milk,	2	15	Wheat bread, fresh baked,	3	30
Tripe and pig's feet,	1		Corn bread,	3	15
Fowls, beef's liver,	2	30	Sponge cake,	2	30
Hard eggs,	3	30	Succatash,	3	45
Soft "	3		Apple dumpling,	3	
Custard,	2	45	Apples sour and mellow,	2	
Trout, boiled or fried,	1	30	" sweet and "	1	30
Other fresh fish,	3		Parsneps boiled,	2	30
Beef, rare roasted,	3		Potatoes "	3	30
Dry roasted,	3	30	" roasted,	2	30
Salt beef with mustard,	2	30	Raw cabbage,	2	30
Pickled pork,	4	30	Raw with vinegar,	2	
Raw pork,	3		Cabbage boiled,	4	30
Mutton, fresh,	3	15			

If food is made fine when taken into the stomach, or cooked, the nutritive power is much increased. This principle is of great importance in the fattening of animals, and shows the benefit derived from cooking or even grinding the materials on which farmers feed their stock, and especially their fattening animals.

FOOT ROT. This is a formidable disease of sheep by which great losses to the sheep grower are at times sustained. It has not as yet become common in this country, but cases have occurred to show its existence among us, and the introduction of foreign sheep may not be without its influence in the spread of the disorder. Its first symptoms are a slight lameness, accompanied with fever, which is succeeded by a swelling about the heel or between the toes, followed by a suppuration and loosening of the hoof. If not checked, the hoof falls off, and the sheep is obliged to walk on its knees to feed, but it most usually perishes from the complaint and emaciation before it reaches that state. In its appearance and effects it much resembles the hoof ail which is occasionally so fatal among cattle, in some parts of the United States. The foot rot rarely occurs where sheep are fed on dry hard soils, or on short pastures. It most commonly makes its appearance in flocks fed on rich soft pastures or meadows, where abundance of food is procured with little exertion, and particularly so, if the meadow or pasture is moist and damp. Doubts have existed as to its contagiousness, but the general opinion seems to be that the treading of sheep on matter from an infected foot, when the sound foot is softened by moisture, or when cracks exist in the hoof, will produce the complaint. When the disease is discovered, the flock should be immediately removed to dry hard pasture, and if compelled to "work for their living" for a while, the effect will be good. The hoof must be pared around the infected places, taking care not to wound the sensible parts, and what is called the foot ointment laid on every part, which may be effected with a feather. Some practice covering a spot with fine quicklime, on which the sheep is obliged to stand for a few hours. Perfect dryness of the feet seems essential to a cure.

The following composition has become celebrated in England and Scotland, for this disease. "Corrosive sublimate one ounce; blue vitriol two ounces; verdigris two ounces; white copperas four ounces, dissolved in half a bottle of white wine vinegar, and apply it with a feather." In addition to this, Mr. Laidlaw used a mixture of tar and common salt with much success, especially in moist or damp weather. Mr. Dick attributes the disease to want of action in the animal, and by living on soft, rich ground, having the horny part of the hoof overgrown and pressing on the tender parts, a result not likely to happen where dry hard ground, or short feed, is found in sheep walks.

FOUNDER. When after severe traveling, violent exercise, or hard work, a horse before he has time to cool is allowed to stand with his feet in cold water, or drink his fill of cold water, the sudden change of temperature produced, is apt to produce acute inflammation of the lungs or the feet, oftener the last. The earliest symptoms are uneasiness, frequent moving the fore feet, but rarely pawing or striking at the belly with the hind feet, as in bots, colic, &c.; as the pain in the feet increases, he frequently places his nose on his feet, or looks at them, and finally, as if unable to support his weight, lies down quietly, or sometimes stands until he falls. Sometimes, but very rarely, a change of temperature from a cold air to a warm stable, will produce an inflammation similar to the other cause, and result in acute founder. Fever, induced from excess of grain, also occasionally produces founder, and from whatever cause the fever arises, the treatment must be the same, as, if unchecked, the worst consequences ensue. On examination, the feet will be found very hot, and a violent pulsation of the pastern artery can be felt. He will soon be unable to walk; as the fever progresses he refuses to stand, and if the disease is not relieved, the hoof will be lost. It is true a new hoof may grow, but it will be smaller and weaker, and never be fit for severe work.

The first thing to be done is to reduce the inflammation. Bleeding is here most to be relied on. If the disease is confined to the fore feet, four quarts of blood should be taken as soon as possible from the toe of each. Poultices of linseed meal made soft, should cover the whole of the foot and the pastern, which will have a tendency when frequently renewed, to soften the parts and relieve the painful pressure. Medicines proper in fevers, should also be administered, of which digitalis and nitre are the most sedative and cooling. If the fever in the foot remains high, a second bleeding is justifiable, and cloths wet in a solution of nitre may be applied. If the fever can be removed before suppuration, or the parting of the hoof at the coronet takes place, there is hope of saving it, and a speedy cure may be anticipated; if this is not done, the cure will be doubtful and protracted.

FREE MARTIN. When a cow has two calves, one a bull, and the other in appearance a heifer, the last is termed a *free martin*. Such a heifer is unfit for the propagation of the species, being barren, while the bull calf will be as serviceable as any. When grown, the free martin is to appearance a cow, exhibits sexual inclinations, and has been known to receive the male, but except in very rare cases without effect. The cause of the barrenness was found by the celebrated John Hunter (who dissected several for the purpose) to lie in a peculiar vaginal and uterine organization, which in effect constituted the animal a hermaphrodite, and effectually prevented conception. Dr. Allnott of London has also recently dissected several, and arrived at the same conclusion. In the few instances on record where free martins have bred, the female has preponderated so much over the male as to render procreation possible. The barenness of the twin female is a singular anomaly, and confined so far as appears to cattle, as all other female twins are as prolific as others. It is singular that the ancient Romans should have applied the name of *taura* to a twin heifer, thus indicating that she possessed in part the nature of a male. Free martins work well in the yoke, are strong and kind workers together or with an ox. Unlike the spayed heifer, the free martin is particularly on the alert when the cows are in season. A curious account of the internal organization of the free martin may be found in the Philosophical Transactions, and in an abridged form, in Youatt's English Cattle.

FREEZING. The freezing point of the thermometer is 32°, and when water, or the sap of plants, are cooled below that, they become solid or freeze. All fluids expand in freezing or crystalization, and on this fact the effect of frost on plants, or on the earth, is mainly depending. All vital organization has a tendency to resist frost; hence a thermometer placed in a living tree indicates a greater temperature under the same circumstances than in a dead one; and every one knows that dead flesh freezes sooner than that which is living. Plants are frequently destroyed by frost, when overtaken by it while in the vigor of growth, as the expansion of the juices in that state bursts the tender vessels and death ensues. If the wood of the tree or plant has ripened, that is if the juices have performed their functions, and been converted by the leaves into the substances that go to make lignin, (see foliage,) the freezing produces little or no injury. In that condition the plant is in a state of hybernation, and its circulation and vitality are mostly dormant. The series of experiments entered upon by Professor Lindley of the London Horticultural Society, and conducted with great skill, to ascertain the effects of frost on plants led to some interesting and valuable results. One of them was that of a great variety of American plants and trees cultivated in the gardens of the Society, those from the northern part of the United States were much more frequently destroyed in the temperature of London than those from the southern part; a result explained by the fact, that the diminished temperature retarded the circulation and aided the ripening of the wood in plants from a warmer climate, while the increased temperature kept the plants from a northern climate in a state of growth too late for the wood to ripen. Thus flowers kept in pots in a chamber are more liable to be killed at night, if the temperature of the room during the day is much elevated. Thus too, trees which are on a dry poor soil are less liable to be killed by frost, than those grown on a rich warm moist soil, as the growth of the latter is prolonged to a later period of the year, and their ability to resist frost consequently diminished.

The freezing of wheat, however, causes more loss to the farmer and the country, than all the other losses from frost combined. When a soil is tenacious, or contains a large proportion of clay, and by its position or want of drainage abounds in water, as such soils usually do, there is great danger that wheat sown on such lands will freeze out or winter kill, as it is termed; and examination will show there are very few farms or fields where wheat is sown, where more or less plants are not destroyed by this cause. The destruction is usually performed in the spring months, when the ground is bare, and freezes at night after thawing during the day. Wheat has two sets of roots, one of which springs immediately from the kernel sown, and is generally some three or four inches beneath the surface; the other springs from the stem immediately at the surface of the ground, and spreads nearer the surface than the set below. A stiff wiry stem connects the two sets. When the frost is out of the earth, all these roots are free, and the plant may be drawn entire from the earth. When the surface only is thawed, the lower set of roots remain firm, and cannot be moved except by breaking. When the surface thaws during the day, it becomes saturated with water, and this freezing at night, expands and lifts the upper set of roots. If this process is repeated for several nights and days in succession, the result is that the connecting stem is broken, and the upper roots are exposed on the surface to a temperature that destroys them. Where a soil is friable, or is not naturally retentive of water, or has this defect cured by thorough draining, this separation of the roots cannot take place, and if the lower set of roots should be started at all, they are hardly ever raised so far as to cause the death of the plant. There are very few soils where this evil exists which may not be cured by draining and subsoil plowing, and as it is one that seriously lessens the amount of crops, and the profits of the farmer, it deserves the consideration of all.

CAPACITY OF THE STOMACH.—It is well known there are some animals possessed of the power of swallowing a sufficient quantity of food at once to last for a long time, a precaution rendered necessary by their precarious life; but that men were capable of such a distention of the stomach has been but lately proved. Admiral Saritckef asserts that a Yakutks in his company would consume in twenty-four hours a quarter of a large Siberian ox, twenty pounds of fat, and a quantity of melted butter for his drinks. Once in his presence and in the way of a lunch, after an enormous breakfast, he swallowed twenty-eight pounds of thick rice porridge, with three pounds of butter. Capt. Cochran asserts he has repeatedly seen one of his Tongouse attendants devour forty-eight pounds of meat in a day, and that three of them would consume a rein-deer at a meal.

NOTES FOR THE MONTH.

Foreign Notices, as well as a large quantity of other matter prepared for this month, we are obliged to omit for want of room.

The Farmer's Monthly Visitor.—Two volumes of this excellent paper have been completed, and a third commenced with the present year. Gov. Hill has brought to the aid of this work, the untiring industry and strong common sense for which he is so justly celebrated, and we are not surprised to learn that its success has been such as to encourage him to new efforts to increase its usefulness. He has made it indeed a welcome and beneficent Visitor to the Farmer's fireside, and it cannot fail to increase rapidly in circulation as the beneficial influence of agricultural reading becomes more generally understood. Terms 75 cents a year—three copies for $2. Address Hon. Isaac Hill, Concord, N. H.

The Farmer's Register.—The Carolina Planter, published the year past at Columbia, S. C., has been united with the Mr. Ruffin's Farmer's Register, at Petersburg, Va., which is hereafter to be issued in a weekly as well as monthly form—the weekly, 16 pages octavo, and the monthly 64 pages as heretofore—the price of each $5 per annum for *two* copies. A new vol. (the 9th,) commences with this year. We perceive by a notice in the last number, that complete sets of this valuable work, from the commencement to Jan. 1842, 9 large octavo volumes, may be had for $22,50. We recommend it heartily to such as wish to make a valuable addition to their Agricultural libraries. Address E. Ruffin, Esq. Petersburg, Va.

The Magazine of Horticulture, is the only publication in this country expressly devoted to Horticulture, Floriculture, Botany, &c., and should be in the hands of every fruit grower and florist. The Feb. number contains a descriptive catalogue of 107 varieties of Apples, which have produced fruit in the Pomological Garden of R. Manning, Esq. Salem, during the years 1839 and 1840, which we should be glad to transfer to our pages, could we make room for it. The Magazine is published by Hovey & Co. Boston—$3,00 a year.

Journal of the American Silk Society.—We are gratified to learn that this Journal is to be continued, the 1st and 2d numbers of the 3d volume having just come to hand. It is conducted by G. B. Smith, Esq., and is a work which should be taken not only by those actually engaged in the silk culture, but by all who desire its prosperity. $2,00 a year—new subscribers will be charged but $4,00 for the 1st, 2d and 3d volumes. Address the Editor, Baltimore, Md.

Large Hogs.—There was exhibited in the Center Market in this city on the 22d of Feb. four hogs whose dead weight was as follows:—the 1st, a full-bred Berkshire, 2½ years old, weighed 685 lbs.—the 2d, Berkshire also, 3 years old, 655 lbs.—the 3d, half Berkshire, 2 years old, 587 lbs.—the 4th, 2 years old, 500 lbs. A hog, raised by Mr. P. Mosely of Lebanon, Madison County, N. Y. was exhibited in this city on the 29th of January last, which weighed alive, 1,255 lbs. He was 2½ years old. His keepers were taking him to Washington, as a present to the President elect. We find in an English paper, an account of a still larger pig, owned by Mr. John Hartshorn, Marshpool, and which weighed 1,680 lbs. Mr. H. has another weighing 980 lbs.

Prolific.—We are informed that Mr. John Cross, of South Westerloo, in this county, has a sow which has brought him 47 pigs at three litters—at the 1st litter 13; 2d, 19; and at the 3d, 15. Two of the last litter, (11 months and 2 days old,) were killed Feb. 1, 1841, and weighed (one 380 lbs. the other 406 lbs.) 786 lbs.

Prize Farms.—The Massachusetts Society for promoting Agriculture, have awarded four premiums for farms, as follows:—For the best cultivated farm, to Abel Moore of Concord, $200—for the second best, to Paoli Lathrop of South Hadley, $175—the third premium of $150, was divided between Mr. Winchester and Mr. Salisbury, as was also the 4th premium of $100, between Mr. Reed and Mr. Converse.

Sugar Beets.—The Boston Cultivator states that Col. E. Falkner of Acton, fattened a cow nineteen years old, on beets and meal. She was poor in the fall; he fed her only ten weeks on about three pecks of beets and half a peck of meal per day, and the beef was good enough for an epicure.

Correction.—The weight of the pig mentioned by M. Y. T., p. 39, was 372½ lbs. instead of 272½.

Snow Storm in Scotland.—In January 1794, a snow storm occurred in Scotland, which for its destructive effects has never been exceeded. Prof. Low, in his work on British Animals, gives an interesting account of it, from which we make the following extract, which will give some idea of the immense damage occasioned by it. "A number of the rivers on which the storm was most deadly, run into the Solway Frith, on which there is a place called the Beds of Esk, where the tide throws out and leaves whatever is carried into it by the rivers, where, after the storm subsided, there were found on that place, and shores adjacent, 1840 sheep, 9 cattle, 3 horses, 2 men, 1 woman, 45 dogs, and 180 hares, besides a vast number of smaller animals."

Freak of Nature.—The Agriculturist says that "Mr. Lewis Joslin, seven miles from Nashville, who is well known to the community as a gentleman of veracity, informs us that one of his flock has brought forth a lamb with but one eye, and that in the center of the forehead."

COMMUNICATIONS.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

Letter to Solon Robinson, Esq.

Dear Sir—Permit me to offer you my very sincere thanks for the kind and friendly feelings which you have expressed towards me in your late letter published in the February number of the Cultivator; and to assure you most truly, that I estimate them highly. But I have another motive for addressing you at this time. It is to condole with you on the bitter disappointment which I am sure that *you* especially, as well as all the other friends to a National Society of Agriculture must feel, in learning from the worthy Editors of the Cultivator themselves, that we must not, at least for the present, look to them for any aid towards the establishment of such an Association. After stating many reasons, in which I doubt not, that these gentlemen conscientiously confide, they conclude with these most discouraging words: "*When the time arrives in which such an Association can be organized with a reasonable certainty of success, we trust that we shall not be found backward in aiding the enterprise to the extent of our abilities.*"

Now I call these words discouraging, because the public press not only forms, but governs public sentiment in this country, more, probably, than in any other country on the face of the earth. Our political journals give most of us both the law and the gospel in politics, while our agricultural papers do the same in all rural affairs. Hence, I will venture to predict, although I am no prophet, that if all the Editors of the latter, not only keep silent in regard to the establishment of a National Society of Agriculture, but actually discourage the attempt to form one, we shall see it, (according to the old saying,) "*when two Sundays come together;*" since the arrival of that "*reasonable certainty of success,*" for which our friends Messrs. Gaylord and Tucker say they must wait, can never arrive at all, unless it is brought about by those very papers which guide and govern the opinions of the great majority of those who read them.

Another argument used by these gentlemen in opposition to any present attempt to establish a National Agricultural Society, is, that "Agricultural Periodicals in a great measure perform here, the part which Farmer's Clubs, Associations and Societies, do in the more densely populated farming districts of Europe." Now it really seems to me, that if *this* be a good reason against attempting to form a National Society of Agriculture, it is nearly or quite as good against every thing of the kind, either in our States, Districts, or Counties; for none have any thing like as dense a population as the "farming districts of Europe;" nor will probably have for many generations to come. Although I deem this a legitimate conclusion from the premises, I will not suppose that our friends designed that their remark should be so understood; for they have expressed themselves, on various other occasions, as great friends to local Associations for Agricultural purposes.

The foregoing considerations, my good sir, have "thrown me all aback" in regard to the project which we both have so much at heart; and the cold water thrown upon it in this icy weather, by our good friends of the Cultivator, had chilled me so thoroughly, that I was a long time in recovering sufficient warmth to start another scheme for effecting our purpose, since they will not aid the one proposed in your letter. If mine also fails, I will then agree, but not until then, that Messrs. Gaylord & Tucker are right in thinking that the time has not yet arrived for accomplishing your design, and that we have been wrong in adopting a contrary opinion.

My scheme is as follows:—Let some friend to the object of it—and surely at least *one* may be found in each Congressional District within the States most convenient to the seat of the general government—endeavor to obtain a written promise from any one intelligent farmer of good reputation as such, to attend at the city of Washington, provided one hundred others will give similar promises, for the purpose of organizing a National Society of Agriculture. Then let these promises be forwarded by the members of Congress from the Districts in which they may have been made. The extra session which will probably be held, will furnish an early and good opportunity; and the papers containing the pledges to attend, might be directed to some friend of the scheme in Washington. I will venture, without consulting him, to name Mr. Ellsworth, the Commissioner of Patents, for I do not believe there is, in the United States, a more zealous friend than himself to the great cause of American Husbandry. The only trouble he need take, would be, to count the names in the papers directed to him, and if there were as many as a hundred, to publish the fact in the public journals, and to name some early day for the meeting. Should he deem it inconvenient to act, and state it in the Cultivator, I myself, if able to go, would attend at Washington for the purpose; and should deem myself most amply repaid for my trouble, if I found the requisite hundred names of "good men and true," both ready and anxious to execute a plan for the good of our beloved country, which, in my humble opinion, would render her a more essential service than any that could be devised, unless it were one for the moral and religious education of our whole people. Without *this* vital element of national welfare, we never, no never, shall be a happy people, whatever other condition we may attain in that reckless and wicked struggle for supremacy in political power, which seems, at present, to have distracted all the nations of the earth.

Before I conclude, permit me to acknowledge that you and our unknown friend near Boston, whose approval of your scheme is mentioned by Messrs. Gaylord & Tucker, were both right in differing from me relative to the aid to be expected from members of Congress towards its fulfilment. A moment's reflection would have prevented me from even imagining, that *they* (generally speaking,) would be prevailed upon by any thing less than the danger of losing their seats, to encourage, or even to think of any project which is totally exempt from party politics. These, and these alone, for a long and most distressing time past, seem to have occupied nearly the whole time and thoughts of our public functionaries, while the great interests of the nation have been so deeply and vitally wounded, that it will require for their restoration, the constant exertion, for many years to come, of all the talents, wisdom and virtue which can possibly be concentrated in our public councils. But enough of a theme which no true friend to his country can ever contemplate, without the most heart-sickening reflections and anticipations.

I will now bid you farewell, with the sincere hope, that you at least, may live to see your favorite scheme accomplished, as you may then have the pleasure of counting our present gainsaying friends of the Cultivator among its warmest supporters. Without doubt they will prove most powerful co-laborers in improving the structure when once the foundations are laid, although they have declined leading the van to fix the corner-stone, which no one can regret more than you and their personally unknown friend,

JAMES M. GARNETT.

Essex Co. Va., Feb. 17th, 1841.

Feeding Swine.

January 1.—Shut up 41 store hogs—spring pigs. Fed with boiled potatoes, and provender and meal. Feb. 4.—Up to this date have fed out 105 bushels of potatoes, and 14 bushels of provender and meal. Pigs thriving as fast as is desirable, living in fine condition. Used up 4 loads of wheat straw in the time for litter. The account stands thus:

Pigs Dr. to Farm, for 105 bush. potatoes, 1s	$13 13
" " " " 14 " provender, 3s.........	5 25
" " " " ½ cord wood 8s. used in cooking,	50
	$18 88

Do not charge them any thing for the straw, as I am glad to get it used up. It has cost then, $18.88, to feed 41 hogs 35 days, or one cent three mills and a half per hog per day. It adds much to the profit of pork making to keep store hogs in good order through the winter.

After various experiments, the best mixture I find to be, 16 bushels of potatoes boiled, and while hot add two bushels of meal, or its equivalent in provender. The potatoes should be well mashed, before the meal is stirred in. I mash the potatoes in the same water in which they are boiled. I am aware that there has been an impression that the water in which potatoes were boiled was injurious; but have fed out over 300 bushels this fall, and found no bad effect yet. Water is added to fill up the vat, holding about eight barrels. I neglected to add to my account above, one peck of salt, used during the time; but my charge upon the wood and provender is high enough to cover it.

I find a great advantage in cooking oats for horses, having followed it now for three months, and intend to do so through the year. I think there is a clear saving of at least one-fourth. Yours respectfully,

Darien, N. Y. Feb. 6, 1841. T. C. PETERS.

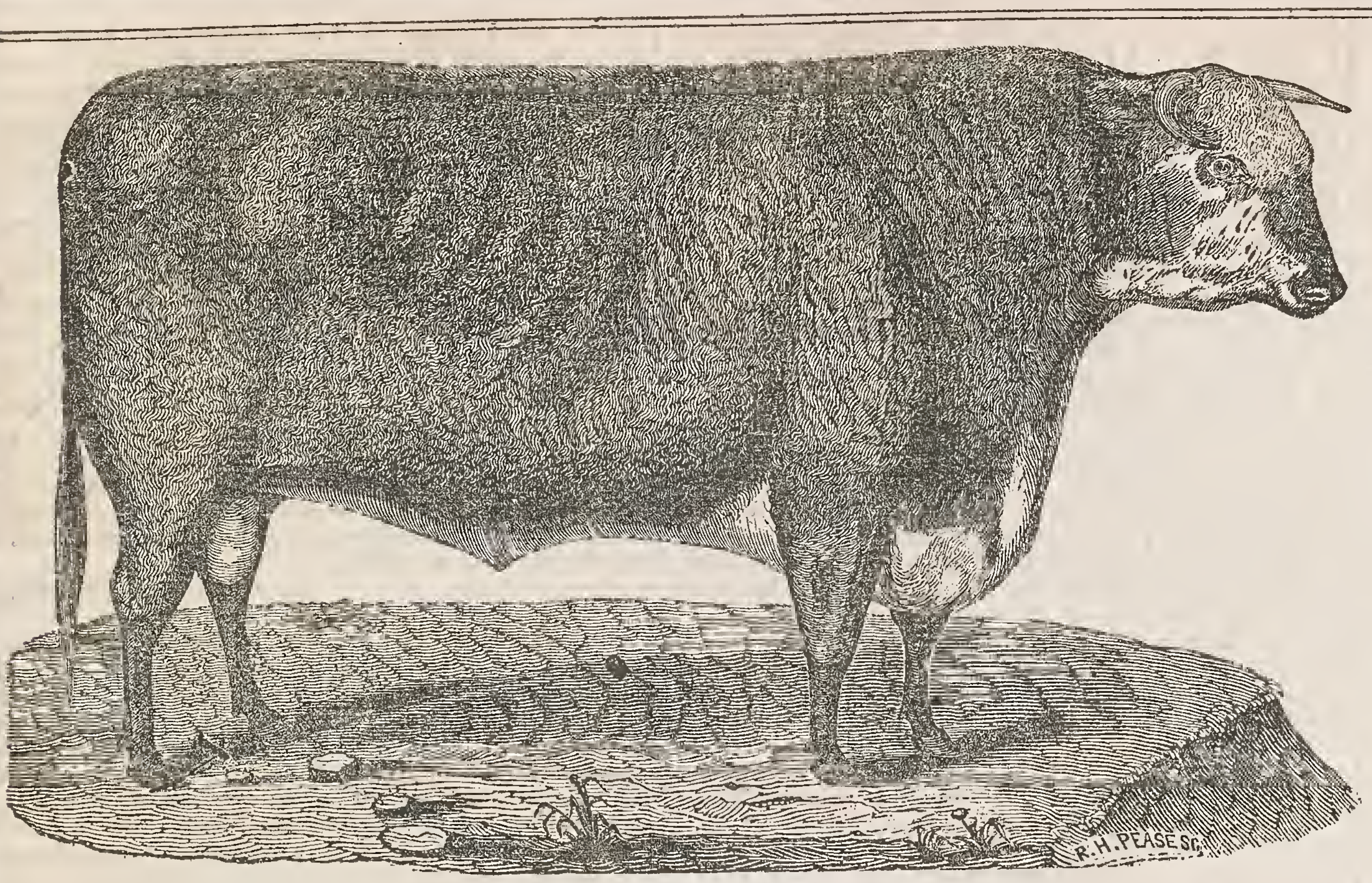
Prices of South Down Sheep.

Messrs. Gaylord & Tucker—In reply to your correspondent, who inquires for what prices he can have South Downs, delivered on board a packet at New-York, will you allow me to say, my price at the yard is from $20 to $50 each; and that the additional expense would be from one to three dollars—though there is not one in the flock but was selected in England, by one of the best judges in the country (except the lambs of such without admixture) and cost me here an average of near $35—that though there is a very great degree of sameness in their appearance and perfect purity of blood in all, though from entirely different families, yet so important has it been thought by judges in procuring the nucleus of a stock, to secure not only the best kinds but the best animals of the kind, that the difference has not been thought too great, and though I hope the time is not far distant when the numbers in our country shall reduce the price, I cannot wish to see less discrimination exercised, for on that do I believe the value of any stock, native or otherwise, is dependant.

The breeders of South Downs in England, who may be supposed to understand their interests in this matter, frequently pay as high as from 50 to 80 guineas a year, for the use of a buck, and South Downs are no new thing there, nor would they at this time, have been so here, but for the rigorous laws which formerly prevailed in England against their exportation, while Spain was kindly furnishing us all the Merinos we chose to take at from one hundred to one thousand dollars each.

Truly yours, E. P. PRENTICE

Mount Hope, near Albany; Feb. 18, 1841.



HEREFORD BULL, SIR GEORGE.—(Fig. 26.)

The Herefords and Short Horns.

MESSRS. GAYLORD & TUCKER—In looking over the back numbers of the London Farmer's Magazine, I find in that of September, 1837, a portrait of "SIR GEORGE." I send you a cut from it (fig. 26,) for insertion; and as he is the sire and grandsire of a portion of our Herefords, I copy the accompanying account:

"The subject of the plate is a Hereford bull, called 'Sir George,' the property of John Hewer, Esq. of Hampton Lodge, near Hereford. In giving some description of him to our readers, we cannot do better than quote Mr. Hewer's own account of him:—'Sir George, now ten years old, was got by Waxy; Waxy by Wellington, his dam Beauty by old Wellington the sire of Wellington. They are of the old original blood, and I believe confined to myself. Sir George has won five premiums.'"

I send you this account to show a portrait of the original breed; and it is my intention to answer, as briefly as possible, the remarks of Mr. RANDALL and Mr. HEPBURN. The latter says, I have "selected my weakest adversary, confident of an easy victory." I know not why, when each derives his information from the same source, both making many quotations from theory; the language of one may be rather more *classical* than the other, each grounding their hopes of success on the *name* of a standard work, that standard not written by a breeder. Mr. R. launching out with similes from other writers, and then says—"But after all, I am not convinced that the Herefords have been converted into Durhams." And I see from the extract of the Hon. HENRY CLAY's letter, that his cattle must have been selected from such breeders as Mr. Youatt describes, *not from the best;* therefore I perceive nothing *formidable* in any remark from either, that would cause me fearful thoughts of an overthrow. If I cannot gain a victory *justly*, I shall not feel entitled to the reward.

Now, gentlemen, I am quite willing to take you individually or collectively; you may quote theory back to the fall of Adam if you choose, and breed cattle from that instruction, and if you do not possess a fallen race, I shall be mistaken in judgment.

If we are to enter into a detailed controversy we must suggest some means of bringing it before the public for inspection and decision; the Cultivator, (according to your account,) is pressed with too much important matter to admit long articles; this can be agreed upon, and winter evenings are best for a farmer's study. I do not see any thing more to be noticed at present in Mr. R.'s article, further than this: he presses me to challenge the Short Horn breeders for milking. I am not disposed to give challenges, but as he has called it forth, I will show a milking cow in May next, against him or Mr. Hepburn, for a silver cup, value $15—mine shall be a *pure Hereford*, my opponent's, a *pure Short Horn*. I shall not extend it unless it is urged upon me. Mr. H. says "according to my own showing, many a good ox has been bred from an inferior animal;" I should like to know when this assertion was made by me; have I acknowledged the Hereford cow inferior, because Youatt has? Never; this must be a *wild* thought; probably I have seen as many of the best oxen of this country as Mr. H. or any other person. In the fall of 1838, I purchased myself, for barreling, nearly five thousand head of cattle, in the western country, in the course of two months, and was engaged in that business four years previous, where from four to six thousand were slaughtered annually, selecting the best for the New-York market; and in the whole time I did not see an ox that was bordering on goodness, (for what I call a show beast;) *good breeding* must be looked to, for such an animal, and requires as much skill as it does to breed a bull or cow. I should have been much surprised at this remark from a *breeder*, had I not known he was led astray by the study of theory alone. Mr. H. may have seen large oxen, but I doubt whether he ever saw the first quality. I shall leave the breeders of our cattle to answer the *unwarrantable attack he has made on them. I shall only tell him that were they disposed to "steal" crosses, or represent them pure* when not so, they could not show them for a premium—a true certificate of their pedigree is demanded. If they are entered as pure Herefords, they must prove so, or the beast is disqualified, the owner erased from the list, and never allowed to show an animal again. Matchless was entered as a pure Hereford, won the first prize, and I *defy any man to prove there is a drop of Durham blood in her veins*, or any other of our animals that I say are Herefords. I hope this is plain enough for Mr. Hepburn. We have a half bred Durham heifer, as I have before stated, and a man that can *distinguish a mule from a Spanish ass*, can see this cross, though I think her a superior animal. I refer these gentlemen to the late numbers of the Farmer's Magazine, to peruse the letters of Mr. PRICE and Mr. BATES; there they may profit from practical knowledge, and see what the Herefords were forty years ago in their estimation.

I was honored by a letter from the Earl of Warwick, a few days since, which I send you, and trust his Lordship will not feel displeased at his name appearing in your valuable paper; much information may be gleaned from it.

I think I may say with confidence, we have just received from R. LOVEL, Esq., Edgecott Lodge, one of the finest Short Horn heifers, coming three years old, that has ever crossed the water. I will send you her likeness and pedigree at some future period; she is a *pure* Herd Book animal.

I could say much on Mr. R. and Mr. H.'s articles, but will leave it to consult your space, or some other means to do so. Their ideas of arriving into notice as breeders, in six or eight years, are quite ridiculous unless at an enormous expense to start with.

Yours sincerely, WM. H'Y SOTHAM.
Perch Lake Farm, Jefferson Co., N. Y. Feb. 1840.

Letter from the Earl of Warwick.

7 Carlton Gardens, Dec. 28, 1840.

SIR—I received your letter of the 13th of November, and accompanied by a Cultivator paper; your wishing an answer, induces me send one, but not breeding myself any Herefordshire cattle, I fear I have little satisfactory to communicate; or any breeding stock on my farm to show you should you visit this country. I consider they can breed better stock in the counties where the soil is best adapted to it, and where the whole attention of the farm is devoted to that object. I therefore buy in my stock poor, between two and three years old; fat them and feed them off for the butcher as I can get them ready, on grass, for summer keep, Swede turneps, (on which I mostly depend) and hay for the winter keep, with some finish only of oil cake when necessary. To do which it would be immaterial to me what breed I bought, or where, depending on what would grow and fat fastest, as good butcher's beasts, the butcher being my customer; and I have no doubt the Herefords are the best breed for such objects; and notwithstanding well bred ones are bought very dear, (a proof of their estimation,) I think they pay best for their keep, turning into money fastest for the food they eat, and less liable to casualties, from the thriving disposition of their constitutions to do well, and lay on flesh while growing. I send into Herefordshire and buy in lean young stock of the best breeders, not trusting to the fairs; I know how *all* are bred.

The ox I won the first prize with at the Smithfield Show last year, (and the best beast of any class shown, ninety competitors,) I so bought as a three year old, (with many more,) for £17, lean. He ran with the other steers, and was put up with them to fat, and I never thought of sending him to Smithfield till two months before the show, as I never sent a beast there before. After the show, I sold him to a London butcher to kill for £70. There is a wretched print of him in the London shops. The painter who did his picture *for me* is Mr. DAVIS, animal painter to the Queen, and lives at Chelsea. He has made a very good colored engraving, and one of which I shall be very happy to procure for you, if you will have the goodness to write to me when you arrive next summer in England.

We breed some pretty good Leicester sheep in Warwickshire; my bailiff will be very happy to show you any thing I may have, if you are likely to be that way. I only breed sheep—we consider nothing like the Leicester for long wool, and South Downs for short. A *Leicester* tup has been known to let for the season for £1000. My house in London is 7 Carlton Gardens.

Your obt. servt. WARWICK.
W. H. SOTHAM, Esq.

MESSRS. GAYLORD & TUCKER—Since writing you, I learn from Mr. Thornton, (the person who has charge of our stock,) that the heifer Spot, by "Sir George," coming three years old, calved on the 18th of January; is now giving from five to six quarts of milk daily, over what her calf sucks; he is a fine bull, thriving very fast, is her first calf, and lies loose in the stable with her; her feed has been cut straw and hay of about equal quantities, mixed with about a peck of bran. Gay is the dam of Spot, whose pedigree may be seen in the July number of the Cultivator. Yours sincerely,

Albany, Feb. 20, 1841. W. H'Y SOTHAM.

Indian Corn—Production of a New Variety.

MESSRS. GAYLORD & TUCKER—Some years since I obtained from our friend the late Judge BUEL, a few quarts of Dutton corn, but it did not answer my expectations as to earliness, and I then determined to manufacture a corn which would be perfectly safe from frost in our short seasons. As the Canada corn was decidedly too short in the ear, I concluded to try the experiment of putting the early corn on the white flint cob. I preferred the white flint cob as it was long and small, and consequently would not retain the moisture as long as the large cob. I therefore on the 20th of June, 1838, planted several rows of the white flint, leaving one-half of the ground for the early corn, which was planted on the 1st day of July; and the earliest ears were ripe enough to pick for seed on the 16th of September. The product was a sulphur colored corn, produced by pulling the tassels from the white flint, and allowing the silks of that corn to be impregnated by the tassels of the yellow corn. I planted that corn in 1839, and the product was on every ear, a mixture of pure white and pure yellow kernels. In 1840 I planted the yellow and white kernels each by themselves, and the product was a pure white and a pure yellow ear. My corn was planted in 1840, on the 16th of May, and on the 20th of August it was ripe enough to cut by the roots. It was planted on land very much worn, and as I had no help, I was compelled to plant it without manure, as I could not manure both potato and corn ground. I also planted quite thick, from which causes the ears were not as long as they would have been under more favorable circumstances, but I had no soft corn. I send you an ear of each color.

An Experiment in the Culture of Potatoes.

I see there is great complaints from some persons in relation to the Rohan potato; and one gentleman goes so far as to pronounce it a humbug. When a seedsman or other person knowingly sells a worthless seed to the farmer, he should be censured, and I will not complain if they are severely handled; but we should be very cautious how we censure a person without abundant evidence of his guilt, and I am inclined to think the fault is in the culture rather than in the potato in this instance. My crop of Rohans the past season was good, and my other kinds are almost an entire failure; but I could account for the failure without attributing it to the variety. I had seen it stated that potatoes would be some days earlier, if exposed to the sun for several days before covering. I therefore concluded to furrow three acres, and drop them all before covering any. I had potatoes which had been cut two weeks, which I dropped first, and the rest of the piece was cut and dropped immediately; when I had finished, I commenced covering with a plow, covering in the opposite direction from which they were dropped; there are 50 rows of 40 rods in length, 10 of which were covered the day I finished dropping; 20 the next day, 10 the next, and the balance two days after; the result was, those that were covered the day they were dropped, were a good yield, and those which lay for four or five days, almost entirely failed to grow; those which were cut sometime previous to dropping, did not fail near as bad as those which were cut at the time of dropping. The weather during the whole time of planting, was excessively warm, which undoubtedly caused the loss of the crop. The season was not favorable to the potato crop in this section of the country, yet there were individual crops which were very good, several of which were of the Rohans; in some instances two bushels have been raised from a single potato. Yours respectfully.

S. PORTER RHOADES.
Skaneateles, N. Y. Feb. 6, 1841.

Discordant Subjects among the Farmers.

The Use of Lime.

Messrs. Editors—Although the agriculturists of the other great divisions of the earth, have availed themselves for centuries, (Pliny informs us that lime was used as a manure by the Romans, the Gauls and the Britons in his time,) of the extraordinary virtues of this mineral, to improve the soil or prevent exhaustion, and it is now being applied lavishly by the very best farmers of our country, with incalculable advantage on every variety of soils, yet the mass of the people of the United States, are obstinate skeptics with regard to its fertilizing properties. We admit some agricultural districts continue very productive without any application of lime; but these soils *all*, either are found to contain a due proportion of carbonate of lime, or they are plentifully supplied by their owners with animal manures, which contain the necessary alkaline substances for vegetation; however, the addition of lime, still would produce wonderful effects eventually. Lime being an essential constituent of the pabulum of plants, none perhaps requiring in their organization a larger proportion of lime than wheat; without lime being contained in the soil, *gluten*, an important component property in the grain of wheat, cannot be formed; hence the necessity of supplying soils which have been exhausted, or have been in their natural formation destitute of carbonate of lime. It is *just as necessary* as to furnish fowls with lime and silex, in the absence of which their eggs would be laid without shells. Why then, is it, that the farmers of New England, and indeed many in this and other States, cannot grow wheat on soils *now*, which yielded golden harvests to their orignal pioneers? The reason is plain and incontrovertible; the farmers have exhausted their soils of the necessary constituents of wheat, and especially lime! So let them supply the defective material at any reasonable expense, and their lands will produce as formerly. Eventually the farmer's success and prosperity will *almost* hinge on the regular and judicious application of lime, or other alkalies, in its absence. —

Beets or Roots for Stock.

On this subject, our farmers appear to be fairly confronted. I too, have been prejudiced in their favor, and gave them a fair trial, using them as a collateral food, in addition to plenty of other feed. I valued them fed with corn fodder and timothy hay, to act as an aperient with dry fodder. But I have since substituted the augmenting for the depleting system, so far as hay is concerned; I now make nearly *all* clover hay, on the highly improved method adopted by Judge Buel, and the same mode has been still longer adopted by an old obscure tho' discerning and extensive German farmer in this county, west of Lancaster, whom I could wish sufficient education to record his experience in the cultivation of the soil. I can bear ample testimony to the superiority of clover hay thus made, preserving the flower, blade and stem sweet and fragrant without waste. It requires no opening medicine like timothy, to keep the hide from adhering and growing to the ribs, to say nothing of its superior ameliorating properties to the soil. The idea of an acre of land which would make two tons of hay, producing from fifteen to twenty tons of beets, held out bewitching inducement to "go in" for beet culture, but finding that they afford a mere condiment to stock, and relying on the representation of chemists, that the common sugar beet contains 85 per cent of *pure water* and 5 of pithy or ligneous substance to 10 per cent *only* of nutriment, I have concluded that a very large quantity of beets afford a very small quantity of real nutriment, and that they have a fictitious value. Potatoes contain 20 to 25 per cent of nutritive matter, carrots and parsneps 9 per cent, and ruta baga 6 to 7 per cent of saccharine matter. So that potatoes will actually afford as much nutriment although they yield less quantity. And here I may be permitted to draw a parallel; the farmer who extirpates the necessaries of life from his grounds to make room for the operations of silk culture, certainly substituted the luxuries for the necessaries of existence; so with the present mania for root culture, (presupposing present expectations will be realized,) we find the effort actually made to force mother earth, to produce exuberant root crops, in addition to the usual crops of corn, in order that the farmer's stock, which usually subsisted on a portion of the corn crop, may now live on roots, to make the whole corn crop a surplus, and the quantity then, necessarily in market, produce such depression in the price that instead of being used as formerly, it will be abused in distilling that *mischievous* liquor, called blue ruin or whiskey! Now, I verily believe that the farmer who will take the same liberal means to force a large corn crop, on an acre, will obtain as much and a "*leetle*" more, solid nutriment, than can be obtained from beets on the same ground, and that too, with far less expense and trouble. The truth is evident, that if the agriculturists of Europe could raise Indian corn (it will not mature in Europe,) with the same facility *we do*, we should hear nothing from the other side of the water, on the importance of their *root culture*. —

Mildew.

Theorists, from Sir Humphrey Davy down, generally adopt the opinion that mildew or rust, is produced by a parasitic plant; here, until more tenable argument be advanced, or additional discovery made, I am compelled to join issue. Having cultivated for ten years, up to the present time, a wheat farm, to the exclusion almost of other grain, I profess to be as familiar with the growth and every thing attending that crop, as it is possible for experience and close observation to make us. I hold, that rust or mildew, in addition to atmospheric influence, is the effect of a forced maturing or ripening process. Wheat late sown, or that grown consecutively on exhausted land, as well as all wheat which is injured by the Hessian fly, is most exposed; in the latter case, the main stock, though injured, puts out at its root, tillered branches, which mature in favorable seasons, but in unfavorable, become the certain victims of mildew, being backward, the sap vessels are ruptured by forced ripening; then if wheat be in any case injured by a parasitic fungus it may supervene more as the effect than the cause; because, a flourishing crop, seasonably matured, *always escapes.* Low grounds too, are exposed to mildew, merely because the crop is always late ripening. Here, if I stand solitary and alone in my opinion, I am prepared to dispute my ground inch by inch. Having disagreed with the former memorable and esteemed conductor (whose portrait, very intellectually developed, hangs encased in a neat frame as a monitor before me when I write,) on this subject, I adopt the concluding clause of his comments on my article, contained in the very last number of the Cultivator he issued, and being among the last acts of his life. "We invite liberal criticism; 'tis the collision of flint and steel that elicits light." Respectfully,

W. PENN KINZER.

Springlawn Farm, Pequea, Pa., Jan. 12, 1841.

Making Pork.

Messrs. Editors—I am favored occasionally with an opportunity of looking over different agricultural journals, and in a late number of the Boston Cultivator, I noticed a statement on fattening hogs, part of which I copy for your paper, adding some remarks, and a little of my experience in the same business. The statement is by Mr. Smith, of Duxbury, Mass.

"I killed two hogs, one sow, and six pigs which the sow raised; their weights were, the two hogs 631, and 566 lbs., the sow 509, the six pigs 1,200 lbs. Total 2,906 pounds.

"They have eat 250 bushels of corn at 60 cts. $150; and 200 bushels of vegetables at 30 cents, making in the whole $210.

"My manner of feeding them was as follows: From the first day of September to the first day of March, their breakfast was raw potatoes; their dinner raw turneps, beets or carrots; their supper one quart of corn each. The first day of March I filled their trough with corn and water, and kept it so until the day I killed them. I had a warm place for them to sleep in; and a yard where I make my manure 36 by 20 feet, with a stone bottom, and have now in it, which I have made this summer, 125 horse loads. I care not what the breed of a hog is, if they will eat well, and we do our part, and give them plenty of corn."

Now for my experience. Last year I fed six hogs, about 18 months old. They had the run of pasture, and the slops of the kitchen in the summer, and were put up for feeding the middle of September. To feed them, I put in my hog house 150 bushels of potatoes, and 150 bushels of apples. These were cooked in a steamer containing about 15 bushels, and the proportions used were about equal. All the grain I fed them was not equal in value to five bushels of corn. They were killed the first of December: Lightest 345, heaviest 430, average 375, total weight 2,250 lbs. Mr. Smith does not say what his pork was worth, perhaps $4, perhaps $8 per cwt. If the first, it was worth $116.24; if the last, $232.48. At the same rates mine would have been worth $90 or $180. Now for the expense of feeding. My potatoes were worth eighteen cents per bushel, my apples perhaps 10 cts., certainly not more; making for both potatoes and apples, a value of $42; call the grain $3, and the value of the whole food is $45. Forty-five from two hundred and ten, would leave one hundred and sixty-five as the difference in the cost of feeding the two lots; comparatively the operation would stand as follows:

	No. of pigs.	*Total weight.*	*Cost of feeding.*	*Value at $4*	*or $8*
Mr. Smith's,..	9	2906	$210	$116.24	232.48
Mine,........	6	2256	45	90	180
Difference,...	3	656	$165	$26.24	$52.48

Thus it appears that at the least price Mr. Smith lost in feeding $93.76, and at the highest gained only $22.48; while at the lowest rate mine exceeded the cost of feeding $45, and at the highest $135. It must be remembered, however, that the value of the hogs, and the labor of feeding is omitted in all these estimates, and should be deducted to ascertain the true profit or loss of the feeding.

I cannot agree with Mr. Smith that the breed of hogs is of no consequence so long as there is corn enough. I am satisfied by experience that there is a difference among our swine (excluding the pet breeds of Berkshire and China,) so great, that at the same age, the same quantity of food will make 50 per cent more pork in one breed than in another. I have been led to believe that the true criterion of value in a hog, was, not in the quantity of food he could eat, but in the flesh the food would make. I am sure my brother farmers must love raising corn better than I do, valuable as the crop is, if they prefer feeding pigs a year on the grain unbroken, and the roots raw, to using one-half the quantity of corn so required, when ground and mixed with the same roots, or a larger quantity steamed. In my opinion cooking food for animals is one of the greatest improvements in modern husbandry, and feeding grain as was done by Mr. S. a downright waste; and I am glad to perceive, by his comments on Mr. Smith's letter, that Mr. Buckminster is of the same opinion.

In one thing the statement of Mr. S. has my most cordial assent; and that is in the value of hog manure, and the propriety of increasing it as much as possible. Pigs are excellent workers at that business, if the proper materials are provided. I have a yard like Mr. S., but without his stone bottom. Into this, straw, weeds, and muck, are put as wanted, or as most convenient, and are thoroughly incorporated with the manure and urine by treading and rooting. These materials absorb and retain the parts that would be most likely to escape, and the whole mass applied to a corn or root crop in the spring, will give an increased crop in many cases equivalent to half the ordinary product, and nearly defraying the expense of feeding.

An Onondaga Farmer.

A Remedy for the Grain Worm.

Messrs. Gaylord & Tucker—Western Vermont was very noted for raising grain, especially wheat, from its first settlement until about the year 1820, when the grain worm was first discovered in rye, barley, summer and winter wheat; its ravages were more confined to the wheat crop of the winter variety. This formidable enemy came more and more numerous, until after repeated trials we were obliged entirely to abandon wheat raising. No remedy appeared to present itself whereby we could gain any success. It is but a few years since those who have cast their wheat upon the ground in the fall have been successful. The spring varieties are now more generally sown; which happens about the fifteenth of May, to carry the ripening process beyond the reach of the fly, and summer fallows are going out of date.

In 1837, I tried an experiment which proved successful in avoiding the depredations of the grain worm; since then I have not cultivated the winter grain, and therefore have not again tried the remedy. As soon as the calyx or envelope of the kernel was formed and while the wheat was in blossom, I prepared some boys with traps and hired them to catch an animal well known in these parts by the name of skunk. They caught two of these noxious animals, which I hung up in two different parts of my wheat field about the height of the grain heads; and the result proved on strict examination that within a circle of several rods around these animals, no larvæ or grain worms could be found, and at the same time in other parts of the field, some considerable intrusions of the worm were noticed; but they did not infect this field of three acres to that extent that they did others in the neighborhood. The contrast as I suppose was occasioned by the strong effluvia that spread in all directions over it. I have also noticed that flies never prey upon the carcass of this animal as they are well known to do upon other dead flesh; and I should suppose that all animals that were endowed with but a small share of instinctive common sense, and were blest with but small olfactory organs, would shun the powerful weapons of this animal without one salutation.

The skunk is an animal which we frequently find in the fields, probably the same species and about the size of the pole cat; its hair is long and shining, with one or two stripes from the head along the back and tail, clouded with white, the remainder black; it has a long bushy tail; lives and burrows in the woods and hedges, and often under barns and outhouses. When undisturbed, this animal is without any ill scent, or disagreeable effluvia; but when attacked, the skunk discovers his singular but effectual method of defense. It emits a fluid of the most nauseous and intolerable scent that has ever been known: so odious, subtle, penetrating is the ill-scented matter, that there is no animal that can long endure it, or will venture to approach him when he is throwing it out; it infects the air all round; with the wind it may float a mile or more. No method has ever been found to extract the scent on which the fluid has been thrown; time, earth and air, after a long period afford the only complete remedy. This ill-scented fluid is an unctuous yellow matter contained in two tumors or bags attached to the abdomen, at the termination of the back bone, and surrounded in such a manner by circular muscles that on contraction the fluid is forced out with great velocity and force.

I have taken out these bags, and have no doubt they may be preserved any length of time by drying, or put them in glass jars in which any quantity of twine might be enclosed; by pressing the sack, the cord would become incorporated with the matter; then at, or just previous to the appearance of the wheat fly, which is about the last of June, while the grain is in the blossom, or milk, string this scented cord around and across the grain fields in different directions, and it would thoroughly incorporate the whole field, and I have no doubt form a safe and effectual barrier in preventing the encroachments of the wheat fly, and many other winged insects.

The above, I cheerfully present for your consideration with liberty to publish, hoping it may be of some use to the public directly or indirectly, by leading the way to a more pleasant if not efficacious remedy to prevent the ravages of so formidable an enemy.

Yours, SOLOMON W. JEWETT

Middlebury, Vt. Jan, 1841.

Cobble Stone Buildings.

THE first cobble stone buildings that I remember to have seen, were at Pittsford in Monroe county, nearly twenty years ago; and from the rude appearance of the work at that time, I have supposed the art was then in its infancy; but perhaps some gentleman of that neighborhood will furnish a sketch of its history.

About six years ago the first building of that description was erected in this quarter, one mile east of Aurora; and in my opinion the walls are more beautiful than brick. The beauty of such structures however, will mainly depend on the *size* and *color* of the stone, though the *color* of the sand will have an influence.

If the stone and sand are both dark colored, the building will have a lurid aspect; for the proportion of lime in the mortar (one-eighth or one-ninth) is too small to whiten it sufficiently; but if the sand be a light gray, the contrast of colors with dark stone, will be pleasing.

Cobble stone of any size not exceeding *six inches* in diameter, may be used; but for the regular courses on the outside, those of *two inches* in diameter should be preferred. Small stones give the building a much neater aspect. Two inch stones are very neat, though three inch stones will answer. The inside row of stones may be twice as large as those on the outside.

The mortar is composed of one bushel of fresh stone lime to eight or nine bushels of clean sharp sand. As the strength of the building depends on the goodness of the mortar, it is very important that sand of the first quality should be obtained. Yellow sand, or any sand that contains clay, should be rejected. Gray sand is sometimes found so pure as not to discolor the water into which it is thrown; and such should be procured if practicable.

Mortar that has been made some weeks is generally preferred. Some masons are particular to reduce the lime to a thin paste, and then *while it is hot* to apply the sand.

The thickness of the wall is sixteen inches, though twelve inches will answer very well for the gable ends above the garret floor.

When the foundation, or cellar wall, is leveled and prepared, a layer of two (or two and a half) inches of mortar is spread over it; and the stones are pressed into the mortar in *two rows* which mark the outside and the inside of the wall, leaving about an inch between each adjoining stone in the same row. If the wall is to be grouted, the two rows are formed into two ridges by filling the vacancies between the stones with mortar, and the space between these two ridges (about a foot in width) is filled with such stones as are not wanted for the regular courses. The grout is then applied. If the wall is not to be grouted however, the mortar should be carefully pressed round every stone, making the wall solid without flaw or interstice. When one course is leveled begin another.

Between every two adjoining courses on the outside, some have the mortar to project as far out as the stones, in a regular line round the building. It is wrought to an edge with the trowel, and adds to the neatness as well as to the strength of the wall; for during this process the mortar is pressed round each stone; and the *smoother* it is made, the *stronger* it will be, and the better will it resist disintegration.

It has generally been the practice to have the corners formed of cut stone; but in a two story building erected last season within a few miles of us, this expense* was avoided by *rounding* the corners, and using cobble stone. The cut stone is not the only saving by this plan, however, much of the mason's time is consumed in laying such corner stones.

On the first mentioned building, the workmen were employed by the day. Four walls, amounting to one hundred and forty-six feet in length, were commonly raised eighteen inches every day by three masons. This is a little short of ninety-nine cubic feet of wall, or six perches to each workman. Sometimes in damp weather they had to stop a while for the mortar to set.

The building erected last season was contracted for by the perch at thirty-seven and a half cents; and half of this sum, additional, was allowed for the tender. The walls, however, were grouted—that is, all the interstices between the stones were filled with liquid mortar; and this substance must have *more time* to set. For this reason not more than three courses a day can be laid in dry weather; and not any when it is showery.

It requires from ten to twelve bushels of sand to a perch besides the lime when made into mortar; and cobble stones lie in a heap when thrown from the wagon about as compactly as they do in the wall.

If cobble stone buildings are as cheap as wood, as one of those proprietors believes, they will be much cheaper in the long run; and this will be evident when we consider the frequent paintings which are necessary to keep a frame house in decent repair.

P. S. Since writing the above, I have received two communications from persons who have had cobble stone houses erected. One says, "the thickness of the wall is measured from the outside of the stones. Pieces of timber, four by six inches and two feet long, are used for setting the lines. These are laid in the course just finished, and the line is drawn through saw-cuts just sixteen inches apart."

The other says, "the cost of cobble is about one-sixth less than brick; and probably one-quarter or one-third less than wood,—on the supposition that the stones may be had within a mile, and sand within two and a half miles." It must be evident, however, that the expenses of cobble, brick, wood and stone, must differ considerably in different places, according to the prices of those materials and the distances they have to be carried. D. T.

Greatfield, Cayuga co. 1 *mo*. 21, 1841.

On the Culture of Indian Corn.

MESSRS. GAYLORD & TUCKER—I have sometimes thought I would contribute something to your columns, (if you deem it worthy,) the result of my operations, but having kept no regular account, I cannot be very minute. In the cultivation of Indian corn, my practice is, deep plowing, late in the fall, of sward ground; and during the winter give it a dressing of lime of from 50 to 75 bushels per acre; in the spring apply the harrow as early as possible, and continue it occasionally until planting, which is the last of April or 1st of May. I use a variety of large white dented corn. During the season of cultivation, I am careful never to plow through the sod. I use the plow and cultivator alternately; am careful to leave but three stalks in a hill. My crop varies from 100 to 125 bushels of ears per acre.

After using the cultivator the last time, I sow my corn field with the common flat turnep and always have a good crop.

Value of the Sugar Beet.

Last year I planted a few rods less than half an acre of sugar beet, and had 327 bushels of fine roots, weighing about 9 tons, and their effect on my cows is truly gratifying. I have three cows that had calves last February, and that will again calve next March, to which I give 2 bushels of beets a day with hay and corn stalks, that now yield us an abundant supply of milk and butter, without any appearance of drying, and doubtless will continue until we stop the beets, and are in fine order. I took an old cow, late in the season, very thin in flesh, which I fed almost entirely on beets, with a little meal toward the last, and made a fine beef of her.

I gave a full supply of beets to my fatting hogs, and never slaughtered better, and with so little grain. I am now feeding them to my store hogs; they are in fine condition and grow fast. In all cases I feed them raw. Notwithstanding what was said against their use in the Cultivator, I am decidedly of the opinion, that there is no article now in use that will produce an equal amount of feed from the acre. I have never used them alone in fattening animals, but this I know, I have never used so little grain in fattening my animals, and never had better.

I cultivate 18 acres of land, and will try the coming season to give you some account of my operations a little more in detail.

One word to farmers in general. Do no more than you can do well. Farms in general are too large; more cattle are kept than are kept well. I am clearly convinced that it is much better to raise 100 bushels of corn from an acre than fifty. It is better to have a cow give 12 quarts of milk a day, and continue the year through, than to give 5 quarts a day for 7 months.

D. C. OSBORN.

Westfield, N. J. Jan. 23, 1841.

Farming on the Prairies.

MESSRS. GAYLORD & TUCKER—The following hints on agriculture were received from a farmer of experience, and are communicated with the hope that they may be useful to the farmers of Illinois, many of whom are subscribers to your valuable work.

In plowing *new prairie*, the sod or sward is usually turned to the depth of from four to six inches, and from twelve to twenty inches wide. It is important that the sod be laid as level as possible in the preceding furrow. The plow beam is usually attached to an axle supported by two wheels; sometimes the fore wheels of a wagon are used. One wheel should be so adjusted as to run on the middle of the sod last turned, and should be of cast iron or otherwise made heavy, so as to press the sod firmly down. The circumference may be set with sharp irons in the form of an axe blade, which will cut holes about four inches long, three inches deep, and about two feet apart, for the reception of the seed corn; this will save one-half the labor of planting; and the corn coming up in the middle of the sod, will not be so likely to suffer from the grass and weeds usually springing from the edges of the sod. My friend suggests that many advantages would be derived by leveling the surface of new land with a heavy roller. He says that by plowing to the depth of six or eight inches and rolling before or immediately after planting, the ground would be fit for the plow as soon as the corn comes up, and that thereby a large crop may be raised the first season. That the grain would immediately strike root into the soil beneath the sod, and that the noxious gasses evolved by the decaying vegetable matter would be confined in the ground or nourish the crop, instead of producing disease in the vicinity. The opinion is prevalent in Illinois that large tracts of new broke prairie are productive sources of disease to the settlers near them, especially if the summer be rainy and warm.

Should these hints enable any of our farmers to save a few day's labor in planting—to raise a good crop of grain, and at the same time preserve the health of himself and family, he will please communicate the result of his experience to the editor of the Cultivator.

Carthage, Illinois, Jan. 15, 1841. C.

State Aid to Agriculture.

MESSRS. EDITORS—I have read with pleasure the communications in the last number of the Cultivator, on the subject of "Legislative Aid to Agriculture," and most cordially approve of the objects therein suggested. Permit me through the columns of your invaluable journal, to second the efforts of those gentlemen by recommending prompt, simultaneous, and energetic action by every Agricultural Society in our State. Let memorials to the Legislature be circulated, praying for the organization of a State Board of Agriculture, and particularly for appropriations, to be used in awarding premiums at the annual Fairs of the County Societies. One or two hundred dollars to each Society will be adequate to their wants; and after the proper spirit is aroused, I question whether any aid from the State will be needed. But at present in the infant state of these associations, that spirit is lacking, and the duty of a few individuals in obtaining subscriptions to constitute a premium fund is very onerous. Very many farmers refuse to enrol themselves as members, because they have nothing to exhibit at the Fairs which stands a chance of obtaining a premium, as a dollar they think is too much for the "sight." Now the only way to bring this class into the fold, and it is a tremendous majority, is to let them see the "pig" for nothing. But the question very naturally arises, who is to pay the *piper?* Why at present, comparatively a very few public spirited individuals are obliged to do it. This is a left handed sort of monopoly, or *aristocratic privilege*, which does not exactly comport with republican institutions, and had better end forthwith. But let the State do it, and it will at once act upon that great and fundamental principle of good government, under any form of "conferring the greatest good on the greatest number." It will be no *gift*, but a *quid pro quo*, and the best bargain the State ever made, for we solemnly promise to return what we receive to her ample lap with quadruple interest.

But a deaf ear has been turned to our former supplications, and I am now clear for demanding it as a *right*, and no longer obsequiously asking it as a *favor*. We uniformly receive a polite, passing bow, from all our chief magistrates in their messages, and a frigid report ekes from a committee of lawyers at the tail of each session, and there is the "be all and end all." The farmer is indeed the "patient ox," who has to bear the burdens of taxation, and the evils of bad legislation more than any other class; but let public men beware, for his patience may become exhausted, and that he carries *heels* which will kick strongly when treated ungratefully. Now, let every farmer through the length and breadth of the State, put a *mark* on the members of the present Legislature who give *negative* votes to the prayers of our petitions, and then *nous verrons*. I have no notion, Messrs. Editors, of using soft soap and sugar candy in this matter any longer. Let us act boldly, with unanimity, and with becoming spirit, and our wishes will be complied with, and not without. A gentle rap at the door is useless. Why the deafness ascribed to the adder is nothing to that of your *officials* after their election. Thunder is the only thing that will make them hear; this is fact, this is history, and *we* the farmers, have got to use it, or my word for it our "barrels will not be down till next week."

I would respectfully recommend the appointment of two or more individuals, residents of Albany, by the State Society, whose duty it shall be to urge our applications from day to day to the members of the Legislature; and furthermore let a strong memorial be presented, which will doubtless have much weight, coming from the parent Society.

I will conclude by saying that energetic measures will be adopted in this County, in furtherance of the above object, and our representatives will give it a cordial and strong support. Your friend, L. A. M.

On the Culture of Wheat.

MESSRS. EDITORS—Believing that I have received a good deal of benefit from reading the experiments of others, I am willing to give the benefit of what little experience I have had in farming, as a small requital to the contributors and readers of your paper, for what good I have obtained from it, and if by so doing I can add one new and *useful* idea to my brother farmers, I shall feel myself amply paid for my trouble.

I set out by avowing my entire belief that *the farmer makes his wheat freeze out, if it ever does so;* the way he does it, is, by too early sowing, for when a wheat plant comes up so early in the fall as to have a large top it invariably has one large and long root, commonly called "a tap root," that strikes deep into the ground, besides a number of small roots that reach about in the top of the ground in search of food. When the first frost comes, it raises up a thin part of the ground and from the large root being deep and the small ones much extended in the surface, the little firm ground cannot slip up the top of the grain, but must either pull up or break the large or tap root, and if that root is broken (as I am satisfied is almost always the case,) the plant must die; but if the wheat is sown later, and is only in "*the red*" in the fall, when the first frost comes the ground will slip up the grain, without disturbing the "tap root," and when the deeper frost comes, it will bring the root all up, and in the spring when the ground settles, all goes down together, and the plant *being whole*, proceeds to grow, and none is frozen out. For the above reasons I have withheld sowing my wheat till in October, and have not had a rod of frozen out wheat in fifteen years.

Hamburgh, New Jersey, Jan. 30, 1841. L

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* Estimated at one hundred and fifty dollars, but then the hauling would have formed no inconsiderable item.

National Agricultural Society and School.

Messrs. Editors—I notice in your last number for 1840, a production from the pen of that distinguished farmer James M. Garnett, headed "Importance of a National Agricultural Society." I have long been in the habit of giving special attention to every thing published over the signature of that philanthropic and talented Virginian, of more than 50 years of scientific experience; and it would afford me great pleasure as well as instruction, were it in my power to visit him and become acquainted with the man and his practices; for if he farms as well as he writes—if he is as good a farmer at home as he is in the agricultural papers, much might be derived from a visit to his residence. But, in so much as my own little matters at home preclude the idea of such a visit, permit me to talk a little with him through a medium worthy of the man I address.

With spirit and force, Mr. Garnett urges the formation of a National Agricultural Society. I agree with him that we ought and must have such a Society. I have no doubt that such an establishment would confer many benefits upon our agriculture, more than any man could now foresee, while it would tend rapidly to enhance the respectability of that branch of business; and therefore I do not write to *oppose* any thing Mr. G. has said, but to *suggest* for his consideration, as well as of your other readers, the idea of *connecting a National Agricultural School, with a National Agricultural Society.* It is well known that half a million of dollars is now in the treasury of the United States, donated by Mr. Smythson to this nation for the purpose of the mental improvement of our people. Now this fund cannot be applied in any way to do *our whole population* so much and such perpetual good, as by the establishment of a National Agricultural School. This point seems to be agreed upon by all your correspondents who have touched the subject; and if a National Society would also be useful, and therefore should be formed, what impropriety would there be in connecting the two together? Might they not mutually stimulate, improve and nourish each other? Or if the two institutions should be separate and independent of each other, would not each be more feeble, less efficient and less respectable? Under present circumstances, who have we to carry out the establishment of such a School? It must be apparent to every one, that if the whole, in its details and practice, is to depend upon the energies and devotion of our heated politicians, we need not expect it will soon go into operation, or that it will be well managed when in operation. I have some little experience in the inefficiency of politicians, when trusted with agricultural matters. Every little party excitement will engross more of their solicitude and attention, than the most important agricultural measure. Indeed you cannot get the politicians of this age to "condescend" to a vigilant attention to such matters. How then are we to succeed in the establishment of an Agricultural School? I answer not by the agency of politicians alone. Nor do I profess to know how it could best be done, and therefore write to induce others to think and express their views. How would it do for Congress to place the establishment and management of the School in the hands of a National Agricultural Society, to be made up annually, of delegates from all the States? Now if every State had a State Agricultural Society, it would be easy for each Society to send the delegates to the National Society, and if Congress were to charter a School thus under the control of the State Societies, this act itself would no doubt cause the people in every State to organize in order to be represented, and thus agriculture would at once assume a stand all over the Union, while a great National Society and National School would be formed on a permanent basis. Thus the agricultural strength would be organized, so as to act in unison. This is the great desideratum. Let all our energies be concentrated, and we can do any thing in the power of man; but divided and scattered as we are, we spend our forces, as it were drop by drop, whereas *union would make us mightier than a torrent.*

If this view be correct, that the surest guaranty for a speedy and judicious establishment of a National School, is the formation of a National Society, let us see on the other hand how a National Society will thrive without a School; and here too, I wish not to be understood as speaking with full confidence that I am correct; let all think for themselves, and express freely what they think. How will the National Society continue to keep up incentives strong enough to insure always full meetings? What important business can be always before the Society, to induce talented men to assemble from all parts of the Union? Can it be supposed that an Agricultural Fair of a national character will continue to hold out inducements sufficient to cause talented business men to ride a thousand miles on their own expenses, to the neglect of their own private business? While the thing is new, many a zealous friend to the cause would readily do it; but when we have had three or four annual meetings, will not every one be less inclined to make a sacrifice of his private interest than at first? We shall all feel that we have put the ball in motion, and that it will move on if *we* do stop to think of our own affairs. Well, but Mr. Garnett intimates that the members of Congress might serve as delegates to the Society. I think, as I have before said, that politicians will not do to manage such business. How then shall we contrive to keep up our Society? To me, there seems to be but one plan, that of placing the School under the control of the Society. Then we may suppose that no man would ever feel that he was going upon an idle errand, when delegated to the National Society. All the inducements of the business of a National Society, a National Fair and a National School, when combined, would I think, be enough to make any man feel the importance of his mission. I should esteem it a greater honor to be elected by a State Society to represent my State in a National Society of this kind, than to be elected by my district to the House of Representatives in Congress. Indeed could a man do more for his country than to fill with ability an office upon which so much of his country's prosperity would depend? But it may be asked, can Congress be induced to place the School under a National Society? I reply, if the people demand it, it will be done; and it is perhaps nearly if not quite as easy to stir them up to that, as it would be to induce them to form a National Society independent of a School. If we could engage the Hon. Daniel Webster, Henry Clay and a few others who feel the interest in agriculture that they do, to urge this kind of a National Establishment, upon the floor of Congress, the people would soon respond, that it must be done. And cannot half a dozen such men as Mr. Garnett, induce a few prominent members of Congress to take an energetic stand in favor of the measure? Can we not "log roll it," or act the part of lobby members, till we gain strength enough to give the position a respectable notice in Congress? And if we succeed thus far, the point is gained, for a majority will respond affirmatively at the ballot box. Respectfully,

F. H. GORDON.

Clinton College, Tenn., Jan. 2, 1841.

Lincolnshire and Cotswold Sheep.

Messrs. Gaylord & Tucker—In the last volume of the Cultivator, page 176, Mr. Sotham has commented pretty freely on an article of mine published in the same volume, page 93, in regard to my Lincolnshire sheep. He remarks—"I have perused with much pleasure a communication from Mr. Clift, on Lincolns, though I cannot say I agree with him, as being the best sheep for the country, or can I believe that length, height, breadth, or girth, denotes a good animal." Now I had nowhere said "that length, breadth, or girth, denoted a good animal," or that their measure in any way whatever, was any "criterion to goodness." In relation to my buck, I only gave the simple fact as it was; neither did it strike me as being at all "novel," to give the measure of an animal; and so far from asserting or believing, that this was an uncommon measure for a sheep, I stated that my Lincolns were not over large, but carried great weight in their compass of carcass. As to Mr. Sotham's not "agreeing them to be the best sheep for the country," I have not the least concern on that point, but will leave this to all those who have proved them, to judge, and time more fully to demonstrate, and shall be ready at all times to compare them with any other breed that may be produced. While on this point, it will not, I trust, be thought out of place to state, that during the last three years, I have sold to the farmers and butchers over 200 head of sheep of the cross and full blood Lincolns, and at prices generally varying, to the butcher from ten to thirty dollars per head, and to the farmer, from ten to fifty and in several instances at one hundred dollars per head; and I state it as a matter of great pride and satisfaction, that not in one instance that has come to my knowledge, have they disappointed all that was expected from them. For the information of Mr. S., I will state, that I have years ago turned lambs to the butcher, short of one year by two or three months, that weighed 18 and 20 lbs. per quarter; but this can be by no means made a general practice with us; so neither does it, or the fact to which Mr. Sotham has referred, disprove that it may not be considered early maturity to have our wethers fit for the stall at two, and at farthest, three years old. Animals that give us the best return, according to the expense of their keep in any given time, must always be the most profitable to the farmer, and that the Lincolns have done this for me, (as sheep,) I again assert, with the fullest confidence, over all others I have yet tried.

The best part of Mr. Sotham's letter, *for me*, remains to be noticed; after giving a very fine, and I have no doubt, just description of one of his bucks, he observes "that if Mr. Clift approves of his good qualities, he will cheerfully sell him to me at a reasonable profit." Now Messrs. Editors, Sam Patch, or somebody else, has quaintly observed "that some things can be done as well as some others," and it so happens that I am sometimes looking out to see what is going on in the world, as well as some others; so I had the curiosity to attend at the late Fair of the American Institute, held in New-York, and I took along with me several of my Lincolnshire sheep to show and enter for the premiums. Here much to my surprise and satisfaction, I found Mr. Sotham with all of his late imported stock, also for show and entered for the premium. Being both of us lovers of fine stock, we were not long in making acquaintance. Here then was American bred sheep, and Lincolns too, obliged to contend against some of the best sheep that England could produce. The contest between Mr. Sotham's sheep and mine, lay, for the best ewe and lamb, a single pair each, and for the best buck, with this difference, or odds against me, that Mr. Sotham showed 19 fine bucks to my one, as I had but a single buck on the ground. I trust it will not be thought arrogant for me to say, that to me was awarded the first premium for the best ewe and lamb, a silver cup for each. I can moreover assure you, Messrs. Editors, that Mr. Sotham's ewe was no fool of a sheep, either, for I liked her so well that I purchased her at a strong price, and she is now in my possession. I have noticed by the Dec. number of the Cultivator, that Mr. Sotham has done me the favor to acknowledge my purchase of him, of one of those bucks, and the loan of another buck, as represented in the Cultivator, for which favor I hereby tender him my thanks, and for his information will state that they have done fine, and show the right sort of constitution. With all due deference to the opinion of Mr. Sotham and others who sold this lot of bucks, I do not fear to hazard the opinion that they showed much stronger marks of Lincoln blood, than of any other breed, particularly in the appearance of their coats, great weight of fleeces, quality and firm constitution which they indicated; and quite certain I am, that the buck I purchased of Mr. Sotham, is altogether of that strain of blood, and Mr. Sotham will bear me witness that I selected him more particularly with that view, as I hope by this means, to keep a part of my flock pure of this blood, and give the Lincolns a fair chance to maintain their ascendancy. I think that these bucks will give a little more size in the general, to my flock, without any sacrifice of their previous fine qualities, which in no case I should be willing to hazard for the sake of obtaining greater size. I have between 80 and 90 choice selected ewes, now in lamb by these bucks, and I hope and intend, by my attention to my sheep, and adhering strictly to the true principles of breeding, to prove them still worthy of the attention of my fellow farmers.

I have written with the best feelings towards Mr. Sotham, and only wish to remove any wrong impressions that his article may have given your readers, in respect to my Lincoln sheep. It will be but sheer justice for me to acknowledge that I think Messrs. Sotham & Corning entitled to much credit and liberal patronage, for their late importation of so much fine stock. I am free to acknowledge, taking their sheep as a whole, I never saw finer, and in several individuals of them, it would, I think, be hard to find their equal in any country. Of his other stock, I profess not to be as good a judge, but I should say, I saw some most beautiful Hereford cattle, very silky in their coats, and fine in their flesh. I have no doubt but they will prove a good cross upon our best native cattle, as well as upon the heavier fleshed Durhams, and other improved breeds among us. Their cow Matchless has been the most perfectly represented in the Cultivator, of any animal I have seen, as like its original in all respects.

You will recollect that in my last communication to you, I gave the weight, price, &c. of some of my wethers for the last 2 years. The present winter, my primest wethers went to the market about the first of December, 24 in number—6 of these sheep were 3 years old, and gave a total dead weight of 879 lbs., or $146\frac{1}{2}$ lbs. per carcass, equal to $36\frac{1}{2}$ lbs. per quarter, and I am informed that one of these sheep gave 36 lbs. of fat in caul or rough. Pretty good weight this, for not over large sheep. With due regard, yours, L. D. CLIFT.

Somers, N. Y. Jan. 26, 1841.

Management of Salt Marshes.

Messrs. Editors—It was my intention to have replied sooner to the inquiries of Mr. Fairbanks of Nova Scotia, published in the November number of the Cultivator, page 178, relative to the treatment of salt marshes; but various engagements, and I might perhaps add some negligence, have prevented until the present time. I have had some experience in improving tide meadows, and have expended much time and money in arriving at a successful system of treatment upon this kind of soil. The following directions may perhaps be useful to your correspondent, and others similarly situated. 1st. That the marsh should be secured from the tide by a permanent bank. 2d. That a sluice or sluices of sufficient capacity be laid, to discharge the rain water, and back waters, which may proceed from adjacent uplands; so that at no time the water courses and ditches will be filled to overflowing. The sluices should be laid deep enough to draw the water through them from the lowest part of the marsh; great care should be taken to have the doors made tight so as to exclude all the tide water possible. The water courses and drains should intersect each other at right angles, and no lot of marsh should contain more than ten acres; if any rain water should lay upon the middle of these lots, it will be necessary to cut small drains to let it pass off freely; these might be covered where the materials are at hand. The mud and earth which come out of water courses and ditches, should be removed into the lowest part of the marsh; by a neglect of this, the rain water will be confined too long upon the surface, and the most luxuriant growth of timothy or clover may in a short time be converted into a nursery of rushes, upon the same principle that wheat so frequently turns to cheat.

The best time to sow down in grass, is when the tide is first shut off, and when the mud is soft; a growth of coarse grass will spring up sufficient to protect the fine grass in its tender state; this crop should be mown off and not suffered to lodge upon the marsh. Timothy* and herds grass require about one bushel to sow four acres. The former will flourish where the water can be kept two and a half or three feet from the surface; where it approaches nearer than this, in the ditches, the latter will succeed best; in order to avoid having it sown in rows, it should be sown a second time across the first sowing. It is not advisable to mow longer than three years in succession; to mow and pasture alternately is the better plan. If the high marsh becomes bound and unproductive, plowing will be necessary; and after raising two or three crops of rye, Indian corn, or broom corn, without the application of any manure, the soil will be quite renovated, and when sown down in grass will be much more productive. When the earthy deposit is several feet in depth, it will not soon become exhausted; when it is not desirable to plow, lime may be used with success. Low marsh, or turf, or as we term it here, "*horse dung*" mud, should not be plowed; when it becomes unproductive, a covering of clay or loam to the depth of two or three inches, will be found the cheapest application. I have had no experience with sea manure.

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* What we call timothy in New Jersey, is called *herds grass* in the New England States, and what we term herds grass, is known by *Red Top* there. To avoid mistake in my meaning above, *timothy* resembles the tail of a rat.

THOMAS F. LAMBSON.

Salem, N. J. Jan. 20, 1841.

To Western Emigrants—No. 4.

Messrs. Editors—By sundry assurances from unknown friends, that my articles have answered some of the purposes for which they were written, I am encouraged to continue. Even if they did no other good than to be the moving cause of bringing "two Durham cows" from my native state of Connecticut, to feed upon our boundless pastures, I should be satisfied. I hope Mr. Allen will give the required information, as to cost of freight, &c. And here I will take the liberty of saying to all persons desiring information connected with the great cause of improvement in agriculture, upon any branch within the extensive knowledge of A. B. Allen, or his brother R. L. Allen, of Buffalo, that they have but to ask, and they will receive. If they wish similar information from Chicago, address John S. Wright, Esq. Editor of the "Union Agriculturist."

No emigrant need fear any difficulty in bringing along cattle and hogs. Several of the masters of steamboats on the Lakes, seem to take great interest in the shipment of choice stock to the West. I have had three lots of pigs, shipped from Buffalo to Chicago during the last summer, in the sole care of the master of the boats, and from the appearance of the pigs on arrival, they must have been treated like cabin passengers. In fact, none but a brute could maltreat a Berkshire pig.

In the shipment of furniture, emigrants need advice. Great care should be taken in packing everything in the most compact manner, in barrels and boxes, strongly hooped and nailed; and very plainly marked with full directions. The freight upon the canal is charged by the pound. Upon the Lake, and upon storage in ware-houses, it is charged by the *barrel bulk*. The best way is to contract in New-York or Albany, for the whole charge of transportation clear through, and pay it, and take a receipt, specifying the contract completely. If you have a family, you will have enough to look after, without watching your freight all the journey. Many articles are lost, through the carlessness of the owners. Articles are sold every year in Chicago, "for freight and charges," that never had any mark upon them of owner's name or destination. You cannot be too careful. Be economical, prudent and good natured upon your journey. Avoid haste and hasty words, although often provoked, and be determined to have a pleasant journey, and my word for it, you will have. And at whatever sacrifice, be sure to settle all your business before you start. For I have found out that "money to come from the East," is a very snail of a traveler; it but rarely overtakes the emigrant; and as for "going back after money," you can earn two new dollars here while you can hunt up one old one there.

If it be possible, always fix upon some definite spot for your location before you start—and when you arrive in a new settlement, *beware of sharks*. Be careful to settle in a healthy spot, although the soil should be less rich. Nothing disheartens the new settler so much as a season of sickness in the first year; and it is often brought on by great imprudence.

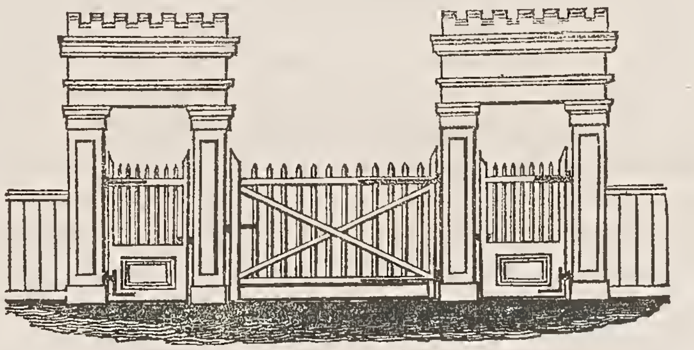
One prevailing fault among new settlers, is undertaking too much the first years. I have known many to completely prostrate themselves in a vain endeavor to fence and cultivate forty acres with strength only sufficient for ten, and after months of toil, finally compelled to witness the destruction of the whole crop, in consequence of their inability to "finish the fence." Not only the loss of crop, but a severe fit of sickness, brought on by over-exertion and exposure. For probably, while toiling at the field, the finishing of the house has been put off, and at last when placed in a situation to require a comfortable shelter from storms and winds, there is nothing of the kind. I have personally known much suffering, and sometimes death, to arise from such circumstances. How much better to make a small beginning. To be sure and make the cabin as comfortable as possible, for at the best, it is to a family that have never been used to the like, but a temporary convenience, generally occupied more through necessity than choice. Not but that a *log house* can be made most completely comfortably, and I have often seen those of a very rough exterior, which showed the highest degree of neatness within. But there is such an anxiety among many emigrants to get a large farm, that the dwelling is neglected. This is all wrong, it is much better to have a "*little* land well tilled," and a house, if not "well filled" inside, at least have all the cracks in the outside well filled, if you expect to keep the wife, 'well willed." Many an ague fit is brought upon the new settler by the unusual exposure to which they subject themselves in an unfinished log cabin, with all the cracks open, perhaps without door or window, and but half a chimney, and sometimes without floor or fire-place.

Such a change from all former usage cannot be submitted to with impunity, although in the summer time, and though it be merely for that indefinite period, "'till I get over my hurry." The fact is that an industrious man upon a new place, where everything is to be created by the work of his own hands before it can be called *a farm*, is never over his hurry. And I am sure that I shall have all the female part of my emigrating friends upon my side, when I insist that it should always be the first thing to do, as I am sure it is the first *duty* of the emigrant, to make the dwelling house as comfortable as the circumstances will possibly admit. If a man will expose his own health, he is bound by the strongest ties to protect that of his wife and children at all times, and doubly so, when he has brought them away from the thousand comforts that they have been reared to, "to begin a new home in the wilderness." And although the new settler's log cabin is necessarily a rough uncouth looking dwelling, it can with a very small amount of labor, be made tight, warm, comfortable and pleasant. How many of my readers now dwelling in their handsome mansion houses, will, as they peruse this, look back to the positive happy days that they enjoyed in a log cabin.

That many of their descendants who are disposed to partake of the bounties that nature has provided for the industrious man in the Great West, will yet enjoy life in the same kind of humble habitation, is the sincere wish of their humble log cabin friend. SOLON ROBINSON.

Lake C. H. Ia. Jan. 28, 1841.

Ornamental Gates.



(*Gate—Fig.* 27.)

There is no one thing, Messrs. Editors, that gives more character to a farm than a neat and handsome gate at the entrance; and this subject has been entirely overlooked by our agricultural papers, as well as other publications. This fact I was not aware of until about two years ago, when I had occasion to erect one at the head of the avenue, leading from the road to my house. I examined the Encyclopedia's, and every book connected with agriculture or rural architecture, and not a syllable could I find on the subject. As a dernier resort, I was compelled to tax my imagination for a plan or form of a gate which would combine neatness and strength, and not be too expensive.

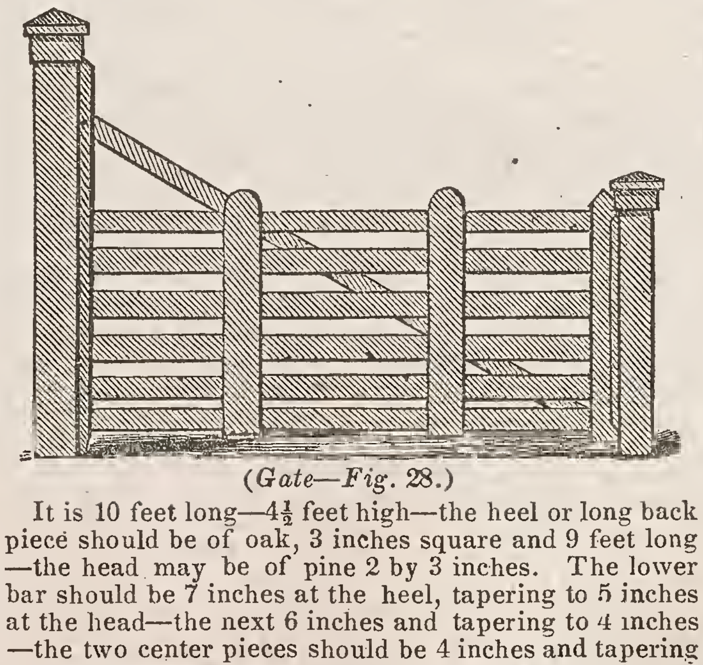
The one represented above was the result, and I had one constructed with some modifications, leaving off the entablature and making the side gates stationary.

I do not offer it as being the *most ornamental* or *least expensive*, but one that might be adopted until a better one is offered; at any rate it may awaken attention to the subject, and *draw* from your correspondents something much superior.

The two center or main posts are of chestnut, 8 inches square and 14 feet long, set 4 feet into the ground, and the earth well packed around them. The two outside ones are 11 feet in length—8 inches square, and also set 4 feet in the ground, and all encased with $1\frac{1}{4}$ inch plank. The gate is $10\frac{1}{2}$ feet in length and 5 feet high. The heel is of white oak 5 9-12 feet long—$3\frac{1}{2}$ inches wide, $2\frac{3}{4}$ inches thick—the top and bottom rails as well as the cross pieces or braces are 4 inches wide and $1\frac{3}{4}$ inches thick—the upright pieces or balustrades are $1\frac{1}{4}$ inches square, and morticed through both bars and cross pieces, every one forming a brace.

The gate is $10\frac{1}{2}$ feet long, and it is astonishing how much weight it will resist at the head. After it was hung, a man whose weight would not vary much from 180 lbs. hung his whole weight on the head, and we could not perceive that it settled in the least.

Every farmer should have a set of carpenter's tools and a room to work in, where many implements may be made or repaired in stormy days, when field work would be impracticable. By practice we become familiar with the use of tools, and a little ingenuity will enable almost every person to make a gate of some description or other, and I would offer the following (fig. 28.) which was handed me by a friend that has one in use, as being quite simple in construction, not very expensive, and when painted, makes a very neat and pretty appearance.



(*Gate—Fig.* 28.)

It is 10 feet long—$4\frac{1}{2}$ feet high—the heel or long back piece should be of oak, 3 inches square and 9 feet long—the head may be of pine 2 by 3 inches. The lower bar should be 7 inches at the heel, tapering to 5 inches at the head—the next 6 inches and tapering to 4 inches—the two center pieces should be 4 inches and tapering to 3 at the head—the two upper ones may be 3 inches at the heel and taper to $2\frac{1}{2}$ at the head. The brace should be firmly secured at the top of the heel piece and bottom of the head, should be 4 inches wide, and a wrought nail, well clenched, through the rails. The posts, if not cased, should be 8 inches square, and capped with pine plank.

It is an old adage that "a man is known by the company he keeps." So the provident farmer is known by his gates, fences and out-buildings; to find them in good order and repair is evidence of thrift, and gives character and a favorable opinion of the proprietor.

"Show me," said a valued friend, "good fences, gates and out-buildings—fields free from brush, briars and weeds, and I will show you a good farmer."

To illustrate this, I will relate a circumstance that occurred while myself and son were riding through the east part of Saratoga about one year ago. It was in a section of the country new to both of us; of course the inhabitants were all strangers. After passing several farms which had the appearance of being pretty well managed, and *many* which appeared the very reverse, we came to one which attracted my attention, and I said to my son, "This man *takes* and *reads* an agricultural paper." "Why do you think so?" said he. I pointed to his fences and gates for an answer, and as we approached his dwelling other evidences were so apparent that I proposed to make him a call. Unfortunately for us he was absent, but we found one of his men who was kind enough to show us the stock and improvements, all of which strongly confirmed my first impression.

In his yard we found a fine Durham bull, for the improvement of his cattle; and his pigs were a cross of the Mocho and Berkshire breed. His piggery was on a new plan intended for the double purpose of fattening his swine and cattle. It was in the basement of his grain barn, near a cellar in which he stored his roots. The basement also contained his horse power, with which he thrashed his grain, and ground his apples and vegetables for his stock. Near to this he had two cauldrons set in arches, in a house where the food was cooked for his hogs.

His pens were about 4 feet wide and 10 feet long. In each pen from two to four hogs are fattened in the fall, and when slaughtered, their places were supplied by bullocks, each pen forming a very comfortable stall for one animal. In addition to the usual fixtures for swine, he had racks erected for hay, and the troughs answered for mangers in which grain or roots could be fed to cattle.

Every step we took only increased our regret at the absence of the proprietor, from whom we were confident we could receive much information.

We were informed, by his man, that he was attending an auction about four miles distant on our road home. I was determined, if possible, to ascertain whether I was correct in my opinion or not. After considerable search I found him, and did not hesitate to approach and enter into conversation with him at once.

And here I would remark, that I have never yet met with a farmer *that had imbibed a spirit for improvement*, that did not receive me with cheerfulness and a hearty welcome. After some conversation on "matters and things" appertaining to our profession, I put the following question to him: "What agricultural paper do you take?" "The Cultivator and Genesee Farmer," was the reply.

To show the importance of gates in another point of view, besides convenience, I will relate another circumstance that occurred last fall. I was in search of a person in an adjoining town, and was directed to take a particular road and turn into the first "swing gate," which I found without difficulty, and could not but remark that it was the only gate I saw in that section. CALEB N. BEMENT.

Three Hills, Feb. 1840.

Improved Yorkshire Swine.

Editors of the Cultivator—Will you so far oblige us as to give us space in your exceedingly valuable publication to inform your countrymen, (several of whom have gratified us by most interesting and intelligent letters,) that we expect to have a tolerable quantity of our improved Yorkshire swine ready for shipment about the middle of May. The price of a single pig will be 15 dollars; for a pair, $25; at which price they will be properly caged and put free on board a steamer at Hamilton, at the head of Lake Ontario. Prepayment to be made in bills payable in Canada, or at least in the State of New-York. A description of the swine appeared in one of your previous numbers, and we have nothing to add to it. We have orders to send several pairs into the United States the ensuing spring, and we have no doubt of their making themselves favorably known to the enterprising breeders of that country. It may however, be important to state, that as a cross with the far famed "Alligators," they have proved themselves highly valuable. Two years ago we had a lot of as shabby sows presented to the notice of our boars, as could possibly be met with, such indeed as no feeding would bring to the weight of 200 pounds; and we have the best evidence that the produce on being slaughtered this winter, being about 18 months old, have weighed from 280 lbs. to 350 lbs. This very great improvement has induced many of our sapient friends to believe that their hogs are now as good as they can be made, and they are consequently breeding from half bred boars, by which proceeding every man of intelligence must know that they will shortly have another swarm of "Alligators." JOHN & E. A. HARLAND.

Guelph, U. C. Jan. 23, 1841.

A Visit to Mr. Allen's Piggery.

Messrs. Editors—Being at Buffalo a short time since, and having heard much of the celebrated Berkshire and China stock of swine, and being an admirer of fine domestic animals withal, I determined to make a visit to Mr. Allen and ascertain whether his stock realized the description I had often had of them.

The farm of Mr. A. is charmingly located on the immediate bank of the Niagara river, two miles below Black Rock and five from Buffalo. The ride is a pleasant one. You are scarcely out of the city on a broad and noble avenue, before you are within Black Rock, which stretches along the river for upwards of a mile, on a broad and level street, with several mills attached to its immense water power, created by the great State pier which walls in a portion of the Niagara river, and here forms the head of the Erie Canal, and supplies it with water for half its length towards Albany.

One can hardly imagine a pleasanter location in the summer season, than is presented from the house of Mr. A., having a fine view of Lake Erie some five miles distant; the town of Black Rock and the steeples of Buffalo, with the ascending highlands stretching far away beyond them—the broad and clear Niagara, here two miles wide, checkered with beautiful grassy islands, and the green cultivated shores of Canada opposite. The canal passess immediately in front of the house between the main road and the river, giving every desirable facility of access and transportation east or west, by canal boats every hour in the day.

Mr. A. B. Allen was not at home, having gone to Ohio to pass the winter; but I found his brother residing there for the present, who kindly showed me their extensive establishment, and gave me much valuable information regarding their stock, and other matters appertaining to the domestic and improved animals of our country. The piggery, including a new erection recently enclosed, is now 100 feet long, by about 30 wide, and two stories high. It is divided off by a spacious alley-way in its whole length through the center in two long ranges of rooms. These are subdivided into separate pens from 8 to 12 feet square, as circumstances require, and fitted up in the most approved style of convenience. In these were the breeding sows, some with young litters of pigs, others two or three together, and some single, as their different conditions and circumstances required. In one end was a steaming apparatus, with huge tanks or vats for steaming the food, supplied with water by a large cistern under the building. Overhead were stored quantities of straw for bedding, corn, oats, Indian meal, shorts, &c. &c.; in a word, all the varieties of food with which the swine are fed. Placed at proper distances through the building were glass windows which pushed back and forward as ventilation was required, but always admitting an excellent light through the day into each apartment. In the rear of each enclosure was a small door for the passage of the animals out into the open air in good weather, and for exercise, a thing almost daily practiced. In short, every convenience which thorough and approved breeding required, was here furnished in a cheap and economical manner. Surrounding the piggery, were three or four grass fields for the summer range of the swine, with temporary pens erected for shelter, and suitable feeding troughs in their proper places.

As you will observe that every thing for the convenience and due accommodation of the animals was in apple-pie order, I shall now attempt to describe what I saw of animated nature within. The first object that struck my eye on entering at my right, was an enormous yet beautifully proportioned Berkshire sow, with eleven young pigs at her side, about three months old. This magnificent animal (excuse the term, for I can assure you that although applied to a *hog*, it is to one so elevated by the successful application of a noble science in natural economy, that the coarse material of the animal is transformed into an almost superior nature from the common groveling brute of the name,) I learned was imported, with three other sows and a boar, (Sultan, the finest and largest animal of the kind I ever saw,) last year, from Berkshire in England, at a great expense. They were all from separate stocks in no way related, and of incomparable value to Mr. A. in enabling him to avoid the *in-and-in* breeding system which much of the finer stock of our country is subjected to, for the want of proper selections from foreign stock of the same blood. This in-and-in plan of breeding, Mr. A. has always avoided, and has spared neither pains nor expense in importations and selections from the best stock of this country, to improve and cross with his own, and make it what it now is beyond a question, the most extensive and superior swine breeding establishment in America, if not in the world; now consisting of between 30 and 40 of the finest breeding sows, 2 imported boars, and pigs of every intermediate stage and growth.

But to the detail. This fine sow would weigh as she then stood, near 500 pounds, was in a capital condition and of a perfect model. Fancy could not picture a more beautiful creature of the kind; she was gentle too, as possible, and quiet as a lap-dog. These pigs I learned, were all engaged at $40 to $50 the pair in the spring. In an adjoining pen was another fine young imported sow with 5 pigs equally good with herself, and all perfect of their kind. Adjoining them also, were the two remaining sows of the last importation, now about fifteen months old, and promising in size and appearance, to equal at the maximum, either of the others. Passing along, I observed the fine and stately sows purchased last summer of the Shaker family at Niskayuna, and of Messrs. Meigs and Middleton of Albany, all select animals of excellent form and proportions. Then again, were a fine pair of young sows from the stock of Mr. Rotch, of Otsego, one of the most scientific, perfect, and fastidious of breeders, not excelling in size, but in beauty of proportion and fineness of limb, perhaps surpassing almost any other. Here too were Ravenhair and Picaninny, the prize animals of the flocks, bred with all the honesty and good management of Justice Harwood, one of the principal managers, besides many others, the reserved stock from time to time bred by Mr. Allen himself. Many of these noble sows would weigh four to five hundred pounds in good breeding condition as I saw them. Their food was principally cooked shorts obtained from the flouring mills at Black Rock, a coarse yet substantial food, with occasional changes of corn meal, potatoes, raw and boiled, sugar beet, boiled corn and oats, as the health or appetite of the animals required, both of which were studiously observed, daily and continually by a careful manager. No animal that I saw was fat, yet all were in good condition, and of course contented and *well to do*. Scattered along throughout the pens, I observed several pigs of various ages and sizes, which the closing navigation had prevented shipping away, or which had been reserved to add to the stock of grown animals; for I found that it was the policy of Mr. A. occasionally to part with a superior, or even a favorite from a well established breeding sow or boar, in extraordinary cases, when he had others equally good at hand, or coming on; but that he made it an undeviating rule never to sell the very best sows in his herd; and by that restriction never suffering any one to possess a better animal than himself. I fancy that if all breeders would adopt and adhere to a rule so correct as this, the standard of perfection in domestic animals would not fall so low as is often witnessed in our country.

After inspecting for several hours, and with great interest, the inmates of the piggery, I was shown in another building, each in his own distinct apartment, the two boars Sultan and Prince Regent. The former is of the latest importation, and is now two years and a half old; an enormous animal, whose weight, if in high condition, would be about 600 pounds. For so large an animal he is fine in his points, being long, rangy, high shouldered, and broad in his hams; of great constitution and vigor, in fine, a most valuable animal for the extensive pork countries of the west, where great size and hardihood are in demand. The other, Prince Regent, now about 18 months old, is the most perfect male animal of the swine family that I ever saw. His size is medium, now weighing, I should judge, about 300 pounds; his head remarkably small and pointed, his ears short and erect; his neck short and highly set; his shoulders broad and firm, body round, deep and long; hams large, well set, and tail properly elevated, with a beautiful silky black hair, and the usual white intermixture of the improved Berkshire in the finest style and fashion. His pigs have proved remarkably fine. Several of them were shown me of uncommon symmetry and excellence. The stock also of Sultan, has proved remarkably good, and those which I saw at this establishment can hardly be excelled. In short, I know not how Mr. A. can improve his present selection. He has been for several years engaged in breeding and selecting his animals. No one has taken so much pains as he has; his opportunities have been good, and thoroughly improved; his eye and judgment are correct and discreet; and he has as a matter of course, excelled when perseverance, intelligence and a high sense of integrity in his business have been called to the aid of a natural enthusiasm, and laudable public spirit. Not only personal advantage to himself, is the result of all this labor, but a vast public good, and it is no exaggeration to assert, that by the services of this individual, and other spirited breeders of domestic stock in this country, our agricultural profits will in a few years be enhanced millions in the diffusion of improved breeds of domestic animals throughout our several States.

I should not omit to state that I also saw several breeding sows of the celebrated China breed, which is yet retained in its perfection at this establishment. Although much less in size and length than the Berkshires, they are still the original of all true excellence in the family of swine, and by many are preferred for crossing the native breeds of the country, to any other. They are exceedingly scarce in the United States, and I know of no other piggery in the country that possesses them. They are beautifully spotted of about equal parts of white and black; are quiet feeders, easily kept and early matured. The *gentleman's hog*, the world over.

Having viewed the piggery in all its parts, and admired its order and good management, I accompanied Mr. A. into the house, where he showed me numerous letters and correspondence, which, to judge by their bulk, must be no trifling affair of itself. There were letters of inquiry; others containing orders; some soliciting information; others imparting it. The writers were statesmen, planters, farmers, large and small—professional men and merchants, breeders of fine stock in distant parts—in fact, from all classes of our citizens, the attention of each of whom has been turned to improvement in his domestic stock, and who intends to be on the high road to excellence in all these important subjects of domestic economy. I found that during the past year Mr. A. had sent pigs to Maine and Georgia, and to almost every intervening State on the sea-board, and to Wisconsin and Missouri at the west, and to Tennessee, Kentucky, and the intermediate States in the Ohio Valley. I confess I saw with honest pride that the highest talent of our country was not too exalted to overlook the substantial improvements so rapidly making in our agricultural stock; and when we find numerous exalted individuals of the present time, diligently devoting a part of their attention to the improvement of domestic animals as they now do, it is a gratifying indication that we are in a state of rapid progression. Henry Clay is said to be one of the best and most extensive stock breeders in Kentucky. He last year ordered a pair of Berkshire and China pigs, each, from Mr. Allen, and a pair of valuable Chinas were also ordered by one of the wealthiest retired gentlemen in the vicinity of Boston. I name these things as no matter of form, but to show that gentlemen of the first talent, intelligence and wealth of the country are sedulously turning their attention now, to what a few years since was considered in America proper only for the vulgar and illiterate. And why should they not? The most extensive breeder of Short Horn cattle in England, is Earl Spencer, recently Lord Althorp, and so attached is he to remaining at home and attending to his stock, that it is said he will only go to London on matters of high state affairs, where he is often officially called, when he can do so with entire convenience to the welfare of his favorite herd of Short Horns!

The success which has attended Mr. A.'s exertions in breeding swine, have brought extraordinary demands upon his coming supply, which cannot much exceed the orders already on hand. Contrary to the common opinion, that the dissemination of these fine animals over our widely extended country, would lessen the demand, it has only tended to increase it, and from present indications, for years to come the demand will keep pace with, if not exceed the utmost efforts to supply a sufficiency of *first rate* stock to those who require them. It should be matter of honest exultation and pride that our agriculturists have so far awakened to the dignity, to the true interests of their profession, as to seek improvement where it has been so long and so heedlessly neglected.

My curiosity was somewhat excited to know by what means Mr. A. was enabled to supply orders for such a distance as he did in many cases, being more than 1,000 miles, with three or four transhipments by water, and occasionally land carriage for many miles. I learned that in all cases the purchasers give the directions of the route to follow, and when the pigs are shipped, either at Buffalo or Black Rock, by steamboat or vessel, or from the farm by canal, with proper directions, they usually reach their place of destination with despatch. Occasional misfortunes occur by accident or bad feeding, want of care, &c., in those to whose charge they are entrusted, by which a temporary disappointment is sometimes suffered by the purchaser; but time and good feeding soon restores the young emigrant to its wonted condition. There is, however, a disadvantage to the appearance of any animal, and particularly so of swine, in transporting it to a great distance, but it must be encountered by those who will have valuable stock, and the risk is abundantly made up in the possession of the animal itself. During the last fall, upwards of 150 head of improved Berkshires left Mr. A.'s piggery for Ohio alone; and 19 went in one lot to a plantation in the interior of South Carolina, without serious accident. I was told that the boar Prince Regent, before spoken of, got so stunted on his passage from England, for want of proper care and feed, that it took him several months to recover his thriftiness, and it may always measurably affect his size.

I find, gentlemen, that I have told you a long story; but as I am an enthusiast in the admiration of fine animals of every description, I have thus spun out my epistle. I cannot close however, without mentioning that in addition to the herd of swine, Mr. A. has a choice selection of valuable Short Horned cattle, which he is rearing with great care. They now consist of ten or twelve head, all Herd Book animals. Since selling their former admirable stock at the west, upwards of a year since, where they have been deservedly admired, the Messrs. A. have recommenced this useful branch of stock raising. Success to their efforts; none better deserve it, and few have made greater exertions to excel in this truly noble as well as valuable undertaking.

A Western Farmer.

Old Virginia hard to Beat.

Messrs. Editors—Mr. Wesley Scott of Botetourt County, told me last Saturday, that he had the largest Durham Short Horn cow that he had ever seen of any breed—that she brought a bull calf the 9th of Dec. 1840, and that he sold it to Judge William Allen, a member of our high court of Appeals, Richmond, for $10 at four weeks old to a day, and that day it weighed 310 lbs. gross weight. He did not weigh it when calved. Now Messrs. Editors, suppose this calf to have weighed 100 lbs. when calved, the daily gain for 28 days would be 7½ lbs. per day. If Mr. Scott had sold his calf for the big sums that many have been sold for, the world at large would be much more disposed to believe his statement. I believe it for he looks and talks like a man of truth, and his doing business for such a man as Judge Allen is a good proof of his fidelity. He had 38 fine beeves driving to the Richmond market, belonging to Judge Allen. The account of this wonderful calf, at once struck me, and I determined to send it to you for publication in the Cultivator.

Johnson's Springs, Va. E. VALENTINE, P. M.

The Rohan Potato.

We have a letter from our friend J. A. Thomson, Esq. of Catskill, the gentleman who first introduced the Rohan potato into this country, in which he expresses the opinion that much of the prejudice existing against it as a table potato, has arisen from the use of a spurious Rohan, which he avers has been extensively sold and cultivated in some parts of the country, and also from the use of the genuine potato before it was well ripened. He says—"In every instance where I have had an opportunity to test the comparative merits of the Rohan potato, by selecting the potato and having it cooked for experiment, the result has been most unequivocally in its favor, over all other varieties compared with it. The fact is, the prejudice excited against this variety has originated from the imperfect mode of its cultivation. It is a very late growing variety, and should be left in the ground even after the frost has killed the vines, (in order to mature it sufficiently for the table,) and when gathered should be put immediately in a cellar on the bare ground and covered over with sand or evergreens. They will then continue to improve, when treated in this way. I have eaten them the last of June, as solid and firm as in January. From *five* successive seasons that I have cultivated the Rohan potato, I am perfectly satisfied that it is not essential to plant them any earlier than other late varieties; I have succeeded best in planting them after the 20th of May, and up to the 10th of June; somewhat like the turnep, the tuber of this potato acquires almost its whole growth in the last five or six weeks."

From a communication of F. E. Faxon, near Boston, we quote as follows:—"In 1839, I bought two Rohan potatoes weighing 1¾ lbs., from which I cut fifty eyes and planted them one in a hill. They were manured with a shovel full of barn yard manure, and a spoonful of plaster to each hill. The product was two bushels. In 1840, I planted the two bushels in the same manner, and the product was 190 bushels, some of the potatoes weighed 3 lbs. The season was very dry, and I did not have more than half a crop of the Chenango or Blue potato. I do not like them for the table, but for stock I think they are a profitable crop."

Mr. A. C. Sanders of Shushan, Washington Co. N. Y., says—"I raised last summer on a middling quality of land, from 2¼ bushels of seed, 200 bushels, quite a share of them very large, some weighing more than 5 pounds."

Solomon Henkel, Esq. of New Market, Va., under the head "Rohan potatoes no humbug," says—"My son purchased in Philadelphia, one pound of Rohan potatoes, for which he paid 25 cents, in the spring of 1839, out of which I made 24 hills, four feet apart; in each I put two eyes; the product was forty pounds. In 1840, I planted the 40 lbs., and obtained twenty bushels and one half. I weighed 12 of them which weighed 10 lbs. Several of them weighed more than a pound. We find them next best to the Mercer potatoes, as they are good flavored and mealy, and have hopes that they will improve by spring, as they are much better now than when first dug."

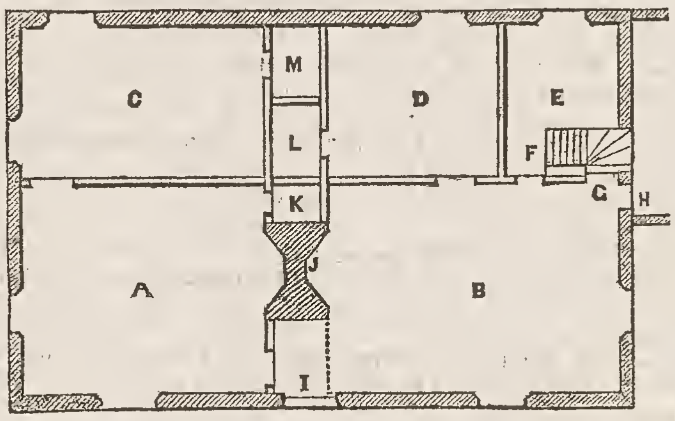
From Mr. J. W. Poinier, Middletown, N. J.—"I planted 16 bushels, obtaining from some potatoes 25 tubers and upwards; they were planted in rows three feet asunder, and the tubers about 15 or 18 inches apart; manured from the barn yard; they came up well, and I calculated on a large crop, but to my surprise when they were dug, there was but 230 bushels. I shall try them again the coming spring, with, I hope, better success. It appears to me they will yield as large or larger crops than we can obtain from any other potato."

"Observer," in allusion to Mr. Guthrie's communication in the Dec. number of the Cultivator, says—"I see Mr. G. has anathematized the Rohan potato, as decidedly as he last year eulogized the Chinese corn. That he has been truly unfortunate in his crop cannot be disputed; that it is a solitary instance of failure so far as I have been able to learn, is also true. Many fields have fallen under my notice the present season, and there has been no complaint from any one as to the *quantity* of the crop. I have grown them three years, and they have uniformly been most productive. As to the *quality* for cooking, or for the table, I should not perhaps dissent so widely from Mr. Guthrie; but for animals I know no reason why it may not be equal to any of the fast growing, large kinds. I must therefore dissent from Mr. G. wholly, when he pronounces the Rohan a humbug, and ranks it with the Chinese corn, and think I am right in presuming that of the many thousands who have cultivated them the past year, he will find few or none who will agree with him in his opinions, either of the sugar beet or of the Rohans."

Mr. Calvin Butler, of Plymouth, (Conn.) alluding to the condemnation of the Rohan by Mr. Guthrie, says—"In the spring of 1839, I procured of Mr. Bull, of Hartford, a peck of Rohans, imported, as I understood, from France. I had them planted on good ground, and well tended, and they produced about 30 bushels; some single ones weighing over three pounds. We had several meals of them cooked, and all the family pronounced them good. The greatest part of what I raised in 1839, were planted by different farmers in this county, and I have inquired of nearly all that had seed of me, and others who have grown the Rohan the past season, and the answer uniformly has been, that they have fully answered their expectations; some single ones weighing over 4 pounds. As it was not convenient for me to plant any potatoes the last season, excepting in my garden, I grew none of the Rohans, and have no interest in them, only that the public should be correctly informed on the subject. The late Judge Buel, than whom no man in the community on that subject would be entitled to more confidence, after several years experience, and a fair candid trial when he had no interest but to give the public correct information, recommended them highly as a good table potato, and a valuable acquisition in our husbandry, (see Cultivator, vol. 5, page 149, and vol. 6, page 66,) and so far as the trial has been made, and made known, the result has been almost uniformly the same. I think therefore they should not be at once abandoned as a humbug in consequence of a failure in one or two particular neighborhoods. I cannot account for these few failures, but am persuaded they are to be attributed to some other cause than the qualities of the potatoe. As to the suggestion of procuring seed from a southern climate, it is to be considered that they originated at Geneva, in Switzerland, a much higher latitude than any part of the State of New-York. They require, it is true, a little longer season to mature in, than other kinds, and that is possibly the cause why they have been condemned as a table potato, having been dug before coming to maturity, in which case any potato would not eat well till they sprout in the spring. Some of my neighbors that had seed of me, say they use them daily for the table, and find them excellent."

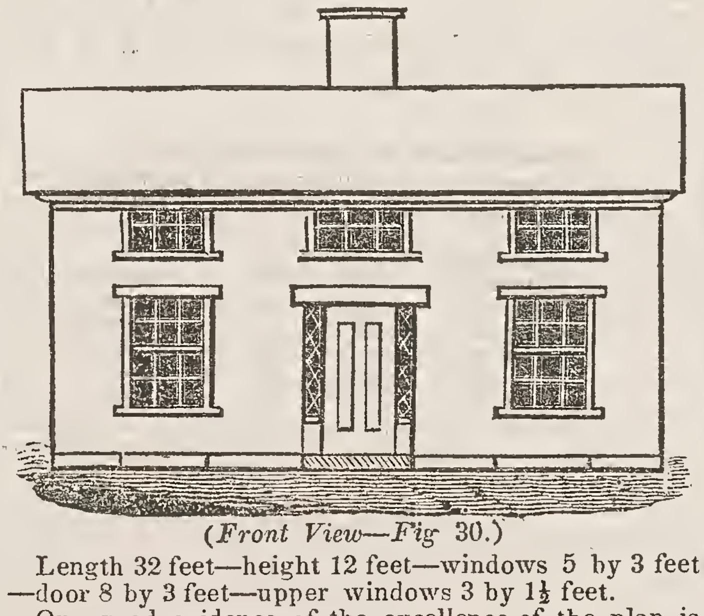
Plan of a Cheap House.

Messrs. Editors—I have been during the year past a subscriber to your excellent paper, and for many years, although a professional man, interested in the culture of the soil, and in all matters of general utility and improvement. I occupy a glebe of about thirty acres, upon which I have made some experiments in farming, and am convinced that scientific investigations may be made highly conducive to the advancement of good husbandry. I do not agree with some that the Rohan potato is to be discarded, or that snow is as good as eggs in flap-jacks; but I do agree with those who maintain that whatever discoveries may be made beneficial to the world, and especially to those who occupy the humble walks in life, should be made public. In accordance with this principle, I send you the plan of a cheap house which I furnished one of my neighbors, combining, as many think, good economy with great convenience.



(*Ground Plan—Fig.* 29.)

A. Parlor, 14 by 14 feet—B. Kitchen, 14 by 15 feet—C. Bed room, 14 by 9 feet—D. Bed room, 9 by 9 feet—E. Buttery, 6 by 6 feet—F. Cellar door—G. Stairs door—H. Door leading to wood house, 12 by 20 feet—I. Front door, south side—J. Chimney—K. Closet—L. M. Clothes Rooms.



(*Front View—Fig* 30.)

Length 32 feet—height 12 feet—windows 5 by 3 feet—door 8 by 3 feet—upper windows 3 by 1½ feet.

One good evidence of the excellence of the plan is the fact that the gentleman to whom I gave it has built twice from it, and has lately remarked that should he build twenty houses they should all be alike.

The following are the dimensions which can be diminished or enlarged as taste or means may dictate. Length 32 feet, breadth 23 feet, height one and a half story, 12 feet. The house contains a good kitchen, parlor, buttery and two good bed rooms below, besides closets and clothes presses. He has moreover an excellent cellar and wood shed, and one large store room, and two bed rooms in the upper story. The whole cost $425.

Of course we do not expect to build a palace for this small sum; but we can build a house good enough for any young man who has his own fortune to make—and who prefers a neat, snug tenement of his own to the looking up of a new habitation every year.

For a common laborer's cottage, or for a substantial farmer's more expensive dwelling, the plans given during the past year are very good. As a medium between the two, for the accommodation of those who do not wish to appropriate more than four or five hundred dollars for that object, I think the enclosed plan will be found very convenient. A piazza in front, one-third the height of the house, would be found very useful, without adding more than $25 to the expense.

I would merely add that building materials do not differ much in cost here, from the same articles throughout New-England or New-York. The price of labor also is about the same. Very respectfully yours,

Lanesboro,' Mass. Jan. 5, 1841. S. B. SHAW.

Rohans and Merinoes.

Messrs. Editors—If you deem the following account of a trial of Merinoes *versus* Rohans, worthy of the space it will occupy in your valuable journal, you will please publish it.

When I planted my potatoes last spring I cut my Rohans into pieces containing two eyes each, and put three pieces or six eyes in each hill; adjoining the Rohans I planted a row of Merinoes in the same manner. Upon digging them a few days since, I found the row of Merinoes, twenty-two hills, gave a bushel and a peck. The row of Rohans, likewise twenty-two hills, gave the same quantity and about six or seven middling sized potatoes over.

I then dug a square rod of Merinoes that gave a bushel and a half; the adjoining square rod of Rohans, containing the same number of hills, gave a bushel and three-eighths. On another side a square rod of Merinoes gave a bushel and five-eighths, and a like square of Rohans adjoining gave a bushel and one-eighth.

These potatoes all grew on the same kind of land and were treated in precisely the same manner, except that the two squares of Merinoes were planted in the usual manner with whole potatoes and the Rohans cut and planted as above stated.

You will perceive that these potatoes gave a poor yield, which was owing to the uncommon dryness of the season. In many cases in this part of the country the potato crop is next to nothing. My Rohans appeared to have suffered much less from the drouth than the Merinoes and others. At digging I found them furnished with very long and fibrous roots which may account for the fact.

I procured last fall a barrel of Rohans from the late Judge Buel, of which I lost about half in consequence of their being sent to me in an old salt barrel. I mention this to caution those persons who have potatoes or other roots to transmit, against packing them in any vessel that has contained salt.

PIERRE V. C. MILLER.

Shawangunk, Ulster Co. Oct. 17, 1840.

Blossburgh Coal.

Messrs. Editors—I herewith take the liberty to send you, for your gratification, a small parcel of Blossburgh Coal: As this coal is destined to assume a rank of importance in this state, for fuel in domestic economy, and in the manufacturing and mechanic arts, and its ashes for manure, a few facts concerning it, may perhaps be interesting.

The mines from which this coal is taken, are situated on the head waters of the Tioga River, in Tioga county, Pennsylvania. Here, also, in the heart of the coal region, is situated the village of Blossburgh. From the mines, the Tioga river and valley descend northwardly into the state of New-York; the river emptying into the Chemung, near the village of Corning in Steuben county.

The villages of Corning and Blossburgh are about 38 miles distant from each other; but are united by a rail-road running down the valley. A depot for the sale of coal is established at Corning, where the coal is delivered by the Arbon Coal Company, and sold at $3.50 per ton of 2,000 lbs. Corning is situated at the head of the Chemung canal, and is accessible to boats from all parts of the state. It is distant from Albany 298 miles, from Troy 291, Whitehall 353, Utica 198, Syracuse 128, Oswego 166, Geneva 73, Rochester 158, and Buffalo 253.

At our agency in this city, No. 37 Columbia-st. for the sale of Blossburgh Coal, the price of the coal is $7 per ton by the cargo; and the price at any other point will be the same as at Corning, with the charges of freight and toll only added.

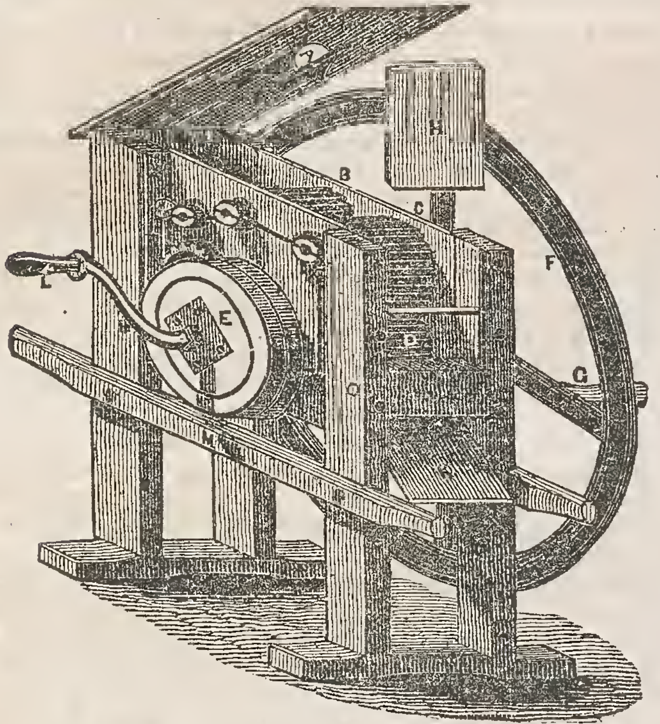
This coal is an excellent article for domestic use, kindling very easy and burning freely with a clear white flame. Every ton brought to the city of Albany, pays a dollar toll to the revenues of the state.

It is decided by the best mechanics in Albany to be a very superior coal for their use for smithing, and for manufactories. The Agent of the Albany Iron and Nail Works, who has thoroughly tested its quality for making iron, says the result of the trial proves it to be superior in strength to any bituminous coal he ever used. On an average of 38 tons, he found 930 lbs. of the Blossburgh coal equal in efficiency, in the quantity of iron it produced, to 1120 lbs. of any other; showing a superiority in the Blossburgh coal of 15 per cent.

The opening of the Blossburgh coal mines is a great accession to the wealth of this state. The supply is inexhaustible. In an area of 22,000 acres, it is estimated that there is coal enough to supply 170 thousand tons a year for 500 years.

This coal was discovered at an early period by one Benjamin Patterson, while crossing the country with a party of German emigrants. In the course of a hunting excursion, he found the coal on the top of a hill, where the wind had blown over the trees by the roots. But it was De Witt Clinton who first called public attention to the subject. In his message to the Legislature in 1827, he says:—"Bituminous coal has been found in the state of Pennsylvania, within 20 miles of the state line, near the Tioga river, which when the Seneca Lake shall be opened, can be delivered in Albany by means of the Erie canal, on very reasonable terms."

Yours, very respectfully, WM. YATES,
Agt. A. C. Co. No. 37 Columbia-st. Albany.



Baldwin's Corn Crusher.—[Fig. 31.]

Messrs. Gaylord & Tucker—Since the publication of a description of Baldwin's Corn and Cob Crusher, (Cult. vol. 7, p. 196,) we have received a number of letters from your subscribers, inquiring relative to their merits, which has induced us to write again on the subject, and add to our description a cut of the machine—a drawing of which you will find enclosed, (fig. 31.) The numerous worthless agricultural implements, &c. that have passed under our notice, has convinced us that it will require extra exertion to introduce into general use, any machine, however useful it may be, without assuring the agricultural community that they will be guarded against loss by machinery proving worthless, and directly opposite to representation; we have, therefore, determined in regard to this machine, as well as any other we may in future recommend, to guarantee them to perform well, and be as perfect as represented. In every case where they fail, with ordinary care and management, such may be returned, and the cost refunded to the purchaser. The fact that three bushels of cobs possess as much nutriment as one bushel of corn—that cattle and swine fed on this mixture thrive much faster, and are kept in a more healthy condition than when fed on corn alone, is now too generally known to require us to say any more on the subject. The actual saving to the farmer (taking into consideration the corrective tendency of this description of food,) by using this machine, is about 35 per cent, an item in agricultural economy not to be disregarded by the frugal husbandman. But to the description of the cut:

B and C represent two fluted cylinders, placed horizontally, through which the corn and cob is first passed; these put it in a proper condition to pass through two finer fluted or ratched cylinders D, which are placed immediately under cylinders B and C; and partially rest on a cast iron ratched concave, and which pass the ground corn and cob out at slide K. A, the hole through which the ear of corn is passed into the cylinders B and C. J and H, the cap or cover and end board, thrown up to show the interior of the machine. F, a heavy cast iron balance wheel. E, the driving pully, 14 inches in diameter, which should be driven by a band wheel or drum of sufficient diameter to propel it 250 revolutions per minute. L and G, crank to turn the machine by; the labor and speed required, however will not justfy manual power to be applied unless very small quantities are to be crushed. The cylinders and concave are enclosed between two substantial cast iron sides and a strong wooden frame, all firmly bolted together and secured in the center of the frame by two wooden braces M, which are extended at the ends, and answer to remove the machine by. The price of this machine as before stated is $65. Horse powers, suitable for two or four horses, will be furnished with the above machines at $100 to $125 each, and driving bands $10.

Corn Husker and Sheller.

We are testing and about to manufacture Col. Goldsborough's Patent Corn Sheller and Husking Machine, which will shell about 1,200 bushels of corn per day, or husk and shell 700 bushels. So soon as we are satisfied with its performance, strength, &c. we will write you a full description.

We have in our agricultural warehouse several other new and valuable implements of husbandry, which we will describe in some future number of the Cultivator.

Baltimore, Jan. 14. R. SINCLAIR Jr. & Co.

Hay, Cotton and Tobacco Press.

Esteemed Friends—On seeing in the Cultivator an inquiry made for a portable hay press, I answer that I have one, supposed to be of the best construction, and is portable by four horses. Price $250, without the wheels or running gear on which it is drawn. It will answer equally well for cotton or tobacco as well as for hay, which information you can give through your publication. By the 3d mo. (March,) an agent is expected to go through Virginia, who might call and give such satisfaction as is required in the case, to such gentlemen as may desire to obtain such a press.

JEREMIAH BAILEY.

Wilmington, Del. 1 *mo.* 21*st*, 1841.

Smoking and Preserving Hams.

Messrs. Editors—It is now but little more than a year since I first got a peep at the Cultivator. And although the general appearance of my farm and stock may not as yet indicate any very sensible effect, I am frank to say your sheets have afforded me both instruction and amusement. I have as yet neither bulls, cows, sheep or swine worth bragging about; but as this is about the season to prepare and smoke our annual stores of hams, I will venture to tell you, and if you please, your readers, how I manage this business. In the first place, I take some suitable cask, perhaps a half hogshead tub, and sprinkle a few small lumps of salt upon the bottom. Then pack in the hams, the skin downwards upon the lumps of salt, the shoulders also, filling the spaces between with cheeks, legs and tongues, making the top about level. Then pour in the brine, made of about an ounce of salt to a pound of meat, and an ounce or two of salt petre to 100 pounds of meat, with water only enough to dissolve them, and there let all rest *two* or *ten* weeks, according to convenience. When ready for smoking, I knock to pieces some old stump, about enough decayed to make a smoke without much heat, and smoke a day or two, and omit about as long; smoking and drying without smoke alternately, some three our four weeks.

To keep hams through the warm season, I formerly packed them in ashes; but finding it an unpleasant and nasty business, I rejected it. Next came canvass bags and whitewash, which were soon abandoned. A third method was to hang them in a cask tight enough to keep the flies and rascally mice out. This proved a better way than either of the preceding; but in damp weather the meat would get moldy. My present method is to pack them in clean dry oats; and in this way I can take out a piece at pleasure, which will be clean and bright. In the fall I mix the oats with corn and grind them, with which I make more ham. Thus nothing is wasted.

I intended to communicate some notions of an old farmer respecting the silk culture, surface spread manure, &c. but want of time obliges me to postpone to a more convenient season. ROBERT WILSON.

Fairfield, Ct. Feb. 11, 1841.

Extraordinary Secretion of Milk.

Messrs. Editors—Having seen an article in the Cultivator of November last, with the caption, *Extraordinary Secretion of Milk*, and having been personally knowing to a circumstance somewhat similar to some of those mentioned in that article, I have thought best to give a brief sketch of the facts. Many years since, I was directed by an uncle, with whom I was then living, to turn a two year old colt into a back pasture, by which means she would be, not only out of sight, but alone and apart from any other domestic animal. At this time the grass had began to show quite a green appearance, it being about the middle of May. In about six weeks from this time, I discovered quite an enlargement of the udder; supposing the cause to proceed from some injury, I hastened to inform my uncle; who, with myself and a third person, repaired to the lot without delay, and after a thorough examination, could find not the slightest injury whatever, but on the contrary, free from every appearance of having had an application of means being used calculated to produce milk; and which was proved more fully by the exertions on the present occasion of stripping, which was continued for some time before the milk came; from this time until late in the fall after, she was milked daily, giving a quart at a time by actual measurement, when with some care she was dried off. D. P. S.

Oriskany, Dec. 17, 1840.

Preservation of Roots in Winter.

To the Editors of the Cultivator—Your valuable correspondent, Mr. J. M. Garnett, in his account of preserving carrots, potatoes, &c., recorded in your number of the Cultivator for the present month, says—"In regard to Irish potatoes, a still thinner covering of earth than the one just mentioned, suffices with us to preserve them from rotting. Indeed it would seem as if they could freeze and thaw several times, during winter, without being destroyed, provided they are covered with earth all the time; for we often find them near the surface and perfectly sound, in the spring, when spading up the ground in which the crop had grown during the previous season. There they must have undergone freezing and thawing whenever the earth was in either state, as it often is to a much greater depth than the potato roots ever extend. Why those roots should always be destroyed when they freeze *above ground*, and not suffer equally when frozen *under ground*, is a matter of which I have never yet seen any explanation; it is among the numerous mysteries in vegetable physiology for the cause of which we have still to search."

The reason why potatoes, apples, &c. become soft, and rot when frozen and then thawed suddenly, uncovered and in open air, is, the sudden thawing. You may put a heap of apples on the floor of a room, or other dry place, where they will freeze perfectly hard, and if covered close with any thing that will exclude the air, so that when the weather becomes warm enough to thaw, the apples will remain sound and uninjured, after they are thus closely thawed. The cover may be of the coarse tow of flax, or any article that will cover them close and exclude the air. So apples may be packed in a tight barrel, if full and headed up so as to exclude the air, they may be suffered to remain so in a garret or any dry place where it freezes hard, and they will be found sound and free from injury, if the barrel remains tight till they are *thoroughly thawed.* It is the sudden thawing that causes the apples or other vegetables to become soft and rot.

So the fingers on your hand, if frozen, and you expose them to sudden heat by warming them at the fire, and thus suddenly thaw them, the flesh will mortify and sluff off. But, if you freeze your fingers or other limbs, and put them in snow, and rub gently till they thaw; or if put into a pail of water just drawn from the well, which will be less cold than your frozen fingers, they will thaw slowly, and suffer but little injury.

So the early autumnal frosts in September, if the morning after the frost is cloudy, the frost will be slowly drawn from the frozen vegetables, and they are not injured; but if they receive the rays of the early and clear sun it thaws them so suddenly, that they will hang their heads and perish. If wet with water from the well, long enough to extract the frost, before the sun shines on them, they do not suffer.

Onions are a difficult root to keep in winter. If they are put in a cellar warm enough to save from frost, they will vegetate and be deteriorated. I put them in the warehouse, where they freeze as hard as if out of doors. If in a heap, I cover them close with some old clothes, or any thing that covers close, to exclude the air. The same if in boxes or casks. They freeze hard, but it does not appear to injure them for present use, if thawed by putting them into a pail of fresh drawn water, to draw out the frost just before cooking them. Onions thus kept, will be in good condition in the spring, after thawing under cover from the air.

I put parsneps, carrots, beets, &c. in boxes or casks, and then cover them with potatoes, which preserves them from drying. Respectfully, DAVID TOMLINSON.

Schenectady, Feb. 13, 1841.

TO CORRESPONDENTS.

Though we have this month published at length or in a more or less condensed form about FIFTY communications, we have at least a dozen more which ought to have had a place this month. "Letters from the West, No. 5," came too late, as did the favors of Mr. Weeks and Mr. Morris. Beside these, we have on hand a large number of articles from correspondents, for which we shall make room as fast as possible. Among these are—Reply to Messrs. Guthrie and Bement on the Sugar Beet, by A. B. Allen.—Reply to "R." on steaming roots, by C. N. Bement.—Draining, by Henry Stephens.—Experiments in Maryland, by D. G. Weems.—Culture of Indian Corn, by Elias Sheldon.—Stables with and without Floors, by L. Durand.—On making Wine, by Schoolmaster Abroad.—Comparative value of Oxen and Horses, by R. L. Allen.—The Farmer's Cottage House, by S. W. Jewett.—Culture of Indian Corn, by J. Armstrong.—Product of Three Acres, by C. Allan.—Grafting the Peach, by C. G. Page.—Winter Butter, by W. S. Wait.—On Bees, by J. M. Weeks, and many others.

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CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

To our Patrons.

We would tender our acknowledgments to our friends and subscribers generally, for the prompt manner in which their subscriptions have been renewed, giving us a gratifying increase in the number of names over those of the same period last year. We are also much indebted for the number and value of the communications we have received; and to which we shall give a place as fast as possible. The generous support we are receiving, and the interesting papers with which we are favored from various quarters, must be considered a gratifying proof that attention to the theory and practice of Agriculture, is not likely to suffer a decline.

The State Agricultural Society.

At the last meeting of the Executive Committee of the State Agricultural Society, it was determined, in order to give more unity and concert of action to the friends of agriculture, and more efficiency to the operations of the State Society, to appoint, in accordance with the 4th section of the Constitution, a General Committee for the several Counties, to aid in carrying into effect the objects contemplated in the organization of the Society. It has been the intention of the Executive Committee to select gentlemen of known zeal and fidelity in the great cause of Agriculture, who, if they are not so already, will not only become members themselves, but use their influence in inducing others among their friends and acquaintances to become members also. To give efficiency to the institution, to raise the funds necessary for distribution as premiums at the annual or semi-annual meetings of the Society—in short, to make it an honor to the State, has been the intention of these appointments; and it is hoped each of the gentlemen named, as well as the other officers of the Society, will exert himself to accomplish the object aimed at. The terms of membership, (one dollar only, annually,) may be seen in the March number of the Cultivator; and it is confidently believed, that with proper effort in adding to the list of members, with the appropriation which the bill now before the legislature allows, and which we think will scarcely be withheld, the Society will be placed on a permanent base, and in a position worthy of the agriculturul resources and capabilities of the Empire State.

The Hereford Prize Cow.

We have a letter from our friend, Joseph Cope of East-Bradford, Pa. in relation to the statement made by Mr. Sotham, (p. 176, vol. 7,) that a "Hereford cow won the first prize, as the best cow for dairy purposes of any breed, at the great show of the Royal Agricultural Society at Oxford in 1839." Mr. Cope doubts this fact, and to show that such was not the case, he gives a detailed list of all the awards of prizes to cattle at that show, quoting from a newspaper and pamphlet account in his possession. We have compared Mr. C.'s account, with that published in the *Farmer's Magazine*, the organ of the society, and find it all correct, with the exception of so much as relates to the 5th class, in which there is no notice of the animal which took the first prize. The First Prize of 15 sovereigns, "for the best cow in milk, which shall in the opinion of the judges be best calculated for dairy purposes," was awarded "to the Rev. J. R. Smythie of Lynch Court, Hereford, for his Hereford cow, aged 9 years and 6 months." The second prize was awarded "to Joseph Badcock of Pyrton, for his Durham cow, aged 14 years and 2 months."

Acknowledgments, &c.

Reports of the Agricultural Meetings held by the Legislature of Massachusetts, prepared by Mr. Colman, Agricultural Commissioner.—These reports, prepared for the Boston Courier, by the Agricultural Commissioner of the state, furnish a valuable mass of facts, on most of the important topics of agriculture, communicated by the members of the legislature at their weekly meetings, and preserved by these notes of Mr. Colman. Such meetings we perceive have been adopted by the Maine Legislature, and we think may be advantageously imitated elsewhere. Of the facts so reported by Mr. Colman, we shall gladly avail ourselves; and for their presentation he has our thanks.

Patent Office, Washington.—The Commissioner of Patents at Washington, Mr. Ellsworth, has kindly forwarded us a lithograph view of the new building recently erected at that city for the use of the Patent office; and as a Repository or Gallery of Models and Manufactures. The immense apartment devoted to this purpose, 273 feet by 63, will soon present one of the most interesting places of resort for the farmer, the mechanic, or the manufacturer, to be found in this or perhaps any other country. It is to be hoped that every American wil take an interest and pride in contributing to the gallery whatever may be new in agriculture, science, or the arts.

"Liebig's Organic Chemistry applied to Agriculture."—We have the pleasure of acknowledging the receipt of a copy of the London edition of this work from our friend W. A. Seely, Esq., Staten Island, one of the first practical, as well as theoretical farmers in the country. A valuable communication on the subject of Vegetable Nutrition, has also been receceived, and the notes which accompanied the volume have been read with pleasure. We have merely had time to glance over the pages of the volume; but what we have read, convinces us that Prof. Liebig, if not correct in all points, is far ahead of any other writer on the subjects he discusses, and that the work, when repulished in this country, will, as we intimated in our last, prove one of the most acceptable presents yet made to the agricultural public.

Since our notice in the last number, we have received a note from Prof. Silliman, stating that he had learned from Boston, that Prof. Webster of Harvard, had an edition of the Organic Chemistry already in press; and consequently he should not at present issue an edition, as announced in his Journal. Mr. Seely will accept our thanks.

British Farmer's Magazine.—G. C. Thorburn, Esq. of New-York, has forwarded us the January number of this quarterly. It is published in London, at about 75 cents per number of 150 pages each. This Journal is well conducted, but owing to its lacking the splendid engravings of the "London Farmer's Magazine," is not as generally known in this country as that Journal. The leading article is a valuable one on the chemical Physiology of Plants, based on Prof. Liebig's new work. The writer, Prof. Graham, concedes great merit, as well as novelty to the work, and thinks it will have a decided influence in the advancement of agriculture.

Bone Manure.

Ground bones are already used to some extent in this country as a manure, and as their value becomes better understood, this use will increase. As we have had several inquiries as to the mode of grinding and using them, and as we have heard of attempts to grind them in common millstones, which would give out an intolerable effluvia, we have thought some account of the English mode of grinding and using might be useful, and have for this purpose condensed a paper on the subject of bone dust in the 50th number of the Q. J. of Ag. by James Halkett of Perthshire, a gentleman long engaged in the bone trade, and familiar with its preparation and use.

Mr. Halkett says, "Bones are always crushed for manure by toothed cylinders, made of iron, of which some mills have three pairs, others two, and some only one. In Yorkshire, where bones are used extensively, they are ground into three sizes; the first is made to pass through a sieve of little more than a quarter of an inch calibre, the second is called half inch, but I have always found it too large to pass through a half inch sieve, and the third is an inch size, which is considered too large for turneps."

The first kind is usually called bone dust; but its effect is the least valuable of any of the three, as it consists mostly of earth and sand that have accidentally got into the bones that are broken or hollow, the rotten carious parts of them, and the old ones which go to powder on the least pressure. The second kind is mostly free from the impurities of the first, is longer in decomposing, and of course carries a crop of turneps or other roots through the season better than the first. The third kind is rarely used on roots, it being too coarse to produce the quick effect essential to their growth. Mr. Halkett thinks the mixture of the first and second qualities in equal parts before sowing, or rather grinding the whole to that degree of fineness, makes the best preparation of bones, as the fine part is felt by the crops at once and hastens them forward while young, a very important point, and when this fails as it sometimes will do before the season closes, the coarser parts have begun to decompose and produce their proper nutritive effect on the plant.

The earliest mode of using bones was to sow the dust broadcast at the rate of from fifteen to twenty-five bushels per acre, but it has been found that by drilling in the dust with the seeds, at least two thirds of the quantity of bones formerly used is saved. In short, one of the greatest improvements of modern husbandry, is the drilling with the seeds such manures as bone dust and poudrette.

From what we have known of the action of bones, and of putrescent animal matter, we have been inclined to the opinion that bones owe much of their value as a manure to the gelatinous and fatty matter they retain, and Chaptal asserts that the extraction of the fat and gelatine from bones, as is done for making soups, soap, &c., deprives them of a great part of their fertilizing qualities. Such however, is not Mr. Halkett's belief. He says, "I find that numbers of agriculturists, and even scientific men, who have analyzed bones, are of the opinion that the marrow and fatty matter in them are of great use in their operation as a manure; and I must confess that at one time I was led to believe, from its plausibility, and what I thought a common sense view of it, that such was the case. But now after the test of experience, by numerous trials between what we call green bones with all the marrow and fat in them, and dry ones free from it, I have always found that the latter raised by far the best crops. Therefore I have arrived at the conclusion, that the less animal fat in them the better, and that the boiling of them before, crushing instead of injuring them, is a benefit."

In England the adulteration of bone dust, since it has become an article of prime necessity to the farmer, is carried on to a great extent. Lime from the tanner's vats, old plaster lime, soap boilers' waste, saw dust, slaked lime, rotten wood, and many other ingredients are incorporated and sold with the finer part of the dust, where of course it cannot be so easily detected as when the bones are more coarsely crushed. There might be bone dust, and poudrette, manufactured in the vicinity of all our large cities, in sufficient quantities to convert the whole region around them into a garden, as has already been done to some of those in Europe; and we are glad to see that efforts are making in this country to prevent the enormous waste of these fertilizing materials, and convert them extensively to their proper use. There is not a city, or even village of note in England, that has not its bone mill; and the quantity of bones collected since the saving of them has become an object, exceeds all previous conception. It would soon be so here, were their value as well understood, and their use as general.

"American Society of Agriculture."

We publish this month two more communications on this subject—that of Mr. Robinson, written, it will be seen, before he saw Mr. Garnett's letter, published in the March number. Could such an institution be established with any tolerable prospect of success, no one would hail it with more pleasure than ourselves, but we must, notwithstanding the renewed request of our respected friend "Near Boston," decline to act as "leaders" in the formation of the proposed National Institution, while there are so many older and abler men enlisted in the cause to which we are devoted. We are glad to see the subject agitated, and highly approve the proposition of Mr. Garnett, published in our last number, as we shall thereby probably learn how many of our agricultural friends are willing to attend the proposed Convention. We hope to hear the views of the Agricultural press generally on the subject. The donation of "Near Boston," will be returned to him or disposed of as he may direct.

WORK FOR THE MONTH.

In the month of April the farm labor of the husbandman may be said to commence. His flocks and herds, his fields and his garden, all now require, or begin to demand his constant supervision. His young animals now as well as his old ones, claim his care, and the least neglect on this point may occasion losses which a year of toil can hardly repair. Too many seem to suppose that because the snow is gone, and the cows or sheep are permitted to go into the fields, (a very bad policy at this season by the way,) therefore, less attention is necessary, and that they may safely be permitted to " shirk for themselves." Now no man who understands his true interests will do this. He is aware that animals need good looking to now as much as ever, and it is probable the inattentive farmer loses more of his stock in April than any other month in the year. Look then well to your animals ; see that that expressive, but unfortunately too often appropriate phrase, "*poverty struck,*" be not applicable to your creatures. One great secret of having first rate cattle, sheep, and swine, consists in keeping them in first rate condition at all times.

Plowing.

Do not plow when your land is not in a fit condition to work. Some soils, those of a light or porous kind, are ready for the plow as soon as the frost is out, but there are many of a clayey, heavy, or retentive kind, in which early plowing, or moving the soil while wet, would prove fatal to a crop. Such must remain until sufficiently dry to work without adhesion, or the labor upon them is worse than thrown away. To remedy such tendency to adhesion as far as practicable, they should be thoroughly underdrained, which will much reduce the period of time in which they cannot be worked. It is generally an excellent plan to plow heavy soils in the fall, while quite dry, as the winter's frost pulverizes them, and they are fit to work earlier than when left for spring plowing.

Spring Grains.

Spring wheat, barley, and oats, will succeed best when put into the earth as early as it can be properly fitted for their reception. Wheat when sown late is very apt to suffer from blight or rust, and give an inferior kernel ; barley is injured by the extreme heat of our summers, unless its growth is so far advanced that such an effect cannot take place ; and although oats will bear late sowing better than other grains, yet every farmer is aware that his heaviest crops and best berried oats are produced by early sowing. Some farmers who raise oats, select their most thistly fields and sow them as late as will admit the ripening of the grain. This late sowing, finds the ground in a state favorable to rapid and vigorous germination ; and the check the late plowing gives the thistle, enables the young oats to attain the ascendancy, which they usually maintain through the season. This treatment is however, only palliative ; it does not destroy the thistle ; and as spring crops do more than any thing else to extend and perpetuate this pest of the farmer, we are convinced that summer fallows, without regard to spring grains, must be more generally adopted by tillers of the soil, if they would hope to have their lands continue fit to cultivate.

Peas.

Next to corn for making pork, in our estimation, ranks the pea ; and in clean soils a crop of them may precede a wheat crop with advantage. Peas may be sown early ; it matters little how early, as they are rarely injured by spring frosts, and they are the sooner fit to remove from the field where wheat is to be sown. Some important experiments made by Dr. Plummer last year, seemed to prove that peas might be subjected to the action of boiling water one minute without injury, but with the effect of destroying the larvæ of the pea bug, which in the fall or at the time of gathering is but just below the surface of the pea and is killed by the heat. We hope this experiment will be repeated, and should it prove successful, it will add much to the value of the pea crop in the country.

Flax.

This is one of the plants, the cultivation of which is too much neglected, and which is deserving the attention of all farmers. We are aware that cotton costs less than linen, but is it worth as much? And beside, is it certain the farmer's sons and daughters will be earning any thing to buy cottons with if there is no pulling, and dressing, and spinning flax? We would not be thought insensible to the charms of music ; but we have a dim recollection of a kind that sounded much more like health, thrift and economy, than that of the harp or piano, and that was the music of the spinning wheel. Flax grows best in a cool, moist climate, and hence with us requires to be sown early, and on ground moist but not wet. Where flax can be dressed by machinery, as it can in many parts of our country, the flax crop, taken in connection with the seed, may be considered a valuable one for the farmer. There is no use, however, in attempting its growth in poor, exhausted soils, as it will succeed in none but those in good condition.

Corn.

We are inclined to the opinion that the agricultural census of the United States will show that, notwithstanding the vast quantity of wheat produced and its importance to the country, the great bread product of the nation is after all, corn. Certainly it will be so, if its capacity of feeding both man and beast is taken into consideration. April is the month in which preparation must be made for this staple crop. The manure should be spread and plowed in, and always remember that corn is one of the few cultivated plants that cannot be manured too high. Cold, wet land should never be planted to corn, and if necessary to cultivate such it should not be moved with the plow, until so dry as to fall to pieces, or be friable. There is many a piece of ground spoilt for the season, and the labor and crop lost, by being worked when too wet. The English make great use of the turnep, and it is a most valuable plant in proper soils and climates ; but would the English grow the turnep as much as they do, if they with the same manure and labor could raise 70 or 100 bushels of corn to the acre? Give your manures invariably to your corn and root crops, and let these be followed by grain with grass seeds. Heavy manuring will make great wheat straw, but it will not give a plump fine berry ; the manure must be thoroughly incorporated with the soil for that, and corn is the best crop for this purpose.

Sowing Plaster.

In the mind of the good farmer, plaster and clover is always connected with ideas of fertility and good crops. He accordingly uses both liberally ; and while some may sneer at his expenses on this score, *he knows* that he finds his account in their use. The latter part of April is a good time to sow plaster, as the young grasses and grains have usually made their appearance and require its aid. It is better to apply plaster to land annually in lighter dressings, than only at intervals of several years, with heavier ones. Loamy, sandy, or gravelly soils, feel the influence of plaster most ; it can be of little use on wet or strong clay lands. We have found that on such soils, ashes were better than plaster, the alkali tending to correct the acidity which generated sorrels and mosses. Never sell your ashes. We have known the quantity of grass doubled the first year on a meadow by the liberal use of leached ashes alone.

The Garden.

" A good garden is half a farmer's living," is an old saying that approaches very near the truth, and should stimulate to more attention than it usually receives. Good ground, thoroughly drained, rich and clean, plowed or dug deep, are the requisites of a garden. Compost manure is to be preferred, as it will be free from seeds of grass, weeds, &c. A garden is a minuature farm, and many experiments may be made in it, which may be repeated if desirable, on the farm, on a larger scale. Vegetables that are hardy or semi-hardy should be planted as early as the state of the earth will admit, or the danger from frost allow. Lettuces, peas, and in some situations, potatoes may be sown or planted, and furnish an early supply for the table. Onions, beets, carrots, and parsneps, should also be sown early ; as the first require ample time to grow and ripen, and of the others double crops may be cultivated. Too many farmers think that work done in the garden is lost, but this is an error not to be tolerated for a moment. Directions on the most important topics of gardening will be found in the former volumes of the Cultivator ; to which the reader will please to refer.

Sowing Grass Seeds.

Do not spare your clover and timothy seeds, in seeding land this spring. Timothy for stock is the most valuable grass grown, and for enriching land alone is indispensable. We sow our grass seeds as though we were throwing away money ; an English farmer sows them as though using them liberally was the only, or the surest way to make money. We should be wise to take lessons of them in this respect. It shuts out weeds, makes a fine, even and sweet turf, and does much more to enrich the soil than a few straggling roots, left to struggle with the weeds as they best may.

Fences.

Never consider any thing has been properly done on the farm, or its business commenced, until every fence has been fully repaired, fallen rails replaced, walls that have been injured by the frost restored, and every precaution to prevent making unruly cattle and trouble among neighbors has been taken. Do what you do, well ; be very careful not to undertake too much, and you can hardly fail of success.

Ayrshire Cows.

In a recent no. of the New-Bedford Mercury we observe a statement furnished by George Randall, Esq., of the produce in butter of an imported Ayrshire cow, a native cow, and a native heifer. The cows calved as follows : the first named, 20th of March ; the second 22d of May ; and the third on the 18th of June ; and the milk was used for butter in each case about eight days after the cows calved. These two cows and the heifer, (the last two years old,) brought up four calves, and from April 1st to December 31st, made 622 pounds 5 ounces of butter, of a very superior quality. This is, unless we are mistaken, over seven pounds per week for each of the three cows during the entire season. Whatever other New-Bedford people may do, we are confident Mr. Randall does not feed his cows on "*beach grass, cods' heads, and mackerels' tails.*" Mr. Randall adds that he has imported three cows and two bulls of the pure Ayrshire blood, and beautiful animals he pronounces them to be. We are always glad to announce the arrival in this country of such stock, and from the present statement of Mr. Randall cannot doubt he will find an ample reward.

Correspondence and Inquiries.

Inquiry—Soil, and Rotation of Crops.

J. M. Johnson, Esq., of Hannibal, (Mo.) is informed that a soil, such as he describes, of a rich mold, with a subsoil tolerably porous and dry, and based on limestone, needs no analysis to prove its fertility. We think the rotation marked out for himself, a very judicious one, with the exception that for the spring crops after corn, we would substitute barley instead of oats, (barley being preferable to oats, before wheat,) and let oats take the place of the rye, leaving out that grain altogether. Mr. J. asks to what crop he must apply his manures? We answer to the roots and the corn certainly. These cannot be manured too much ; but heavy manurings applied directly to wheat frequently cause more straw than grain. It will be best to mow the clover the first year of the rotation, and pasture the second. It is a good plan to sow timothy with clover. It gives a finer hay, and covers the earth more completely. Six pounds of clover seed and six or eight of timothy to an acre, will seed land very well ; but it will be found safer to use more rather than less than this quantity in seeding.

Inquiry—Fish Manures.

Our friend " W. S." of Compton, R. I., inquires respecting the propriety of using fish as a manure. All animal matter has been derived from plants, and as these derive support from the air as well as the earth, so animal manures in decomposition give off their ammonia and carbonic gas for the use of plants, and the earths remaining are returned to the soil. All animal matter then must be a powerful stimulating manure, and when applied to a soil from which every thing in the shape of vegetable matter is taken and nothing returned, will, as a matter of course, soon leave it in a partially exhausted state. It seems to be natural to man to trust to one thing alone ; forgetting that the processes of nature are combinations, which, he who would produce the same results, should aim to follow. Plaster, bones, and fish manure, have all been highly extolled on their first use, and then as bitterly condemned by those who used them constantly and neglected other manures. Plaster gave great crops, but when the vegetable matter in the soil was exhausted, plaster could not create plants. Those who have used plaster in connexion with clover, and a rotative system, instead of exhausting, have enriched their lands. So with bones ; and so with fish manure. They are invaluable agents of fertilization ; but will not prevent the exhaustion of soils, when relied upon exclusively as manures, or when the plants they are designed to stimulate are not furnished either by nature or the husbandman, with their proper pabulum or food.

The Chess Controversy.

This is a question which it seems will not 'stay put,' as we have several communications pro and con on the subject, which, as we cannot insert them entire, we must dispose of in this place ; and first, our friend Chittenden, of Michigan, who approaches the subject as a man who thinks, and is desirous to ascertain the truth. We extract the proposition he makes for the consideration of the readers of the Cultivator, trusting it may be carried into effect : " The manifest advantages of having this question settled, and the ease with which it may be accomplished, should stimulate every wheat grower in putting it beyond a doubt. Let a number of farmers in different sections of the country prepare a small piece of ground, from a quarter to an acre, by thorough fallowing, or some other way that will entirely free it from all foul seeds, then provide seed by sorting or picking from the bundle, that they may *know they sow nothing but pure wheat.* If the produce of this be nothing but wheat, let it be sown the following year upon land prepared in a similar manner, and if the result is equally favorable, a supply of pure seed would be obtained for themselves, and for others who would rather purchase pure wheat of their neighbors than sow foul seed of their own. Let the *proof* thus establishe be each year communicated to the editors of the Cultivator, and through their invaluable journal made known to the world."

" *A Subscriber,*" from Ontario county, is very confident. We give two extracts : " The facts which I am about to relate, occurred in a field that had been sown several times with wheat that contained not a single particle of chess, nor any other foul seeds, for it was a practice of my own, that no foul trash should be sown." * * * " In what manner the frost acts, whether directly or indirectly, to thus cause transmutation, is something that I cannot explain ; yet it is something that will be understood, if it is agitated but a few years longer. An enlightened public will not permit the theorist or the logician to triumph over facts which will stand to the laws of nature if explained." We have, with David Thomas, been accustomed to believe that *pure wheat* was a scarce article, and our own observation and experience would induce us to think the first quotation must be read with some qualification. We have no doubt that facts will triumph ; and facts, not suppositions or assertions, must decide.

The instances and arguments offered by our correspondent Mr. Crenshaw of Va. in favor of transmutation, are such as have been urged and replied to so fully in the pages of the American Farmer, Genesee

Farmer, and Cultivator, that a repetition would be scarcely proper.

By the way, our agricultural friends, to whom the transmutation of wheat into chess appears so certain and easy, have an opportunity now offered to "make money," by a demonstration of their theory. In consequence of a new agitation of the matter in Virginia, the able editor of the Farmer's Register, Mr. Ruffin, has offered a premium of $100 to the man who shall demonstrate the transmutation of wheat into chess, with the process of performing it. We believe, too, that Mr. Chapin's premium of $50 (see Genesee Farmer, vol. 2, page 310,) is still open for competition, so that the advocates of transmutation have every encouragement to advance *proofs* and institute experiments.

Agriculture in Virginia—Value of Marl.

We give the following from a letter received from our friend, H. Harrison, of Prince George county, Va.: "It is astonishing to witness the increased production merely from intermixing with the soil, what we familiarly call *marl*, an increase on many occasions of fifty per cent. Its *modus operandi* may form a fruitful theme of agricultural disquisition. It may depend upon the greater affinity which exists between the lime and the acid of the earth, and thus destroy the great obstacle to a successful culture; or a combination may ensue which proves the proper stimulus to the plant; or a compound be formed, perfectly soluble, which the plant assimilates to itself. To Mr. Ruffin is awarded the merit of reviving from obscurity what had grown obsolete, if not of original application upon an extended scale with us.

"Some attention has been directed among us to the improvement of our stock of cattle and hogs. The improved Short Horns have been introduced among us, but some doubt is entertained whether they are fully adapted to our district, as our most inferior land is devoted to pasture, and the better kind to tillage. Indeed, it appears to be generally agreed, that so large a frame requires abundant grass to sustain it. The Berkshire hogs from Bement, Lossing, and Brentnall, have been introduced, and are considered to be vastly superior to our ordinary stock; for elegance and symmetry of form, for aptitude to take on fat they stand unrivaled; still there are other kinds among us, derived from England, but little inferior to them.

Wisconsin Territory.

We yield a hearty concurrence in general to the views and opinions expressed by our correspondent (T. W. Sipperly) at Delavan, W. T. as to the excellence of that territory, and the adaptation of its soil and climate in particular, to emigrants from New-York and New-England. As a general rule, however, we are not the advocates of migration, but would prefer to see our large farms reduced to more comfortable dimensions, and cultivated in a better manner, rather than have so many of our young men leaving for the west for want of land to till. Small farms, and superior cultivation, will be best for all in the end. The recipes sent by Mr. S. will appear as we can find room for them.

Principles of Breeding.

Our friend J. B. of Hildreth, O., in reply to our remarks on the concluding part of our Review of Walker on Intermarriage, is informed that we do not plead guilty to the charge of 'fastidiousness,' in respect to the discussion of such matters; but that we imagine every subject necessary to a full understanding of the questions at issue among breeders, may be treated in such a manner as to divest it of all indelicacy, or any thing which shall render it unfit for a journal intended for general reading, and which should be a welcome visitor to every member of a family. There are, however, some topics, which the general, and *correct*, opinion of mankind, has excluded from popular discussion, and confined to works devoted to such subjects; and of these, those relating to the theories of procreation have always held a distinguished place. While, therefore, our columns are open for the discussion of all topics, when treated in a proper manner, we shall reserve the right of deciding on this point; and knowing as we do, that national degradation has always followed in the wake of female demoralization, we shall not hesitate to exclude any papers, or condemn any book, however valuable in other respects, that have a tendency to such a result.

We do not agree with J. B., that there is no *nervous* connection between the mother and the embryo; we doubt the position that the *quality* of the blood derived from the parent has no effect in determining the physical character of the progeny; and we must be permitted to question whether, where a full blood Berkshire is crossed with a common sow, some of the pigs will be full blood Berkshire, some entirely of the common kind, and others of various grades. The question asked by J. B. whether "the structure of the grandparent is ever transmitted to the grandchild, without being possessed by the parent?" would seem to receive some support from the fact, that in hereditary insanity, cases not unfrequently occur, in which the child escapes, and the disease reappears in the grandchild.

Lusus Naturæ.

J. M. Irwin, in a letter to the Cultivator, has described a singular freak of nature. A cow was killed for beef, and the calf, then in the fifth month, was taken from her. On examination it was found that the animal had two perfect heads, connected with a single neck, and each brain contributing its part to the single spinal cord. The heads were attached to the neck at right angles, which would have made delivery impossible. There were two wind-pipes, each connected with the lung on its own side; and two gullets, each terminating in a stomach of its own. The stomachs united in a common duodenum, and the intestines were single to their termination. The calf was a male, and except in the points noted resembled an ordinary animal.

Experiment with Potatoes.

In a communication from L. Smith, Esq., of Fallsburg, he mentions an experiment made by him in planting the Yam, Mercer, and Rohan potato. Twelve Yam potatoes were cut in pieces, one eye on each piece, and planted two pieces in a hill. Adjoining, in rows of the same length, and with pieces cut in the same way were two rows of Mercers; next these were two rows of Rohans, cut and planted as the first; and then again two rows of Rohans, with only one piece in a hill. At digging, the Yams gave five bushels of assorted potatoes, and a peck of small ones; the Mercers five bushels and a half of assorted, and a half peck of small ones; the Rohans gave five bushels to the first two rows, and I could perceive no difference between them and the two last, either in tops or bottoms. The Rohans were large, and required no assorting.

Inquiry.

Messrs. Editors—My farm is better adapted to raising stock or keeping dairy than for grain, but I do not wish to keep a dairy. Which would afford the most profit, and be the best to improve the land, raising neat stock, or keeping sheep? If sheep, what breed would be the best for that purpose? If neat stock, what breed? and which would be the most profitable, heifers or steers? An answer from one qualified by experience to express an opinion would be thankfully received.

Fallsburg.

Inquiries—Sweet Potatoes and Hessian Fly.

A. Aylsworth, of Granville, O., requests some information on the subject of raising and preserving the sweet potato; and the prevention of the Hessian fly.

A writer in a southwestern journal gives the following directions, which he has successfully practiced for twenty years: "Manure and break up your ground, and make it fine by plowing and harrowing. Then throw three furrows together, and to complete the ridge with a fine rake, draw the dirt up on each side to about the height of a potato ridge. Open a trench on the ridge and drop the slips five or six inches apart, and cover two inches deep. There is no difficulty in the after culture; and a plow will materially assist in digging the crop. The potatoes are put in a tight bin or garner in the cellar with chaff or dry dirt around and on them, and put them in the same day they are dug. When freezing weather comes on, close the cellar windows. Plant as early as the spring frosts will admit, and dig after the first frost is hard enough to bite the leaves." To preserve the sweet potato, exclusion from the air and light, a dry place and dry covering, and a moderate or rather low temperature is necessary. With these requisites there is little difficulty in their preservation.

As to the Hessian fly we regret to say, that important as the subject is to the farmer, and extensive as are its annual ravages, no method has yet been discovered of arresting its depredations on the wheat crop. Every thing is as yet but mere theory, which it is nearly useless to detail. What is known on the subject may be found in former volumes of the Cultivator. Mr. Aylsworth gives the results of three experiments on spring wheat, the results of which condensed, are as follows:

1st. Sowed 9th of March, 1840. Injured by the fly about the lower joint; product a middling crop.

2d. Sowed April 15th, 1840. Looked well until about to head, when about one-tenth of it headed, and ran up the usual height. The remainder formed no heads. On examination it was found the fly had not lodged its eggs in the usual place near the root, but invariably *above* the upper joint. That which bore a head had but few of the larvæ.

3d. Sowed May 16th, 1840. Looked finely for three or four weeks after it was sown; when it began to perish, and soon all disappeared; the fly causing a total failure.

Large Calf.

"*O. K.*" of Homer, had a cow calve on the 22d of June last. The calf was weak, and was obliged to be assisted for a fortnight before it could help itself. Its weight the day after it was dropped, was 115 pounds, at five months it weighed 550 pounds, and its girth was five feet.

Inquiry.

Messrs. Editors—How long should a man be engaged in agriculture before he has a right to the appellation of a practical farmer? O. K.

According to the common use of language as applied to men engaged in the professions, or in the mechanic arts, when an individual begins to put in practice the knowledge which he has previously acquired on any given subject, he is said to become a practical man, and we know no reason why the same rule should not apply to the farmer. The value of the opinions, however. expressed by these men, or by others, must depend much on their habits, and their means of observation. *Long experience*, combined with *correct observation*, certainly entitles opinions to great weight; but there are men who have farmed it all their days, that act as mechanically as the implements they use, and the latter are almost as much entitled to the appellation of practical farmers as the former.

Rohan Potatoes and South Downs.

Mr. Taylor of Delphi, Onondaga, informs us of the result of an experiment made by him last year in cultivating potatoes. He planted the Rohans, (cut in pieces, with two eyes in a piece, and two pieces in a hill,) the Sardinias, English Whites, and Orange potatoes, two rows of each; rows, 60 or 70 hills in length, and gave them the same treatment throughout. At digging, the Rohans were found clustered together in the hills, much lessening the labor of digging; but they did not yield as much to the row into nearly a bushel, as the other kinds planted. Mr. Taylor has commenced the breeding of South Downs from stock purchased from the flocks of Messrs. Rotch and Bement. The South Downs are great favorites of ours as a sheep for the common farmer, and we presume Mr. Taylor will not be disappointed in their value. We concur fully in the desire expressed by Mr. Taylor, that where no good reason exists for withholding a name, it should always accompany a communication. We have no doubt such a course would be generally acceptable to the numerous readers of the Cultivator.

Gapes in Chickens.

Our correspondent, Gen. C. of Iowa, attributes the gapes in chickens to breeding from too old cocks, and says—"Whether the age of the male would cause that disease or not, I know not; but I can well remember the time when cocks were allowed to grow old for the purpose of cock-fighting, that three-fourths of the chickens died with the gapes; and I have since noticed that where none but young cocks are kept on a farm, the disease is almost unknown. I do not remember having seen a dozen chickens affected with it in the last thirty years."

Farm Crops.

Mr. J. F. Osborn of Port Byron, Cayuga Co., well known as a successful agriculturist, writes us as follows: "My crops for 1840, were not quite as good as usual; still my corn averaged 80 bushels per acre; my oats over 60, wheat 20, and potatoes 300 bushels to the acre. On one and one-eighth of an acre of sugar beets, I had 800 bushels; but on three-fourths of an acre of ruta baga, I had but 200 bushels, while three years since, on the same ground, I had over 1,000 bushels. The black bug attacked the young plant; the white worm or maggot showed itself in the root; and a little red blue bug, which eat out the small or center leaves of the plants about finished them."

Great Yield of Carrots.

Mr. Edgerton of Mount Moriah, N. Y. says—"In 1839, I planted eight rods of ground with carrots, in drills twenty inches apart; (they should be two feet when the ground is suitably prepared;) the produce was 88 bushels, or at the rate of 1,900 *bushels* to the acre. I measured one that was 18 inches in diameter, and the same in length. I also raised a considerable quantity of Swedish turneps and Mangel Wurtzel. From the latter I could have selected 100 roots that would have weighed half a ton. I am convinced there is no crop that better repays a little extra labor than carrots, or that is more deserving of general cultivation by farmers."

China Tree Corn.

Mr. Fowler of Vermillion, Ohio, gives the following as the result of some experiments made by him last year in raising corn:—"About the 20th of May I fitted one and a half acres of ground (without manure) and planted half an acre with the improved White corn; half an acre with the China; and half an acre with the common gourd seed; in rows 4 feet apart, drilling the corn so that the stalks were from 8 to 10 inches distant in the rows. I hoed the corn twice, and kept it free from suckers. About the first of October I gathered it, and after husking made trial by shelling and weighing; the result of which was that the China yielded 73½ bushels of 56½ lbs., or at the rate of 147 bushels per acre; the White, 54, or at the rate of 108 bushels per acre; and the gourd seed 56, or at the rate of 112 bushels per acre." Mr. Fowler speaks highly of the China corn, and thinks it will be one of the best kinds for cultivation in a suitable climate. The correctness of Mr. Fowler's estimate is certified by C. Ruggles, Esq. who witnessed the measure.

W. Bache, Esq. of Wellsboro, Pa., writes us that his experiment with the Chinese corn was very successful, and that he has little doubt the acquisition to the country will be an important one.

Portrait of Judge Buel.

For the purpose of preserving the fine portrait of Judge Buel furnished the subscribers to the Cultivator with the 6th volume, a correspondent suggests that the engraving be neatly pasted on blank paper of suitable size and bound with the Cultivator as a frontispiece to the volume. He says—"Personally permit me to say, I can never forget the dignified form, the patriarchial mien, the sauvity of manner, and benevolent expression of countenance, evinced in our limited personal acquainttance with him, and wishing to retain these impressions and his likeness, and presuming many others wish to do the same, I have no doubt they will appreciate the suggestion of Truly yours, W."

Olds' Corn Planter.

Mr. Calvin Olds, of Marlborough, Vermont, has sent to us a notice of a new "Corn Planter and Seed Sower," which is highly spoken of as acting on simple and effective principles, "dipping up the seed and dropping it at given points with great exactness. The quantity is regulated at pleasure" We are always pleased to notice improved implements of this or other kinds. It will be found for sale at Thorburn's Seed Store. Mr. Olds' "Planter" received the premium of $20 from the Franklin Institute, Philadelphia.

"The Earl's Letter."

Doubts have been expressed by several of our correspondents, as to the genuineness of the letter from the Earl of Warwick, published in our last number, page 49, and three or four have criticised it with great severity. The letter was evidently an off-hand reply to the inquiries of the gentleman to whom it was addressed, and as such should not be subjected to the criticism it might have deserved, had it been deliberately written for publication; indeed we think it creditable to the Earl as a business man, if not as a polished writer. In accordance with the suggestion contained in a private letter from an esteemed friend, who thinks that either ourselves or Mr. Sotham have been hoaxed, we have carefully examined the original, from which it was put in type, and we have not a shadow of doubt as to its genuineness. It has the regular English postmark, as well as that of Boston, and the seal used, as we are assured by a gentleman who examined it before it was broken, was that of the Warwick family.

Slaughter House Manure, &c.

We take this method of replying to our correspondent, "Q. C. R." of Shoreham, Vt. Slaughter house manure, composed as it is of blood, flesh and offals, is, when decomposed, one of the most valuable of manures, and according to Chaptal, Liebig, and the British Husbandry, should always be made into compost before using. It should be placed in layers with swamp muck, turf, yard manure, or other matters, that the gases of ammonia, &c., which escape in the process of fermentation, may be absorbed and retained. If the soil is very dry or sandy, the earths mixed with the compost should be argillaceous, and if clayey or heavy, the reverse.

Bones are a capital manure, but it is necessary they should be broken or crushed before using, and the finer this is done, the more immediate will be the effect. An active man, with a suitable sledge or hammer, will break bones rapidly, and, though crushing would be far preferable, they would be better in this way than not broken at all.

The Dutton corn is certainly an excellent kind of corn, but it will not ripen as early as some others, and the cob is comparatively large, which renders thorough curing or drying more necessary. Last season, Dutton corn succeeded admirably, some of the finest fields we ever saw, being of that variety. The seed might be obtained in Albany.

The Berkshires are not a large hog, but the multitude of instances reported in the journals of the past season in which they have reached from 4 to 600 lbs. weight, would seem to be conclusive that if not a large framed hog, they may be easily made of great weight. If, however, any one finds the full blood Berkshires not large enough to suit his notions, (we believe few who try them will entertain such an opinion) he can cross them with some larger breed and thus produce swine of any desirable size.

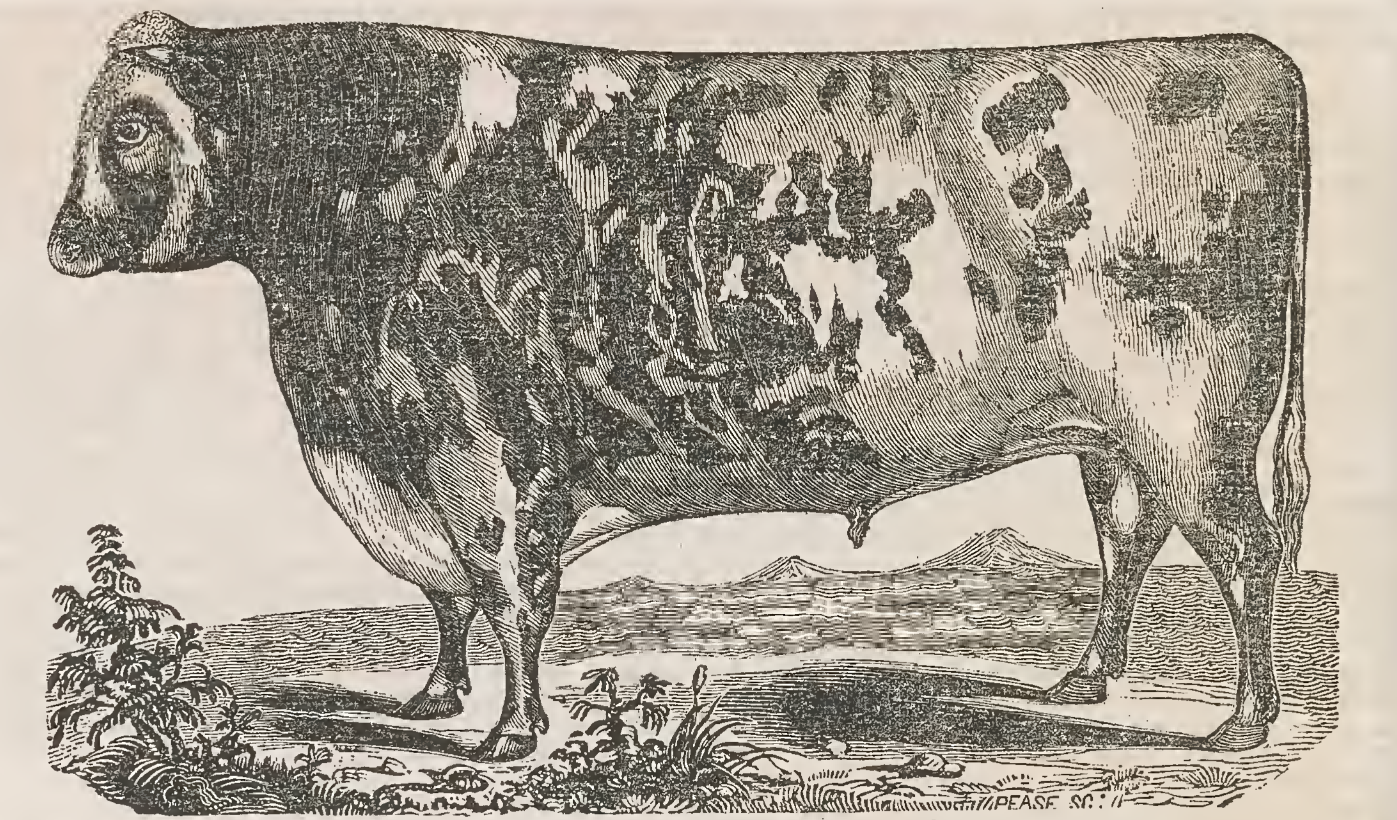
We would further suggest to our correspondent, that his soil, from his description of it, is one that would be essentially benefitted by plaster, and that by using it liberally with clover, and a rotation of crops, he cannot fail of rendering his farm fertile and productive.

Rearing Calves on Flax Seed and Hay Tea.

Our correspondent "*East Windsor*," in commenting on the paper of E. S. Willett, on rearing calves, in the Dec. number of the Cultivator, demurs to the practice there recommended, for the following reasons:—

1st, it is contrary to the course of nature; 2d, it will not produce as good calves; 3d, it will be more expensive; and 4th, it will not be as good for the cow. He prefers rearing calves on skimmed milk, with a handful of some kind of light meal added daily, with sweet hay or grass. He says—"We do not claim but that calves can be kept *alive* without any milk, but what is the profit? What can be done with the skimmed milk, better than to give it to the calves? It is certainly desirable with us, to have our calves attain some size the first year; the bringing up of calves in *starvation* one year, to see them grow faster the next, is like rolling a stone up a very steep hill, to see it roll down again very swift. The best stocks of cattle with us (and we have some that cannot be beat in New-England, or the State of New-York) are those that are the thriftiest the first year."

New Cotton.—A new variety of cotton has been introduced into Alabama from Rio, in South America, and is called the Rio Cotton. It is said to be superior to the best Sea Island. The staple is about three inches long, and of glossy, silk texture.



IMPROVED SHORT HORN BULL "LEOPARD,"

(From a painting by T. K. Van Zandt,)

Owned by E. P. Prentice, Esq. Mount Hope, near this city.

New-York State Agricultural Society.

The Executive Committee of this Society held their regular monthly meeting, at room No. 7, Exchange, Albany, on the Third Wednesday of March, 1841—present, Messrs. Nott, Bement, Vail, Prentice, McIntyre, and Tucker. The President having taken the Chair, the Board proceeded to the appointment of the general committee for the counties, and completed the list as follows:

ALBANY COUNTY.
F. C. Hillhouse, Watervliet.
Wm. N. Sill, Cedarville.
John J. Bullock,
ALLEGANY.
Alvin Burr, Angelica.
James McCall, p. m., Rushford.
BROOME.
T. Robinson, p. m. Binghamton.
CAYUGA.
David Thomas, Aurora.
John B. Dill, Auburn.
J. F. Osborn, Port Byron.
CLINTON.
H. K. Averill, Plattsburgh
CHEMUNG.
Eli C. Frost, Catherine.
CHENANGO.
William S. Randall, Norwich.
H. Balcom, Oxford.
Wm. Newton, Sherburne
CHAUTAUQUE
Jabez Burrows, Mayville.
Mr. Crooker, Fredonia,
Orton Clark, Sassadaga.
CATTARAUGUS.
Anson Gibbs, Ellicottville.
David McClure, Franklinville.
CORTLAND.
John Miller, Truxton.
Dan Hibbard, Cortland Village.
COLUMBIA.
John P. Beekman, Kinderhook.
Oliver Wiswall, Hudson.
E. Tilden, p. m. New Lebanon.
DELAWARE.
Jabez Bostwick, Hamden.
Wm. Frisbee, Delhi.
DUTCHESS.
Theodore Allen, Hydepark.
D. H. Holden, Poughkeepsie.
Anson Sherwood, Fishkill.
Eli Westfall, Rhinebeck.
Essex.—W. G. Ross, Essex.
ERIE.
Harlow Case, Buffalo.
R. L. Allen, do.
A. D. Tenny, Alden.
FULTON.
Thaddeus St. John.
FRANKLIN.
James Duane, Duane.
GENESEE.
Lewis E. Heston, Batavia.
Martin O. Coe, Le Roy.
Ezra Bishop, Attica.
P. M. Ward, Perry.
GREENE.
A. Van Bergen, Coxsackie.
William Salisbury, Leeds.
HERKIMER.
Henry Burrall, Salisbury.
Samuel Colman, Warren.
JEFFERSON.
O. Hungerford, Watertown.
Eldridge G. Merrick, Clayton.
Chas. E. Clarke, Great Bend.
KINGS.
Cornelius Bergen, Brooklyn.
Garret Kouenhoven, Flatlands.
LIVINGSTON.
Micah Brooks, Brooksgrove.
Alex. Simpson, Caledonia.
LEWIS.
J. Bostwick, Lowville.
MONROE.
R. Harmon, jr. Wheatland.
Alfred Jones, Rush.
Abel Baldwin, Clarkson.
MONTGOMERY.
John Frey, Palatine Bridge.
Isaac H. Tiffany, Fultonville.
MADISON.
Jonathan Ledyard, Cazenovia.
I. S. Spencer, p. m. Canastota.
S. B. Burchard, Hamilton.
NEW-YORK.
Abraham Bell, W. A. Seely, Norman Hecok, A. Dey, Wm. Emerson, Wilmot Williams, D. K. Minor, E. Bement, I. Adriance, S. Fleet, J. L. Mott, New-York.
W. H. Hall and Gouveneur Morris, Harlem.
NIAGARA.
William Parsons, Lockport.
James Baldwin, Royalton.
ONONDAGA.
William Fuller, Skaneateles.
George Geddes, Geddes.
Enoch Marks, Navarino.
Peter Reed, Manlius.
OTSEGO.
Francis Rotch, Butternuts.
H. Gregory, Gilbertsville.
Robert Benedict, Richfield.
ORANGE.
James H. Crawford, Crawford.
N. P. Hill, Montgomery.
J. D. Bull, Hamptonburgh.
ONEIDA.
T. Goodsell, Utica.
Ira S. Hitchcock,
Elon Comstock, Stokes.
OSWEGO.
Orlo Steele, Oswego.
Alvin Rice, Hannibal.
ORLEANS.
A. Whitney, Kendall.
ONTARIO.
Oliver Phelps, Canandaigua.
Myron Adams, Bloomfield.
Robert Nicholas, Geneva.
PUTNAM.
James H. Cornwall, Towners.
QUEENS.
John Treadwell, Jamaica.
RENSSELAER.
J. J. Viele, Buskirk's Bridge.
George M. Tibbetts, Troy.
John Sampson, Troy.
ROCKLAND.
J. Wood, p. m. Clarkstown.
RICHMOND.
Samuel Ackerly, Southold.
SCHOHARIE.
J. Westover, Richmondville.
John S. Brown, Esperance.
SULLIVAN.
W. F. Brodhead, Forestburgh.
STEUBEN.
Z. A. Leland, Bath.
Israel Skinner, Prattsburgh.
Wm. J. Gilbert, Painted Post.
ST. LAWRENCE.
H. Van Rensselaer, Ogdensburgh.
Zenas Clark, Potsdam.
SUFFOLK.
J. F. Dayton, East Hampton.
Asher P. Hamblin, Babylon.
SENECA.
G. V. Sackett, Seneca Falls.
SARATOGA.
James Thompson, Ballston.
J. H. Beach, Saratoga Springs.
SCHENECTADY.
D. D. Campbell, Schenectady.
TOMPKINS.
Ezra Cornell, Ithaca.
Wm. T. Lawrence, Newfield.
TIOGA.
C. F. Johnson, Owego.
ULSTER.
Philip Hornbeck, Accord.
M. G. Decker, Bruynswick.
WAYNE.
C. S. Button, Newark.
R. H. Foster, p. m. Lyons.
WARREN.
William McDonald,
WESTCHESTER.
S. F. Halsey, West Farms.
L. D. Clift, Somers.
WASHINGTON.
Henry Holmes, Greenwich.
Dr. Newcomb, Whitehall.
YATES.
Jared Patchen, Benton Center.

The Recording Secretary reported a complete list of the members of the Society, specifying those who have paid their annual dues for the current year, and the sums due from those in arrears—when it was

1. *Resolved*, That the names of the members of this Society, who have paid their dues, be published in the Cultivator—that notice be given to those in arrears; and that a monthly list of all new members, as well as those who pay their dues, be published hereafter.

Members of the N. Y. State Agricultural Society.

EDWARD P. LIVINGSTON, Claremont, Life Member.
Bement, Caleb N., Albany.
Briggs, Amos, Rensselaer Co.
Buel, Jesse, Albany.
Buffett, Lewis, Schaghticoke.
Burchard, S. B., Madison Co.
Comstock, Elon, Stokes.
Cornell, Ezra, Ithaca.
Ferguson, John, Schenectady.
Fowler, S. S., Greenbush.
Fuller, William, Skaneateles.
Gaylord, Willis, Otisco.
Grove, H. D., Buskirk's Bridge.
Hoag, S. W., Rensselaer Co.
Linn, A. L., Schenectady.
Marks, A., Durham.
Maynard, John, Seneca Falls.
Masters, N. W. Schaghticoke.
McIntyre, Alexander, Albany.
McIntyre, J. McD., "
Middleton, Robert, Albany.
Miller, Erastus, Albany.
Morrell, L. A., Lake Ridge.
Munroe, David, Camillus.
Nott, Joel B., Guilderland.
Parke, S. M., Albany.
Prentice, Ezra P., Albany.
Prentice, Sartwell, "
Robinson, D. A., Farmington.
Rotch, F. Butternutts
Scott, David, Attica.
Shaw, A. H., Lansing.
Sherwood, J. M., Auburn.
Tucker, Luther, Albany.
Vail, George, Troy.
Van Bergen, A., Coxsackie.
Walsh, Alex., Lansingburg
Wendell, Herman, Albany

A Finance Committee was appointed, consisting of Messrs. Nott, Vail, Prentice, Walsh and McIntyre.

The subject of By-Laws was referred back to the committee, to report at next meeting.

The Corresponding Secretary reported a Circular Letter to the General Committee, which was read and approved, and directed to be printed, together with the Constitution, and sent to each member of the Committee.

Interesting Reports were received from Messrs. Morrell and Randall, on the Premium List, which were referred to the next meeting, in the expectation that the other members of the committee will report at that time.

2. *Resolved*, That as the Executive Committee are to decide at their next meeting, (to be held on the Third Wednesday of April,) as to the time and place of holding their Exhibition and Fair, each member of the Committee, who cannot attend the meeting, be requested to communicate his views on these points in writing.

3. *Resolved*, That we pledge ourselves to use our personal exertions to increase the number of members of our Society, and that we will, each one of us, present the names of some new members at each monthly meeting of the Executive Committee; and that this resolution be forwarded to such members of the Committee as were not present, and their concurrence solicited.

Adjourned to the 3d Wednesday of April at 3 o'clock,

Loss of weight in drying Grasses.—In the 8th volume of the Massachusetts Agricultural Journal, is a table furnished by the Hon John Welles, of the loss the different grasses sustain in drying. There are some discrepancies in the results of different years, the result probably of greater ripeness in one case than the other:

100 lbs. of	green	white clover	gave when dried,	27	lbs.
"	"	red clover,	"	26	"
"	"	herds' grass,	"	39	"
"	"	fresh meadow,	"	44	"
"	"	salt grass,	"	60	"
"	"	English rowen or 2d crop,		19	"
"	"	corn stalks	gave when dried	25	"
"	"	spiked oat grass,	"	50	"
"	"	red top,	"	46	"
"	"	Rhode Island,	"	40	"
"	"	couch grass,	"	48	"
"	"	marine black grass,	"	38	"

MONTHLY NOTICES.

"The Northern Light."—The first number of a monthly journal, with this title, has just been issued by an association of gentlemen in this city, under the editorial supervision of John A. Dix, Esq., a gentleman whose reputation as a writer, as well as the paper before us, affords a sufficient guarantee of the ability with which it will be conducted. It is devoted to the discussion of the principles of political economy, agriculture, literature and a record of passing events, and to be issued on the first of each month, in the same style and form as the Cultivator—price $1.00 a year.

Exportation of Bones.—We learn that Mr. S. Titcomb, of Waterford, Saratoga county, in 1839, sold to an English gentleman for exportation twenty tons of bones at eight dollars per ton; and that the same person has lately written to Mr. T. asking whether he could obtain a farther supply, and offering at the rate of ten dollars per ton. That a profit is realized by the exportation, we have no doubt; but we would ask whether it would not be better to grind and use these bones at home, than to send this invaluable article abroad, and import wheat and potatoes in return.

Breeding Cattle.—In the interesting reports of the agricultural meetings at Boston, furnished for the Boston Courier by Mr. Colman, is a notice of the "Creampot breed of Cattle," produced by Col. Jacques of Charlestown, and an account of their qualities, &c. by that gentleman. In the course of his remarks, he said, "He had now twenty-eight cows and heifers of this stock; and at his pleasure he could breed his stock with orange color or yellow around the eye; of a mahogany color, white bags and black teats, as might be desired." * * * * "With a view to test his principles (of breeding) he had gone largely into the breeding of rabbits; and it had required the ninth generation, and four hundred rabbits to reach the point he aimed at."

Tobacco in Canada.—The Buffalo Advertiser says that tobacco is almost the only crop made by the cultivators of the soil for the distance of seventy-five miles east from Malden, along the northern shore of Lake Erie. We saw many drying houses or barns a hundred feet in length, and nearly filled with the poisonous weed hung up to dry or cure. The runaway slaves and free blacks from Virginia and elsewhere have carried with them a practical knowledge of cultivating tobacco to their new residence, which in despite of its unpropitious latitude, they are able to turn to good account.

White Carrot.—From some experiments that have been made with this root, it appears that it will produce nearly or quite double as much on the same soils and with the same treatment as the common orange. Whether it will be as valuable for feeding remains to be seen. Should it prove so, the Flemish carrot will be a great acquisition.

Going Backwards.—A Mr. Carmichael in the American Farmer, places the *Tinicum* cattle, a breed he imagines can be traced to the island of Tinian in the Pacific Ocean, at the head of our cattle, and while admitting the advantage of crosses, sagaciously observes, "I should prefer a bull from New-England to one from Old England." There are many beautiful cattle in New-England, but the best found there are the result of recent crosses with imported English bulls.

Bone Manure.—In the Farmer's Register is a record of a series of experiments made by T. A. C. Jones to test the value of bone manure in comparison with stable manures, and he arrives at the following conclusions: "1. That when applied at the rate of from fifty to eighty bushels per acre on the exhausted lands of Virginia, one bushel of crushed bones is more than equal to one cart load of (twenty-five bushels) good farm yard manure, in its effect on the crop. 2. That the effect of bone manure is more durable than that of any putrescent manure usually procured on a farm. 3. That when applied to land which is in good heart, the effect is much more powerful than it is on very poor land. 4. That when combined with manure and applied in the form of compost [eight per cent of bone dust with the scrapings of the farm yards] the effect both instant and remote, far exceeds that of any other application with which I am acquainted; and lastly, if stable manure has to be purchased, or even hauled more than half a mile from your own stables, bone manure at fifty cents per bushel, the price it cost me, delivered on my farm, is the cheapest manure of the two."

Poudrette.—Mr. Minor, of New-York, at one of the legislative agricultural meetings in Boston, made some interesting statements respecting the value of this manure on crops. On *winter* sown wheat it added much to the crop, and its value is truly great on corn and root crops generally. The method of applying it to corn, is to give each hill a *gill and a half*, half at planting, and half as a dressing to be worked in with the hoe or cultivator. The price of *poudrette* at the manufactory in New-York is $1.75 per barrel of four bushels; or three barrels for five dollars. Of the fertilizing powers of poudrette there can be no question, but experiments would seem to show that it is better adapted for corn or roots that require to be brought forward rapidly, than for the spring grains, particularly wheat, as by giving a rank and rapid growth of straw the tendency to rust or mildew is increased.

Grasshoppers in January.—The N. H. Herald mentions that a gentleman of Woodbridge had brought to that office a number of real grasshoppers, gathered in the open air, when the thermometer was at zero. There had been a thaw immediately previous to their being found. We have seen full grown grasshoppers of the previous year, in March; and a friend of ours assured us several years since that he had caught trout in the Otisco lake on hooks, baited with grasshoppers caught in the open fields in February, and dropped into the water through holes cut in the ice. The grasshopper would seem therefore to be more tenacious of life than has generally been supposed.

"Tree Fence."—Mr. Asa Chatfield in the Herkimer Journal gives the following account of an experiment in fencing made by him. In reference to an article in the Cultivator on fencing, he says: "I will describe a kind of fence I have on my farm. It consists of trees commonly called the English poplar, set out some twenty-five years ago, in a straight line, fourteen feet apart, close to the rail fence which then bordered the road passing by my house for the distance of eighty or ninety rods. When I put them there, I designed them for nothing more than ornament, my farm for the most part being very well supplied with stone for walls. The trees grew very rapidly, and after a few years the idea struck me, that I would procure black ash rails, as being as durable as any I could get on the farm, (cedar would be preferable where it could be got,) and bore and mortise the trees the same as posts, and fit the rails in them. I did so—it took but five rails to a length, and the very next year the rails were grown in perfectly solid, and have remained so ever since. There is no falling off of the rails, neither can any wind blow the fence down, nor can any animal of any description push or shove it down. * * * The poplar tree, if used for the fence, should have its top taken off once in eight or nine years, and that will prevent too much shade, where the fence runs across the farm."

Great Porkers.—Whatever may be thought of the year 1840 in other respects, it will long remain famous for the heavy hogs it has produced. Mr. Willard of the Shaker Society at Canterbury, in a note to Gov. Hill says, "We give you the weight of three of the *full blood* Berkshires which we slaughtered a few days since. Two weighed, when dressed, each 476 pounds, and one 550 pounds, all of which had no extraordinary keeping, and we are induced to believe that by proper management and more feeding they could have been made considerably larger."

Another Pig.—Mr. J. Osborne, of Kennebec, Me., slaughtered a pig the last of December, not quite eight months old, which weighed, including the rough fat, 401 pounds. Such a pig is we think hard to beat.

Still another Lot.—Our Kentucky friends must look to their laurels, or the old Bay State will wear them yet. Mr. Phinney has furnished the New-England Farmer with the weights of fifteen Berkshire and Mackay hogs killed by him 2d February. "738, 655, 579, 574, 556, 528, 523, 517, 503, 501, 487, 480, 476, 441, 400, pounds; aggregate weight 7,958 pounds; average weight 530½ pounds."

Preparation of Cions.—From some experiments made last spring by Mr. Newton, of Worcester, it appears that the chance of the cions inserted in grafting living is much increased by dipping the upper end of the cion in wax, or covering it with a film so as to prevent evaporation. We have tried the same method with cions, and with cuttings, and think it worthy of adoption.

Wheat in Connecticut.—The quantity of wheat grown in Connecticut as shown by the agricultural census is as follows: Hartford county, 13,449; New-Haven, 7,032; New London, 10,138; Fairfield, 10,802; Windham, 8,899; Litchfield, 23,544; Middlesex, 5,463; Tolland, 7,553. Total, 86,880 bushels. This is pretty well, but Connecticut can and will do better hereafter.

Cooking Hams.—A correspondent of the N. H. Farmer's Gazette says: "If you have not cut your hams, I will tell you of a good way to cook them. Boil the ham three hours, then skin it nicely, pound crackers fine and sprinkle on it, then bake one hour. Cooked in this way they are very nice."

Capabilities of the Soil.—Under this title Mr. Townsend, near New-Haven, has given the Farmer's Gazette a statement of the crops raised by him on a small piece of ground in four years. The land measured just five-eighths of an acre. First year fifteen ox cart loads of forty-two bushels each of pumpkins, or 630 bushels. Second year potatoes, which sold for $70. Third year thirty-one shocks of rye, large sheaves. Fourth year (1840) cut three tons of hay of good quality. The expense of culture, manure, &c. of all the crops was $46.

To make Leather Water Proof.—We find in the Maine Cultivator the following directions for making boots or shoes water proof: "Take three ounces spermaceti and melt it in a pipkin or other earthen vessel over a slow fire; add thereto six drams of India rubber, cut into slices, and these will speedily dissolve. Then add of tallow eight ounces; hog's lard two ounces; amber varnish four ounces; mix, and it is fit for use. Two or three coats with a common blacking brush are to be laid on, and a fine polish will be the result.

Agri. Statistics of Michigan.—Horses and mules,	28,784
Neat cattle,	179,198
Sheep,	95,584
Swine,	304,358
Bushels of wheat,	2,147,585
" barley,	119,491
" oats,	2,053,074
" rye,	33,129
" buckwheat,	106,797
" corn,	2,238,796
" potatoes,	2,040,941
Pounds of wool,	144,793

Corn for Fodder.—Mr. Letton, of Davidson, Ky., last year sowed three acres of corn for fodder, and cut from this land twenty hay-loads of fodder, estimated to weigh one ton each, or more than six tons of first rate fodder per acre. Some experiments have been made in the New-England states with corn sown for this purpose, and with favorable results. We think there are many farmers who might greatly increase their means of feeding their cattle or horses by sowing corn in this way.

Pickled Beef and Pork.—It is well known that these articles are with difficulty preserved sweet in the south. To prevent their souring, take them out of the brine and smoke them until dry—throw away the old pickle, or cleanse it by boiling and skimming. Smoke the barrel thoroughly and repack the meat.

Great Egg.—Mr. Buckminster says: "A gentleman from Medford showed us last week the largest hen's egg we ever turned eyes on; its girth was seven and three-quarters of an inch, by six and a half—the fowl was quite young, and had laid several eggs nearly as large as this—she laid three, in four days last week."

Another.—We have just measured an egg, taken from a basket received from our friend of the "Three Hills Farm," and find its girth to be 5¾ths by 7¼ths inches.

African Sheep.—The Boston Society of Natural History have received from D. S. M'Cauly, United States Consul at Tripoli, two varieties of the sheep in the north of Africa. Three of these animals are of the Bengazi or four horned breed, and are distinguished by the size of their tails, which sometimes weigh fifteen pounds, and are highly prized by epicures. The fourth is a ram of the Fezzon breed, much resembling the goat in its appearance, limbs and hair, and inhabits the high ranges of the Atlas. They cannot probably be considered as of great value, other than as curious specimens of this animal, not hitherto known in the United States.

"A Lady Agriculturist."—We learn from the Maine Cultivator, that at the last meeting of the Kennebec Agricultural Society, Mrs. Content W. Hains claimed and received the premiums for the best crops of Indian corn and wheat. The yield of corn was 132 bushels of ears to the acre, and of wheat 29 bushels. There were a number of competitors, but they were fairly distanced by the lady

County Agricultural Societies.

Onondaga.—The following list of officers of this Society, chosen at its last annual meeting, has been furnished us by the President:

JOHN SANFORD, President, Marcellus.
Silas Gaylord, 1st Vice President, Skaneatles.
James L. Voorhes, 2d " Lysander.
George Geddes, Recording Secretary, Camillus.
John C. Brown, Corresspondling Secretary, Onondaga.
Mr. Wallace, Treasurer, Syracuse.

Executive Committee—One for each Town.

Salina, Joseph Savage.
Camillus, Talmadge Cherry.
Onondaga, E. Marks.
Dewitt, N. P. Bogardus.
Elbridge, John Ranny.
Skaneateles, Chester Moses.
Marcellus, Myron L. Mills.
Spafford, John Baxter.
Otisco, Warner Abbot.
Tully, Nichol Howel.
Fabius, Aden Howe.
Pompey, David Marsh.
LaFayette, John Spencer.
Manlius, P. R. Read.
Van Buren, John Bowman.
Lysander, John Stevens.
Clay, S. L. Wormwood.
Cicero, John Bowring.

Monroe.—At the annual meeting of the "Genesee Agricultural Society," held Feb. 2, 1841, the title of the Society was changed to "Monroe Agricultural Society;" and the following officers elected:

LYMAN B. LANGWORTHY, President, Greece.
William Garbutt, 1st Vice President, Wheatland.
Henry E. Rochester, 2d do. do. Gates.
William C. Cornell, 3d do. do. Henrietta.
Henry M. Ward, Recording Secretary, Rochester.
Michael B. Bateham, Corresponding Secretary, Rochester.
Charles F. Crossman, Treasurer, Rochester.

Board of Managers.

R. Harmon, Jr. Wheatland.
Oliver Culver, Brighton.
Thomas Weddle, Greece.
Isaac Moore, Brighton.
H. E. Barnard, Mendon
William Pixley, Chili.
Enoch Strong, Perinton.
John B. Smith, Ogden.
John H. Robinson, Henrietta.
George C. Latta, Greece.
J. P. Stull, Rush.
George Sheffer, Wheatland
Doctor A. Baldwin, Clarkson.

Cortland.—The annual meeting of this Society was held Feb. 13, 1841. Reports were presented, on the general state of Agriculture in the County, by H. S. Randall—on Cattle, by R. Boies—on Horses, by T. Harrop—on Swine, and on Fence Building, by J. Onderdonk—on the Dairy, by A. Rice—on Fattening Beef, by I. Boies—on the Comparative Value of Potatoes and Ruta Bagas, by J. Ives—on the Application of Manures, by P. Barber—on the Theory and Practice of Draining, by H. Stephens. These Reports are to be published. The following officers were elected for the present year:

JESSE IVES, President.
H. S. Randall and David Matthews, Vice Presidents.
R. Boies, Treasurer—Amos Rice, Secretary.

Executive Committee.

Dan Hibbard.
Morris Miller.
Manly Hobart.
Paris Barber.
Israel Boies.
A. Chamberlain.

Crops, and their Value from Five Acres.

In conversation the other day with a gentleman of our acquaintance, well known as a most successful farmer, he remarked that the productiveness of good soils was not generally understood, and that their capability was one of the strongest arguments in favor of small farms. As a proof, he instanced the crops he had grown on a small piece of land in four years, without extra tillage or manuring. The course of cropping pursued, he said, was not one to be commended, as it partook too much of the exhausting kind; but circumstances seemed to render it proper at the time; and it was not until very lately on looking over his books to ascertain products and prices, that the profits of this piece of ground had presented itself as worthy of notice. We made a minute of the crops grown, and their prices, from his memorandum, and we here give it to the reader, merely remarking that a crop of clover and roots should have intervened between such a course of white crops. The field contained 6½ acres, but with the exception of the last crop of wheat, only five acres of it were in tillage. It had been a meadow, well manured, and the soil naturally fertile. The first year, the land was carefully broken up, and sowed with spring crops; these were taken off and winter wheat put in; to this crop succeeded spring grains; and these by winter wheat taken off last summer, or in 1840.

1st year,	1 acre	spring wheat,	28	bushels, sold at	$2	$56 00
	1 "	barley,	47	" "	6s.	35 25
	3 "	oats,	254	" "	4s.	127 00
2d year,	5 "	winter wheat,	125	" "	$2	250 00
3d "	5 "	oats,	100	" "	31c.	31 00
3d "	5 "	barley,	170	" "	44c.	74 80
4th "	6½ "	winter wheat,	150	" "	$1	150 00
		Bushels of grain,	874	Value when sold,		$724 05

It will be seen that the two first years were years of high prices; but at the average rates of grain, farming like this must be profitable.

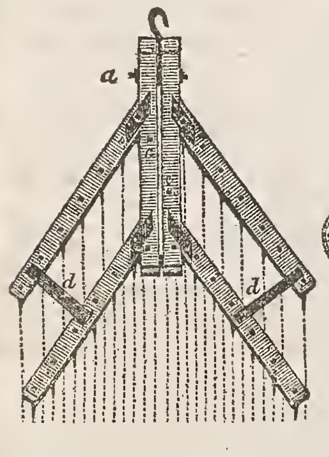
Farm Implements—The Harrow.

In the former numbers of the present volume of the Cultivator we have given descriptions and figures of several of the most approved plows and drills in use; and shall now notice some of the principles that govern the construction of the harrow, with figures of some of those implements that have been the most approved on trial. Every farmer is aware that a good harrow is one of the most effectual implements in fitting the soil for the reception of seed, by breaking up clods, disengaging roots and pulverizing the earth, which he can have at his command; and he must have lived and observed to little purpose, if he has not found that some forms of the harrow are much better adapted to accomplish these purposes than others.

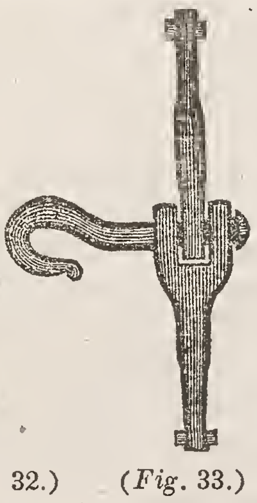
The simplest form of the harrow, and one which we have frequently seen used in new districts, is the crotch of a tree, with holes bored in the diverging parts into which wooden pins are put for teeth, and is drawn by the projecting forward part; and the first improvement is the substitution of iron for the wooden teeth. As agriculture advances, better implements are required, and make their appearance; and though it is in the best form somewhat imperfect, still its use is of the utmost consequence and cannot be dispensed with in tillage. The shape of the teeth used in the harrow is of great moment, as on these the principal efficacy of the implement is depending. They are usually made square, and tapered equally on all sides, and then driven into the frame without reference to their position, or line of draft. The best form of the tooth would seem to be one which would give a straight line to one angle of the tooth, and then to have it placed in the harrow in such a way that the straight edge or rather corner of the tooth shall come in front. If the angle of the tooth made in tapering it, is obtuse, or the tooth blunt, drawing the harrow forward has a constant tendency to lift it from the ground, and cause it rather to glide over the surface, than penetrate and pulverize the soil. There is no advantage gained by having the teeth made of a disproportionate length, as they penetrate no deeper unless additional weight is added to the frame of the harrow; and experience shows they are much more liable to be bent or broken than when of the proper length. Some harrows are made with the teeth longer than usual, and curved with the points forward, so as to break up and raise to the surface all such roots of grasses or weeds that might otherwise escape the harrow, or by re-vegetating produce injury to the crop. Implements of this kind are called *grubbers*, and are found of essential service to the farmer when used.

The disposition of the teeth in the frame of the harrow should be such that each one may operate distinctly from the other, or so that the number of impressions made on the soil will be equal to the number of teeth used, and at as nearly equal distances as possible, as seen in the dotted lines of some of the figures. The weight of the harrow should be adapted to the nature of the work to be performed, since it would be improper to use on light sandy or friable soils such implements as are required to break up and pulverize heavy clay ones; or substitute those of the latter class for the fine toothed lighter ones which are best for harrowing in grass seeds. Elm is one of the best woods for the frame of the harrow, as it is less liable to split than almost any other, and is also hard and durable. If farmers in general would put their large stones into walls, and the smaller ones into drains, instead of allowing them to remain for years on the surface as plow and harrow breakers, they would much improve the appearance of their fields, and lessen materially the annual cost of farm implements.

The first figure of the harrow we shall give, is the one of which a cut and description was formerly given us by George Geddes, Esq., of Onondaga, and which as the construction is simple, and not open to the objections that can be urged against some others, is deemed worthy the notice of the farmer. In the communication which accompanied it, Mr. Geddes says:—"It is not liable to clog, from the position of the center teeth, and if it should clog, the driver has only to lift up one side while under motion, and it immediately cleans itself; while if the patent harrow clogs in the part next to the horses, (and that is the part most likely to clog) it is necessary to stop while it is cleared. It is adapted to every kind of ground. On smooth land it moves without perceptible motion at the hinges—in rough, stony, or stumpy land, by its hinges it is fitted to circumstances. It is lighter than the common harrow with the same number of teeth, the length of the whole timbers being but twenty-eight feet, and if properly made, very strong; as the shape of it is such that it cannot catch and break."



Geddes' Harrow—(*Fig.* 32.)



(*Fig.* 33.)

a and *b* hinges, which allows it to fit into unevennesses of the surface passed over. The hinges being inserted from corner to corner of the timber, the harrow will be more portable, as one-half can be laid over on the other, while moving it from field to field.

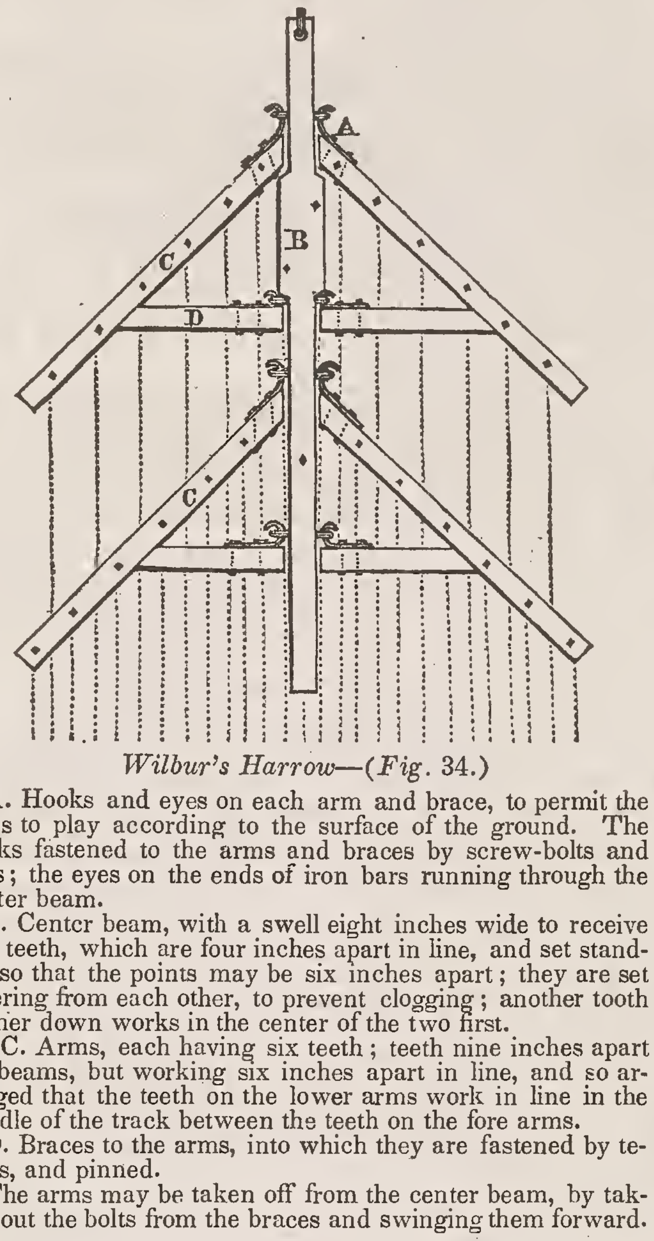
The hook by which it is drawn, is a continuation of the pivot on which the hinge turns, as shown on a larger scale, figure 33.

The teeth, *c c*, are curved, otherwise the tracks made by them will be too far apart. *d d*, two Swedes' bars, bolted on the top of the wood and fastened by screws above.

The side pieces have tenons, passing through the middle pieces, the joints being secured by iron plates above and below, riveted together. The size of the timber three by three and a half inches. The iron used for teeth, is seven-eighths of an inch square, and running within two inches of each other, the thirty teeth make a breadth of four feet ten inches, every part of which is harrowed alike fine.

Teeth passing so nigh each other as within two inches from center to center, is perhaps more than would be necessary for common use. Twenty-two teeth, so set as to run within three inches of each other, making a breadth of five feet three inches, would make a lighter harrow, and do the work as well as a square harrow with thirty teeth.

The following cut represents a harrow, invented by Edward Wilbur, Esq., of Pittsford, Monroe Co., and its advantages are thus described by him in a letter to the former proprietor of the Cultivator:—"The great advantage which I conceive my harrow possesses over others, even of the jointed kinds, consists in its working more perfectly the *whole* surface of the ground over which it passes. The arms swinging independently on each side of the center beam, enables one to descend into a hollow, while the other on the same side, is elevated by a sod, a stone, or any little eminence; whereas in other jointed harrows, both arms would be elevated to the height of the highest, and consequently leave some ground undisturbed, or at least but partially harrowed."



Wilbur's Harrow—(*Fig.* 34.)

A. Hooks and eyes on each arm and brace, to permit the arms to play according to the surface of the ground. The hooks fastened to the arms and braces by screw-bolts and nuts; the eyes on the ends of iron bars running through the center beam.

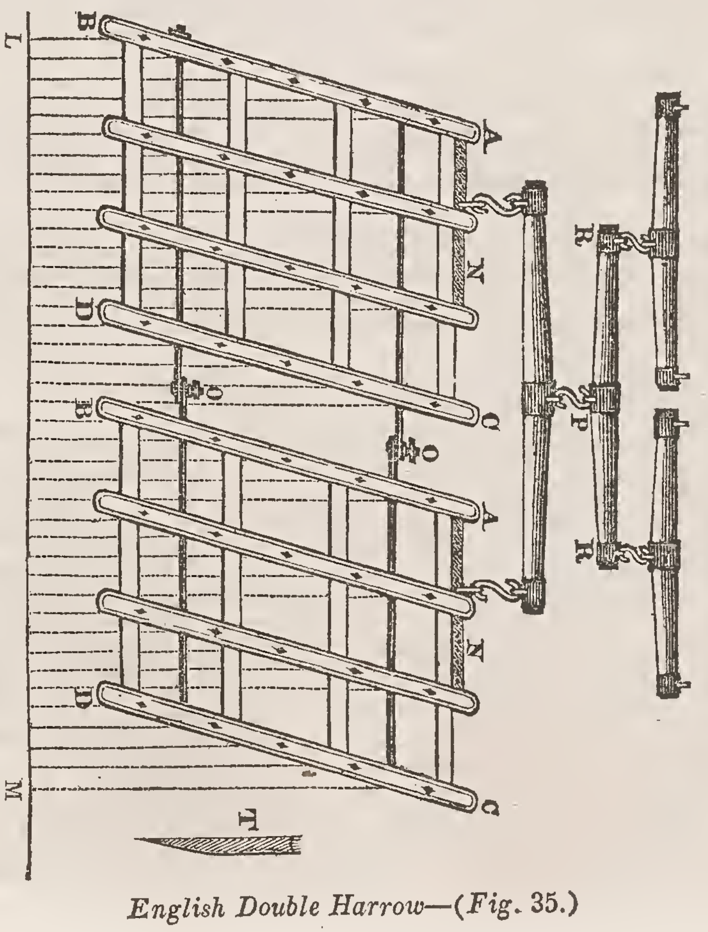
B. Center beam, with a swell eight inches wide to receive two teeth, which are four inches apart in line, and set standing so that the points may be six inches apart; they are set catering from each other, to prevent clogging; another tooth farther down works in the center of the two first.

CC. Arms, each having six teeth; teeth nine inches apart on beams, but working six inches apart in line, and so arranged that the teeth on the lower arms work in line in the middle of the track between the teeth on the fore arms.

D. Braces to the arms, into which they are fastened by tenons, and pinned.

The arms may be taken off from the center beam, by taking out the bolts from the braces and swinging them forward.

The following cut with the description, is from Prof. Low's "Elements of Practical Agriculture," and represents one of the best and most esteemed implements in use in Great Britain. It will be seen that the harrow itself does not differ materially in principle in construction from the double harrows in common use in the United States, except in the points of the shape of the teeth; the passage of the rods making the connecting joints through the whole harrow frame; the greater width of the space harrowed; and the mode of attaching the team for the draft.



English Double Harrow—(*Fig.* 35.)

"The harrows represented in fig. 35, of which the frame is of wood and the teeth of iron, are formed with a regard to these general principles. They are connected together in pairs by hinges. They consist each of four bars of wood, AB, CD, &c. which are joined together by an equal number of cross-bars of smaller dimensions, mortised through them. The larger bars may be two and a half inches in width or more, by three in depth, and the smaller two and a quarter inches in width by one in depth. The larger bars are placed oblique to the smaller bars, and to the line of the harrow's motion, and the teeth are inserted into them at equal distances from each other. This inclination is made to be such, that perpendiculars from each of the teeth falling upon a line LM, draw at right angles to the harrow's motion, shall divide the space between each bar into equal parts, so that the various teeth, when the instrument is moved forward, shall indent at equal distances the surface of the ground over which they pass.

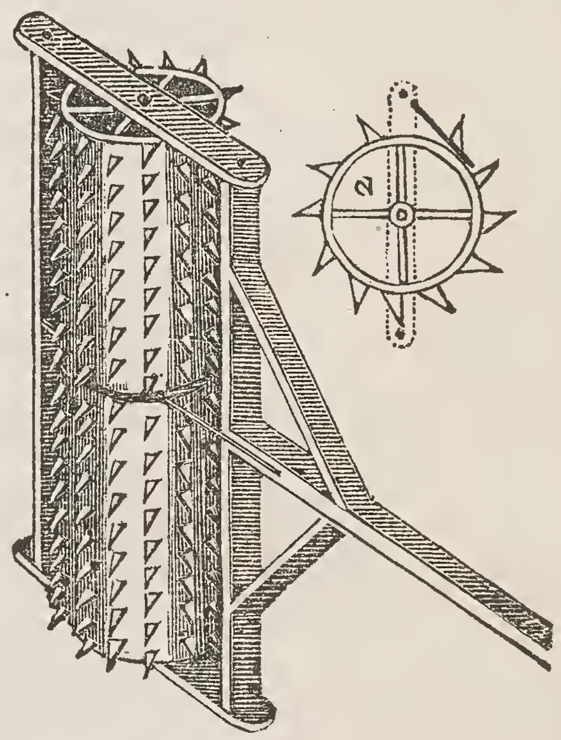
The number of teeth in each harrow is 20, five being inserted in each of the larger bars. When two harrows, therefore, are employed together, the surface of the ground from L to M is indetned by forty teeth, impressing the ground at equal distances from each other, and covering the space of about nine feet. The teeth may project below the under surface of the frame seven or eight inches, their length somewhat increasing from the hindmost to the foremost rows, where the oblique position of the line of draught tends most to elevate the harrow. The teeth are often inserted into the frame with a little inclination forward; but this deviation from the perpendicular, if made at all, should be very slight, because it renders the harrow more apt to be impeded by the weeds or other substances collected in the angle between them and the frame. The teeth are fixed in the bars by boring holes with an auger of about three-fourths of an inch in diameter, and then driving them firmly through. The teeth, when thus driven into the bars, will be retained with sufficient firmness. The best of the common kinds of wood for the larger bars, as being the least liable to split, is elm, birch or ash, and for the cross-bars ash.

The iron rods which terminate in the hinges, O, O, may pass through the framework to give it greater strength. These rods keep the harrows at the distance required, and the hinges admit of either harrow rising or falling according to the inequalities of the surface. When thus joined, the harrows are drawn by two horses guided by reins, the driver walking behind, so as to be prepared to lift up either harrow when choked by weeds, or otherwise interrupted.

The method of attaching the animals of draft will be explained by the apparatus of swing-trees, shown in the figure, by means of which each animal must exert an equal force in pulling. There are plates of iron, N, N, passing through the left-hand bars of each harrow. These plates have a few holes in them, so that the line of draft may be shifted to the right or left as may be required.

The position of P is not fixed, but must vary with the roughness of the surface over which the harrows are dragged. Hence not only must the staple P be placed somewhat to the left-hand, but there must be the power of moving it more or less towards the left-hand, according to the roughness of the surface passed over. This is effected by the iron plates, with holes, and by means of which the driver can readily shift the line of draft more or less to the left hand, as may be required."

It sometimes happens that meadows or pastures which it is inconvenient to plow for the purpose of rotation, become deficient in the more valuable grasses, or requires renewal, and for this purpose an implement called a scarifier, a kind of harrow, has been extensively used in England and the continent. This loosens the earth, and fits it for a dressing of manure, and a reseeding with better herbage. In this country an implement called "Conklin's Revolving Press Harrow," an engraving of which is given below, has been highly approved, not only on grass lands, but on tough swards or lands that require extra labor to fit them for crops.



Conklin's Revolving Press Harrow—(Fig. 36.)

Fig. 2, represents the end of one of the cylinders, showing in particular the manner in which the teeth, which are attached to the frame behind, operate in clearing the teeth of the roller.

The machine consists of two cylinders, twenty inches in diameter, and three feet long, formed of cast iron staves, which are bolted to end pieces or heads, in the center of which are boxes, similar to those of a cart-wheel, and revolves on an axle in the same manner. The teeth are of wrought or cast iron, and are inserted in the staves, and are fastened by means of keys or nuts upon the inside.

Oats require strong rich soil, good culture, and early sowing.

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

FRIABLE. When a soil is so constituted by the admixture of the original earths, and the addition of vegetable and animal matter, that it works easily; is penetrated without difficulty by the roots of plants or by the plow; which does not form clods when worked wet, or turn to dust when dry, and which is good for nearly or quite all cultivated crops, it is termed friable. Tillet of Paris instituted a great variety of experiments on the fertility and friability of soils, and the one that united these essential properties the most fully was composed as follows:

Coarse silex or pebbles,	25	Silica or sand,··········	21
Alumina or clay,······	16·5	Carbonate of lime,·····	37·5

One of the best soils analyzed by Davy, and which was noted for its friability, its good wheat, and general fitness for cropping, was constituted as below:

Carbonate of lime,·····	28	Alumina,················	29
Silica, ·················	32	Animal and veg. matter,·	11

The intervale lands of most rivers are friable; we need refer only to those of the Genesee, Mohawk, and Connecticut.

FRICTION. A very large part of the power required to move a thrashing machine, a wagon, or a plow, is expended in overcoming the passive resistance of simple friction; and the greater in any case the space on which this acts, the greater will be the force required to overcome it. A wagon, the axles of which run on rollers where the friction is reduced to its minimum, will move over a surface with much less force applied, than one where the whole surface of the axle comes in contact with the inner part of the hub, and the friction of course is at its maximum. The experiments of Mr. Pusey of the English Royal Agricultural Society, proved that in all soils, the celebrated Scotch plow which, from its structure of share and mold-board, exposes a great extent of surface to friction, was so much impeded from that cause, that a large part of the power of the team was expended in overcoming it; and that in tenacious soils at least one half of the force exerted was required to overcome the effect of this cause. It is clear then, that a light plow, with part of the weight supported on a wheel or wheels, and with the least possible surface exposed to friction, will move the easiest for the team; and in all implements and machinery, the lessening of the friction is one of the most important things to be aimed at in their construction.

FRUIT. The seed with its envelop or pericarp, is the fruit of a plant or tree. Sometimes the seed is perfect without such covering, and then it is termed naked; this is the case with corn, sage, and other seeds. The fruit of plants furnishes man with some of his most healthy and delicious food, as the apple, orange, peach, grape, &c., prove. Some fruits grow of an enormous size, of which the Valparaiso and mammoth squashes or pumpkins, are examples. As a general rule, the largest fruits are not the best, or the finest flavored. Fruits are much improved by cultivation, of which the apple is a familiar instance; all the varieties now known having originated, it is supposed, from the crab apple.

FUEL. This indispensable article is most commonly composed of either wood, peat, or coal; in this country usually the first. Wood is composed of carbon, hydrogen and oxygen; to the two last of which, combustion or flame is owing, when wood is consumed in the open air. When the oxygen and hydrogen is expelled without combustion or only a partial one, as in the coal pit, the carbon is left, and is termed charcoal. The hard woods make the best fuel, such as hickory, or sugar maple; some of the soft woods burn with great rapidity when dry, as linden or pine; while some, such as the Lombardy poplar and chestnut, can scarcely be consumed at all.

Peat is the remains of vegetables, accumulated in swamps or low grounds, during a long series of years. It is taken out, pressed to force out the moisture it contains. then dried for use. It makes a most valuable material for fuel. and though as yet little used in this country, it forms the principal fuel used in large portions of Europe.

Coal is either the charcoal made from wood, or that obtained from the earth, and called bituminous or anthracite. (See Coal.)

In a large part of the United States, fuel forms one of the most important items of expense to the householder; and is as a whole, constantly becoming of more consequence. Even in Western New-York, and parts of Ohio, where only a few years since, the great inquiry was, how shall we dispose of our wood, wood for fuel is becoming comparatively scarce. The value of these lands for cultivation when once cleared, forbids their being allowed to grow up again to wood, and the impolitic practice of most farmers in clearing much more land than they can possibly till well, has greatly aggravated the evil. Economy in the use of fuel, has then become indispensable, and the best methods of using it requires careful consideration.

In the first place then, the house must be built in such a manner and of such materials, that a small quantity of fuel only will be needed. A few hundred dollars in the construction of a house, will save perhaps, thousands in heating it, and at the same time render it far more comfortable and conducive to health. Houses built of stone or brick, if constructed so as to prevent the dampness, which unless guarded against, is apt to arise from such walls, are undoubtedly the best. The great points to be attended to, are warmth and ventilation. See that the first is secured, and the temperature can easily be regulated by the latter. Fire places are the most wasteful way of using wood, as two thirds at least of the heat generated (Count Rumford says four fifths,) is lost to all useful purpose, being employed in heating the chimney, or the air above it. Stoves, and of these there is an almost endless variety, are coming into general use, and are undoubtedly far superior in economy, neatness, and ease of domestic management to the fire place; still as generally used, much of the benefit that should be derived from them is lost. By means of a stove with proper fixtures in the basement story of a dwelling, a whole house, properly constructed, and indeed almost any one, may, by means of heated air conducted in pipes where wanted, be heated to any temperature compatible with health, and at an expense which is scarcely worth mentioning, when compared with the ordinary modes. We advise every man who builds, to look carefully at the question of fuel, and consider the best means of avoiding unnecessary consumption.

FUNGI. This name is applied to a class of plants embracing a multitude of species and varieties, some of which are of great consequence as seriously affecting other plants and substances, upon which they are parasitical. Under the name of fungi are not only mushrooms, toad-stools, &c., known, but the microscopic mold, mildew, smut, rust, and dry rot, are also included. The varieties that most interest the agriculturist, are those that affect cultivated plants and trees, such as the *Uredo* and the *Puccinia*, which are the most common kinds that infest wheat and corn, causing in some one or other of their varieties the smut and the mildew. The fungus *Ecidium*, particularly the *Ecidium berberis* has been supposed by many to affect fields of wheat injuriously, when these were so situated that the rust or sporules of the *berberis* could be blown from the tree upon the grain. The experiments made by Col. Hecox of Skaneateles, and described by him in the 7th volume of this journal, would prove that this belief is a popular error, even did not the microscope show that the two fungi which infest wheat and the barberry are entirely different plants.

Fungi are propagated by the sporules or the minute seeds which seem at times to fill the air, as every spot suitable for their growth will be found to have been seeded in a few hours. Of the immense numbers of sporules given out by some of these plants, some idea may be formed from the fact that the smoke of the puffball is nothing but millions of these light, but fertile particles. All fungi flourish the most in damp moist places and weather, when the temperature is sufficiently high to give a rapid vegetation. Wheat therefore, is always found to suffer most from mildew or fungi, when hot, damp weather occurs at the period of filling the ear, or the dews known as honey dews occur, which seem a proper nucleus for the propagation and spread of this parasite. Low lands suffer more from mildew, than high ones; and plants of a forced and rapid growth, such as those in places highly manured, or which grow in the midst of summer, are more generally attacked than others.

The *dry rot* which is so destructive to our navies, and to timber generally, is occasioned by a fungus. The thallus or spawn, is fixed in the minute pores, and spreads with the greatest rapidity, destroying the life of the wood and rendering it brittle and worthless. The fungus is of several kinds, such as *Merulius lacrymans*, *Polyporus destructor*, two highly organized fungi; and particularly the *Sporitrichum*, which has been more destructive than any other, to the immense deposites of oak collected at Sheerness, for the British navy. Many experiments have been made to test the value of various preparations in preventing dry rot, by Dutrochet and others, but though some of the poisons used, checked, none proved effectual in destroying it, or preventing its spread, with the exception of red precipitate or corrosive sublimate, which destroyed the vitality of the plants or the sporules entirely. On this result has been founded the process patented by Mr. Kyan, of impregnating timber with a solution of corrosive sublimate, termed the Kyanizing of wood.

The disease called La Muscadina in silk worms, is an instance of animal dry rot, or death caused by the growth of a fungus. This plant, the *Botrytus Bossiana*, perfects its thallus or sporules in the body of the worm, filling every part with such a mass that they are easily broken, and the skin bursts, showing the efflorescence of the fungi. If healthy worms are covered with this thallus, they sicken and die, and if a needle dipped in the substance be inserted in the body of a well insect, it catches the disease at once. The fungus called *Sphaeria militara*, attacks wasps and bees in the West Indies, and causes their death in a short time; and such are by no means solitary instances of such insect parasites.

FURROW SLICE. This is the name given to that part of the soil which is either wholly or partially inverted in the process of plowing. The position in which the furrow slice should be left, is one of the most contested points of modern agriculture; some farmers contending it should be laid flat, and others that it should be left in an angle of inclination of nearly 45 degrees. It is probable that the advocates of both systems are partly right and partly wrong. Where a soil is very light and porous, compactness in the surface is to be aimed at, and a furrow slice laid flat, will admit of compression by rolling. On the contrary where the subsoil is retentive, and the aim in plowing is to render the soil light and friable, leaving the furrow slice in a lapped and consequently inclined position, leaves space for the roots of cultivated plants to expand more freely, and the water to drain off more readily. In the latter case, a furrow slice of 9 inches in width should be about 6 inches thick; while where the slice is to be laid flat, the width in proportion to the thickness must be much greater, or twice or three times its thickness. The furrow slice of an English plow is rarely more than from 8 to 10 inches, while that of an American one is usually from 10 to 14. Generally speaking, the narrower the furrow slice, the more complete the pulverization of the soil, and consequently this necessary point must be determined by the condition of the land to be plowed.

GALVANISM. This is one of the forms under which electricity is made to develop itself, and in which it performs many important operations in nature. When electricity is produced in such a manner that it passes from one body to another in sparks or masses, as in the common electrical machines, or from the clouds to the earth in lightning, it is called simple electricity; when the wires or conductors of an electric battery are in contact, the current passing produces effects said to belong to electro-magnetism; but when the wires or conductors are separated by some interposed substance which forms an imperfect conductor, the physical changes which the interposed substance undergoes, constitutes the phenomena of galvanism. It is owing to electricity in this latter form, that the principal changes in matter appear to be owing. By means of his simple electro-chemical apparatus, by which a current for months or years may be kept up, Mr. Crosse, one of the most successful experimenters of the age, has produced carbonate of lime, arragonite, quartz, protoxide of copper, arseniate of copper, and its blue and green carbonates; phosphate of copper, chalcedony, carbonate of lead, &c. &c., circumstances which render it probable that all the minerals, veins of metallic ores, and the processes of crystalization and accumulation of matter, including the growth of vegetables is the result of galvanic or electric action. It is thus rendered nearly certain that manures act by the salts they contain, acting when brought in contact with the earths in producing galvanic currents, and thus giving vitality, or the power of absorption, nutrition and growth, qualities possessed by all plants. As there is still some doubt as to the origin of the animalculæ produced by Mr. Crosse in some of his various experiments, we shall pass them by with the remark, that the curious on the subject may find a full account of the matter in the late volumes of Silliman's Journal.

GANGRENE. Plants are liable to be attacked by a disease which from its producing on them the results of gangrene on animals is called by the same name. It is a species of mortification and rapid decay, which, unless arrested at once, destroys the plant. It sometimes appears on the branches or the trunk of trees, and steadily advances until it is carefully cut out, or the tree dies. In plants, the part attacked dies, and the remainder continues sound, though at times the whole becomes eventually involved. Thorough excision is the only remedy for this disease, which from the difference of appearance it assumes, is called the *wet* and the *dry* gangrene.

The Plow.

The opinion expressed by us in the first number of the present volume as to the cause of the heavy draft of the English plow, beautiful as is their form and construction, has received further confirmation from an experiment made on one of these plows near Nashville, Tenn. We copy from the Agriculturist: "Mr. Collins had the pleasure of witnessing one of the splendid agricultural exhibitions of the "mother country," and was particularly interested with the trial of plows, so much so that he had one made entirely of iron, after the model of the instrument that took the first prize, and with the supposition that it would be of great service to the farmers of this country, he put it in our possession for a trial. Two strong horses were hitched to it, but in a few rounds in a stubble field, the draft was found so great, that the horses had to be stopped. This extra power is the first objection to the plow. *The bottom of the implement is about four feet in length, and drags remarkably heavy.* The share does not cut a sufficiency for the mold board, and from the pressure of the 'heel' and mold board at the same time, the draft is too much for a common team. * * * * This *great sled wedge* of a plow, may do better in the tough clays of England than in this country, but nothing short of the English draft horses would be able to pull it."

If our readers will take the trouble to look at the experiments made by Mr. Pusey, and described in our first number, they will see that the same bad effect, resulting from its heavy draft, was as sensibly felt there as here, while using the improved Scotch iron plow, the same brought out by Mr. Collins. We are glad to see this important point, the increase of draft from friction, attracting the attention of the public, as we are confident the result will be the production of implements of lighter draft, and equally good work, with the best plows now in use.

Remedy for Kicking Cows.—A bed cord drawn tightly over the loins of cows, in front of the udder, will cause them to give down their milk, and also prevent their kicking. J. G.

Original Communications.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

Improvement of Lands—Yards for Animals.

Messrs. Gaylord & Tucker—Having redeemed a portion of my farm from absolute sterility, and the remainder from a state of nature, and believing that a detail of my progress may not be uninteresting, I send the same for publication. When I purchased and took possession of this tract, which was in the spring of 1823, it contained 350 acres; of which 175 were creek and branch bottoms, 80 were uninclosed galled old fields, and 95 woods. The creek bottoms, amounting to 153 acres, were all that were fenced, and all that were believed to be worth fencing; and these had been continually cropped with corn, rye, wheat, and oats, for about 80 years, so that they were completely exhausted; many spots being bare of vegetation through the year. The produce on the better portions was about fifteen bushels of corn to the acre, and of small grain about one-third of this. About half of those bottoms were stony and sandy; the balance clay, mostly white and unctuous; only one short ditch on the premises, consequently several brushy swamps; and nearly the whole surcharged with persimmon bushes and poverty briers. I wish it distinctly understood that there is neither fiction nor exaggeration in the above explication; and to add still further to the gloomy prospect, I will state a few more facts; the bottoms were liable to damage by inundation; there had never been a particle of grass seed sown on the premises, and the houses of every description were in a complete state of dilapidation. It will now be asked what could have induced me to purchase such an outcast property? To which I reply, that on examination I found the hills were a healthy clay, and that the bottoms were susceptible of a high degree of improvement, by ditches, manures, and irrigation. My first effort at improvement was to cut a canal nearly a mile long, for the purpose of casting water, and with it mountain mold and mud, on my bottoms; and this effort was crowned with success, for in one year a plot of twenty acres was made sufficiently rich to produce a heavy crop of tobacco. The canal enters near the head of my lands, and at the distance of half a mile a fall of 26 feet was obtained, where I erected a saw and grist mill; from which mills the water either passes off by a tail canal again to the creek, or continues around the hill as required. Thus I have two fields of about 40 acres each, which are irrigated when not under tillage, but this is not oftener than one year in four.

My next effort was to ditch my bottoms for the purpose of draining off superfluous water, which is very nearly completed.

I now turned my hands to picking up stones, nearly every one of which have been piled, and about one-half removed when and where wanting.

In the mean time I was not inattentive to the accumulation and spreading of my small stock of manures; but more of this presently.

My old fields were now fenced, and the gullies stopped, and galls cured. Finally, houses built, and lands purchased and cleared; so that my tract now contains 1500 acres, about 700 of which are enclosed, and about 500 under a course of tillage.

I will now speak of my manures and manner of estimate. When I speak of a load let it be understood as one for a yoke of oxen. When a horse-cart is used, two loads are put together and counted as one; each load from the yards of animals is counted as one; a load of straw or damaged hay one; saw dust and chips one; scrapings about houses one; compost mold and leaves one; compost ashes and leaves one; raw mold two for one; ashes five bushels for one; green vegetables, plowed down, estimated according to burthen; trees and shrubbery cut down to rot, according to burthen and length of lying; drift cannot with any degree of accuracy be counted, nor are the felling of trees or the drift included in the underwritten table. My memorandum of manurings previous to the year 1829, has been lost, consequently I cannot give an official detail, but when it is remembered that I had no meadow, that my land was very poor, and when I further state that I found no manure on the premises, and that my animals were fed for the winter at my former residence, consequently I had no manuring for two years, it must be admitted that I had a most discouraging start.

Year 1829,	Loads	353	Year 1835,	Loads	908
" 1830,	"	142	" 1836,	"	891
" 1831,	"	258	" 1837,	"	4110
" 1832,	"	610	" 1838,	"	626
" 1833,	"	407	" 1839,	"	660
" 1834,	"	638	" 1840,	"	2400

Although I have for several years past been in the custom of plowing down small portions of green crops for improvement, yet on examination I find that no estimate is made on this account, previous to 1840; and as a sample of my operations in general, I give the memorandum verbatim for the above mentioned year. I count the year's manuring from July, 1839, till July, 1840. Turned down 20 acres oats, equal to 300 loads; moved from cattle yards 508; from horse yard 177; from hog yards 226; compost leaves and ashes 14; compost tobacco trash and ashes 20; compost ashes and salt about 610 bushels, equal to 122 loads; scrapings about houses and saw-dust 76; straw, damaged hay, out fee lings, &c. &c. to make up the balance. In addition to the above I have accumulated some tens of thousands of loads of mold on my bottoms, and cut down the timber to lie till decayed on about 250 acres of land, that is, since commencement.

This year my manurings will amount to about 2800 loads; to move which, my carts have been in motion and will be continued at every opportunity till about the middle of April. Let it be understood, nevertheless, that the actual carriage will not be this amount, but about 2200 loads.

My bottoms will now produce from 40 to 120 bushels of corn to the acre, my hills from 20 to 40 bushels, and both yield small grain and grass in proportion.

My horse yard is littered with leaves from the woods. My cattle yards are bottomed with mold from ditches, which ditches are expressly appropriated to this purpose; then corn stalks, tops, husks and cobs, straw of small grain, and hay.

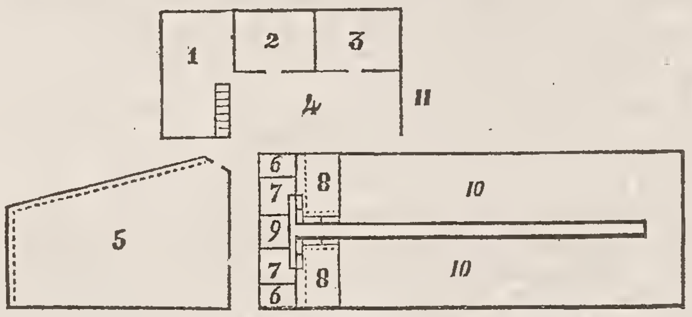
My hog yards are littered with leaves, corn stalks, rotton wood, green weeds and grass, and at intervals with small portions of damaged straw or hay.

My sheep have heretofore been fed at large, but the ewes and lambs are now cotted, from which source, however, I expect but little manure, as the yard is not littered, except with the offal of their feedings.

I shall now be enabled to manure annually about 30 acres of my best bottoms for corn, which with the aid of two or three drafts of creek water, applied to the growing crop, will ensure me a sufficiency of this grain: besides giving an annual dressing to my hog garden, also to portions of my meadows, and sections of high grounds.

My stable and horse yard, cow yards, hog yards, and sheep cot and yard, are all contiguous. They are located near the center of the farm, the two first mentioned having pure spring water already piped therein, and the two last intended to be shortly supplied.

Believing that the economical arrangement of those domicils and yards are at least equal to any thing I have seen in your Cultivator or elsewhere, I send a drawing for publication.



Cattle Yards, Pens, &c.—(Fig. 37.)

No. 1 is my stable and horse yard—2, 3 and 4, are cattle yards—5 is the sheep cot and yard—6 and 6 are apartments for boars—7 and 7 for sows and pigs—8 and 8 for hogs—9 is the vegetable house—10 and 10 the hog garden. The openings are gates and drawers; the close parallel lines are passages and troughs, the dotted lines represent shelters; there should be shelters also over the pens 6 and 7; and between the sheep yard and piggery a passage of 10 feet to a bottom field—11 meadow below yards.

The piggery is not yet complete, but will in a few days receive its tenants, who when incarcerated are intended to labor for their living, by compounding manures. The hogs in one yard will be slaughtered about the middle of November, and in the other about the last of February; at which times the yards will be cleared of manure, and retenanted with pigs.

When required, the water from the mills now passes immediately above the sheep yard, thence on to the hog garden or meadow. The drainings from the larger cattle yard number four, also issues on to the meadow from the point marked 11; at which point I am now constructing a large wooden cistern for the purpose of retaining the urine when desired. The cistern will have a plank partition near the bottom of which many large auger holes will be bored, so that by this means a communication may be had. Into the upper apartment I intend to cast every animal which may die on and about the premises, adding a sufficiency of ashes and lime to produce a soapy matter, all of which can be flashed on to the meadow, by letting in the creek water; or carted off when required. The upper apartment being elevated somewhat above the lower, the water will not flow from the surface, but pass through the auger holes, and thus the valuable contents of the pool will be stirred up and move off in order.

My laborers amount to only eight. My cows (cattle) from 30 to 60 head, my sheep from 200 to 400, my hogs from 60 to 120, but when my permanent piggery goes into operation, it is intended to keep a uniform number, of about 132. My cattle are three-quarter and half Durhams and scrubs; my sheep are Lincolns, Bakewells, crosses and scrubs; my hogs are Berkshire, Bedford, Mackey, Barnitz and crosses. My grasses are herds, (red top) orchard, green sward, and white clover, which are all indigenous; also red clover. My cattle and sheep are mostly grazed about ten miles from my residence, on the big mountains, and brought home to winter; and thus my improvement is enhanced.

My operations are on a small scale when compared to many southern farmers and planters, but I believe but few of them go ahead of me when counting by the acre: indeed I begin to think that I may make a good farmer yet 'ere I die. But there is one great stumbling block in my way, I am a grower of tobacco; and this year intend to cultivate the weed on about 22 acres, which is more than usual for me. This crop I only cultivate on new lands, and there only because it prepares ground better for the grass seed which are intended to be sown.

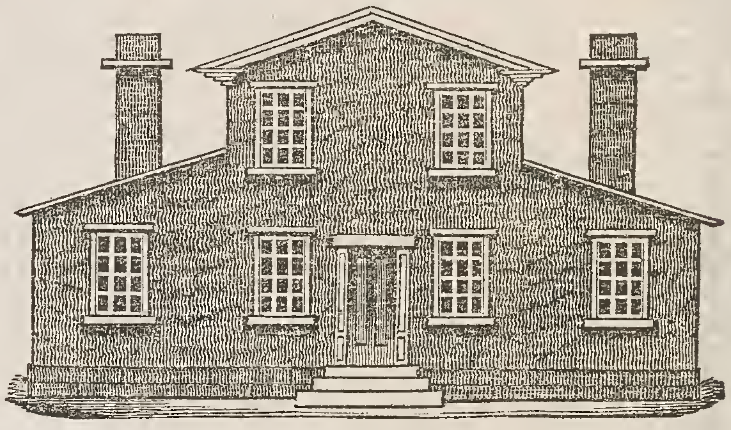
Messrs. Editors, I am tired and I am satisfied so are you, consequently I will close, with this one request—please send a few Yankee farmers amongst us, that we may learn economy. Z. DRUMMOND.

Amherst Co. Va. Feb. 2, 1841.

P. S. Continued rains having caused water to rise in the excavation for the cistern above mentioned, I have abandoned the determination of planking it the present year, and am now casting in leaves and damaged straw and hay, which is saturated with urine from the yard. Dead animals will also be cast in. The size of the cistern is 13 by 21 feet and when completed the depth will be 7 feet. Z. D.

February 10.

The Farmers' Cottage House.



Elevation and Front View—(Fig. 38.)

A house in good taste and convenient, may be said to constitute the chief pride of many farmers, and indeed many persons in the highest circles of society. Illiberal persons are, however, prone to decry all those constructions which do not ordinarily enter within their own peculiar views, taste, and means.

Modern buildings generally are more commodious and beautiful than those castles of former times. We do not hear so many execrations uttered against those dwellings which vary from the old mode; where ornament, order, compactness, and good taste are displayed.

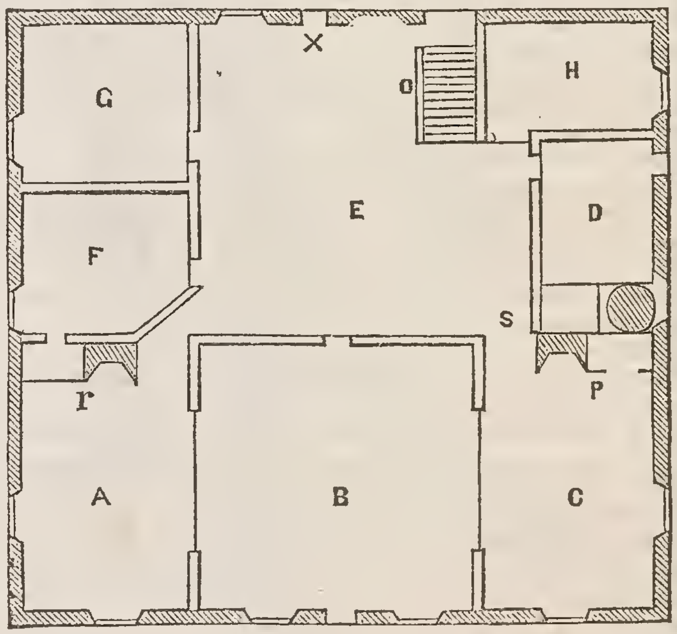
Therefore, if true, that the community are growing more liberal, they will pardon me if the following plan of a farmer's cottage house, should not accord with all their system of building.

As for size, compactness, and cost, this plan is adapted to the medium class of farmers, which constitute the greatest portion of your subscribers.

Fig. No. 38, displays the elevation and front view, looking towards the east; the gable ends and the sides, may be either stone or brick to the first roof; in the representation it is stone, with the chimneys of the same material. If the builder is disposed to make flat roofs, and cover them with tin, and set thereon a ballustrade, it would have a grand appearance.

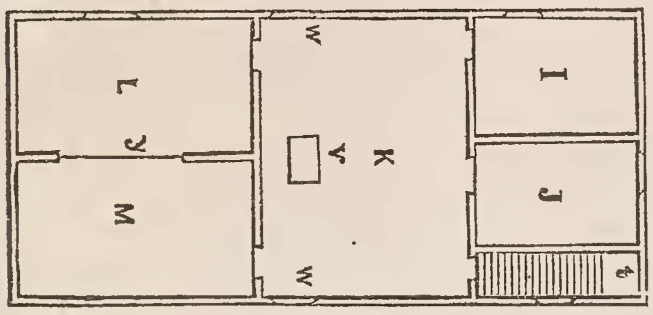
The ground floor should be two feet above the surface earth, and sixteen and a half feet from this floor to the main roof, and from said floor to the eaves of the wings eight and a half feet.

Fig. No. 39, gives the dimensions and divisions of the ground plan 36 by 37½ feet within the walls. The main building 16 by 36, and the wings 10¼ feet by 36.



Ground Plan—(Fig. 39.)

Explanations.—A. represents the dining-room, 10¾ by 17 feet, with folding doors between this and the parlor B. which is 16 by 17—C. library and sitting-room, 10¾ by 17, with a cupboard at the right hand of the fire place *p.* and folding doors between this and B. so that the three rooms may be opened into one when wanted—D. wash-room and arch, with an outside door for convenience, and to ventilate the kitchen E. in warm weather, which is 19 by 16, including the stairway *o.* for cellar and chambers, and not including 3 feet space added by the side of the wash-room and oven *s.* with glass lights over the parlor and wash-room doors, provided a wood shed should hide one of the windows near the back door *x*. to be accommodated by a cook stove—F. and G. bed-rooms, to use a stove if necessary, with a clothes-press at the left of the fire-place *r*.



Chambers—(Fig. 40.)

Fig. No. 40, represents the manner in which I would divide the apartments of the second story—K. common chamber 12 by 16 feet, with a stairway at *t*. and warmed by a box-stove *v*. the pipe of which will go through the wall at *w*. between roof and ceiling, and enter the chimney, which should be well secured by a double pipe laid in before the house is ceiled—I. J. bed-rooms, or J. might be made smaller and used as a clothes-room—L. M. parlor chambers, 14 by 16, with four windows to make it cool and pleasant, or close the folding doors *y*. and divide it into two bed-rooms when wanted; the side windows in the chambers are not full size.

A house of the above description would cost from eight to twelve hundred dollars, depending on the country where it is to be erected, and the manner of finish.

In the art of building there are three important items to be considered, viz: convenience, firmness, and delight. To accomplish these ends we must have due regard for the *situation* and the *work*. As to the situation either that of the whole is to be considered or that of its parts. In the first, regard must be had to the quality, temperature and salubrity of the air; to the quality of the soil, to the conveniency of water, fuel, &c., and to the agreeableness of the prospect. As to the situation of the parts, the chief rooms, studies, libraries, should be towards the east; those offices which require a cool fresh air, as cellars, pantries, granaries, to the north; those which require heat, as kitchens, wash-rooms to the south.

In the above plan I have situated the front to the east, but as to this matter in building regard must still be had to the country, roads, &c., each being obliged to provide against its own inconveniencies.

Yours, SOLOMON W. JEWETT.
Weybridge, Vt. Jan. 16, 1841.

Zea Maize or Indian Corn.

MESSRS. GAYLORD & TUCKER—Agreeably to the request contained in the Cultivator for February, (p. 28,) the subscriber forwards to the editors four ears of *white flint corn*, as samples of his crop of 1840. This variety is generally raised and appears to be best adapted to the soil and climate of Richmond county, which is the smallest in the state, being an island situated under the lee of New-Jersey, between 40 and 41 degrees of north latitude. It is better and more generally known, by its insular name of Staten Island, and is rich in the production of wheat, rye, barley, oats, Indian corn, &c.; but its agriculture has been neglected, because being surrounded by the water of the ocean, many of its inhabitants procure a living in taking fish, clams, and oysters, which abound in their season upon its shores.

The samples of corn forwarded to you, are from a crop of ten acres, the ears of which are all of a large size, and well filled, many of the stalks having borne two and three ears. Most of the ears contain eight rows, but there are found among them some of ten and twelve rows. The seed was planted between the 12th and 16th of May, 1840, and cut at the bottom and stouted between the 22d and 25th of September following, its period of growth being a little over four months. The grain is white, hard and flinty, keeps well, and makes good Indian meal; and the shelled corn brings the highest market price in the city of New-York.

The seed from which the crop was raised, was selected from the best ears of my crop of 1839, and from those stalks which contained two good ears. The corn was planted on a grass sward overrun with johnswort and daisies, and turned over in April. It was manured in the hill, with a mixture of horse dung from the city of New-York, and my own coarse barn-yard manure. No extra pains were taken with the crop, which was a fair average one, producing 1025 bushels of ears, equal to 512½ bushels of shelled corn, or 51 bushels per acre; besides a large quantity of pumpkins. Your neighbor Mr. C. N. BEMENT, saw and admired the crop, when nearly ripe. With the horse manure from New-York, was introduced a great quantity of foul seeds with which the corn and an adjoining patch of potatoes were overrun. They were mostly extirpated from the corn field, but the potatoes suffered for want of help to weed and hoe them, and from the pressure of other work.

The above contains the amount actually gathered; but the crop would have probably yielded fifty-two bushels to the acre, had not a dozen neat cattle broken through my neighbor's part of the line fence between us, and luxuriated all night, eating, trampling down, and destroying many of the stouts. One corner of the field was also reserved and eaten green, and not taken into the account. Considering this as an excellent variety of corn, I shall reserve a number of barrels in the ear, and deposite them with Mr. SAMUEL BROWN, No. 4, Liberty-street, New-York, to supply my friends and those who may wish to cultivate it.

The farm I occupy lies on the south side of Staten Island, facing the ocean. It was formerly owned and occupied by Judge GARRETSON deceased, and after his death had become considerably dilapidated, and overrun by johnswort, daisies, and elder bushes when purchased by me in the spring of 1839. Considerable efforts have been made to bring it into better cultivation, and I hope to be able to communicate something to your valuable periodical as my experience increases. There are twenty or more acres of woodland upon it, but the best timber had been cut off before my purchase. The wood lots, however, are springing up abundantly with young hickory and *white oaks*, and hence I have given it the name of OAKLAND FARM.

My neighbor, W. A. SEELY, is showing how the farmers on the south side of Staten Island may supply themselves with a superabundance of manure by a proper use of peat, sea weed, fish, and their ordinary supplies of litter without the necessity of buying it.

Respectfully yours, SAMUEL AKERLY.
Oakland Farm, Southfield, Richmond co. March 3, 1841.

Feeding of Silk Worms.

MESSRS. GAYLORD & TUCKER—Inquiries from "B. G." were made in a recent number of the Cultivator, "whether silk worms partly reared on the white mulberry, may be fed with safety on the large leaf Canton, or multicaulis; and also, whether they may be fed with these kinds together or alternately with advantage; and if not, what is the best method to be pursued where these different kinds are to be used?"

The following information I received in a communication from an experimenter, who has been doing something by the way of growing silk and feeding the silk worms from the leaf of several varieties of the mulberry, which I consider good authority, and I have taken the liberty to forward the correspondence to you for publication. S. W. JEWETT.

LETTER TO S. W. JEWETT.

DEAR SIR—Your inquiries whether the silk worm can be fed on the common varieties of mulberry during two or three of the first moultings and then carried through on the Canton or multicaulis, I should give it as my opinion that it might be done with perfect safety. I see no reason why a change of feed from one to another, on any good varieties of mulberry leaf, should affect the health of the worm, and the quality of the silk, therefore, would only vary according to the proportion of leaves of the better or poorer qualities that are fed to the worms. I have supposed that it would be altogether the most profitable way, and almost the only practicable one, to feed the worms on the other varieties through about two-thirds of the age of the worm, and then feed on the multicaulis.

The reasons for this are the following: *First*, If you wait for the multicaulis to get a sufficient growth, so as not to injure them by picking the leaves in the higher latitudes of our country, say Maine, New-Hampshire, Vermont, and the northern part of New-York, unless you start them early in the hot bed, it will be too late before the worm will wind its cocoon if you depend wholly on that variety. But *Second*, if you have indigenous and other varieties to feed upon the three first weeks, when the labor of picking is comparatively little, the multicaulis will increase its foliage during that time, more than all the season before, having taken deep root, and if stripped entirely, and even cropped as early as the first week in, or middle of September, it will facilitate the hardening of the wood.

The six weeks worms should be hatched out the last week in July, and fed on the Alpine or some other variety of mulberry. The white will answer till about the twentieth of August, and then the worms are old enough to eat the bottom leaves of the multicaulis, which may be picked first and thus the trees stripped to the very top.

For the purposes above, one may extend his plantation of permanent trees, of the Alpine American seedling, Broosa, Canton, Asiatic, and other varieties that will stand our winters, to any extent he pleases, and rear from them a crop that may be hatched out as soon as there is foliage in the spring. The same trees would not be materially injured to be picked again the last of July and first of August, sufficiently to carry the crop of worms designated for the multicaulis half through their growth. Indeed, it is not quite certain but that for this northern climate these varieties are most profitable, as they remain rooted in the ground, and ready to sprout up in the spring early, and afford more foliage in our short seasons than can be obtained from the multicaulis. They are not quite so easily propagated by cuttings as the last mentioned variety; indeed they cannot be propagated profitably by cuttings. By planting the tree, root and all, horizontally, they will increase as fast as the multicaulis planted in the same manner, which, on the whole, one season with another, the best way. But a still better way of propagating them is to bend down the sprouts of one years growth, still attached to the old root, and fasten it horizontally by a hook and cover it with fine dirt and it will send up a large number of sprouts, which, first supported by the old root, till they take root themselves, after two or three hoeings, and supported by the double root will grow most rapidly and afford an abundant foliage. The last season my Alpine sprouts grew six and some more than seven feet, yielding leaves of a fine velvet surface eight inches long and six wide, and more numerous on the stalk than the multicaulis. The Alpine will grow till frost comes, and of course the tender parts will kill down in winter; but so far as it becomes lignified, or wooded, it will stand the northern winter.

There is still another variety, that comes from multicaulis seed, called by some the American seedling, that grows very rapidly, is much earlier in the spring than the Italian white, hardens, and nearly stops growing before the early frosts, and therefore kills down but little if any in winter. The leaves of these are not of as fine a texture nor as large as the Alpine, but very thick on the stalk, and much larger than the white mulberry.

With a plantation of standard trees of the Alpine, Broosa, and other varieties, to say nothing of the multicaulis, I fully believe that children from the age of eight to twelve, with the aid of some one to superintend the feeding, and that may be an aged person who could do but little else, with the leaves near, could pick enough out of school hours to yearly support themselves and go to school all the time; and then on to the age of twenty, with facilities for reeling and manufacturing of sewing silk, &c. the other seasons of the year, might be more profitably employed than in any other business while attending school. With a plantation convenient, and sufficiently extensive, it is my opinion that sons and daughters might fully support themselves through their preparatory studies from ten to twenty, and through the high school and college. I view it as the most feasible manual labor system that can be connected with our seminaries of learning. DANA LAMB.
Bridport, Vt. Feb. 16, 1841.

"American Society of Agriculture."

MESSRS. GAYLORD & TUCKER—The February number of the Cultivator is before me, and I have read your reasons for "declining to assume the responsibility which your friends had assigned you, at least, for the present."

I am willing, and do freely acknowledge, that your means of information are such as to enable you to come to a more calm conclusion upon the subject than I can, and perhaps your reasons are cogent, though I hope not conclusive, to all the friends of a National Society. I cannot regret the conclusion that you have come to, for it is the very one to cause the matter to be discussed; and the case is of that importance, that it should not be acted upon rashly. I am ready to admit, "that a failure would be a serious calamity;" but I am not ready to admit, or even believe that there are so few "men of public spirit, friends to agriculture, and alive to the interest, prosperity, and honor of the country," as you seem to fear. I believe that there are at this time "*enough* of such men to be found," who, notwithstanding they are "wide-spread," from "Maine to Georgia," would lend sufficient energies "to render such an enterprise certain of success."

I am happy to see you admit the utility of such a society—in fact, I don't know that that is denied or doubted by any one—the only point at issue, then, is, as to the proper time to commence the organization. This, then, is the sole question for the friends of the cause to answer: *Shall the organization of a National American Society of Agriculture, be undertaken in the year* 1841?

Readers, correspondents, friends of the project, one and all, speak, yea or nay. If the answer be in the affirmative, I will show you ways and means to "set the ball in motion." The thing *can*, if you say it MUST, it SHALL be done. But remember that the worthy editors of this paper are doubtful of the feasibility of the undertaking, and their opinion is entitled to consideration; but if we conclude to "soberly rely upon ourselves, and our own resources," and are likely to succeed, they will come to our aid with the power of Hercules; and so will the editor of every agricultural journal in the Union—so will every legislator, for the project will be "popular." No doubt your correspondent speaks truly when he says, "if we are to have a National, or American Society of Agriculture, it must be got up by farmers themselves." Shall we, the present generation, have it—shall the ardent and devoted friends of a cause that seeks "*to elevate the character and standing of the cultivators of the American soil*," have an opportunity of meeting one another, upon a spot so consecrated as that will be, where such an union of hands and hearts would take place. How ardently do I long to see such a meeting of such men as will compose such a society. Such a meeting will, sooner or later, take place, for it is the nature, disposition and education of the people of this country, to assemble together to discuss important questions. Is any question now before the people, so important as improvement in agriculture? Does not the wonderful extension of the number and circulation of agricultural journals, show that the public mind is deeply agitated upon the subject.

And now friend GARNETT, what say you? What says old Virginia? What says old Kentuck, through friend STEVENSON, of the Kentucky Farmer? And upon "sober second thought," what say Messrs. GAYLORD & TUCKER? If monthly "agricultural soiries" are so pleasant and useful, how much more so would be a grand *National Concert*.

And with anxious hopes to live to be one of the performers at that "concert," I remain an unwavering friend to speedy action, and yours, with respect and esteem,

SOLON ROBINSON.
Lake C. H. Ia. Feb. 18, 1841.

Tagging and Washing of Sheep.

Messrs. Editors—As the time is approximating when the wool grower may expect remunerating prices, I think that a few hints, founded on my own experience, in reference to the preparatory steps to shearing of sheep, will be acceptable to some of your readers. It cannot be denied that the neglect to attend to these matters, as interest and common honesty require, has subjected the American wool growers to much deserved censure from the manufacturer; and I will prove by an unquestionable witness, before I close, that we are more slovenly in the preparation of our wool for market, than any other people who have any pretensions to civilization, on the face of the globe. But I will forbear to censure, although I feel quite certain that no subjects could be selected, which would furnish so much ammunition for the discharge of broadsides.

The great majority of farmers do not tag their sheep at all; at least do nothing more than merely cut off the distinct locks, and largest lumps of excrement. This is performed sometimes at the period of washing, but more frequently neglected until shearing. Those who manage in this way, if they have a surplus of wool beyond family consumption, subject themselves to much censure; for the reason, the manufacturer expects of the wool grower that a portion of the wool about the dock and flanks should be separated from the fleece, which, with the ordinary wooled sheep, is little better than dog's hair; and therefore gross deception follows if it is not done. In consequence of the great neglect of this, arises very many of the actual frauds upon the manufacturer, by concealing all this trash, with the dirt adhering to it, inside of the fleece, and then carefully wrapping an extra quantity of twine about it, in order to prevent detection, as well as to increase its weight.

But aside from all this, there is an absolute gain to the farmer by tagging his sheep well, if done at the right time, which, in all cases, should be before the foddering season expires; because, if neglected until after that period, the sheep feeding on young grass, will occasion many to scour; and if so, the wool about the flank is rendered one complete mass of filth, and of course, is a total loss; whereas, if done at the time mentioned, it will be taken off comparatively clean, and can be used in many ways for family purposes.

The period I have chosen for tagging of sheep, is from the 1st to the 10th of April. As early as this, is very necessary for other reasons than those already cited. The ewes are generally, with all fine wooled flocks at this time, heavy with lamb; and I remark, they should be carefully, nay tenderly handled; who does otherwise, has not the humanity of a savage. The easiest mode, and that which I have adopted for many years, is to place the sheep upon a bench, resting on its rump. The bench should not be more than two feet in height, and a stool should stand beside it on the floor, for the tagger to rest one foot upon; this brings his thigh in such a position as to rest the back of the sheep on it, and throws the animal in a position of about 45 deg. After this, if it be a male, the first operation is, to cut the wool immediately about his *water works*, because, if not done, the wool being constantly saturated with urine, will cause soreness and sometimes ulceration; sheep have sometimes died from this cause. If it be a ewe, the first thing to be done, is to cut the wool growing around the bag, and particularly all that upon it; if this is attended to, the lamb in its first attempt to suck, has no difficulty in finding the teats. Then cut the wool from the inside of the hind legs, and that below the *fundamental parts*; after this, the legs are held towards the tagger, which enables him to cut all that is necessary from the flanks and dock. Inasmuch as with the finer grades of sheep the wool is short, great pains is required to cut very close; if this is done, there will be less waste in manufacturing, and no necessity for going over the same parts again at the time of shearing. As it is impossible for the wool to be perfectly dry at this time, it is my practice to spread it thinly over the floor of the wool loft, and every few days stir it with a fork.

It is difficult to say how much tag wool, in good faith to the manufacturer, and in accordance with strict honesty, should be taken off. From about 1,900 sheep, I obtain generally about 500 pounds; all the most filthy locks are of course excluded. I have had for a series of years, this description of wool manufactured; sometimes on shares, and again paying so much per yard for manufacturing. I have readily sold it to my work hands, paid mechanics bills, and exchanged with merchants for other goods. Having worn the article, I can testify to its being equal in strength to any purchased from the stores; but the great majority of farmers have yet to learn that it is a matter of economy as well as interest, to tag their sheep well, and use the wool for family purposes.

Having said all that I deem necessary on this branch of my subject, I proceed to the other, namely, *washing of sheep*; and I implore the spirit of equanimity and complacency of Mr. Pickwick, to preside over my nerves, while dwelling upon it. But on reflection, with a view to avoid all temptation to any explosion of indignation, I will not detail the scandalous, nay more, fraudulent manner, which usually attends this operation, with the great majority of farmers, and proceed at once to lay before your readers my own mode, and the evidence, that *honesty* and *interest*, in this matter, are more nearly connected than is generally supposed.

At the eastward, it is common with many of the wool growers to make use of vats for washing their sheep. This mode I have adopted. The size of mine is ten feet in length, six feet in breadth, and about four in depth. It is made of two inch pine plank, well secured at each end by gripes, which are of oak timber. About the sides are temporary platforms for the washers to stand upon when washing, and the water is conducted into it by means of board troughs; the fall from which is about 2 feet. Having two troughs or spouts, the washing of two sheep can be carried on at the same time; during which, two others are put into the vat for the purpose of soaking. The object of this is to loosen the dirt; for, by so doing, it more readily separates from the wool. The other advantages of this mode are these: a man can stand *beside* a vat—for it is wholly unnecessary for him to get into it—and wash all day, whereas, if he is up to his waist in a pool, an hour is about as long as he can endure the cold; the water falling the distance above mentioned, removes the dirt much sooner than by squeezing; the water in a vat is all the while pure, in a pool it is always rily; two active men, with one other to hand sheep, will wash 400 in a day.

There are few streams but that afford a needful supply of water, and also a sufficient fall. Where the latter is not the case, it is only necessary to excavate a place on the margin of the stream sufficient for the admission of the vat and platforms; for a fall is of the greatest consequence, as without it, it is impossible to gain the full advantage to be derived from vats; in fact, it is out of the question to make wool white and clean by squeezing, unless a much longer time is taken than usual, and after the greatest pains, its aspect is dingy.

The cost of my vat, including all its appendages, was not quite nine dollars. Now, I will recommend, if so small an expense deters any individual from being sole proprietor of one, that farmers club in neighborhoods, fix on some eligible site, and own it in common. My neighbors have for years past, brought their flocks to my place for washing. I charge them nothing, nay, they are cordially welcome, for I am very happy in being instrumental in putting them in the way of doing the *clean thing*.

I have uniformly endeavored to put my wool intended for market, in the best order with particular reference to *cleanliliness*, although some have had the knavery and impudence to laugh at me for so doing; saying at the time, "that the fleeces would weigh heavier if they were not *quite* so clean, and that the dirt would bring as much as the wool." Out upon such rascality to cheat the manufacturer. But query—How many are there who have not the boldness to say any thing *aloud* in approbation of this vile practice, yet *do it* from year to year!! As well might we sell chess for wheat, as fill our fleeces with stones.

Some of us are honest from *interest*, and with others "it comes by *nature*." Well, it is quite immaterial from which of these sources I am influenced; suffice it to say, I endeavor to keep at least one eye on that sterling old proverb—namely, "honesty is the best policy;" and its good fruits, I will now furnish you the evidence that I have reaped.

My wool has been purchased by the Messrs. Lawrence of Boston, for the Middlesex Company, for a number of years past, and such is my implicit confidence in their integrity—and very happy am I to say, that I have not yet discovered that it is misplaced—that it has been usual for me to forward it to them, and allow them to fix the value, which, in all cases, has been equal to the highest market price. I will here insert extracts from two of their letters, in reference to the condition of two of my clips, and could furnish similar extracts from half a dozen more. "In fixing prices, we have allowed you five cents per lb. more than we have paid others for similar qualities, for the *reason that yours was in much better condition than is usual*." And again, in regard to another clip. "Our sorts will turn out from two to three cents per lb. *less* than we have allowed for yours, on purchases of over 300,000 lbs., but *the condition of yours is very good*." The gain, on the quantity forwarded, which the first extract refers, amounted to over two hundred dollars, and on the second, about one hundred and fifty. "Who would not act the part of an honest man when paid for it so handsomey?" *some* of your readers will doubtless say. All I shall say to such, is just this: the Messrs. Lawrence will be very happy to make you honest on the same terms and conditions. Try it. It is the only species of *bribery* of which I approve, for it leads to virtuous acts; *other* kinds tend to corruption.

But, I have made an assertion at the beginning of this essay, in regard to our *preparation of wool for market*, which I have said would be proved to be true, by an unquestionable witness. I proceed to do it, although I have some compunctions on the score of good taste, as the testimony is embraced in a letter which has already been published, some three years since, in the old Genesee Farmer, with some comments by myself. Your present list of readers, probably varying essentially from that time, as well as the importance of the subject, constitute my apology for introducing it a second time to the public. The information it affords will be new to many, I doubt not. I shall omit the letter I addressed to Mr. Lawrence, and only insert here, the queries. I will further state, that the distinguished gentleman is at the head of that mammoth woolen manufacturing establishment, the Middlesex Company, located at Lowell, Massachusetts, which has the capacity to manufacture six hundred thousand pounds of wool per annum, and is now working up at the rate of 2,000 lbs. per day.

The queries addressed to Mr. Lawrence, are as follows:

1st. Of the average of American wool, washed in the usual way, what per centage is lost by cleansing or scouring?

2d. Is German or Saxon wool better washed, and the general condition better than American wool? Please state the condition of Spanish wool also.

3d. Do the German wool-growers secure their fleeces with twine, or by twisting a band of wool? And which mode is most acceptable to the manufacturer?

4th. Is it not very common to find *inside* of fleeces, shorn in this country, dung locks and trash of all descriptions, entirely useless to the manufacturer? Of, say 100 pounds, what per centage is lost by purchasing, *unknowingly*, wool having this trash with it? Please state some of the most glaring instances of frauds which have come to your personal knowledge in this way.

5th. Are you not, in your purchases of wool, very much influenced, in fixing prices, by its condition—whether well washed or badly washed—if so, would not the difference you allow, amply compensate, and more, the farmer for the extra time required in washing his wool well?

6th. Will protection, or sheltering of sheep improve the quality of the fleece?

Boston, May 1, 1838.

Dear Sir—Absence from home a number of weeks, is my apology for so long a delay in replying to your highly esteemed favor of the 28th March.

In reply to your queries, I have to say—

1st. The average loss by scouring American wool is 34½ per cent.

2d. The average by same process on German wool is 24 per cent. Some of the best clips in Saxony will not shrink over 16 per cent, but the wool is accommodated, (technically called)—that is, the skirts and head of the fleeces taken off. Spanish wools are scoured with soap after being shorn; as we take them, they shrink about 10 per cent. The wools from New South Wales are of the Saxon family, the stock having been carried from Germany; they yield about 70 per cent of clean wool.

3d. The wools from the most celebrated flocks in Germany are packed in bales weighing about 400 lbs. each—the fleeces never done up singly, but spread flat against each other—there is no twine about them. This mode cannot be adopted in this country for a long time, till which, let the fleeces be secured by a gentle twist of the tail—if your neighbors cannot make it out to their minds, let me refer them to my excellent friends, H. D. Grove or Daniel Rogers, of Hoosick, who will relieve them at once.

4th. The practice of enclosing in the fleece, clippings, &c., is too common, and should be discouraged by manufacturers. I have known six ounces of this useless stuff taken from one fleece. There is another practice equally disgraceful—the use of five to twenty times as much twine as is necessary. A short time since, I took sixty-six feet of large twine from one fleece.

5th. These cheating practices are short sighted, inasmuch as the "clean thing" brings a price proportionate. We always fix the price per pound by the quantity of scoured wool it will yield—in our purchases we frequently make a difference of five cents per pound in precisely similar qualities. By adopting this system, the loss on our purchases is less, probably, than of some other manufacturers. For the last three years the loss in our stapling room on American wool has been 1½ per cent; this includes clippings, twine, dirt, &c.

6th. I believe protection in winter is essential to the production of fine wool, especially in this hard climate. My acquaintance with wool-growers in this country is very extensive, and I do not know a single instance of *fine* wool being produced without sheltering the sheep. Besides the quality of the wool, there are many other considerations why sheep should be sheltered; and first, *humanity*—then *the saving of life* of old and young—*avoiding diseases* of all kinds, &c. &c. too numerous to mention.

The art of growing wool in this country is becoming better understood yearly, and I believe the time is not distant, when we can afford to produce wool at about European prices.

Your ob't serv't and friend, S. Lawrence.

Do not the above facts, Messrs. Editors, bear me out most fully and conclusively? It seems that the Spanish wool is first in point of cleanliness, next the Saxon or German, then Australian, or New South Wales, and last of all *American!* But let us inquire, where is New South Wales? Why it is a British colonial settlement on the vast island of New Holland, where also is Botany Bay, the place where England's culprits are banished to expiate their crimes; and yet in that land of villains and scape-goats, it seems that, in cleansing their wool, they are more honest than we, by *four and a half per cent!* Oh shame, where is thy blush!! Yours truly,

L. A. MORRELL.

Lansing, Tompkins Co. N. Y. Feb. 22, 1841.

Letters from the West—No. 5.

The Common Stock of Ohio.

Messrs. Editors—I shall suspend any further notices of thorough-bred stock in this vicinity, till the fine settled weather of spring, when I can look over it with more leisure than I have at present at my disposal; in the mean while, having seen most of the specimens of crosses and common animals that exist here, I will now subjoin a few remarks in regard to them.

Of the horses, considering the vast number that are bred in this great and fertile region, I consider Ohio in comparison with our more Northern States, as particularly unfortunate; and I am told the farther south and west we look, the worse it grows, it being almost impossible to find there the real sterling utilitarian, *the horse of all work*—I mean such an animal as on a dry and tolerably level road, will carry one with ease on the saddle, at the rate of seven or eight miles an hour, for hours in succession, without fatigue, or that will go the same pace in a light wagon with wife and daughter by our side, and then changing to farm work, plowing with his mate on the average, two and a half acres per day, &c. &c., day in and day out, and keep fat upon it. The best animals that I see here, have been brought from the north, or are bred directly from northern stock; they are of pretty good size, fair goers, and tolerably enduring; then there is the great Dutch wagon horse, strong at a pull, but without action, and so terrible slow in his movements as to really exhaust one's patience in riding or driving him; and lastly, there is the light Virginia racer, thorough-bred or nearly so, a pretty horse enough under the saddle on dry roads, but totally unable to carry weight without soon tiring out on a muddy track. They have endeavored to remedy the defects of these two last, by crossing with each other; and a more worthless spawn, as a general rule, I think I never saw. They are big in the head, with long necks, large backs and legs, flat spongy feet, narrow chests, high sharp withers, light carcasses, and cat hams. Their tempers are as vicious as a mule's, and their gait neither a trot, pace, or gallop, indeed, I am at a total loss under what name to classify it, unless we call it a cow-heel shuffle.

Having occasion to ride out into the country the first day of my arrival here, one of these choice nondescripts was brought up for me as an especial favor; and I must confess as I took a sharp cast over his extraordinary figure before mounting, I could not but give my head an ominous shake, and query in my own mind whether I had not better make use of my own feet rather than those of the ungainly quadruped before me. The hostler seemed to half divine my thoughts by my looks, and answered them by saying, that "the hoss was a tall 'un for comfort, and a screamer to go; and if the gentleman worn't *afraid* of his being a little curos when he passed things, he did'nt know nothin' about, he'd carry him mighty well." I must confess I was a little stirred up at the emphatic word "*afraid*," and not understanding the precise meaning of the words "comfort, screamer and curos," in the hostler's lingo, and having in my day been accustomed to mount pretty much all sorts of cattle, from the slow elephantine cart horse, up to the mettlesome thorough-bred, I instantly straddled the "tall 'un" before me. The third step he took was a stumble, that brought him down sprawling upon his knees, and would have sent me a clear somerset over *his head*, on to my *own* pericranium, had I not taken a stiff brace in the stirrups before starting, and held a powerful grip with my left hand on the reins. As it was, I recovered my steed, and kept my seat, and saved myself a bump on the head from the hard pavements, that is yet unknown in the vocabulary of phrenologists, and a pretty *debut* really, in the midst of the high street of a populous town, would it have been to make for one who has so much talk upon cattle as myself! The details of that ride would alone fill my letter sheet, and it is probably quite enough for me to say here, that the "comfort" was such a shaking of bones and flesh as I never before experienced, either by land or by sea; that the "go," with lathering, puffing and blowing, was about five miles an hour; and the "curos" part, was an almost total refusal to pass a bridge, ford or creek, or consisted in ramping and viciously shying to the imminent danger of dismounting a careless rider at any odd object, such as a stump, a dead log, the flash of a bird, &c. &c. in the road. Indeed, it was here only that he displayed any spirit, for which, as I had got on the look out for his tricks, he had my thanks, thus breaking the otherwise tiresome monotony of my first equestrian essay in the west, and confirming a sort of previous suspicion that I had entertained of the merits of a cross between a light mettlesome racer, and a great lathy, porous-boned and flabby-fleshed dray animal. As a general rule, I will freely say, that I find but two distinctive qualities in them, and these are viciousness, and a total want of adaptation to either saddle or harness. I trust that I shall be excused the freedom of my remarks on this subject, for I am only reiterating what every breeder of horses here frankly confesses; and as a finer region does not exist than the uplands and rolling country of the west for the production of these noble animals, I do most heartily desire to see people, when disposed to raise horses at all, grow good ones. The services of well bred northern trotting stallions, with handsome figures, fine action, great endurance and strength, with good size and quiet temper, may be secured at ten dollars per mare; and with just this additional outlay to the stock grower, he can produce a good animal from fair common mares, at a cheaper rate than the miserable dull or vicious unenduring brutes that are but a curse to the country.

Of horned stock here, the common kinds are, as is too frequently the case at home, ring streaked, speckled and gray, with black, dun, yellow and bay, their quarters consisting in a big wiry tail, and a sharp crowning rump, that will take on fat with the same avidity as Pharaoh's lean kine did of old, and probably make about the same return for their keep, but I am happy to qualify this flattering observation, by adding that I frequently see scattered over the country a touch of the beautiful Devon and large Hereford cross of New England, together with a fair mixture of Galloways, Dutch, Muley, &c. &c., fair animals enough, but no larger or better of their age, than with us. But the moment you throw in a Durham cross, the milder climate and consequent longer run at grass, begins to tell, and two year olds of this description, will be as large as northern three year olds of the same blood, and at three and a half and four years the cows fully mature, and are as large as good sized oxen, with deep full fat quarters, wide loins and expanded udders. Why will our farmers be so slow in adopting improvements, and keep on toiling for grain and grass, to then almost literally throw it away, on a breed of animals that will give them but half the return in beef and milk for their products, that a better race would. They can now buy Herd Book Durham bulls at a reasonable price, and good grade ones from ¾ up to 31-32, from $50 up to $150, according to age and quality, and I ask again if they cannot afford a *full* bred, why then take a *high* bred for a commencement.

The sheep that I see here, are superb of all kinds, common or what not. They get a full belly, and show their keep most advantageously. One would naturally think most of the land too rich and level for them, but such does not seem to be the case; and I believe as a general rule, they are healthier here than with us, and certainly all kinds grow larger and look finer, I mean with ordinary farm keep. I have seen Saxons, Merinos, South Downs, Leicesters, and so on through the whole list, with all sorts of crossings, and all look well, but farmers are rather careless about preparing their wool for market, and do not consequently get as high price for it as they otherwise might; and as to mutton they do not seem to think much of it for the table, and prefer pork. Now this is all wrong, for it is a much healthier meat, and to my taste, much more palatable—indeed I may say, that I am a sort of a Jew on the article of pork; and though I breed pigs, I scarce ever eat of them, so that here is a confession prefaced by a recommendation, that as I do not own a sheep's head, people will allow me to be disinterested in making.

Swine are pretty much all the go and thought of here, and abound of every name and nature, from my very particular and amiable friends, Messrs. Alligator and Landpike, up to the quiet gentlemanly Chinese, and lordly aristocratic Berkshire; the former however, being the most numerous, may be said to be the Democracy of the country, and no offence meant in the use of the term to the thin skinned demagogues, who have such an ardent love for the people—that is of themselves, place and power. Between these, there is a middle rank, of which the Byfield, Leicester, Woburn and Irish Grazier crosses predominate; making quite a fair class of animals, the Byfield being the best. I have also seen some of the Russia bred, a pretty good hog of medium size and prick ears. His skin is thick, with bluish spots on it, hair thin, but very coarse and of a white color. He is said to be a quick feeder, but I should think if what I saw are the genuine thing, the meat must be coarse grained, and somewhat inclined to toughness. Yet of all this, I wish to speak under correction.

Manner of Feeding Stock in Ohio.

Of the manner of feeding stock here, I do think too exclusive use is made of raw corn. It is one of the best of grains undoubtedly to finish off a fatting lot of stock, but to keep them along in store order it lacks *bulk*, and is too stimulating. Machines have been in use here to break up the corn, cob and all, into meal, but they have proved so defective as to rather prejudice the farmers against them. I suppose that they lack strength in many of their parts, and are also somewhat too complex in their construction. If some of the eastern machinists would turn their attention to this subject, and make a machine that is both strong and simple, and of a reasonable price, he could not but soon gain a fortune here, in vending them; the demand in this immense fertile region of the southwest, would be almost unlimited. They are also greatly in want of a strong, powerful machine to cut up corn, stalks and all, something upon the principle of a hay cutter, but the demand for these would be much less than for the former.

I wish that I could see a chemical analysis of corn cobs. I do not suppose that there is much nutriment in them, neither is there in straw, but all who have tried meal composed of the cob and the grain, agree that except for the last stage of the fatting process, it goes quite as far, and makes as much flesh, as the corn alone; of this I have not the slightest doubt, provided it is mixed up with a sufficiency of water, and allowed to slightly ferment before feeding; and as a corroboration of this opinion, I will here give the details of a little experiment that I made at home in Buffalo last summer.

I had twenty-two Berkshire swine in a small pasture during the month of August, where the herbage was so completely dried up as to give them no feed from it. I accordingly ordered them four bushels of raw corn per day, but this did not seem to satisfy them, and they were roving about the pasture uneasy, and as I soon found, losing flesh. I then took three bushels of ship stuffs, (which is the best quality of bran from our flouring mills) and divided it equally into two barrels, and then filled them up with water. In about 24 hours this swill would commence fermenting; and every day about 1 o'clock P. M. the hogs were called up and the whole placed in troughs as fast as they would eat, and they scarce ever could entirely finish the whole two barrels of the mixture. They then seemed fully satisfied, and would go and lie down perfectly contented. A bushel of raw corn however, was scattered over the grass just to amuse them in cracking it the next morning for breakfast. On this food the lot gained gradually, and in a fortnight from being rather thin, were in as good condition as I ever wish to have breeders. They were all sows, young and old, weighing from 120 to 400 pounds, would probably have averaged about 250 pounds. The cost of the feed may be thus stated: 4 bushels of corn per day, on which the stock was growing poor, at 45c. $1.80; 3 bushels ship stuffs, 10c. 30; 1 bushel corn, 45c., extra time mixing up the swill with water and feeding, 25c. $1.00. Making a saving of 80 per cent, and that it would be equally great if not greater, with corn cob meal thus mixed up, and especially boiled, I have not the least doubt. Corn alone gives too much *fat inside*, without a corresponding *bulk* of flesh outside, which seems to be the most necessary material for good breeding. What would a man think to be fed on pork alone? Would he not daily crave bread and vegetables? Indeed, it is doubtful to my mind, whether he would not sicken and die under such a regimen.

Root crops ought to be grown here more than they are. Land that will yield 50 bushels of corn to the acre, would turn out at least 300 bushels of potatoes, or 600 of beets, carrots, parsneps or ruta baga, and the expense of raising and securing these last, cannot be greater than that of the first, and four bushels of the one, would certainly be equivalent to one bushel, with the stalk fodder that accompanies it of the other.

Feb. 1841. A. B. A.

Comparative Value of Horses, Mules & Oxen.

Messrs. Gaylord & Tucker—An apology is due to the N. Y. State Agricultural Society, for omitting to report on the subject they have twice assigned to me, but it having been inconvenient to attend the annual meeting when the appointments were made, they were not sufficiently impressed on my mind to draw my attention to the subject in time for their meeting the present month. Indeed, in consequence of the press of other matters, it was not till now, that it occurred to me that this duty was to be performed. So far, however, as their object is the publication of the different reports, it may be accomplished by the insertion of this communication, but with this serious abatement to its usefulness, that it cannot receive that revision and sanction of the intelligent members of the board, that would so materially add to its correctness and authority.

The comparative value of horses and oxen for agricultural purposes, has so often been the subject of discussion, and the arguments so very correctly and succinctly stated in your own paper so lately as March last, that it would hardly seem necessary to repeat them here. But there are some considerations connected with this subject, not hitherto treated of to much extent, that I will submit to the public, for the purpose of eliciting hereafter, such observation and discussion as may lead to highly important results.

In a country so varied as ours in climate, soil, surface, tillage, crops, extent of farms, &c. &c., there must necessarily be sufficient difference in circumstances, to justify the use of both horses and oxen, not only in contiguous, but even on the same premises. This assertion will appear conclusive, by simply stating the universally acknowledged merits of each. These are summarily stated by assigning such labor to the horse, as is required to much extent during the hot season, where active movements are wanted, and when a load is to be removed a considerable distance over a good road. This seems to be the extent of superiority claimed for the "noble beast." The claims of his more humble, but on the whole, much more useful competitor, are the smaller amount required to purchase them, the economy and simplicity of tackle, the easiness and cheapness of keep, less liability to disease, docility in managing, constant improvement till they have attained a full growth, and their ultimate value when they have outlived their working character. These are the generally distinguishing characteristics between the two races; though it not unfrequently happens that individuals of each approach and even cross the line of demarcation, the horse sometimes falling below the average standard of ox endurance and speed, while the latter if truly bred and properly trained, boldly pushes his way into the foremost ranks of his prouder rival. That a great improvement may result from a strict observation of the capabilities and requirements of each, there cannot be a doubt. Let us see the position they respectively occupy at the present time. The horses in this and the northern States generally are very well adapted to the services they have to perform. If we except the French horse, as he is called, (deriving his name probably, from his having been almost entirely used by the French Canadians,) which is a cross of a very good European horse on the Indian poney; and is in deservedly high repute as a hardy, serviceable animal, and is very extensively used along the State's side of the Canada lines, we have no well defined or distinctive breeds of horses, but they are a mixed race, made up from good stallions imported from time to time, on our former stock of mares; and in New York and New Jersey especially, there has been a high cross from the very choicest imported bloods, and to such extent has this been carried, that in many sections of these States, and several of the others, it will be almost impossible to find a native animal now, that is not deeply in the best blood. By choicest, it should not be understood, the *dandy* racers of their day, that will run against a streak of lightning provided they have little weight to carry, but the strong, serviceable, enduring animal, whose progeny is as well suited to the road and plow, as their sires were to the turf. Some of which were Post Boy, Messenger, Membrino, Duroc, Eclipse and Bellfounder, whose descendants may be found pretty extensively distributed over the north, and constitute an invaluable improvement to the former respectable stock. This improvement, if universal, would probably be all that would be requisite in horse flesh. But there still remain a great number not tempered by noble blood, with ungainly heads, long sway backs, rough haired, coarse jointed brutes, whose bones scarcely possess more strength or density than a corn cob; and with muscles more resembling a tanned sheep skin, than the wiry sinews of the well bred beast, and if these could be at once spayed and castrated, we should secure a double benefit, in breeding fewer horses and those of the best kind.

The question has been much mooted of late in Kentucky and elsewhere at the South, (where they have in this extensive section, but two kinds of horses, one good for racing, and the other good for nothing,) as to the kind of animal required to improve their agricultural horses, and wisely discarding the notion of importing some of the old varieties of Europe that were formerly held in considerable repute, such as the Suffolk Punch, the Cleveland Bay, the Black cart horse, and others that have much degenerated of late, whether positively or relatively, I cannot say, others having been vastly improved by the infusion of better blood; and they have with much good sense ordered some of the best stallions from Long Island and elsewhere, from the stock we so largely possess, and from them they will soon acquire a valuable race. We of the north, require no importation to secure for us better horses than can be found in the world for our purposes. We have only to select judiciously with more show, or substance, according to the fancy of breeders; and from these we can produce all that is required.

But we object to the number of horses kept among us. They are *too expensive a luxury.* Food enough is consumed by the *surplus* horses in this country and England, to make every individual in them both, entirely comfortable. From the earliest days after the flood to the present time, they have been a prominent object of pride, as well as engine of conquest, plunder and devastation, by every tyrant and robber from Nimrod to Napoleon. We cannot wonder then, they were so emphatically interdicted to the Israelitish shepherds, by the express command of Jehovah himself, for how could the narrow valleys of their limited Canaan, have contented them, or supplied half their swarming population with food, had they possessed the proportion of horses we think essential to our necessities? And no sooner did Solomon commence his career of glory and conquest, accompanied by the introduction of an extensive royal stud, imitated no doubt by the nobles and grandees of the land, than the nation passed under an intolerable oppression, that resulted in the revolt of ten twelfths of the people, and soon after, in the subjugation and captivity of all.

We have no hesitation in venturing the assertion, that were our present stock of horses reduced *to one fourth their present number, and the places of another fourth supplied by mules, and each put to their required duties, the remaining labor of the country would be vastly more advantageously performed by oxen.* But first of *mules.*

It would appear on even a very slight reflection, that in excluding the services of this humble, but hardy and useful animal, we are annually sustaining an immense loss. Probably it would not be overstating the case, to say that with little grooming, half the attention and feed, and no disease, they will outlive the laboring lives of horses, and do the whole work of each. But that there is great disparity in favor of the former, in the amount of labor rendered for the quantity of expense bestowed on each, those who have tested both are prompt to testify. They are the only beast of labor that can be trusted by their masters in the hands of the slaves at the South, their hardiness enabling them to live under a usage that would kill horses almost as fast as harnessed. They are easily and cheaply reared, strong for their weight, hardy, require little attention, subsisting on the coarsest herbage, almost free from disease, and live to a great age in the full possession of vigor and strength, many being found capable of their accustomed labor at 35 and 40 years old, and some authentically stated to have attained ages apparently almost incredible. Why then, under these manifest and acknowledged advantages, are they not generally used? The whole objections, after deducting a little for *family viciousness*, may be summed up in one word—*pride.* Unfortunately for us, those we have been accustomed to see, have had more than a due proportion of thick muzzle, chunk head, long ears, ewe neck, narrow chest, diminutive legs, small body, cat hams, and most unprepossessing tails, the result of breeding an indifferent jack to the refuse mares of the country. But in a question of utility we must school our ideas somewhat, and if we cannot quite bring up the mule to the symmetrical elegance and fiery spirit of the horse, we can bring them down to think him not only not so unsightly an object, but a very valuable and useful beast. He has, to be sure, in days of yore, and among nations we deem less tasteful and refined than ourselves, been esteemed not only as a beast of burthen, but considered with regard among the luxurious, the opulent and the proud: and kings, princes, and nobles, from Absalom, (the most courtly dandy, and thorough-going demagogue on record, that has as far distanced his competitors in the race of folly, as his brother Solomon has all modern philosophers in wisdom,) to the haughty sovereigns, Ferdinand and Isabella, that stand uneclipsed in later times in the acquisition of territory, wealth and glory they made for their country, the mule has received all that brute regard and fondness we bestow upon the horse. Nor should their taste be too summarily questioned. We have seen specimens of this hybrid, with proportions so happily blended as to challenge not simply our approval, but our high admiration, standing 16 hands, symmetrical, (for a mule,) firm jointed, clean limbed, compact, round barrel, arched neck, and a costume varying, through every shade, from a light roan to a jet black, and which reflected like a mirror, the light from their polished sides, constituting a together a lofty bearing, that would effectually silence the pretensions of half the legitimate bloods of the land. Such animals could not be purchased for $500 per pair, a price not fixed from fancy, but from actual experience, believed to be within their absolute value. Let the experiment at once be tried, by using some of the best Kentucky Jacks on our large blood mares, and a salutary change will soon be effected in our northern teams.

But for moderate farms generally, we think the ox, beyond comparison, the most profitable animal to depend upon for field labor. He is the natural and almost spontaneous production from an indispensable portion of every man's stock. He comes almost unbidden to our hands, and is reared with little trouble or attention on the coarser products of the farm; is liable to few diseases, which are generally understood and easily remedied; is domestic, kindly disposed, tractable, patient, and ever ready to do his utmost; and when he has worked through his best years, and attained to a full maturity, he is turned into the field to gather up and condense the scattered herbage, and then is prepared to fill up the measure of his usefulness, by uncomplainingly yielding up his life to the stern and never satiated demands of his master. If at any time in the course of his working days, he becomes disabled, he is turned out and fattened, or if kept in good condition, is always ready for the shambles. Some years since, I had an ox, that through the carelessness of his driver, had a part of a hoof crushed, by having a log rolled on it, and finding it impossible to staunch the wound, I had him butchered, and disposed of his carcass for $62, when the well matched pair were not worth more than $100, for working oxen. Not so with the horse; if the slighest fracture or disease is discovered, down comes his value from 20 to 80 per cent, or if much disabled or seriously diseased, he becomes absolutely worthless, or even worse, as the expense of keep and farrier's bill, is the only legacy bequeathed by the dead brute after months of attention.

But to the objections to an ox team, "They cannot endure like the horse in hot weather." Grant it. There is a part of 4 months in our climate, when they cannot do as much in the heat of the day, but there are parts of every day they can do a great deal; and probably all that might be required of them; and if the sluggards who drive them, would take a lesson from the feathered inmates of every copse, tree and shrub that surrounds them, and bestir themselves before the fading glimmer of the last star in the morning, and unyoke and provide for their weary companions in toil through the sultriness of the day, and again when the excessive fervor of the sun had abated, they would renew their labor till dewey eve admonished them it was time to rest, they would find probably they could accomplish, without excessive fatigue to their teams, all that was necessary to perform.

The great objection to them, however, is their "dullness and inactivity." Is the quadruped or biped in fault? We believe, with all due deference to our own species, the latter. If the poor dumb brute could portray his wrongs, they would frequently be found to shame his more intelligent master; and if even handed justice could be done, compel him to change places with his abused servant. The ox is generally trained before he has acquired half his strength, and his power at once tasked to the utmost. If however, he is allowed a respite, his burdens are for a brief time only delayed, and long before his strength is fully matured, he is habitually overloaded, and that too under every privation of nutritious and stimulating food; and the consequence is, as every one, not an ox or ass, would have predicted, he loses his spirit and ambition, and becomes the stupid thing we are so accustomed to see, and the whole race are condemned for faults that really belong to another. Let light yokes or harness be adopted, suitable four wheeled wagons, instead of the neck bruising carts, that are too often a full load for a team when empty; let the ox be well fed and curried and kept in his yoke only a reasonable time, and *never overtasked*, and he will in his improved character, soon retort upon his calumniators. *But the real difficulty is, the breed of working cattle need improving throughout the State.* In how large a portion of it are they far below the standard of working cattle in New-England? Is this owing to the mode of rearing, or the breed? We think the latter. All know the difference in the capacity for performance between horses of the same bulk; that one will regularly perform labor throughout the year, that would knock up another of the same weight in a week, and kill him in a month. May there not exist the same difference in the breeds of cattle? Without hesitation we would answer yes, though not perhaps to the same extent. We are not left to conjecture upon this point, however, though our unassisted reason might clearly indicate the truth; for we have the recorded experience of intelligent and observing men, on both sides of the Atlantic, who have tried this matter fully and fairly, and whose united testimony is, that not only are certain individuals better adapted to various purposes of labor, but whose breeds are so constituted in form and character, as to give them the utmost possible adaptation to this object, consistent with the other important one of their nature, in furnishing subsequently a carcass every way suited to the nutrition of man. These breeds are pre-eminently the Devons and Herefords, and to their unrivalled qualities for draft, Loudon, Youatt, and other distinguished writers testify; and their opinions are corroborated by thousands of experienced individuals in our own country. We know the Devons to be intelligent, docile, spirited and capable, quick in their movements and enduring in performance, and in many instances, when of pure blood, well trained, and properly managed, rendering it no easy matter for good horses to out-do them. Youatt yields to the Herefords nearly the same meed of praise, and allows them greater strength, though we think them less active. Classifying them by the sportsman's scale, we should say the Devons were the thorough bred, and the Hereford the stouter hunter, and though not possessing the speed, yet with sufficient for his object, he is enabled to carry greater weight than his more active rival. Both have good forms and constitutions, a large share of Bovine intelligence, a quick eye and ready ear, dense bones, strong joints, a large proportion of well disposed muscle, great strength and a rapid stride that makes it no easy matter for their drivers to keep pace with them; in addition to which, they are kind feeders, and when turned out to grass, will take on flesh rapidly, and when fattened are preferred and will (in England at any rate, where the different breeds have been guaged by all the epicurean palates that have taken cognizance of flesh for the last two or three centuries,) bring a higher price than any except the Scotch cattle. Did we possess these valuable cattle, and their descendants crossed with our best natives, extensively disseminated through our State, we should hear very little about the great inferiority of cattle.

It may perhaps be asked if the far famed Short Horns are not adapted to labor? If so, their advocates have failed to demonstrate it, with some few exceptions; nor do we deem it compatible with their characters they should ever be so distinguished. There is an anatomical and physical impossibility in the thing. They must combine opposite and irreconcilable properties in accomplishing this. Their great and paramount excellence is, to load on flesh in the right points at an early age, combined with great capacity in the cows for secreting milk, in which they are excelled by no other breed except the Long Horned Durham or Yorkshire. In conclusion, for this article has already been drawn out to an unwarrantable length, all that is necessary in compassing the great desideratum, the *improvement* of our country cattle, is to select the choicest native animals we have already, that are best adapted to this purpose, and cross them with Devons, and perhaps Herefords, selected in England especially for this object, and we shall soon have a race not surpassed for securing to the agriculturist what he most demands, viz. *the accomplishment of the greatest amount of farm labor at the least expense.*

Truly yours, R. L. ALLEN

Buffalo, Feb. 1841.

Preserve leached and unleached ashes which have accumulated during the winter, to be applied to corn, *in the hill*

The Short Horns and Herefords.

Messrs. Editors—It is with deep concern that I perceive by a communication in your March number that Mr. Sotham has lost some of that comity of feeling, with which he professed to enter into the discussion on the relative merits of the Short Horns and the Herefords; more especially that he has, without pausing to consider the pain and injury it would inflict, spoken in terms falling little short of utter disrespect of the breeding skill, and even the knowledge of what constitutes the valuable points of cattle, possessed by Mr. Youatt, Hon. Henry Clay, Mr. Hepburn, and lastly my humble self. No man, I will venture to say, intimately acquainted with Mr. Sotham, values him more highly than I do, and I have ever believed that he was by no means properly appreciated by a large portion of our breeders.

I well recollect with what profound pleasure I hailed Mr. Sotham's communication from England, (published in your October number,) that he was on his way to this country "*with the best lot of stock ever seen together*," and his modest challenge to the "owners of the best cattle in America," to meet him at the cattle show at Niblo's in October. It is an affair of more magnitude than every one may suppose, for *one man* to buy up "the best lot of stock ever seen," even in the small island of England, and I could not help fancying the deep mortification, the unavailing regrets of such men as Earl Spencer, Mr. Bates and other English breeders, when they ascertained the fact, and found that the broad Atlantic rolled between the aforesaid "lot" and England. What deep and lasting gratitude then should every American have felt towards so great a public benefactor! But, alas, all know that the "ingratitude of republics" has passed into an adage. The fair day arrived at Niblo's, and with it arrived Mr. Sotham with the Hereford cow (with the *aliases*) that "won the first prize at Oxford, 1839, against all England;" the cart mare and cart colt "allowed by the best judges to be as good as England could produce;" the twenty-four rams that "could not be beaten even in England;" and lastly, "the pigs of various descriptions, the best that could be procured in England." Mark the astounding sequel! The cow that "beat England," was beaten by an American bred Durham, though rumor says that Mr. Sotham actually condescended to wait personally on the committee, after they had retired to their room for consultation, for the generous purpose of imparting his superior knowledge of what constituted the true excellencies of cattle, and to inform them in what low estimation the cow that subsequently proved to be the winner, would be held in England! Whether any of the four and twenty rams, like the fiddlers of old "all in a row," received premiums, I am unable to say, though I learn that some of Mr. Sotham's sheep were beaten by Mr. Clift's. And to show at what an utterly low ebb the taste of our country is, in such respects, I will state that I am credibly informed that those splendid *steeds*, as well as those pigs, whose loss it is feared England will never be able to repair, were actually *laughed at* by two-thirds of the ignorant and impudent Yankees present!

But enough of this. It only proves that men in advance of their age, are rarely appreciated by it. Galileo found it so; Copernicus found it so; Capt. Symmes found it so; and Mr. Wm. Henry Sotham, if he finds it so, should neither be grieved or disappointed. It is your empty, swaggering, conceited fellows, who always proclaim their own "best," who are most successful in these degenerate days; for the modest and unassuming there is little chance. The simple fact that the committee of the American Institute decided against Mr. Sotham's Herefords, proves nothing. That they were the "best lot of stock" at Niblo's, or that "were ever seen," we have the most indisputable authority—the same which the Marshal Montmorenci had that the Dauphin was a brave man—the Dauphin *told him so himself!* Will any man deny that this was

"Confirmation strong
"As proof of holy writ!"

But I must say I think it was hardly magnanimous in Mr. Sotham, after seducing Messrs. Clay, Hepburn, myself and others into this controversy by honied assurances of dealing gently and leniently by us, to suddenly, without a word of warning, convert a merely friendly passage of arms into deadly strife. It might have evinced considerable nerve on the part of Fitz James to say to a party of wild Gael, "come one, come all,"—but Mr. Sotham, when he says that he is willing to stand a brush with Messrs. Youatt, Clay, Hepburn, etc. "individually or collectively," well knows that he utters a safe challenge. True, Mr. Youatt is concededly the first writer in England on cattle; Mr. Clay is a clever man in the Senate, and one of the first breeders of the various kinds of improved cattle in the Western States; Mr. Hepburn certainly *writes* like an intelligent man—but which of these men ever "purchased five thousand cattle in two months," or belonged to a concern "which slaughtered from four to six thousand annually for four years?" If there be truth in the sage old apothegm that he

"Who kills fat cattle must himself be fat,"

does it not follow by a parity of reasoning that he who buys and slaughters cattle must be an adept in the science of breeding them? Cannot your butcher, who wields the knife and cleaver, manufacture these implements better than your mere blacksmith, who perhaps never cut up a beef in his life! We doubt whether this last process was ever performed by Mr. Youatt, unless in the way of dissection; and as for the Kentucky Senator, confess,

"'An thou lovest me Hal,"

that there's many a man within half a dozen miles of Ashland, who has bought more, killed more, barrelled more, and eat more beef than thyself, and *argal*, knows better how to breed it. The fierce old Hepburns, of East Lothian, were *drovers* and *butchers* both in a "border foray," but we doubt whether their peaceable Pennsylvania descendant has ever drove or slaughtered 5,000 cattle in his life. If not, what should he *presume* to know about breeding fine cattle!

By the way, we should like to know what was the "head and front" of this unfortunate man's "offending," that he should be selected as the especial victim of Mr. Sotham's ire—used up—as little of him left as of the famous Kilkenny cats. Was it for suggesting that the recently imported Herefords were indebted to a Short Horn cross for their improved points? Mr. Hepburn undoubtedly considered this the greatest compliment he could pay them! Mr. Sotham in the October number of the Cultivator, page 161, in enumerating "the best lot of stock ever seen together," says, "one half blood between the Hereford and Durham, to show the cross, which I think an excellent one, *probably better than the pure breed of either*, and from what I saw of Mr. Cother's stock of Middle Aston, it may be extended much further than generally supposed, for his fourth cross was equal to the first—not the least sign of degeneration." Can words be more explicit? And what did Mr. Hepburn do, but follow "in the footsteps of his illustrious predecessor?" Why, Mr. Sotham is as difficult to please (the best have their foibles) as the drunkard, who reeling home at midnight, declared "if he found his wife up, he would whip her for not going to bed when she ought to have done—if he found her abed, he would whip her for not sitting up and waiting for him." Disagree with Mr. Sotham, and you incur the fate of Clay and Youatt—agree with him, and the shade of the mangled Pennsylvanian rises warningly before you. Mr. Hepburn only surmised (in common with many others) that Mr. Sotham had been a more fortunate man than he himself supposed—that instead of mere Herefords, he had actually obtained that cross between the Herefords and the Durhams, which we have Mr. Sotham's own authority for supposing "better than the pure breed of either." Why should Mr. Sotham object to having it believed that his cattle have received that last finishing touch, which by his own showing, will make perfection more perfect. Is it modesty, the fear of claiming for his own more than they deserve? Yet he *may* be mistaken *against himself*. He says of the cow that was beaten at Niblo's, "I defy any man to prove there is a drop of Durham blood in her veins." I presume there is not, but supposing there was, and a good many of them, who could testify to it except the breeder? I assert that my pig is a pure "landpike," —now grant for the sake of the argument there are several drops of the "Alligator" in him—how is Mr. Hewer or Mr. Sotham to ascertain that fact, if I see fit to conceal it?

Finally, Mr. Sotham challenges Mr. Hepburn or myself to exhibit a pure Short Horn, against one of his pure Herefords, as a milking cow in May next, for a silver cup, value $15. Now did Mr. Sotham ever hear of a shrewd Yankee, by the name of Ezekiel Peabody, who having tried in vain to dispose of a horse for $40, rode him one bright morning, briskly into the town of C——, (where several sportsmen resided,) and offered to wager $15, that the aforesaid horse could out-run any thing in C—— for a mile; and how that finally he consented to sell "Connecticut Eclipse" to young 'squire W., for $150, before the race came off? *But would not Ezekiel have betrayed a great want of discretion, had he suffered his motive for making the bet to leak out in the presence of a third person, who was under no obligation to keep it from the other parties?* I will merely add that this "silver cup" challenge *came to my ears* long before it was openly made to me. *Verbum sap.*

In reply to that challenge, I may be permitted to say that I never have paraded my own stock before the public. I have discussed the merits of the Short Horns and Herefords as *families*, without converting my communications into advertisements setting forth the merits of *my own* animals, as the venders of patent medicines recount the wonderful virtues of their nostrums. My herd, always small, has been rendered still more so by recent sales, and circumstances have induced me to turn much of my attention to crosses between the Short Horn and other varieties.* But if Mr. Sotham is really in earnest—if he wishes to risk $50 or $100, on the milking properties of a pure Short Horn and a pure Hereford, by the proper tests, (say the actual admeasurement of milk—or rather the pounds of butter made during one week of each months from the time of calving to the time of exhibition)—the matter to be decided at the annual Fair of the State Agricultural Society—I hereby distinctly inform him *he shall be met.* Satisfactory *proof* to be had, of course, of the milk and butter produced by each cow; and the bet to be forfeited in case either party should "*sell out.*" If Mr. Sotham accepts this challenge, he will signify it in your next number, to enable the proper steps to be taken. HENRY S. RANDALL.

Cortland Village, March, 1841.

Ripening of the Brown Corn.

Messrs. Editors—I noticed in the January number of the Cultivator, an inquiry by a "Subscriber," as to the time of ripening of the "Brown Corn." In answer to this inquiry, permit me to state briefly, my experience of last year. I planted my corn on the 16th day of May, and on the 22d day of August, I gathered good ripe seed corn from the field, wishing at that time to send some to a friend in the eastern country. From the appearance of the corn at that time, I presume I might have gathered good ripe seed a week earlier, had it been necessary. Another Subscriber.

Hartford County, Conn., Feb. 22, 1841.

Cure for Infected Kidneys in Hogs.

Messrs. Editors—I see in the Cultivator, (p. 168, vol. 7,) that Mr. J. M. Hudson, of Va., asks for information respecting a disease among hogs, which he denotes as infection of the kidneys, or weakness of the loins. I have had some acquaintance with this disease for many years, and suppose it to be the effect of kidney worms. I have often known copperas given to hogs with this disease, and never knew it fail to cure them in a few days, even after the hog was unable to get about but by dragging the hind legs. The copperas may be given to them in portions of about half a spoonful daily, in dough, or any thing else that they will eat. Pursue this course for a week or ten days, and a cure will be effected. A little wood ashes will do no harm, but it cannot be relied upon for a certain remedy.

Monroe, Ga., 1840. L. P.

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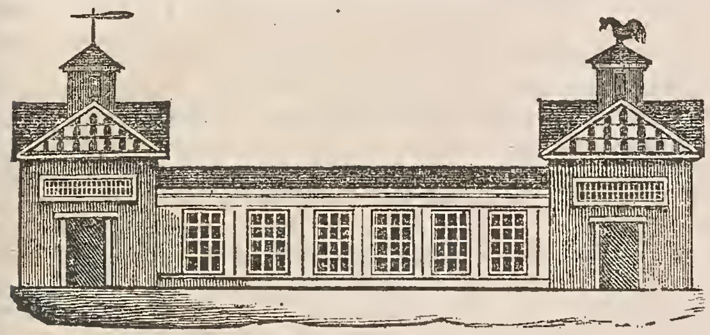
* Every one at all conversant with the subject, is aware that the thorough bred Short Horn, or any other animal of *equal size*, is not the proper stock for the hilly and thins oils of many of our grazing districts. The Devon, suitable in other respects, fail as milkers. A breed that should engraft to a considerable extent the milking and feeding properties of the Short Horns, or that capacity for short keep possessed by some of the smaller varieties, would certainly be a great desideratum—and towards this I have aimed. I have young cows now coming in, crosses between the Short Horn and the New Leicester, the Ayrshire, the Devon, the Holderness, and our native stock. Of these various crosses I may have occasion to speak hereafter. Though by no means "the best lot ever seen together," some of these animals are reckoned clever in these parts.



Poultry House—(Fig. 41.)

Breeding and Management of Poultry.

While others write with nobler views,
Of *Cattle*, *Hogs*, and bleating *Ewes*,
Let humbler themes be mine;
"Bright *Chanticleer* proclaims the dawn,"
And wakes the sluggard in the morn,
Ducks, *Geese* and *Turkies* join.

I most cheerfully comply, Messrs. Editors, with your request, "to furnish you with a plan and description of a Poultry-House, yard and fixtures, together with my management, views," &c. &c. This I will do the more readily, as it may save the necessity of replying to some letters of inquiry on the subject. It is however, but a little over one year since I erected my poultry-house, and turned my attention to the subject; and it could not therefore be expected that my experience should be very extensive; but I have been enabled to discover some errors, which by making known, others may profit by the information.

On most farms very little attention is paid to the breeding or rearing of poultry; and but very indifferent accommodations for them, as the rearing of a greater number than can subsist by picking up waste grain, or what might escape the pigs and be lost, is considered by many as unprofitable; and any cold apartment, with ill-contrived places for nests, and dirty roosting places, is generally considered all that is necessary.

Poultry may be considered by some, as a very insignificant part of live stock on a farm, still they should not be altogether despised, for there are very few who do not like a fresh laid egg, or a fine *fat pullet*, and these are some of the *fine things* which happily can be had in great perfection by the farmer, with very little trouble or expense. Eggs, whether boiled or fried, raw or roasted, or made into custards, agree with most palates, and fried with ham, or made into omelets, form a repast within the reach of all, and to be despised by none.

On small farms, near villages or cities, the breeding and rearing of turkies, ducks and chickens, and in some situations the keeping of geese, is found profitable. I know of several in this vicinity, whose receipts for poultry and eggs, have not been the least item of their income.

In England there are exhibitions, and prizes awarded for the best poultry. At one of these exhibitions, a turkey was exhibited that weighed 20¼ lbs. One capon 7 lbs. 14 oz. One pullet 6 lbs. 13 oz.

The importation of eggs from Ireland in 1837, to Liverpool and Bristol alone, amounted in value to $250,000. The importation from France, the same year, was probably greater.

I noticed in the "Farmer's Magazine," published in London, that a very curious and highly interesting exhibition, especially to the physiologist, was opened in 1839, called the *Eccalcobion*, a contrivance for hatching eggs by artificial heat. It differs from the Egyptian method as well as those which were tried by De Reaumur in Paris, and Moubray in London. And now it remains for the ingenious Yankee to contrive an apparatus for producing fresh eggs when desired.

"Eggs," says Low, "are an extensive product of common poultry." Lawrence in his work on poultry, states that from five Poland hens he obtained in eleven months, 503 eggs, weighing at the average of one ounce and five drams each—50½ pounds.

Last year my hens commenced laying the 7th of February, and between that period and the 15th of August, we obtained 2,655 eggs from 60 hens; when the year previous, from 100 hens we did not get but a few over 1,000. This shows the importance of confining them so that the eggs can be readily obtained, and no time lost in "looking for hen's nests."

A friend of mine, who resides in a neighboring city, and keeps between thirty and forty hens, informed me, a few days since, that he had obtained eggs from his hens through the year; that is, there was not a single day in which he did not get some. This he accounted for as follows: he had one brood of very early chickens, and when the old ones ceased laying, for moulting, the pullets commenced; and in cold weather his yard is so completely protected by high buildings on the north and west, and receiving the full influence of the sun from the south.

A neighbor who erected a poultry-house last summer, and took the precaution to have it filled in with brick, says his hens never ceased, but continued to lay during the fall and winter, and that he obtained 37½ cents per dozen for the eggs.

Mr. Stimson, of Galway, connected, a few years since, the profitable business of rearing poultry to the useful purpose of protecting his garden from the depredations of those numerous tribes of insects which so frequently render abortive the best exertions of the gardener. His method is simply this: a sufficient number of coops are constructed and are placed in different parts of the garden, and the hens with their broods are put into one of these coops; the chickens finding no restraint upon their freedom, roam over the garden and devour every fly, bug or other insect which they may meet with. There is one objection, however, which I found to this, particularly if left too long in the garden, as they become so attached that it is difficult to keep them out when grown up. I would, therefore, recommend removing them to the poultry-yard as soon as they get in feather.

Whether the fowls are suffered to go at large or are confined, there should be a poultry-yard where they may be regularly fed, and this should be on dry ground and plenty of gravel. There should also be water in the yard, and it should be sheltered from the north and west. There may be placed in the yard, under cover, dried sand and ashes that they may indulge the propensity, so natural to them, of rolling or basking.

In selecting a situation for a poultry-house and yard, I would advise by all means to place them on the south side of buildings, or the south or southeast side of a hill, so that one side of the wall may be set against the hill, and if of stone to be laid in mortar, which will add much to the warmth of the room. If the buildings are of wood they may be filled in with soft brick, tan or straw to the very top; brick is preferable, as it will harbor less vermin.

The figure at the head of this article, showing the elevation of rather an extensive and costly establishment, would not only be very convenient but add very much to embellish the premises. The cupolas on the tops are for the purpose of ventilation as well as ornament. On the bottom of the cupola and inside of the building is a door hung on hinges, with a cord and pulley attached, so that it may be closed or opened at pleasure. The gable ends may be turned to the south, in which dove-cots may be formed or they may be made in the roof as in the figure.

The buildings at the ends are intended for roosting apartments and laying and hatching. These buildings are to be thirteen feet square, and thirteen feet posts. I name this size as there would be no waste of timber, being just the length of the boards and joists. If not too near the dwelling-house, so that there could be no danger of fire from sparks, I would recommend to have the roof *thatched with straw*, as being much warmer in the winter and cooler in the summer; and when well done it forms a tight and durable roof, and will last for twenty years. It should, however, be made much more sloping in order to carry off the water more readily.

A round hole one foot in diameter, with a sliding door, should be made in each apartment for the birds to pass in and out, and to confine them when necessary.

There should be no floor to prevent the fowls from coming to the earth, and the litter should be often removed, and the bottom sprinkled with lime at least once in each week.

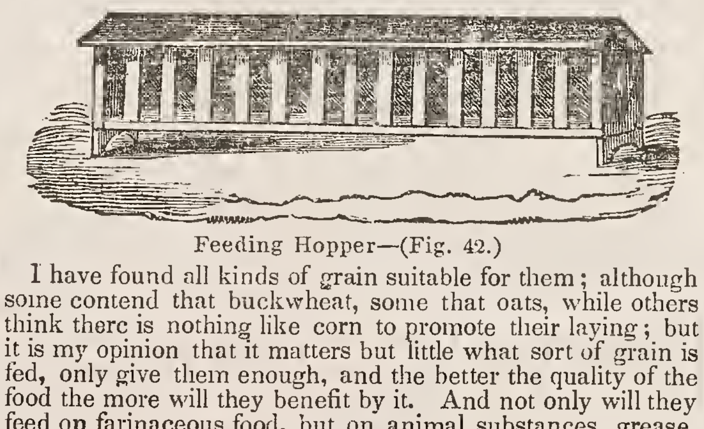
The roosts should commence at the top and slope downwards, at an angle of forty-five degrees, like a ladder, to the ground. The cross pieces or spars should be of sassafras of two inches in diameter with the bark on, which is said to be a protection from vermin. No flying is necessary in this form of a roost, as the birds ascend and descend by steps. The spars should be placed one foot apart horizontally for hens and eighteen inches for turkies, so that they may not incommode each other by their droppings. Ranges of boxes may be hung around the sides for nests. To gratify the hen's organ of secretiveness the apartment must not be too light, and the access to the nests so contrived that she may steal quietly there unobserved. The boxes should have doors or covers to them so that the eggs can be removed without difficulty.

In the hatching of poultry, as in most other things, Nature is the best guide. The hen and duck, if left to themselves, find some dry, warm, sandy hedge or bank, in which to deposit their eggs, forming their nests of moss, leaves or dry grass. In this way the warmth is retained when the bird leaves the nest for the moments she devotes to her scanty and hurried meal. The best mode is to put in the bottom of the nests a sufficient quantity of fine dry sand and grass, or moss, or cut straw. Wood ashes has been recommended by some, as they produce the effect of destroying vermin by which they are apt to be infested at that time; and that this will not be disagreeable to them, is evident from the propensity which they have to roll or wallow in heaps of dust or of ashes of any kind. As this is the season for the incubation of every species of domestic poultry, I have thought the above might be acceptable to those who are paying some attention to this subject.

The long building with windows in front, connecting the two extreme ones, is intended for exercise in the winter, being made warm by filling in with brick, &c. and thatching with straw. The front to be ten feet high, roof sloping to the north. The windows are intended to admit light and heat from the sun; or the windows may be omitted, and the front finished in the form of a shed. This apartment is well calculated for feeding and watering, as well as for the gravel, sand, ashes and lime. Boxes may also be placed there for laying and hatching. By partitioning it off, two varieties of fowls may be kept separate; or one side may be appropriated for turkies and guinea hens, and the other to the gallinaceous tribe. These should open into a yard of considerable size, as room and space is necessary for their health, when they are not permitted the range of the barn-yard. The yard should be dry and have a southern exposure. Ventilation, cleanliness and pure water are essential to the health of poultry, as well as all domestic animals.

The yard should be enclosed by a fence at least seven feet high, with long sharp pickets, and the timber on which the pickets are nailed, unless some distance below the tops, should be on the outside to prevent the fowls from perching on them, as they seldom fly over a fence without alighting.

It appears to me from my experience to be the best method to feed fowls an abundance of nourishing food. Experience tells us also, it is better to give animals of all descriptions a full allowance of food from their birth to their maturity, and the same rule applies to fowls as to animals.



Feeding Hopper—(Fig. 42.)

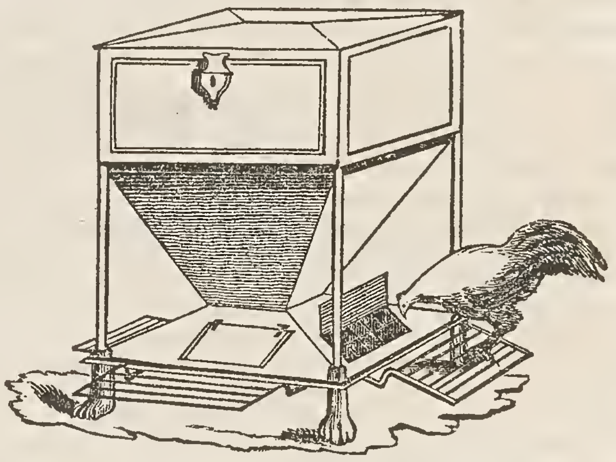
I have found all kinds of grain suitable for them; although some contend that buckwheat, some that oats, while others think there is nothing like corn to promote their laying; but it is my opinion that it matters but little what sort of grain is fed, only give them enough, and the better the quality of the food the more will they benefit by it. And not only will they feed on farinaceous food, but on animal substances, grease, suet and milk, sugar and molasses too are consumed by them. I have found wheat-screenings, which I procured at the flouring mills, a very good and cheap article for fowls. Corn, if fed alone, should always be cracked, as I have known some cases which proved fatal by swelling and distending the crop to bursting.

But to feed economically, feeding hoppers or boxes should be constructed for that purpose; and the one figured above I have found to answer a good purpose.

It is very simple and easily constructed, as you may readily suppose, when I inform you that I made it myself. The dimensions are as follows: it is four and a half feet long, nine inches wide; end pieces fourteen inches high; the bottom four inches from the ground; a strip of board four inches wide is firmly nailed on the sides, raised two inches above the bottom, forming a manger or trough to prevent waste of food. Another strip three inches wide is nailed on the top in front to secure the ends. Narrow strips may be nailed to the top and bottom, leaving space enough for the fowls to enter their heads when eating. The hopper is formed by two pieces of boards nine inches wide set between the ends, as shown by the dotted lines like a V. They should extend to within half an inch of the bottom and from one to half an inch apart, according to the size of the grain. The top or roof may be the same width of the box, or it may extend over sufficient to protect the fowls from rain when eating. The length may be varied according to the number of fowls kept.

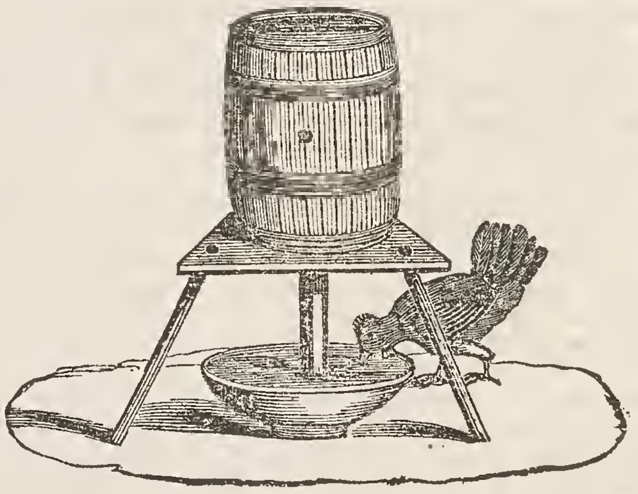
In the feeding of poultry I am convinced it is the best plan to keep feed constantly where they can help themselves whenever they desire it; and when it is kept constantly before them I think they will not consume as much as when fed at intervals from the hand. And for that purpose I would recommend the one described above, which I have had in use for the last six months.

The following is an improved *poultry feeding fountain*, published a few years since in the "Transactions of the Highland Society," in Scotland, and figured and described in "Loudon's Encyclopædia of Agriculture."



Improved Feeding Fountain—(Fig. 43.)

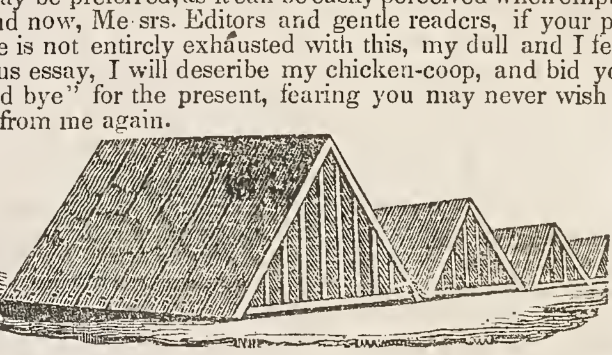
It may be made to contain any quantity of grain required, and none wasted. When once filled it requires no more trouble, as the grain falls into the receiver below as the fowls pick it away; and the covers on that which are opened by the perches, (the principles of which I do not understand,) and the cover on the top protects the grain from the rain, so that the fowls always get it quite dry; and as nothing less than the weight of a hen on the perch can lift the cover on the lower receiver, rats and mice, (which are very troublesome where grain is fed in the ordinary way,) are excluded. It is astonishing, too, with what facility the fowls learn to leap upon the perch, and so open the cover of the receiver, which presents the grain to their view and within their reach. On their leaving the perch or platform, the door, either by a spring or a weight, closes at once.



Water Fountain—(Fig. 44.)

Fowls, like some other bipeds of larger growth, prefer pure, clean water, and where a running stream cannot be had I would recommend a fountain like the figure above, which is nothing but a tight keg set on a three legged stool, with a small tube extending from the bottom to a shallow dish, basin or trough, which should be small, so that the fowls cannot get into it and soil the water. A demijon, carboy or jug may be used for the same purpose, and on some accounts the glass vessel may be preferred, as it can be easily perceived when empty.

And now, Messrs. Editors and gentle readers, if your patience is not entirely exhausted with this, my dull and I fear tedious essay, I will describe my chicken-coop, and bid you "good bye" for the present, fearing you may never wish to hear from me again.



Tent Coop—(Fig. 45.)

This is formed by nailing boards two feet in length, forming two parts of a triangle, like an inverted Λ, the ground forming the third, as I prefer having the fowls next the earth, so that we have only to remove the coop when necessary to cleanse it. It should be at least two feet long; one end may be boarded up tight and the other secured by nailing strips of lath, in the form of grates, leaving sufficient room between each for the free passage of the chicks without admitting the hen. There should be an earthen vessel or wooden trough for water, and a shallow vessel or a board in front to feed them on.

It was my intention to have followed this in the next No. of this paper, with a description of the *varieties* of domestic fowls, but have been relieved by Mr. Gaylord, who has prepared a very interesting, able and excellent article on the subject.

CALEB N. BEMENT.

Management of Bees.

Messrs. Gaylord & Tucker—I propose to prepare a series of short essays on the culture and management of bees, to be published in your valuable paper monthly, or as often as you think best; not to crowd out other matter of more importance. The following subject will be taken as basis on which I intend to predicate my remarks, to wit:

"*The condition and perfection of the brood combs and young broods in a hive of bees determines its success, and its profit to its owner.*"

In the discussion of this position, some hives and their uses may be examined, and bad management corrected, and in the course of the remarks I shall make, a new bee-hive will be proposed, a hive constructed on several entire new principles, differing from any other known, to my knowledge. It may be used as a swarmer, or a non-swarmer, as may be most agreeable to its owner. As it is so constructed that swarms may be divided off in the appropriate season for swarming; young and fruitful queens are raised to replenish and keep perfect the young broods—instead of having the brood combs vacated in consequence of old and barren queens, which is the sure result of all non-swarmers in the course of a few years, with which I am acquainted. I think I shall be able to send you a model next month, with an explanation of its uses. No principle of the Vermont bee-hive will be counteracted in this, nor any conflicting sentiments with those set forth in my manual on bees, will be advanced. In the course of the remarks I shall make, paralyzing bees by the use of fungus, and the practicability of doubling swarms for wintering, will be considered and illustrated. And also removing swarms or hives of bees after they are too old to be profitable by the use of the pruning knife.

As the perfection of the brood combs and young broods in the hives determines its success, the first thing to be attended to in the culture of bees, is, to furnish them with a suitable tenement, that will enable the bees to perform all their peculiar instinctive duties, and at the same time afford the greatest protection from their enemies. And here it should be remarked, that a box placed under a hive of bees affords the greatest possible protection to millers, moth-worms, spiders, and other vermin, inimical to the bees, as it forms a most ready retreat, and most perfect harbor for these insects to conceal themselves from the notice of the bees in the day time; moreover if this box is made in the shape of the roof of a house with the hive resting on the same, I can conceive of no invention that is so well calculated to facilitate the entrance of those night intruders; as the gable ends of the box afford a ready pathway for them when prowling out of their lurking place, and enable them to crawl directly up into the hive among the combs, and there accomplish their pernicious and deadly purposes.

A bee-hive that is designed as a swarmer should hold one and a half bushels, and be made with two apartments, upper and lower, by a horizontal partition, inserted at such a distance from the bottom as to leave a space which will hold one bushel, for the bees to use as a kitchen, as they will use this apartment to perform most of their labors and instinctive offices, by preparing their brood comb and raising the young bees here. In the chamber or upper apartment of the hive may be inserted drawers, globes or other vessels to suit the convenience or fancy of the owner. If rightly managed, pure honey only will be deposited in this apartment, as the bees will dispose of the pollen of flowers, or bee-bread, by storing it in cells in the immediate vicinity of the young, where it is wanted to feed the larvæ. It should here be remarked that a communication from one drawer to another should never be made (unless it is done to evade a patent right) for the labors of the bees are retarded until a sufficient number of bees are hatched to fill both drawers before they can make comb in either, as a perfect uniformity of heat is required to enable bees to make comb, the air in both boxes must be of the same temperature—and the communication will frequently deter the bees from depositing any honey in either. Moreover it will not be surprising if millers should be found on the outside of the boxes in the chamber of the hive.

It is not material in what shape a hive is made, except as a matter of convenience both to the bees and their owner; bees will build their combs in any shape adapted to the space they are made to occupy, in the most economical and best possible manner, to save themselves steps and time. I prefer a wedge form for the lower part of a bee-hive on account of its convenience in wedging the combs to prevent them from falling, and also to enable their owner in passing on their rear, to let down the bottom board so as to examine the interior of the hive without being compelled to disturb the bees by raising up the hive. No objection should be raised against a square hive or even a round one, admitting the bottom board can be suspended and closed at pleasure. As on the management of the bottom board, and other ventilating processes, depends the perfection of the young broods in the hive, in a great degree, this part of the subject will be considered more in detail. The bottom board ventilator, and even a proportion of the hive's mouth, corresponding with the number of bees in the hive, should be kept closed during the spring months, and at all chilly turns of weather during the breeding season, which usually lasts from March to October. There would seem to be an objection to this practice on account of the return of the moths among the combs again after the bees had dropped them down upon the bottom board. But when it is known that at this season of the year a moth worm was never known to make the attempt to return to the combs after he was dragged from the place of his concealment in his armor, his activity and ambition being at once subdued by the action of the atmosphere and rough treatment of the bees, the objection is removed at once, for it is but little trouble, and requires but little time to let down and clean off the bottom board, occasionally, until the hive is so replenished with young bees, as the weather comes in hot, so as to render a chill among the young broods impossible. Then the bottom board may be suspended three eighths of an inch below the edges of the hive, to enable them to keep any web from forming or worms from crawling up into the hive, as they are able to crawl up only in hot weather, at the same time the bees are able to reach this distance and raise themselves upon the edge of the hive; moreover, in hot weather I have seen bees form a rope or ladder, six inches in length, to enable any working bee to ascend upon the combs without being compelled to crawl up the side of the hive.

By the use of the bottom board a perfect ventilation in the draws is formed in hot weather by the buz of the bees in the lower apartments, by forcing more freely, good air, softened by animal heat, through the apertures into the draws, which expels the air that is exhausted of its vitality, (or pent heat) and enables the bees to prosecute their business in the draws to the best possible advantage. (This is what has brought chamber hives into use, and this is what constitutes one point of the letters patent in the Vermont bee hive.)

Truly yours, J. M. WEEKS.

Salisbury, Vt. Feb. 20, 1841.

Produce of Three Acres.

Messrs. Gaylord & Tucker—I will give you the product in bushels and by count, of what grew on three acres and three rods of ground, in the summer of 1840. I will call it three acres, for there were four large apple trees on the land that little or nothing would grow under. I will also state the price that the articles have generally sold for at home or in New-Haven, 14 miles from this. And here let me state that notwithstanding all that has been said against the China tree corn and the extravagant price that it was sold for by the ear, I do think that our friend Thorburn has conferred a favor upon the agricultural community of America, in the article of corn that is worth thousands of dollars.

The three acres were stalk land in the spring of 1840, which produced the year before about 50 bushels of shelled corn to the acre. There was a light sprinkling of manure put on the land, and the rows split running north and south, about 25 rods long, which was all the plowing except where the flax, ruta bagas, and peas grew.

And first, 10 rows of rohan potatoes, product 75 bushels, worth 33 cents per bushel, ········	$24 75
One row of blue kidney, excellent for eating, 8 bushels at 37½, ········	3 00
40 rows of China tree corn, 90 bushels as sound as ever grew, at 62½, ········	56 25
Six bushels of white beans, sold at $1·50, ········	9 00
And here let me state that after my corn came up, and was hoed once, there was so much said against the China tree corn, I began to think I might lose the crop, so that I planted it all over with beans between the hills, and the product was as above stated.	
Five rows of pumpkins of all kinds, shapes, and colors, from the nut shell squash, to 100 pound *loafers*, 200 in number, besides the small ones, principally sold at New-Haven, from 6¼ to 17 cents apiece, call them 8 cents each, ········	16 00
100 cabbages fit for market, besides scores of small ones raised among the pumpkins, at 5 cents each, ··	5 00
Three rows of white flint corn, extra pains taken, dung in hill, no beans, product less than China tree, 6 bushels, at 62½, ········	3 75
Six short rows of broom corn, 28 brooms, worth 10 cents each, ········	2 80
Four bushels of seed, weight over 40 pounds per bushel, worth 37½, ········	1 50
22 hills of melons, used in family, say $1·00, ········	1 00
12 quarts of flax seed sowed the 14th of May, product 3 bushels of perfectly clean seed, worth $1·00 per bushel, and judged to be 100 of flax, that is worth here $12, ········	15 00
Four bushels and 18 quarts of perfect marrowfat green peas, as can be raised in this part of the country, from half a bushel of seed sown the 14th of May. I have sold a part of them at two dollars per bushel, the others will sell in the spring. And here I will observe I think that I lost half the crop of peas by the drouth, they were sowed too late, ········	9 12
125 bushels of ruta baga, sowed in drills 23d of June. On account of the drouth the greater part did not come up under four weeks, worth 25 cents per bushel, ········	31 25
Three large loads of corn fodder, worth for stock three dollars, ········	3 00
	$181 42

Perhaps some of the readers of the Cultivator may think that the prices here put to some of the articles are too high, but it is nothing more than the greater part of them have been sold for already, and the others will be, or fed out to stock. It is true the rohans, ruta bagas, cabbages or pumpkins, are not worth the price here put, to make pork or beef, or at the prices those articles fetch. I have kept no account of the expense of tending those three acres; and I will only say it was well done as every farmer's work ought to be done.

The potatoes and China corn, planted 25th and 27th of April, I should think that one-half of the main stalks of the China corn had two good ears, many three, and frequently four. I can say all ripe, not a soft ear in the piece, and seldom any moldy or swarthy. I have ten bushels of the China ears to sell for seed all gathered two ears from each stalk, no more nor less. And I will challenge any farmer in the state of Connecticut, to produce more bushels of corn, of any kind, or weight, from one acre, than I can next year, life and health spared, and extraordinaries excepted. If any of the readers should think that I am only a gardener, with a few acres of land, and that in the highest state of cultivation, they may know that those three acres are a part of my farm of 175, and in no better state than nearly 100 which is cultivated in wheat, rye, corn, oats, grasses, &c. every year.

You will readily perceive that my occupation is more in holding the plow, than in writing for the public prints. Yours, CLAUDIUS ALLEN.

Cheshire, New-Haven co. Conn. Feb. 14, 1841.

Culture of Indian Corn—Great Crop.

Messrs. Editors—I send you a statement of Mr. Elias Sheldon, as delivered to the committee for awarding premiums on agricultural products, of the Cultural and Mechanic Art Society of Enfield, Somers, Ellington, and East Windsor. S. D. CHAPIN.

"The land on which I raised my crop of Indian corn the season past, had been under cultivation a number of years, and is what is denominated 'old field.' It had the previous year been sown to rye, the stubble of which was turned in sometime in the month of February, 1840. Nothing more was done to the land until about the 1st of May, when I carted upon the piece at the rate of 25 cart loads of manure to the acre, from my barn-yard. It was spread, and the cultivator passed over it so as to cover the manure. The land was furrowed each way with the plow at about three feet distance. The hills were made where the furrows intersected each other. A part of the piece was manured in the hill with well rotted manure, and a part with plaster of Paris. The corn was planted on the 17th day of May last, dropping into each hill four kernels of corn. The corn was carefully hoed twice, and at each hoeing the cultivator was used by passing it between the rows each way. At the second hoeing unleached ashes were dropped about the hills of corn at the rate of half a pint to a hill. The third hoeing was omitted, but the cultivator was used as before by passing each way between the rows. The produce was at the rate of one hundred and ninety bushels of ears of corn weighing forty-five and a half pounds per bushel, and two cart loads of pumpkins per acre. ELIAS SHELDON."

Somers, Conn. Jan. 30, 1841.

Winter Butter.

Messrs. Gaylord & Tucker—There is scarcely one operation of the dairy more important to the farmer, than the manufacture of good butter; and in the winter time, experienced dairy-women are frequently disappointed in their endeavors to procure it.

The plan now used in my family with perfect and invariable success, was adopted from seeing its practical operation in the winter of 1825, in the family of Dr. Jones, of Halifax county, Virginia. Mr. Fessenden published an account of it in the first edition of his "Complete Farmer," in 1834; but having seen many plans recommended in agricultural journals during the present winter for making good butter, of rather an equivocal character to my mind, I feel persuaded that the method now in use by my family would prove a great saving in labor and cream, wherever adopted.

The process is simply this: As soon as your milk is brought in, strain it into tin pans or pails, of a suitable size, and set them upon hot coals, or where convenient, upon a cooking stove, and allow the milk to heat gradually until the temperature is nearly up to boiling heat—from 130° to 150° Fahrenheit will answer. Then set them away and allow them to stand forty-eight hours. By this time the cream will rise in a thick leathery coat, and in quantity and quality that will surprise any one who has never before made the experiment. Take it off and churn it by stirring with a wooden paddle, which is our method, or in any other convenient manner, and the butter will be produced immediately, and of the finest quality and flavor. The cream is perfectly separated from the milk by this method,—perfectly sweet, and there is never any disappointment in the speedy manufacture of the very finest quality of butter; and it gives more butter from the same milk than we have ever been able to obtain in any other way.

Cream may be rendered oily by heating, and butter entirely spoilt in flavor by heat, at a much lower temperature than I have suggested; but new milk will bear heat to any degree short of boiling, without the least injury to the cream which subsequently rises.

It has made my heart ache to see an industrious woman stand three or four hours over a churn, to be rewarded in the end, perhaps, by an indifferent turn-out of ill-looking butter of a doubtful flavor, and I trust I may be excused for urging the trial of this method upon every one who may not already have become familiar with it. The quantity and quality of the butter will be increased, and the labor of producing it most essentially diminished. Respectfully your friend,

WILLIAM S. WAIT.

N. B. For the convenience of heating milk in vessels adapted to that purpose, it may be well to state the fact for the benefit of those who may not already be acquainted with it, that all the cream will rise from milk as speedily and effectually when set away in a deep pan or pail, as in a shallow vessel,—and the process of skimming rendered more easy and convenient.

Greenville. Ill. Feb. 3 1841

The Sugar Beet.

Messrs. Gaylord & Tucker—I have noticed in the late numbers of the Cultivator, Dr. Guthrie's and Mr. Bement's attacks on the sugar beet, insinuating that it is an almost worthless root for the feeding of stock; and as the opinions of these gentlemen, with partial experiments, are directly at variance to those of the most eminent agriculturists of France and Germany, after an experience of more than thirty years, and to those also of many of our own countrymen, after trying it with satisfactory effect about five years; and as I had the honor of appearing in the last May number of the Cultivator, strongly recommending its production and feeding, I feel bound to make some comments on these communications, and reiterate my own experience in the feeding qualities, of what I consider as one of the most valuable of roots.

I am perfectly satisfied by Doct. G.'s statement of the analysis that he made of the beet, vol. viii. page 40, that he was either grossly imposed upon in the purchase of seed, and had grown the mangel wurtzel instead of the white Silesian, or that he had planted it in so rich a vegetable soil, as to produce so rank a growth as to almost totally destroy the saccharine matter that is usually found in it, especially when he adds, that "the beets brought upon our table are totally destitute of sweetness." Now I have not only my own taste for three years in succession, to prove that sugar beets raised in and about Buffalo, are exceedingly *sweet* and nutritious, but can also bring a hundred witnesses any time to corroborate the assertion, from their own daily eating. The famous blood beet cannot compare with the sweet, tender Silesian, and as for mangel wurtzel and other beets, they are almost tasteless after them; and they are never boiled in a pot by themselves, that there is not a sweet syrup left at the bottom, almost of the thickness and agreeable taste of sugar-molasses, which, in my opinion, only wants to be clarified and granulated, to make good sugar. So much for personal taste and experience; now for that of stock. I know that fed raw to cows, they considerably added to the quantity and especially the quality of the milk, making the butter as sweet, and almost as yellow as is produced on fresh summer's grass; they also kept them, with the addition of hay alone, in the best possible order; and the young stock fed on them, together with hay, were as fat and almost as fine and glossy in their coats, as when on the best of summer pasture. I never tried them with horses, but should hardly think them hearty food enough for those at work. Not keeping sheep, of course I could not experiment with them; but others speak very flatteringly on this point, as may be seen from some communications that went the rounds the year past in most of the agricultural papers, copied, I think, from the Philadelphia Cabinet. Beets there were said to produce the best of mutton and the finest of wool.

The most important use, however, that I have made of them is with hogs. But as my breeds embrace only the China and Berkshire, it is in reference to these superior animals alone that I can speak, and here it seems that Doct. Guthrie's Berkshires did tolerably well, while his others almost starved. The first winter I kept my grown swine partly on beets and partly on potatoes, raw; the second winter almost exclusively on raw beets, thrown to them on the ground. I did not notice any difference whatever in their appearance during these two seasons, but each time they were kept in as good flesh as I ever wish to have breeders, and they were by no means allowed to eat their fill of them either. The third winter, (the last) having erected a steaming apparatus, with a new piggery, I commenced cooking the food for my hogs, and have frequently steamed beets alone and fed them to all ages, from the pig two months old up to the grown animal of four years. To the last, I had to stint them to a common water pail half full twice a day, or say from eight to ten quarts, or they would get too fat for breeding, and as to the former, with the addition of a trifling quantity of corn, I never saw animals thrive better, or more contented in my life. They would fill their bellies and lie down in their straw, and dose away for hours together, as contented as puppies and as whist as mice; and this stock thus treated, I am not afraid to show, either for general size or fineness of point, against any thing in the United States, saving my late importation, and that only for great weight, these last being somewhat of a larger class than is usual among Berkshires. During this same winter I steamed a mixture of carrots and potatoes with the beets occasionally, but in feeding I found that as a general rule, the pigs would pick out the beets first, the potatoes second, and only eat the carrots when hungry at the last; but if any one were to ask which I thought the most nutritious, I should say the potato without doubt. My accommodations are too limited, however, to make the careful experiment as to the relative value of roots, bushel for bushel, and again in comparison with grain, as requested by Mr. Caton, of Illinois, but I trust that the above will be satisfactory to him and to others, so far as it goes, for it is experience and not theory. I must say that I do not like this jumping at conclusions from partial experiments. I recollect reading an address some two years ago, by some one in Pennsylvania, before an agricultural society, in which the writer maintained—and he seemed to be an intelligent, scientific man—that ruta baga, by analysis, was but little else than wood, and therefore, as a food for man and beast, it was almost totally worthless. Indeed! And yet this same despised root, together with a little straw, makes most of the English beef and mutton, and in some instances at times one-fourth supports its laboring population. Appropos to this, I recollect once telling an intelligent neighbor that I cultivated pumpkins a good deal, and liked them much as food for swine. "Well," he replied, "they never did anything for my hogs but scour them." The fact was, he had an *inferior breed* of animals. Again, I shut up some Berkshire sows that were quite poor, about three weeks, to put them in condition; they were allowed nothing but pumpkins during this time, and were then turned out, having got really, in that short time, almost too fat for good breeding. An intelligent gentleman who had seen them previous to their being shut up, and then again when they were let out, acknowledged that nothing but seeing the thing with his own eyes would have convinced him of the truth of it, and wound up by adding, (I do not give the words exactly, but the ideas,) "why instead of fatting them, the urine that would have come from common hogs, thus fed, would have made them skeleton poor by this time."—I am no chemist and therefore humbly ask, what would be the analysis of clover? Not much, I fancy, but water. And yet Berkshires, and in fact, all good crosses of the China hog, will keep fat upon it in summer and grow well; and I will conclude this long letter on sugar beets by saying, that if their stock does not thrive upon them, why then gentlemen have been deceived in their seed, or they have not got the right sort of animal to consume the roots.

Like Judge Garnett of Virginia, I have occasionally eat Rohan potatoes; whether I was in my "right senses" or not at the time, I can't say, but this is the conclusion that I came to at the different times I partook of them, that they were only of about a third-rate table quality. Yours, A. B. ALLEN.

My compliments to Mr. Howard of Ohio, with acorrection of his quotation of my opinions of Herefords as expressed in the October number of the Cultivator. I there said that "in *comparison* with these," viz. Messrs. Corning's and Sotham's "all others that I had ever seen had narrow hips, thin loins," &c., not simply that they "were narrow at these points," as he makes me write in his communication in the last January number of the Cultivator.

February, 1841.

The Hessian Fly.

Messrs. Editors—The vast amount of wheat annually destroyed, (or supposed to be,) by the wheat or Hessian fly, as it is called, ought to induce every intelligent cultivator of this best of grain to investigate the subject with more care and attention than they yet have done. As yet opinions as to the cause or a remedy are conflicting and various. Some say that the fly deposites its eggs on the grain in the ear, while standing; there it remains until the grain vegetates; and after the wheat has formed one or two joints, it gets up between the stalk and the leaves and there brings forth the fly. Others say that this fly deposites its eggs in autumn at the first or second joint of the growing wheat; and many believed that if they deferred sowing until after frost, the fly would be dead and the wheat safe, but here they were disappointed, and soon discovered that the spring wheat was also destroyed. Where does the fly winter, or where is it hatched early enough to deposit eggs in the spring wheat long before any are hatched in the winter wheat? Will any of those who believe that the eggs are deposited on the grain, tell us how they get up to the second joint of the wheat between the leaves and the stalk without possessing any power to move, or any apparent animation?

I had not been long engaged in the cultivation of wheat, before my attention was drawn to this subject. I found the eggs that destroy the wheat at the joint, usually the second joint, between the leaves and the stalk. In the earliest stage that I have seen them, they were nearly the size and shape of a small grain of rye, of the same color as the stalk where they were—a pale green, semi-transparent—standing up lengthwise of the stalk, with a minute filament at their lower extremity, as though they had been attached to the joint. In a few days after this, they were white, and after another short period they are brown, hard, and much enlarged, pressing so upon the stalk as effectually to stop its growth. The leaves now receiving more than their usual nourishment, become larger and deeper colored, so that they may easily be distinguished from the other wheat at some distance. Occular demonstration compels us to believe many things that we otherwise would not. After mature reflection on what I have seen and read on this subject, I am induced to believe that the eggs which destroy the wheat, are produced by, and grow in diseased or unhealthy wheat; that this wheat has become diseased or unhealthy by one or more of the following causes. 1st. Bad seed, old, shrunk, or otherwise imperfect. 2d. The ground naturally or otherwise unsuitable. 3d. The weather too warm and moist, or perhaps too much electricity in the air. When the first and second cause prevails, the wheat will be injured only in pieces so circumstanced. When the third cause prevails, whole districts will be injured. I am aware that by many I shall not be considered orthodox in this matter; and they will perhaps smile at the idea of a vegetable producing an animal. They must recollect that the lower order of animals approach in constitution so near to a vegetable, that naturalists cannot agree where to draw the line of separation. Who would believe that a horse hair immersed in water warmed for a short time by a summer sun, would become an animal, having every appearance and motion of a snake, if we had not seen it? Can they believe that an egg is deposited by its parent for each animalculæ that we find swarming in most liquid substances exposed to warm weather? What is an egg but a fortuitous assemblage of organic particles, which, when operated upon by a certain degree of warmth a given time, produces an animal? Mr. Cross produced insects by passing the electro-magnetic current through silicate of potash. I believe there is no better remedy, than to sow only new, sound, and healthy wheat on the most suitable ground prepared in the best manner; use lime, and put your manure on a previous crop.

Morristown, N. J., 1841. R. K. TUTTLE.

The Rohan and Silver Lake Potatoes.

Messrs. Gaylord & Tucker—Frequent communications have appeared in the agricultural papers for the last few months, in relation to the qualities of the Rohan potato. It is doubtless true, that we, as a people, are somewhat prone to be taken up with new things, but I imagine a greater difficulty with many of our farmers, is, an unwillingness to adopt improvements, when they are truly important, solely because they are new. And it appears to me evident, also, that when a single experiment in relation to any new grain or vegetable, does not exactly equal all that the cupidity it may be, of the experimenter expected, the article is at once cried down, and pronounced a cheat, or it is said, "*It is done for a speculation.*"

Now I do not pretend that all that has been said about Rohan potatoes is true—neither do I believe that all that has been said against them is any nearer the truth. In this, as in many other matters, the truth lies between the extremes. I have raised the Rohans for three seasons, and if my experience is worth any thing, it is, that the Rohan is a very productive potato and of very good quality. The first season I planted but a few; the next I planted a bushel, and the yield not far from one hundred bushels. Last season I planted five bushels on an acre of ground, and although the season with us was unfavorable for the soil which was occupied, yet the yield was equal to nearly 400 bushels to the acre, while other varieties in the same field and under the same culture, yielded much less, besides using three times as much seed to the acre.

I fattened my hogs mostly upon these potatoes, occasionally throwing in sugar beets to vary their food—and I venture to say a finer lot of pork or better fattened, was not raised in this region. The hogs were mostly half blooded Berkshires and Chinas—and they did remarkably well—and I have never fattened hogs at so little expense, by at least one-third. Your correspondent, H. D. Grove, speaks of the Merino potato. I have raised them, and I consider the difference in the nutritive qualities very great, and entirely in favor of the Rohans.

I have not used the Rohans much as a table potato, because I have varieties more choice; but I can say, to those who call them "*abominable*," that if their wives understand how to cook potatoes as they ought to be cooked, they will find very many kinds of potatoes which deserve such an appellation rather than the Rohans. My Rohans boil up very mealy and are a solid potato, and remarkably nutritious. I regret very much to see such sweeping denunciations as are contained in some of the communications in your paper. In your February number, S. Guthrie has made a furious attack upon the sugar beet—and it may be the beet deserves all the hard words that are spoken of it—but I believe such kind of communications have a tendency to weaken the confidence of the community in statements which are made in our agricultural journals.

I have another variety of potato, which I procured in Ellington, Conn. two years since, called the *Silver Lake*, which I believe is a better potato than the Mercer or Pinkeye, and is a much better bearer—the yield is full one-third greater than the Mercer. I have a considerable quantity of these potatoes, and if they prove on further trial, as choice as they now appear to be, you may hear from me again. B. P. JOHNSON.

Rome, Oneida county, N. Y. Feb. 23, 1841.

Preservation of Bacon—Wintering Calves.

Messrs. Editors—As the season is rapidly approaching when all good house-wives feel a natural solicitude for the preservation of their bacon, permit me to inform such of your readers as may not be apprised of the fact, that by white-washing their bacon, they can preserve it, perhaps, more economically and effectually, than by adopting any other of the various modes which have been recommended for this purpose. A respectable neighbor of mine has saved his bacon in this way for the last twenty years, without the loss of a single piece. Early in the spring, after his meat is well cured, he gives his bacon a good coat of white-wash, with the common brush, on the fleshy side and on the ends of the hocks, sprinkling a small quantity of fine ashes on the moist white-wash, and hangs it up again in his smoke-house, where it is permitted to remain until it is taken down for use. The process does not injure the meat in the slightest degree. It owes its efficacy, obviously, to the fact that the hard crust it forms over the bacon, prevents the fly from depositing its eggs in it. Any other means, which would exclude the fly from all access to the meat, such as burying it in salt, oats, &c. covering it with canvass bags, plastering it with ashes, &c., would, of course, be equally effectual.

Never wound your meat until you use it, for the fly will be sure to deposit its eggs in the wounds. A friend of mine lost a number of hams last summer, in consequence of his wife's thrusting a knife into them to ascertain their quality.

To preserve meat well, a smoke-house should be roomy, dry, cool, and dark, and yet sufficiently open to permit a free circulation of air, otherwise your bacon will be soft, damp, and rancid. On this account, wooden smoke-houses are greatly preferable to those constructed of brick and stone.

It is a great, yet very prevalent error, to smoke bacon in wet and damp weather ; for by smoking it at such seasons, the "*sweat*" which then collects upon the meat, and which has a peculiarly disgusting taste, is driven into it and dried upon it, and impairs its flavor. Smoke only in dry weather. If your meat is well cured, the only use of smoking in summer time, is to expel the fly from the house.

If any of your readers smack their lips as heartily as I do over a *good old Virginia ham*, that fairly melts in your mouth, they will not fail to observe these plain directions for the preservation of their bacon.

As my sheet is not quite full, I will add a word on another subject.

Passing recently by the farm of a distinguished agriculturist of this county, I espied on one side of the lane, the grim carcasses of a brace of calves, from whose naked skeletons a flock of voracious crows were vainly endeavoring to tear a scanty repast. Now, Messrs. Editors, I beg leave to inquire most respectfully, whether, in your opinion, the most economical mode of carrying those useful animals (carrion crows) through the winter, is, *by feeding them on veal ?* or whether it would not be better policy in our farmers, though not perhaps so patriotic or public spirited, to give their calves a small quantity of bran or meal daily in the fall to put them in order to go through the winter—to sow a patch of rye in August or September, for winter and spring pasture for them—and to house comfortably, and feed well with fine hay and meal in cold and inclement weather ? If our farmers would pursue this course, they would have in the spring vigorous, well grown, thrifty calves, that would soon come to maturity ; instead of a miserable remnant of poor, weak, stinted, lousy skeletons, that are a disgrace to the flock. Take good care of your *young* stock of all kinds ! If you must neglect any, let it be the old and vigorous, rather than the young and tender. CORNELIUS C. BALDWIN.

Rockbridge co. Virginia, March, 1841.

"American Society of Agriculture."

MESSRS. GAYLORD & TUCKER—I have this morning been carefully perusing the communications of Messrs. ROBINSON, GARNETT and GORDON ; all excellent, and beyond my faint praise, and I trust they are not alone ; Mr. Gordon's views are nearly identical with my own, as communicated to Judge BUEL years since, and to you in my last. In regard to a National School, we differ only in details ; to prevent confusion, let all details be omitted for the present, and prepare for a convention, to deliberate on our country's best interests. It would be desirable to have each State and Territory represented, but I would not be particular in following geographical lines, congressional districts, or old obsolete paths ; let the convention come together from a pure regard to the cause ; and to the end that this may be done, and well done, you must reflect that you were early pointed out, after the death of the lamented Buel, to fill his place, (and I know by whom,) and you, following the leadings of Providence, as Mr. Lawrie Todd would say, are now looked up to by the farming interest of this country as their organ and leaders ; I pray you then, rid yourselves of your diffidence, follow the wishes of your friends, charge all miscarriages to them if you will, but let us have the convention coming through your call. Who knows better who to call ? No one. Let it be made general from your paper if you will, or ask advice from one or more of your correspondents in the different sections of our country who will be likely to attend, and promote this great cause, to whom you can send your circulars of invitation, and receive from them answers as pledges of attendance ; and if no more are present than your friends Robinson, Garnett, Gordon, and I know Mr. Ellsworth will be there, with your friend from near Boston, you may expect no injury will be done the cause, but much good may result from *such* a convention. Relying on your aid, I enclose you ten dollars to form a nucleus in defraying the early expenses, and trusting you will be fully sustained in all your doings, save your extreme diffidence, I subscribe myself your friend, NEAR BOSTON.

Cure for Blind Staggers.

EDITORS OF THE CULTIVATOR—Your correspondent R. L. asks,—"Is there no remedy for diseases in swine," and states his loss of a number of valuable hogs by the Blind Staggers. The remedy for that disease is simple, and has been used with great success. I once had 17 shoats taken down in one day with the Blind Staggers. My family supposed they had been poisoned. I secured each one with a rope around his upper jaw, so as to keep his head still, and with a sharp knife made an incision in the forehead about 2 inches in length. I then loosened up the skin on each side of the cut, and filled the place full of fine salt—nothing more. Fourteen out of the 17 were well the next day. I have tried it repeatedly, and always with success, when taken in season. Care should be taken to cut *only* the skin and not let the knife touch the bone. Charcoal is cleansing, and a good preventive, but I apprehend not a powerful remedy. Respectfully yours, WM. THURBER.

Cramton, R. I. March 17, 1841.

Root Steamers, &c.

MESSRS. EDITORS—In the Feb. number of the Cultivator, your correspondent "R." has atempted to make himself a little witty at my expense. Although he is well known to me, he may not be to all the readers of this paper, and I do not approve of these attacks in the dark, and now enter my solemn protest against it. When *names* are called, let the *names of the writers* be given, and not stand behind the curtain and launch forth their *sportive* arrows, regardless of consequences.

I was not aware, until your correspondent "R." informed me, that I was "one of the committee on modern inventions," nor that I had erected a steam boiler on the "*scientific* principle of exposing the least possible surface to the action of the fire, to procure in the smallest space of time and with the least expenditure of fuel, the greatest quantity of steam." Nor do I recollect of ever having recommended "a wooden box and sheet iron bottom" for *steaming* vegetables. But I do recollect of having some private conversation with him on the subject. The one I have had in operation, and the one which I presume he alludes to, was for *boiling* and not for steaming, and answered a very good purpose while it lasted. It was not used during the summer, and when we commenced using it in the fall it leaked so much that I was obliged to abandon it.

I must confess I was not a little surprised that R., abounding as he does in *scientific* knowledge, should ever attempt to raise steam in so frail a vessel as a "wooden box, with a sheet-iron bottom."

The apparatus described by your worthy correspondent, SOLON ROBINSON, Esq. is quite a different thing from the one described by R.

As evidence of what I said in recommendation of Robinson's Steamer, I would beg leave to call your attention to the following, from a letter I lately received from a gentleman who has one in use : "I have," says he, "one of Robinson's Root Steamers in operation and it works admirably well ; the door shuts snug and tight, and requires no weight to hold it, nor is it necessary to raise high to cook potatoes. After the steam raises so that we can see it forcing through the sides of the door, we stop putting in fuel, spread the coals over the bottom, shut the mouth of the furnace tight, and in fifteen minutes they are completely cooked. The only fault I find with this steamer is, it takes too much wood ; still it saves a vast deal of labor, and I prefer it to any other I have seen."

As regards "Mott's Agricultural Furnace and Cauldron," I have only to say, that "a further trial" has confirmed me in my first opinion, and the only objection to the one I have is, that it is too small for my establishment.

In recommending this boiler I had no particular "consideration for the inventor" in view ; nor did I wish to "withhold from the public a knowledge of defects." I found one in Albany and had the privilege of trying it—by paying $21, and I have no doubt but the same privilege would be granted to others, should they make application.

I would beg leave to call the attention of the inventor to the following query by R. "Would it not be an advantage to have the rim of the cauldron so cast as to admit a close cover or a steamer to set close over it ? and why not have points of attachment cast on the boiler so that it may, with a small crane or lever, be raised from the stove, and its contents 'upset' in a 'receiver' ?"

A very similar question is asked by another correspondent as follows : "Now, sir, my object in writing to you, is to inquire whether one of those Agricultural Furnaces (Mott's) with a cauldron that would hold three pails of water would be sufficient to steam fifteen bushels of roots ? the cauldron to have a tight cover and a steam pipe leading into one of Robinson's Steamers, would, I think, be far preferable to either separately."

I approve of the above suggestions and have no doubt of their practicability, and recommend them to the favorable notice of Mr. Mott.

Before closing this long, and to many uninteresting essay, I will remark, that in *my experience*, I have never been successfull in steaming vegetables, and have adopted the "old fashioned way of *boiling* potatoes," and am "best satisfied with it," and if R. has mistook "steaming" for "boiling,"—it is his fault, not mine, and if his disappointment has been great, I can only say, I regret it. CALEB N. BEMENT.

A Challenge.

Butternuts, March 18, 1841.

MESSRS. GAYLORD & TUCKER—I sometimes get a peep at the Cultivator, and am sure to find something good in it, though I am no book farmer, as you may pretty well know by this. The last paper said pretty considerable much about Herefords being good milkers. I am myself an old countryman, but never heard of Hereford cheese or Hereford butter ; but I know a great deal of Welsh butter is eaten in Herefordshire. Now if you think so much of the Herefords for milk, I will go into a fifty dollar sweep-stakes with Mr. SOTHAM, [money in your hands by the 25th of this month,] with a Short Horn pure bred heifer, now under my care, in calf with her first calf, against any other untried heifer of the Hereford breed of pure blood not calved at the time of accepting my challenge. The heifers to be milked at some agreed time for six successive days, and the milk weighed on the spot in presence of our respective friends, twice a day, who will attend at fixed hours for milking ; and the greatest amount of milk given in the 6 days will decide the question.

No rule is without an exception, and there may be one good milker in a herd of Herefords, but if Mr. SOTHAM has confidence in the breed of his cows, let him take a heifer and trust to her blood and good family milking.

I will name to you the heifer *Dahlia*, a red roan *now* in calf to Archer, with her first calf—daughter of Daisy—g. d. Yellow Rose—g. g. d. Arabella. Some of your readers will know those cows, and the heifer is too well known to allow of any mistake being made as to which is the animal.

The heifers to be milked, I should say from the first Monday in June 7th to Saturday night 12th.

Mr. Alexander has a heifer now with her first calf, over a month old, and now gives eleven quarts a day more than her calf than take. If any body doubts, try him with a challenge. If you think me pretty short in my time, it is that, if accepted, it shall be done while Mr. Sotham is as ignorant of my heifer, as I am of his. It is enough that she is an untried heifer in calf with her first calf.

If he accepts my challenge to a sweep-stakes, let him plank the money, and show you and some friend you may take with you, the heifer. Yours, &c., I. MILLER.

March 20.—Dahlia calved this morning. It is before her time ; but I think it won't hurt her, though it is too long a time before the trial ; but I live in a cold country, and we have but little grass till June.

Experiments with Poudrette.

D. K. MINOR, agent of the New-York Poudrette Company, has furnished us a communication on its use, by a gentleman from Pelhamdale, which we are obliged to condense ; merely remarking that we think this manure one of the most valuable kind, and hope the companies preparing it, will receive ample encouragement, as we are sure it is deserved.

J. H. Esq. says—"I consider it superior to any manure I have ever used. On potatoes, the seed and soil being the same, those manured with poudrette came up four days the earliest, maintained their ascendancy throughout the season, and gave the greatest and best product. For corn there is no other manure that can come in competition with it. I planted a fortnight after my neighbors had planted, yet in three weeks my corn was farther advanced than any near me. There was less soft corn than I have ever had in proportion to the quantity of good corn. It was planted about the 28th of May, and cut up and removed the 1st of September. As a top dressing to grass it is invaluable. I had sowed some grass seeds in October ; but in March there was little or none to be seen. I had the ground raked, some poudrette spread lightly over it, and half the usual quantity of clover seed sown on it. The effect was truly astonishing. It was cut in June, and August, and part in October, and remained fresh and green till snow fell. For turneps, I know poudrette to be almost a certain guard against the fly. Mine this year, were as fine as were ever raised in this county, while many about have failed. I put the poudrette on the drill after the turnep seed, the quantity very small, looking like a train of gun powder. For cucumbers and melons, &c., I think poudrette mixed with peat earth the best manure I have tried ; I raised very fine watermelons on sand, with this compost the past season."

To Correspondents.

THOUGH we have used in part a smaller type, and devoted a larger portion of our paper than usual to the favors of our correspondents, we find ourselves unable to insert several, which we had intended to give in this number ; among these are the favors of Mr. WEEMS, Mr. ARMSTRONG, Mr. MORRIS, "L. B." Mr. MARKS, "N. N. D.," Mr. TOMLINSON, SENEX, Mr. DURAND, "M. Y. T." and others, which shall have a place in whole or in part in our next paper. Several other communications are also already filed for insertion as early as possible, among which we may mention those of Mr. SEELY, Mr GARNETT, Mr. TILGHMAN, Mr. BRECK, Mr. CURTIS, Mr. MATHER, Mr. WESTFALL, Mr. NICHOLS, Mr. DIEHL, Mr. STEVENSON, J. F. L., &c.

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THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Notice of Liebig's Organic Chemistry, applied to Agriculture.

It is but comparatively a few years since the opinion that science could do aught for agriculture was scouted by the great mass of mankind. and particularly by those most interested, the farmers themselves. The knowledge requisite for tilling the earth was supposed to come by instinct, or be hereditary, and the idea of improvement in husbandry was considered on a par with the vagaries of Paracelsus, or the seekers for the philosopher's stone. This is the more surprising; since the slightest investigation would have shown there is no pursuit of man where the deductions of science are more useful, or severe and carefully conducted experiments more likely to be amply repaid. The discovery of the bases of the alkalies by Davy, gave a new impulse to the inquiries which had been instituted into vegetable physiology, and that truly great man embodied the mass of facts he had discovered, and the theories deduced from them, in his volume on Agricultural Chemistry. That volume may be said to have opened a new era in the pursuit of Agriculture, showing as it did, that the most important operations of the farmer depended on a combination of physical and chemical causes. Great, however, as was the advance made by Davy, some of his theories were found untenable, some of the practices he recommended unsuitable; still inquiry had been awakened, scientific men had been taught that the application of science to agriculture was practicable and necessary, and the utility of improved processes in tilling the soil made apparent to all who were willing to investigate, or not too proud to be taught. The French, never behind where the discoveries or the applications of science are concerned, soon followed in the path marked out by Davy, and Count Chaptal, one of the ablest men France has produced, published his 'Chemistry applied to Agriculture,' a capital work, and one which is perhaps more generally known than any that has been written on the subject. It is one of the volumes in the excellent series issued in by the Harpers for School Libraries, and ought at least to be found in every school district in the state. Chaptal was aware that his work was imperfect, but the great learning, and unwearied perseverance brought to the task by him, evidently left little to expect, until farther advances in science should give an additional impulse to the chemistry of agriculture. That time seems to have arrived. The vast resources of the German Universities, the patient research so characteristic of the people, the numberless discoveries which have been made in vegetable physiology, and the patronage and influence of the government have all been enlisted in the promotion of agriculture, and to effect this, no pains have been spared to ascertain the laws that govern the germination, nutrition, and consequent growth of plants. The results of these researches have been embodied in the volume, the title of which is placed at the head of this article. Prof. Liebig has given to the public a work to be read and studied; one that commands assent to the positions assumed by the clearness and force of the arguments; and which, if not correct in every particular deduction, will, we are confident, notwithstanding the novelty of some of the positions assumed by him. be found to be sustained in the main by facts and experience.

In the notice we propose to give of Dr. Liebig's volume, we shall endeavor to point out the most prominent features of his system, and as far as possible in his own language, certain that we cannot fill a page or two in a manner more acceptable to the intelligent readers of the Cultivator.

All former writers on the subject of Agriculture, have based their systems on the commonly received opinion, that the nutrition of plants is mostly derived from the vegetable mold, humus, or geine, existing in the soil. From this position Prof. Liebig dissents, and this difference it will be seen is fundamental.

Carbon, water, and ammonia, contain the elements necessary for the growth of plants and animals; the manner of their derivation is the point at issue. The carbon which constitutes the solid part of vegetables, has been attributed to *humus*, with the exception of the supposed small portion ascertained by Priestly, to be derived from the atmosphere in the shape of carbonic gas. The question is thus stated by Liebig:

> "The opinion that the substance called *humus*, is extracted from the soil by the roots of plants, and that the carbon entering into its composition, serves in some form or other to nourish their tissues, is so general and firmly established, that hitherto any new argument in its favor has been considered unnecessary; the obvious difference in the growth of plants, according to the known abundance or scarcity of *humus* in the soil seemed to afford incontestible proofs of its correctness. Yet this position, when submitted to a strict examination, is found to be untenable, and it becomes evident from the most conclusive proofs, *that* HUMUS, *in the form in which it exists in the soil, does not yield the* SMALLEST *nourishment to plants.*"

The arguments used by Liebig, to establish this position, are based on numerous and varied experiments; such as the facts that pure *humus* is very sparingly soluble in water at any time, and if once dried, or even frozen, is perfectly insoluble; that the best mold when treated in water, leaves it colorless, and less than 100,000th part of organic matter is dissolved; that the quantity of *humus* in a forest or meadow is constantly accumulating, although a certain quantity of carbon in the shape of wood or hay is annually taken off; and that if the alkalies, lime, or ashes, fit it for assimilation, the salts so formed are so difficult of solution, that were all the water that falls on a field to be saturated with the *humates*, they would prove entirely inadequate to furnish the carbon of a field of wheat or beets.

Since then the carbon of plants cannot be derived from the soil, it is evident it must be derived from the atmosphere. The woody fibre of plants, partially decayed, is called *humus*, and *mold* is the product of this complete decay of the woody part of plants. Prof. Liebig says:

> "In attempting to explain the origin of carbon in plants, it has never been considered that the question is intimately connected with the origin of humus. It is universally admitted that humus arises from the decay of plants. No primitive humus therefore can have existed, for plants must have preceded the humus. Now, whence did the first vegetables derive their carbon? and in what form is the carbon contained in the atmosphere?"

The conclusion to which Prof. Liebig arrives, is, that plants derive the carbon exclusively from the decomposition of carbonic acid, chiefly and often entirely supplied to them by the atmosphere. Humus or vegetable mold is only valuable as a source of carbonic acid, which it emits very slowly. Humus being the product of vegetable life, there is no more reason to suppose, that admitting it were absorbed by plants, it would aid in their nutrition, than that sugar, starch, and gum, which humus much resembles, should do so; but it is well known that these substances, although they may be absorbed by plants, are never assimilated, or in other words are never available as the food of plants. Prof. Liebig thus describes the office of humus:

> "Humus supplies young plants with nourishment by the roots, until their leaves are matured sufficiently to act as exterior organs of nutrition; its quantity heightens the fertility of a soil, by yielding more nourishment in this first period of growth, and consequently by increasing the number of organs of atmospheric nutrition. Those plants which receive their first food from the substances of their seeds, such as bulbous plants, could completely dispense with humus; its presence is useful only so far as it assists and increases their development, but it is not necessary,—indeed, an excess of it at the commencement of their growth is, in a certain measure, injurious."

Although *humus* is thus divested of the high place usually assigned it in the nutrition of vegetables, still its functions are very important, and we add Prof. Liebig's account of these, illustrating as the extract does, the advantages of deep and thorough tillage:

> "The decay of woody fibre, (the principal constituent of all plants,) is accompanied by a phenomenon of a peculiar kind. This substance, in contact with air or oxygen gas, converts the latter into an equal volume of carbonic acid, and its decay ceases upon the disappearance of the oxygen. If the carbonic acid is removed, and oxygen replaced, its decay recommences, that is, it again converts oxygen into carbonic acid. * * * Humus acts in the same manner in a soil permeable to the air as in the air itself; it is a continued source of carbonic acid, which it emits very slowly. An atmosphere of carbonic acid, formed at the expense of the oxygen of the air, surrounds every particle of decaying humus. The cultivation of land, by tilling and loosening the soil, causes a free and unobstructed access of air. An atmosphere of carbonic acid is therefore contained in every fertile soil, and is the first and most important food for the young plants which grow in it.
>
> "In spring, when those organs of plants are absent, which nature has appointed for the assumption of nourishment from the atmosphere, the component substance of the seeds is exclusively employed in the formation of the roots. Each new radicle fibril which a plant acquires, may be regarded as constituting at the same time a mouth, a lung, and a stomach. The roots perform the functions of the leaves from the first moment of their formation; they extract from the soil their proper nutriment, namely, the carbonic acid generated by the humus.
>
> "By loosening the soil which surrounds young plants, we favor the access of air, and the formation of carbonic acid; and on the other hand, the quantity of their food is diminished by every difficulty which opposes the renewal of air. A plant itself effects this change of air at a certain period of its growth. The carbonic acid, which protects the undecayed humus from further change, is absorbed and taken away by the fine fibres of the roots, and by the roots themselves; this is replaced by atmospheric air, by which process the decay is renewed, and a fresh portion of carbonic acid formed. A plant at this time receives its food, both by the roots and by the organs above ground, and advances rapidly to maturity. * * * *
>
> "*The size of a plant is proportional to the surface of the organs which are destined to convey food to it.* A plant gains another mouth and stomach with every new fibre of root, and every new leaf."

The important practical inferences which may be drawn from these facts, will be apparent to every reflecting mind. The advantages of deep plowing, frequent stirring the surface, application of vegetable matter or manure, and the necessity of perfect seeds, present themselves at once.

Hydrogen is constantly present in the structure of plants, and is the base of the oils, gums, resins, caoutchouc, &c. As plants possess the property of decomposing water, and as there is no other body from which they could derive this substance, the hydrogen doubtless, arises from this source. Nearly all vegetable structures contain hydrogen in the form of water, but the hydrogen which is essential to their constitution and the presence of the products named, cannot exist in them in the state of water, but is prepared by its decomposition. This furnishing a proper supply of hydrogen, is one of the important services which water renders to vegetation.

It has long been known that nitrogen acts a most important part in vegetation, but physiologists have not been agreed as to the manner in which it is furnished, or the source of the supply. In unravelling these mysteries, or in answering the question, "How, and in what form does nature furnish nitrogen to vegetable albumen and gluten, to fruits and seeds?" Prof. Liebig has been peculiarly happy, and this part of his work may be deemed the most original and luminous of his pages:

> "Plants, as we know, grow perfectly well in pure charcoal, if supplied at the same time with rain water. Rain water can contain nitrogen only in two forms, either as dissolved atmospheric air, or as *ammonia*. * * * There are numerous facts showing, that the formation in plants of substances containing nitrogen, such as gluten, takes place in proportion to the quantity of this element which is conveyed to their roots in the state of ammonia, derived from the putrefaction of animal matter. * * * The nitrogen of putrified animals is contained in the atmosphere as ammonia, in the form of a gas, which is capable of entering into combination with carbonic acid, and of forming a volatile salt. Ammonia in its gaseous form, as well as all its volatile compounds, is of extreme solubility in water. Ammonia, therefore, cannot remain long in the atmosphere, as every shower of rain must condense it, and convey it to the surface of the earth. Hence also rain water must, at all times, contain ammonia, though not always in equal quantity. It must be greater in summer, than in spring or winter, because the intervals of time between the showers are in summer greater; and when several wet days occur, the rain of the first must contain more of it than that of the second. The rain of a thunder shower, after a long protracted drouth, ought for this reason to contain the greatest quantity, which is conveyed to the earth at one time."

We have often noticed the surprising effects produced by thunder storms on vines, such as the *Solanum dulcamara*, in giving a rapid growth, but while the theory of Liebig explains the cause, or at least one of them, we have been inclined to attribute much to the effect of electric agency in the matter, a fact perfectly consistent, as experiments prove that currents of electricity, by increasing the vital activity of plants, prepare them to receive nutrition more rapidly.

The great discovery made by Prof. Liebig, of the existence of ammonia in rain water, when its presence had never been suspected, was one of those happy applications of science to the investigations of causes affecting plants. which can scarcely fail of the best results in explaining many of the operations of tillage. Ammonia may always be detected in snow water. The inferior layers of snow which rest on the ground, always contain greater quantities than that on the surface. "It is worthy of observation, that the ammonia contained in rain and snow water, possesses an offensive smell of perspiration and animal excrements—a fact which leaves no doubt respecting its origin."

Prof. Liebig's volume contains a great number of interesting details on the presence of ammonia in plants, thus proving that it is actually taken up by the roots, and in that form applied by their organs to the production of the azotized matters contained in them. Thus ammonia was obtained from maple sugar, the juice of the birch, the juice of the beet, the products of the distillation of flowers, herbs and roots, and the unripe gelatinous pulp of the peach and almond, contain it in quantities easily appreciable. In short there is scarce a vegetable tissue of any kind free from it.

> "Animal manure," says Prof. Liebig, "as we shall afterwards show, acts only by the formation of ammonia. One hundred parts of wheat, grown on a soil manured with cow-dung, (a manure containing the smallest quantity of nitrogen,) afforded only 11·95 parts of gluten, and 64·34 parts of amylin, or starch; while the same quantity, grown on a soil manured with human urine, yielded the maximum of gluten, namely, 35·1 per cent. * * * The barren soil on the coast of Peru is rendered fertile by means of a manure called *guano*, which is collected from several islands in the South Sea. It is sufficient to add a small quantity of guano to a soil which consists only of sand and clay, in order to procure the richest crop of maize. The soil itself does not contain the smallest particle of organic matter, and the manure employed is formed only of *urate, phosphate, oxalate*, and *carbonate of ammonia*, together with a few earthy salts."

The importance of nitrogen to plants intended for the support of animal life, may be inferred from the fact,

> "That the quantity of food, which animals take for their nourishment, diminishes or increases in the same proportion as it contains more or less of the substances containing nitrogen. A horse may be kept alive by feeding it with potatoes, which contain a very small quantity of nitrogen; but life thus supported is a gradual starvation; the animal increases neither in size nor strength, and sinks under every exertion. The quantity of rice which an Indian eats astonishes the European; but the fact that rice contains less nitrogen than any other grain, at once explains the circumstance."

In practice then, that farmer will be the most successful who manages his manures, or the source of ammonia, in such a way that they will serve as a nutriment to his own crops. A heap of manure lying on the surface of a farm benefits the owner no more than it does his neighbors. The nitrogen escapes as carbonates of ammonia into the atmosphere, and the carbonaceous matter or decayed vegetable part is soon all that is left in its place.

Prof. Liebig's discovery of ammonia in water, has led to a simple yet beautiful explanation of the manner in which gypsum acts on plants. We gave some notice of this in the March No. of the Cultivator. Prof. L. says:

> "The carbonate of ammonia contained in rain water, is decomposed by gypsum in precisely the same manner as in the manufacture of sal ammoniac. Soluble sulphate of ammonia and carbonate of lime are formed, and this salt of ammonia, possessing no volatility, is consequently retained in the soil. All the gypsum gradually disappears, but its action upon the carbonate of ammonia continues as long as a trace of it exists. * * * The action of gypsum or chloride of calcium really consists in their giving a fixed condition to the nitrogen—or ammonia which is brought into the soil, and which is indispensable to the nutrition of plants."

The substances named above as carbonic acid, water, and ammonia, are necessary to the existence of plants, as they contain the elements from which plants are formed; but there are other substances requisite for the formation of certain organs or parts destined for special functions. Plants obtain these substances from inorganic nature; and although in a changed form, the ashes left by incineration contain the salts and earths which are thus useful. There are numerous metallic oxides and phosphates, and alkaline bases, which are thus employed, and on the quantities of these contained in any given soil, the character of its vegetation will depend.

> "All kinds of grasses contain in the outer part of their leaves and stalks a large quantity of silicic acid and potash in the form of silicate of potash. The proportion of this salt does not vary perceptible in corn [grain] fields, because it is conveyed to them again in the form of putrefying straw. But this is not the case in a meadow, and hence we never find a luxuriant crop of grass on sandy or calcareous soils which contain little potash, evidently because one of the constituents indispensable to the growth of the plants is wanting. Soils formed from basalt, graywacke, and porphyry are, *cæteris paribus*, the best for meadow land, on account of the quantity of potash which enters into their composition."

Without alkalies or alkaline bases most plants could not exist, and the roots of plants are constantly engaged in collecting from the rain, those alkalies which have been raised by vaporization from the sea; which according to Prof. Liebig, is the grand reservoir of these substances, and from which they are distributed over the earth by winds and clouds. According to Marcet, sea water contains chloride of sodium, sulphate of soda, chloride of potassium, chloride of magnesia, sulphate of lime, carbonic acid in a proportion 100 times greater than that of the air, and ammonia; "so that the same conditions which sustain living bodies on the land are combined in this medium, in which a whole world of other plants and other animals exist."

It is well known to the farmer, that when gypsum first came into general use, after a few years had passed, the substance was severely condemned as an exhauster of the soil, an opinion now exploded, and which finds no advocates among the intelligent, the exhaustion complained of arising not from the increased crops, but a defective culture. On this point, Prof. Liebig has the following just remarks:

> "But when we increase the crop of grass in a meadow by means of gypsum, we remove a greater quantity of potash with the hay, than can, under ordinary circumstances be restored. Hence it happens, that after the lapse of several years the crop of grass on the meadows manured with gypsum diminish, owing to the deficiency of potash. But if the meadow be strewed from time to time with wood ashes, even with the lixiviated ones which have been used by soapboilers, (in Germany much soap is made from the ashes of wood,) then the grass thrives as luxuriantly as before. The ashes are only the means of restoring the potash."

A fine illustration this, of the cause which render leached ashes so valuable as a manure on the sandy soils of Long-Island or New-Jersey. The addition of the alkali gives rise to the formation of silicates of potash, without which the stems of the grasses, or the cereal plants cannot be formed.

The growth and development of plants is, therefore, depending on the presence of alkaline earths, or alkalies; and the growth will be rapid, and the development perfect in proportion to the existence of the proper quantity. Hence too plants, which require but a small quantity of these substances, will grow and flourish where other plants would perish. Every one is aware, that firs and pines will grow on barren granite or sandy soils, and find potash enough for their use, while oaks will not flourish on such soils. The examination of 10,000 parts of oak wood yield 350 parts of ashes, the same quantity of fir wood only 83 parts. The numerous instances given by Liebig, of the importance of these alkaline metallic oxides on vegetation, show beyond controversy, that their influence has been too much overlooked. It has been thought remarkable by some vegetable physiologists, that those cereal grasses which furnish food for man, should as it were, follow him wherever he goes. The reason is to be found in the fact, that none of our grain plants can produce perfect seeds, or seeds yielding farina, without a greater supply of phosphate of magnesia and ammonia, than can be found in regions where these salts, resulting from organized vitality, are less abundant. It follows that wherever men abound, these plants find their proper food and follow in their train, with the certainty and regularity of the domesticated animals.

The part of Prof. Liebig's volume, devoted to the art of culture, is well worthy the study of the farmer. After a description of the constituents of soils, and the manner of their formation, he goes on to describe the effects of constant culture, where no ameliorating means are used. Prof. L. says:

> "The first colonists of Virginia found a country the soil of which was similar to that mentioned above; [rich in alkalies and humus,] harvests of wheat and tobacco were obtained for a century from one and the same field without the aid of manures, but now whole districts are converted into unfruitful pasture land, which, without manure, produces neither wheat nor tobacco. From every acre of this land there were removed in the space of 100 years 1,200 pounds of alkalies in leaves, grain, and straw; and it became unfruitful because it was deprived of every particle of alkali, which had been reduced to a soluble state, and because that which was rendered soluble again in the space of one year, was not sufficient to satisfy the demands of the plants. Almost all the cultivated land in Europe, is in this condition; fallow is the term applied to land left at rest for further disintegration. It is the greatest possible mistake to suppose that the temporary diminution of fertility in a soil is owing to a loss of humus; it is the mere consequence of the exhaustion of the alkalies."

This view receives a strong confirmation from the culture and crops on the lava soils around Vesuvius, and where after a cropping of more than a thousand years, without any manure being applied, grain crops are still produced with undiminished profusion. This decomposed lava, though containing little humus, is rich in alkalies, and this accounts for the prodigious fertility of the mass. Every farmer is aware that those parts of his fields where black muck, or nearly pure vegetable mold, is in the greatest abundance, usually if not always give the most inferior grain. The straw may be large, but it will want firmness, and the berry will be shrunken and imperfect. "The cause is this,—that the strength of the stalk is due to silicate of potash, and that the grain requires phosphate of magnesia, neither of which substances a soil of humus can afford, since it does not contain them; the plant may indeed become an herb, but will not perfect its fruit or seed."

It has been ascertained that 100 parts of wheat stalks yield 15.5 parts of ashes; the same quantity of barley stalks 8.54; and oats only 4.42 of ashes, which are all of the same composition. It would appear from these facts that upon the same field which will yield only one harvest of wheat, two crops of barley, and three of oats may be raised. There are some plants, such as the *leguminosæ*, (peas, beans, &c.,) and buckwheat, which are remarkable for the small quantity of alkalies they contain, and the first named plant, it is well-known, is successfully used in a rotation of crops, as one which may precede wheat advantageously.

Prof. Liebig is a strenuous advocate for a rotation of crops, and his reasons are based on the theory of *Decandolle*, which he considers as fully established:

> "Decandolle supposes that the roots of plants imbibe soluble matter of every kind from the soil, and thus necessarily absorb a number of substances which are not adapted to the purposes of nutrition, and must subsequently be returned to the soil as excrements. Now, as excrements cannot be assimilated by the plant which rejected them, the more of these matters which the soil contains, the more unfertile must it be for plants of the same species. These excrementitious matters may, however, still be capable of assimilation by another kind of plants, which would thus remove them from the soil, and render it again fertile for the first. And if the plants last grown also expel substances from their roots, which can be appropriated as food by the former, they will improve the soil in two ways."

Macaire Princep established this latter fact, and proved that as some plants assimilate the rejected matter of others, a rotation of crops, founded on the facts so demonstrated, could not be otherwise than beneficial. On this subject, no well informed farmer has now any doubt, and the rotation of roots, grains and grasses has become part of every well arranged system. The experiments of these distinguished men have been verified by others, but for their history we must refer to Prof. Liebig's work itself. This excrementitious matter in time undergoes a change into a substance like humus, or which supplies its place, as a source of carbonic acid. The time to effect this change depends on the composition of the soil, and on its greater or less porosity. It is the quickest on a calcareous soil, for the power of organic excrements to attract oxygen and to purify, is alway increased by alkaline constituents; the change is slowest on heavy soils, such as wet loam, or clay.

No fact is better ascertained than that the fertility of a soil cannot remain unimpaired, unless those substances, of which it from time to time is deprived by cropping, are replaced, and this is effected by manure. It is on this point that Prof. Liebig's work is invaluble. The substances that in plants go to form food for animals, and form flesh by assimilation, are here traced to their original elements; and the substances which in the excrements of the cow and horse exert an influence on vegetation are pointed out, and the extent of that influence estimated. A careful analysis of manures proves there are other substances which will answer the same purpose as animal manures, of which one of the most prominent is ashes, lixiviated or otherwise, and which contain a large portion of phosphates.

> "With every 100 pounds of the lixiviated ashes of the beech which we spread over a soil, we furnish as much phosphates as 460 pounds of fresh human excrements would yield. Again, according to the analysis of *De Saussure*, 100 parts of the ashes of the grain of wheat contain 32 parts of soluble, and 44·5 of insoluble phosphates, in all 76·5 parts. Now the ashes of wheat straw contain 11·5 per cent of the same salts; hence with every 100 pounds of the ashes of the beech, we supply a field with phosphoric acid sufficient for the production of 3,820 pounds of straw, the ashes being calculated at 4·3 per cent; or for 15-18,000 pounds of grain, the ashes of which amount, according to De Saussure, to 1·3 per cent."

Bone manure is still more powerful from this cause. The bones of animals are derived from the hay, straw, &c. which they take as food. Bones contain 55 per cent of the phosphates of lime and magnesia, and hay contains about as much of them as wheat straw, consequently eight pounds of bones contain as much phosphate of lime as 1,000 pounds of hay or wheat straw, and two pounds of it as much as 1,000 pounds of the grain of wheat or oats. The quantity of manure supplied to land with forty pounds of bone dust, is sufficient to furnish three crops of wheat, clover, potatoes, or turneps, with phosphates. Prof. Liebig's work on this point strikingly illustrates the effect which a small quantity of these salts will produce on a soil. It is a matter of indifference in what form the substances taken from a soil are restored to it, whether in excrements, ashes or bones, the effect is much the same. Prof. Liebig, indeed, says:

> "A time will come when fields will be manured with a solution of glass, (silicate of potash,) with the ashes of burnt straw, and with salts of phosphoric acid, prepared in chemical manufactories, exactly as at present medicines are given for fever and goitre."

Prof. Liebig shows that excrements, or dung, have a very variable and relative value. Their power is mainly owing to the nitrogen or ammoniacal salts they produce or contain, and in common dung this quantity is very minute. The nitrogen contained in the fæces of man is greater than in that of animals, but is by no means constant. In that of the inhabitants of towns the amount is greater of this constituent, than in that of those in the country; as in cities more animal matter is used. "The fæces of those who live principally on bread and potatoes are similar in composition and properties to those of animals."

The manure from cattle and horses are most valuable on soils consisting of lime and sand, as such are usually deficient in silicates and phosphates; while their effect is less on soils that are argillaceous or granitic, as these usually contain all the potash that is necessary, or at least a considerable quantity. In such soils, human excrements increase the fertility in a remarkable degree, and it is here that poudrette exercises an almost magical influence. The urine of man and animals contains in its nitrogen a source of the greatest fertility, as from it ammoniacal salts are formed in abundance. The active properties of urine exist in its urea, tree lactic acid, and lactate of ammonia. When urine putrefies. or becomes available to vegetation, the urea is converted into lactate of ammonia, or volatile carbonate of ammonia, one of the most powerful of the fertilizing agents.

The great obstacle in the use of urine as a fertilizer has arisen from the escape of the ammonia, but according to Prof. Liebig, it may be fixed and retained for the use of plants without difficulty.

> "If a field be strewed with gypsum and then with putrified urine, or the drainings of dung-hills, all the carbonate of ammonia will be converted into the sulphate, which will remain in the soil. But there are still simpler means of effecting this purpose; gypsum, chloride of calcium, sulphuric or muriatic acid, and superphosphate of lime, are all substances of very low price, and completely neutralize the urine, converting its ammonia into salts, which possess no volatility. * * * If we strew the floors of our stables with gypsum from time to time, they will lose all their offensive smell, and none of the ammonia which forms can be lost, but will be retained in a condition serviceable as manure."

Pastures act a most important part in returning to the soil a supply of nitrogen in place of that taken away in the hay and grain. In large farms, where each field in rotation is in grazing, the nitrogen is completely replaced, and where the manures made on a farm are carefully returned to the soil, the quantity of this important ingredient must increase every year. When the night soil of cities shall be generally converted into poudrette, as it now is in some places, no nitrogen of consequence will be lost, as the quantities used in the shape of corn and cattle will be returned to the country and made available for new crops and the feeding of new animals. The following extract will show the loss farmers sustain from not attending to these powerful manures:

> "When it is considered that with every pound of ammonia which evaporates, a loss of 60 pounds of corn (grain) is sustained, and that with every pound of urine a pound of wheat might be produced, the indifference with which these liquid excrements are regarded is quite incomprehensible. In most places only the solid excrements, impregnated with the liquid, are used, and the dung-hills containing them are protected neither from evaporation or from the rain. The solid excrements contain the insoluble, the liquid all the soluble phosphates, and the latter contain likewise all the potash which existed as organic salts in the plants consumed by the animals."

Prof. Liebig's work is divided into two parts, the first of which we have now briefly noticed. Some of his principal points of difference from the other writers that have preceded him, or rather those things in which he has advanced beyond them, may be seen in the extracts we have made; but the vast mass of facts he has collected, and the numerous experiments he has conducted and recorded, can only be learned by a reference to the work itself. The second part of the volume is devoted to a description of the chemical changes of organic compounds, and is, as well as the appendix to the first part, rich in facts illustrative of his opinions and his views of the nutrition of plants, and the promotion of vegetation.

The principal things in which Prof. Liebig may claim originality in his system, and they are those which lie at the basis of all agriculture, are the use attributed by him to humus, or rather the divesting this substance of the paramount importance that has been assigned it in vegetation, and the discovery of the manner in which nitrogen or ammonia is furnished to plants, and the consequent explanation of many of those things which have hitherto been so mysterious and inexplicable. His reasons for the rotation of crops, and his arguments to prove the necessity and propriety of such a course of culture, as well as those which refer to the value and application of manures, are such as will be appreciated by the farmer who has paid attention to the operations of nature around him.

It is to be presumed that some of the positions taken by Prof. Liebig may require some modification; and on some points he may prove not perfectly correct, but for the manner in which he has taught us how the principal operations of vegetation are performed—and the understanding this constitutes the whole philosophy of agriculture—the farming public are very greatly indebted, and we cannot question its influence will be widely felt. In conclusion we remark that we recommend Prof. Liebig's volume most cordially to the reader, and as an American edition, with notes by a distinguished writer, is in the press, we trust that the views of the learned German may be put to a practical test, by the intelligent agriculturists of our country.

WORK FOR THE MONTH.

Corn.

THE agricultural census of the United States proves, as we had anticipated, that Indian corn is our great bread crop, it reaching the amount of 318,000,000 of bushels; and the crop of the year 1839 was at least 20 per cent less than that of 1840. May is the month for preparing the ground and planting this crop; and from the 1st to the 15th, may be considered the proper time for planting. The ground must be rich, mellow and free from all unnecessary moisture. If inclining to clay, or to be heavy when plowed wet, the greatest care should be used not to have the earth moved while in that state. If you have but a small quantity of manure, you may use it in the hill; but it is better to apply enough to ensure the rapid growth of the crop, and spread it equally over the ground. Too deep plowing between the rows is not advisable, after the roots have begun to spread; but a frequent stirring of the surface will be found very useful. There are almost numberless varieties of Indian corn, known by local appellations, or marked by some difference in color, &c. Of these, the Dutton, Brown, Canadian, Red Blaze, are the most celebrated at the north, while some of the varieties of the gourd seed are usually depended on for the great crop of the south and west. The distance in planting the rows, depends on the size of the corn, richness of the soil, &c.; and the number of stalks in a hill must be governed by the same rules. The greatest quantity can be grown in drills, but corn can be cultivated easier by planting so that the cultivator can be run both ways between the rows.

Potatoes.

Potatoes may be planted from the time the ground becomes dry until June; but the late crops will not ripen as well as the earlier ones, or produce as good table potatoes. A moist soil, with abundance of vegetable mold, is the best for potatoes. If the ground is inclining to be wet, they may be planted on ridges; if to be dry, this root will do the best in furrows. For the table, the Pink Eye, Mercer and Foxite are highly esteemed; for field culture, or for animals, the Sardinia, Long Red, Merino and the Rohan, are most valued. The Rohan requires the whole season to mature, but is very productive and easily gathered.

Animals.

More animals die in the months of April and May, than in any or perhaps all the other months of the year. It is a sign that a man has little corn for his pigs, no clover, hay or turneps for his sheep, no carrots or oil cake, or ship stuff for his cows, or cob meal and cut straw, oats and cut hay for his horses, when the crows begin to collect for their carrion feast in the fields, and the fences and apple-trees are decorated with dead lambs, sucking pigs, &c. &c. Don't let your animals into your fields too early; and not into your meadows at all, unless you wish to have the roots of the grasses spoiled by treading, or killed by close grazing. Men rarely lose any thing by extra attention to their animals at this trying season of the year; and attention to their wants now, is always amply repaid at a later period.

Manures.

The cardinal point to be observed in the management of manures, is to apply them in that state, and to those crops which are the most benefited by their application. When manures are left in the yards over the summer, and exposed to the action of sun and rain, they are deprived of much of their value. The most efficient parts pass away and are lost to the farm. If manures are not applied to the spring crops of corn and roots, they should be heaped with layers of earth, vegetable mold, marsh mud, wash of roads and with some lime, that the salts and gases produced, may be absorbed and retained. In this way, the value of yard manures is much increased, and the quantity augmented. The experiments of Chaptal and Liebig, prove that the mere vegetable mold left by the decomposition of plants or manure in the open air, possesses little value compared with that in which all the salts and fertilizing ingredients are retained.

A short time since, a committee of the French Institute was appointed to examine the nature and effects of a new manure, represented as of extraordinary power. It was found to be composed of Gypsum, saturated with urine, the mass then dried and pulverized, and applied to plants in the form of a powder. It was pronounced the most effective of a large variety of the animalized manures, so much so indeed that the committee recommended great caution in its use. A small quantity applied to corn, garden plants, &c. gave a most rapid and vigorous growth. Would it not be well for our farmers to make some experiments with this material? It is certainly within the power of all. We hope that poudrette and bone manure will also be fairly tried; on these points we should be negligent no longer.

Fruit Trees.

May is the time to examine your fruit trees particularly. Look at your plumbs and cherries, and if you can detect the black excrescences upon them which are so common, and which threaten to destroy these delicious fruits, see that every infected branch is eradicated without ceremony. This course has been successful in some nurseries and orchards, and will doubtless be in others, if thoroughly adopted. There are some apple trees in almost every orchard that are shy bearers, and while thrifty and vigorous, will not produce a bushel of fruit in a dozen years. Let such trees be marked for grafting. Trees may be transplanted this month, if proper care is used to remove a sufficient quantity of earth with their roots. Do not put your trees into narrow deep holes, dug in a hard soil, but let the holes be large and shallow rather than otherwise, and be careful that the tree in setting out is not covered but a very little higher with earth than as it naturally stood. Neglect of this point, not unfrequently inflicts serious injuries on trees, and prevents their thrift or productiveness.

New Things.

Do not run crazy after new things. There is a great deal of charlatanry in the world; and cattle and sheep, and swine, and new plants, or new varieties, are as capable of being outrageously puffed, as Brandreth's Pills, or Rowland's Kaylidor. Many valuable plants and animals have of late been brought to the notice of the public, and farmers are much indebted to the public spirited men who have been at such pains and expense in importing or improving them. While therefore the farmer should encourage every properly conducted effort to improve the character of our animals, and increase the quantity and quality of our productions, he should examine every claim to improvement carefully, and frown down every attempt at imposition or fraud. Many failures occur in seeds and plants in one part of the country, when the same would succeed well in another. Such are not adapted to the particular soil and climate, and the blame must fall on the want of judgment in undertaking the culture.

The Team.

It is enough to sicken the heart of a man of ordinary feeling, to witness the wretched skeleton animals that are compelled, by dint of flagellation, to perform the labor of the farm, in so many instances. Such treatment of animals is not only cruel but unprofitable. It is certain that one team well kept, will do more work than two half starved ones, and do it at the time and in the manner it should be done. It is a most injudicious practice to allow working cattle or horses to leave their stalls for the pasture, until the spring work is mainly over. They cannot derive sufficient nutriment from the young grasses, and a taste of the new, makes them eat sparingly of the old, and the result is, they will fall away rapidly

Plaster.

May, in our latitudes, is the best month for sowing gypsum, and it should be improved fully. The use of it on corn, peas, potatoes, and particularly on clover, will amply repay the expense of procuring and sowing. The quantity per acre should be from one to two bushels; although a greater quantity can do no injury. Do not fear reducing your lands by the use of plaster; that was one of the errors of ignorance, and ought not to find any countenance among well informed men. It cannot be too often repeated, that plaster and clover are the grand means of enriching and fertilizing land.

Caterpillars.

Examine your fruit trees and orchards carefully this month, as you will be able to detect the appearance of worms, or webs, more readily now than at a later time, and when attacked early, an orchard may be soon cleared of the caterpillar. A long slender rod with a swab of tow or cloth around the end, will at this time wind up both web and worms, if applied in the morning when the insects are in their nests, and no injurious applications to the trees, such as are sometimes recommended, will be necessary.

Pruning.

It is the custom among farmers to do the pruning of their orchards at such times as is most convenient, or as they have been taught to do, without reference to vegetable physiology, or the best methods pointed out by nature. Some prune in the winter, many in this month, and perhaps May is as good a time as any, the summer months excepted. We think that July, or rather the interval that takes place between the formation of the flower and fruit shoots or buds, and that of the terminal shoots or buds, a period that lasts some three weeks, is the best time for pruning, and we advise those of our friends who have this work to do, to ascertain by experiment, what time gives the most healthy and vigorous wood for covering the wounds necessarily made in pruning.

Harrowing Meadows.

Meadows, where they have not been subjected to an occasional plowing and cropping, are apt to become exhausted of good grasses, the ground close and hard, and the roots mossy. A dressing of ashes or plaster will do much good, but a thorough harrowing with a fine toothed harrow, will materially aid such dressing and give a sweeter, better herbage. Previous to the harrowing, grass seeds of the best kind should be sown, which will be covered by the process, and a new healthy crop will be the result. The experiments of Liebig, in ascertaining the effects or necessity of alkalies in the formation of grasses are interesting, and show conclusively the loss those sustain who sell their ashes, or allow their leached ones to remain without use, when their fields would by them be so much benefited.

The Garden.

THERE is very much work to be done in the garden the present month. All the vegetables we intend to cultivate, the seeds of which are not already in the ground, must be put in as fast as the soil is warm enough for their reception. There is little use in planting when the ground is cold and wet; the plants will be more vigorous and arrive at maturity in favorable states of planting, if the putting into the earth is delayed a week or fortnight, as soon as they would if put in, when the soil was unfit as much earlier. Let the ground be rich, loose, dry, and warm, and there is little to fear for the garden.

Corn for the table, must have a place in every kitchen garden, and if planted in drills and properly managed, a few rows of the early, the common, and the sweet varieties, will furnish a supply for a long while. It must be planted as soon as the danger of frost is passed, as it has no enemy to fear but cold.

Melons and cucumbers are cultivated in hills, the first five or six, and the last four feet apart. Bridgman directs to have a rich piece of ground worked the first week in May, mark it into squares of the distance intended for the hills, at every angle of the square dig a hole twelve inches deep and eighteen over, into which put six inches deep of good rotten dung; put on this four inches of good earth and mix well with the spade; draw more earth over the mixture and form a circular hill a foot broad. Of cucumbers, plant four or five seeds half an inch deep, and of melons six or seven at the same depth. We prefer putting more seeds in a hill, and after the plants are well up, selecting the best placed and most vigorous for the crop. The yellow bug is the worst enemy the cucumber and melon is obliged to encounter, and a crop of these plants as well as squashes, will be frequently destroyed in a few hours. Constant attention at such times is required; but we have found a hen with a good brood of chickens, enclosed in a coop and placed in the garden, one of the best preventives for these and similar depredators.

Beans, both the bush and the pole beans, require a rich light soil, and may be planted either in hills or in drills. Pole beans are best in hills, four or five beans in a hill, and the pole placed in the centre with the aid of an iron bar. Beans are very tender and cannot be planted with safety early, as the crop in that case is very liable to be destroyed. The White Lima, Dutch case knife, and White Cranberry, are the most esteemed pole beans; and the White Cranberry Dwarf, White Kidney Drawf, Refugee or Thousand to one, and Early Six Weeks, among the best bush beans.

Squashes should be planted in hills as directed for melons or cucumbers, and should find a place in every kitchen garden. The early Bush Squash, Vegetable Marrow, Cocoanut and Crookneck are the kinds most generally cultivated. The Summer Squash may be planted some four feet apart, the running kinds from six to nine, as is required by the length of vine. As in the case of the melon and cucumber, several seeds should be put in each, of which all but three or four may be pulled up.

The Strawberry should have a place in every garden, as the fruit is not more delicious than conducive to health. A soil of strong rich loam, rather moist than dry, is best for this berry, as the mass of foliage and flowers from each root requires a plentiful supply of water. May is a very good month for making strawberry beds, and if the transplanting is well done, and the plants watered as required, many of the roots will produce fruit the same season, and give an abundant supply the next. The culture of the strawberry in rows gives the best fruit, and frequent renewal is advantageous. The principal care in growing the strawberry, is to clear the plants of the runners, for these, if suffered to remain, soon give such a mass of vegetation, that but little fruit, and that of an inferior quality, can only be expected. The Methven Scarlet, Pine or Mulberry, Downton, and Keen's Seedling, are choice varieties, but new kinds are almost yearly announced, some of which have proved of great excellence.

May is a good month for transplanting cabbages from their seed beds to the place where they are to stand. A moist cloudy day is to be chosen for transplanting, but if the roots are good, and the soil in good condition, few failures will occur in any state of the weather. Cabbages are frequently planted too close to mature their heads; and if set out too early, those intended for fall and winter use, will have a kind of second growth from the head, cracking it open and rendering it unfit for use.

The Tomato has within a few years acquired much celebrity as a garden vegetable, and to most palates it is as delicious, as it certainly is conducive to health. The Tomato is a tender plant, and should be started in a forcing frame, but if planted as early as the season will admit in a warm border, or in rich warm soil in the garden, they will generally reach maturity. Those who have not hitherto cultivated this plant, will do well to introduce it into their gardens.

Spinach is an excellent garden plant, particularly the New-Zealand variety, and may be sown early. This plant is apt to degenerate, and instead of giving large perfect leaves, as it will when of good quality, only run up to seed, and be of little value.

The Beet is generally cultivated and well deserves to be, but it should be sown at different times, and varieties of the late and early kinds should be carefully selected. If the beet intended for winter use is sown early, it frequently attains its maturity, undergoes a change that unfits it for eating; it is found to contain more potash than sugar, and throws up a seed stem that renders the root fibrous and worthless. The white Siberian or sugar beet is an excellent variety if not grown in too rich ground: but for general use, and on all soils perhaps the blood beet or scarcity should have the preference.

The first sowings of beets, carrots, parsneps, &c. are large enough this month to require thinning, and the earth should be stirred around them to aid their growth. Much is depending on the attention these plants, with onions, lettuces, and indeed garden vegetables generally, receive when young. The earth must not become crusty or hard, but kept friable, as on this its aeration depends.

May is not unfrequently a trying month for young plants, on account of drouth, and if this occurs they must receive proper watering, or they will be severely checked if not destroyed. The cucumber and melon are apt to suffer from this cause, as they have only one set of roots, while the squash, &c. throw down roots at little distances from their vines and derive more abundant supplies of moisture.

Transmutation.

The materials seem to be rapidly accumulating for a new chapter in the "Progress of Error," so far as regards the subject of transmutation. The belief is an old one that rye is at times transmuted into chess, and the same opinion has been at different times entertained of wheat and oats; and is still, so far as wheat is concerned, by many. Within the past year, several new discoveries have been made in transmutation, and several plants have been added to the catalogue, as undergoing such conversion. The Maine Cultivator, (a very good paper by the way,) has been the medium through which most of the late discoveries have been made known; for instance the case in which a distinguished physician of Maine states as a fact within his own knowledge, in which a field of barley, partly eaten off by cattle, in all such places *turned to oats!*—that in which Mr. Smiley, from the excrescences or buds on the stalk of the annual summer flower, the Gilliflower, grew a large quantity of *first rate potatoes*; and those in which Dr. Parker of Billerica produced from the seeds of the water Arum or *Calla palustris* of botanists, the *true tiger lilly*, and from the seeds of the Peony, *true yellow lillies*. (See the Maine Cultivator of Dec. 5, 1840.)

But the honor of heralding all the new transformations cannot be claimed by Americans. We learn from the Q. J. of Agriculture, that some farmers in Forfarshire in Scotland, have converted smut balls from wheat into chess; and the following from the "Comptes Reuder" of August 1839, shows that the French have not been laggards in the matter.

"Some botanists have thought in consequence of the extreme resemblance of the fruit of the Ægilops to the grains of cultivated wheat, that the latter was only an Ægilops modified by cultivation. M. Auguste de St. Hiliare says, "from a letter from M. Frederic de Girard of Montpelier, that M. Esprit Fabre having found in the environs of Adge, some plants of the *Ægilops triticoides*, had sown the seeds of them in his garden, and had obtained a plant in which the characters of the *Ægilops* had almost disappeared to make way for those of a *triticum*, or wheat. It is not yet altogether a *triticum*, but it is no more an *Ægilops*. M. Fabre proposes to sow next year, some grains collected this year, (1839,) and to continue the observation he has begun."

In the transmutation of grain thus far, the progress has always been backward, or from good to that which is worse; M. Fabre seems to us to be nearer the right track, and we hope if any more discoveries are to be announced in the transmutation of plants, they will be of the Fabre kind, or the change be from bad to good.

Correspondence, Inquiries, &c.

Plaster on Wheat.

A "Subscriber" in Gorham, Ontario Co. asks the following questions:—"Does or does not plaster when sowed with clover seed upon wheat in the spring, have a tendency to make the crop (wheat) *rust*, thereby causing the destruction of the grain, according to the severity of the rust? If so, what plan is best to adopt, instead of plaster so as to give as rapid a growth to the clover ley, to render it fit for plastering after harvest?"

We very much question whether plaster ever produces on wheat the effect supposed by our correspondent. In an experience of 20 years, we have never known an instance unquestionably traceable to this cause, of rust in wheat. Rust will sometimes attack plastered wheat, and so it will in such seasons that which has not been plastered. A neighbor of ours whose crop annually is from 8 to 12 hundred bushels of wheat, has always plastered his wheat, and has never perceived any such injurious results. For keeping up the fertility of his wheat lands, he relies on plaster and clover altogether, and an increasing productiveness after a trial of 25 years, shows he has not miscalculated the efficiency of this mode.

If plaster operates in producing rust at all, it must be by giving too rapid a growth; and there is reason to believe, that any fertilizing substance which would give the growth of clover that plaster does, would also still more injuriously affect the wheat crop. The concentrated animal manures, such as Poudrette, or Urate, if applied in large quantities directly to the wheat crop, is found to give too much straw, and an inferior grain; of course we know of no manure that would give the same growth to the clover, that would not be far more likely to injure the wheat than plaster.

The subject mentioned by "Subscriber," is, however, a very important one, and we should be pleased to hear the opinions of some of our experienced correspondents, who have so extensively practiced sowing plaster and clover with their wheat

Corn Culture.

Our correspondent "L." of Maryland, in controverting the opinion of Judge Buel, that deep plowing corn in the after culture of the plant was injurious, transmits the following quotation from Cobbett. "But why need this be said in an Indian corn country, when it is well known, that without being *plowed* between the rows, the corn will produce next to nothing. It may appear, that, to dig thus among growing plants, is to cut or tear off their roots, of which the ground is full. This is really the case, and this does great good, for the roots thus cut asunder, shoot again from the plant side, find new food, and send instantly fresh vigor to the plant. The effect of this tillage is surprising. We are hardly aware of its power in producing vegetation; and we are still less aware of the distance to which the roots of plants extend in every direction."

We were aware of this opinion of Cobbett's, but have been inclined to attribute the good effect of tillage on corn, not to the tearing of the roots, or the mutilation of the plant, but to the aeration or exposure to the atmosphere, which frequent stirring of the soil produces, and which has the best effect on plants. One of the largest crops of corn ever raised in the United States, was grown last year by Mr. Williams of Bourbon, Co. Ky. and the culture was from the beginning intended to bear on this question, the surface only being moved in the shallowest manner, and no plow used to disturb the roots. The crop was 158 bushels to the acre. Let the ground on which corn is planted be light and friable, rich, and plowed in the first place so that the roots can penetrate without difficulty, and we think there is no benefit in tearing the roots by deep plowing. The cultivator will loosen the earth, and pulverize it better than the plow, and does not touch the roots.

The error of not working corn in a drouth for fear of 'firing' it, is not as common at the north now as it formerly was. The man who lets his weeds stand, to shade his crops and save them from drouth, and he who refuses to stir the surface at such time for the same reason, acts on principles equally and alike unsound and unphilosophical.

Tobacco—Imposts.

We have received two communications from "Agricola," and "Subscriber," on the paper inserted in our March number, respecting the Tobacco trade of this country. We are not disposed to differ with Subscriber as to the worthlessness of the weed in itself, and religiously eschew it in all its forms; so we do not consider ourselves called upon to controvert his positions, and shall rejoice if the reform of which he speaks shall be as complete as he seems to anticipate.

"Agricola" is strenuously anti-tariff, and for that reason we should like to give his paper a place in the Cultivator; but our journal was not established for such discussions, and the file of communications before us on agricultural topics, forcibly reminds us that other subjects than political economy, require all our space. One word only to our friend. The treasury of the nation must be replenished by direct taxation, or by impost duties. We prefer the latter; as we are confident a majority of the people of this country do; and we are anxious that the scale should be so graduated as to do equal and exact justice to all foreign nations as far as is possible. The articles this country cannot produce, but which are of prime necessity to the mass of the people, should feel duties the lightest; articles of luxury, things required by the rich and the affluent, and not required or accessible to the many, should feel them the heaviest.

Management of Bees.

We have received from Mr. Quimby, of Coxsackie, an article on the management of Bees, from which we make the following extracts:—"In the January number of the present volume, an inquirer asks if there is any way of preventing more than one hive swarming at a time? My experience would lead me to answer there is. It is only the first swarm from a hive that should be kept separate. These seldom or never leave the hive without first appearing outside the entrance in great numbers, apparently in a tumult, a few minutes previous to swarming. The apiarian, if he is observant, will soon learn when to expect a swarm. When one has started, and there are indications of another before the first is hived, they should be well sprinkled with water from a watering pot, or some other way. They will immediately re-enter the hive to avoid the supposed shower. In about thirty minutes they will try it again, which will give time to secure the first. If they should be disposed still to unite with the first, throw a sheet over the hive to keep them out."

Mr. Quimby adds the following query, which we hope some experienced apiarian will answer through our columns, as others have suffered loss from the same cause:—"I have had several hives in which the young brood appeared fatally diseased. The breeding cells were nearly filled with the young bees in the grub state, stretched at full length in the cells, dead and putrified; the cells are sealed. In this unhealthy state, so few are hatched, that the numbers rapidly decrease, and are soon gone, unless transferred to another hive by driving them out, the only remedy I have yet found. In this I have been successful when done in season, in rearing a healthy swarm, yet the loss is considerable, as they do not swarm that year. Large and small hives are equally affected. I wish to learn the cause of this fatality, and the means of preventing it."

South Downs and Leicesters in Ohio.

Mr. L. Barker, of Monroe, Knox County, Ohio, gives a favorable account of the progress of agriculture in that part of the State, and says "he can show as good Leicesters and South Downs as ever came from England; and as fine Berkshires as any of the New-Yorkers are able to do." When farmers begin to prefer and keep the best animals, it is a sign they are beginning to understand and attend to their true interests.

Feeding Milch Cows.

In reply to an inquiry in the Cultivator as to the *best* and *cheapest* manner of feeding milch cows, Mr. J. A. Grimes, of Harrodsburgh, Kentucky, gives the following method as practiced by him. We would add, there are few substances more nourishing than corn fodder, and the large stalks, that are usually lost, if treated in the way recommended by Mr. G., make the best food for cattle or horses:—"We procure in the fall, all the corn shucks we can, as the farmers put little value upon them. When we commence feeding, we have a large kettle in which we can heat water, and a basket holding the quantity we intend for each animal. We then take the shucks to a common cutting box, and cut them as you would hay or oats, and scald them a few minutes in the kettle. Then take them out and sprinkle three quarts of meal to the bushel of cut shucks, and you will have a better feed than three gallons of corn or meal, fix it as you will. When I was last in Mississippi, the corn crop was very short, and I suggested this way of feeding to some of my friends, for feeding mules and horses as well as their milch cows, and before I left, was told the cows had improved very much in the quality as well as the quantity of their milk."

Mr. G. is a most successful breeder of Berkshires, and has sold great numbers of the pure breed, as well as crosses with the Irish and Bedford. Mr. Grimes' stock is represented as one of the first quality, of which there can be little doubt, it having been derived from the best sources.

Inquiries—Apple and Peach Orchard.

A correspondent in Ulster County says :—"I have some 50 or 60 fine thrifty apple trees, but they do not bear ; what process must I use to improve them? I observe something which looks like lice upon them ; if so what will kill them? I should be glad to set out a peach orchard in the spring. What situation is best for it?"

If apple-trees that are thrifty are not inclined to bear, grafting will prove a certain remedy. Pruning is also sometimes useful. Some trees will blossom abundantly and yet bear no fruit ; some experiments would seem to show that in such cases sprinkling the blossoms with plaster has a good effect. Lice on the tree may be removed by whitewashing, or by washing with lye. The peach requires a warm free soil, and a southern exposure. This tree cannot endure a heavy soil, saturated with water ; and if it struggles through a brief existence in such a position, the fruit will be limited in quantity and of inferior quality.

A Tennessean.

A friend of ours in Tennessee, after expressing a wish to make some improvements in his agriculture, and ordering a set of the Cultivator from the beginning, adds, "I assure you, however, I never expect to begin to raise 137 bushels of corn to the acre, or make a yearling hog weigh 300 lbs. If I do I must have but one acre, and but one hog."

We can assure our friend, that although such crops of corn as those he alludes to, are rare at the north ; yet multitudes of hogs from 10 to 12 months old are made to weigh 300 lbs., by our pork growers ; indeed nothing is more common ; and if he will discard the landpikes of which he speaks, and substitute some of the improved breeds, we have not a doubt he will do the same. If our friends in the south west will seed their lands with good grasses, where its growth is practicable, keep more cattle, sheep and swine, adopt a rotation of crops, and depend more on these than on cotton, we think they would be essentially gainers by the exchange.

Indian Corn.

We have received from Dr. Goodsell of Utica, an account of some experiments and trials instituted by him in 1839, to determine the kind of corn best adapted to the latitude of Utica. After examining a great number of kinds, he selected for planting the Tree corn, the Dutton, the Canada White, the White corn, the Massachusetts corn, (yellow,) and the Toronto, or ninety days corn, also yellow. These six varieties were planted in the same field, and at the same time.

The Tree corn did not ripen ; the Dutton was objectionable on account of the size of the cob, which, not drying through, gave a moldy effect to the kernel near the but of the ear ; the Canada White ripened well, and is a good variety ; the White corn gave a good growth but was too late ; the Massachusetts ripened well, but the kernel is not deep and cannot give as much value as the White flint ; the Toronto gave the best ears, was the best filled out ; and in 1840, Dr. Goodsell directed none to be planted but the Toronto. As a proof of the rapidity with which this corn comes forward, the Dr. states that on the first day of July he planted some of this corn in his garden, and before the middle of September, ears were picked for boiling, and early in October, it was cut up and housed. We have the pleasure of acknowledging the receipt of several ears of this variety ; and we understand that Dr. Goodsell could spare a few bushels for seed.

Suggestions about Pigs.

A subscriber who signs himself "*Cheshire*," from Carroll County, Indiana, has made some important suggestions as to the propriety of not losing sight, in the discussions about pigs, and the efforts made to improve the breeds, of the admitted valuable breeds existing in the country, other than Berkshires. We think this point one that should be attended to ; and having no personal interest in any of the breeds ourselves, we are anxious that the interests of the great body of the farmers only should be consulted in the pages of the Cultivator ; and though fully convinced of the excellence of the Berkshires, we shall be gratified in presenting the claims of any of the varieties or breeds named by our correspondent, if brought forward in the manner suggested in the extract. If any of our friends who have the breeds alluded to, will furnish us with the descriptions, and information desired, with correct delineations, we shall take pleasure in presenting them to our readers.

"We in the west need an improved breed of hogs, but we want, (at least such is the impression of many,) a larger and handsomer hog, at least so far as color is concerned, than the Berkshire, to bear witness to the richness of our soil, and the exuberance of our crops. You would both entertain and instruct a great many of your western readers by giving in your paper, historical sketches of the Bedford, Cheshire, Woburn, Russia, and Byfield hog, their distinctive color, shape, time of maturity, average size, and where the breeds in purity could be purchased, with prices, &c., accompanied with illustrations or portraits, that speak far more effectually than pages of description. In this way farmers will be enabled to judge for themselves, as to what breed of hogs is best adapted to their situation and their means."

Profitable Sow.

The following is an extract from a letter written by Mr. J. Reed, of Butler County, Ohio. "As your subscribers are sending you the weight of calves, pigs, and other animals, I will venture to send to you the amount of sales, or the value of the litters of a single sow in my possession. She had the first litter the 6th of July, 1837 ; and in all has had seven. From these seven litters I have sold $1,206 of pigs, and have reserved for myself three choice sows, for which I have been offered $50 each, making in all, $1,356. The sow was sent from Albany by C. N. Bement to Mr. Beach. She is five years old this spring, and will weigh about 500 lbs."

Inquiry—Manure.

I have frequently observed on reading the Cultivator, that you eastern folks estimate manure by the "*cord*." Please to say in a paragraph, what constitutes a *cord of manure. Mauch Chunck, Pa.* L. Lippincott.

The term "*cord*" has been adopted by many farmers to express a given quantity of manure, as more definite than "*load*." This latter word is applied to the quantity carried by a horse cart, wagon, or ox cart, and necessarily expresses a variable quantity ; which is not the case with "cord." A cart or wagon body with side boards, will carry not far from a cord of manure. A "load," in ordinary cases cannot be considered more than half a cord.

"Hamilton's Patent Pit Saw & Slitting Machine."

W. Williamson, Esq., of "Junction, Va.," requests some information as to the value of this invention, and the probability of its success. We will thank any who are acquainted with the subject, for the information desired, as we think, if its performance is as represented, it must be valuable in many parts of the United States.

Charlock, or Wild Mustard.

"A. H. N." of Skaneateles, requests information as to the best mode of separating the seeds of this plant from the false and broken grains remaining after threshing. If fed out to fowls with the grits, they propagate rapidly, and even spread over a farm. If it cannot be separated, no farmer should use it, until it is boiled or ground, to destroy the vitality of the seeds. "A. H. N." says, "a gill of these seeds put in a barrel of new cider, will keep it a long time from turning sour."

Mustard Seed.

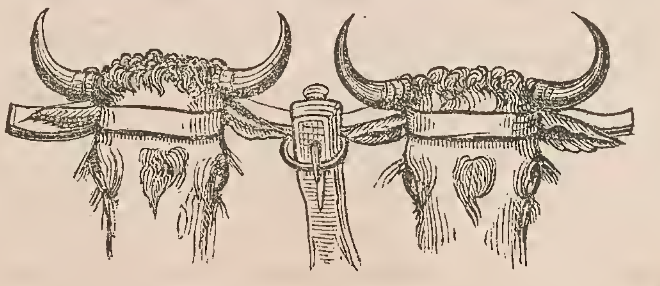
Messrs. French and Davis of this city, mustard manufacturers, inform us that they will pay $3 per bushel for clean English or American mustard seed. The brown American, or yellow English only should be cultivated. The seed of the wild mustard or charlock, is sometimes brought to market, but it is worthless. Would not the cultivation of the mustard as a field crop be profitable? Has it been attempted in this country, and with what success? Will some of our friends reply?

Inquiry—Pumps.

R. P. Dodge, Esq. of Georgetown, has requested to know whether the pump called the Troy pump, and noticed in the former volumes of the Cultivator, will draw from deep wells, or such as are from 45 to 60 feet in depth. If Mr. Dodge will turn to the article alluded to by him, (Cult. vol. 7, page 19,) he will find the following from the agent, H. Warren, Esq. of Troy. "One man will pump quite comfortably, with one of these, forty feet deep, and I do not care selling them *longer* than that ; although I have sold them 75 feet long ; but such pumps go too hard to suit me, especially to send off." Mr. D. will find his inquiries as to prices, &c., answered at the same place.

Working Cattle.

Cattle are among the most valuable animals we possess for farm labor ; and though in our wheat growing districts where extensive summer fallowing is required, horses are of necessity preferred ; yet on a great majority of farms in our country we have no doubt cattle would be found preferable. All who have worked the ox are aware that much of his ability to labor, and the ease of draft is depending on the yoke ; and it seems probable that a decided improvement might be made even in this respect by adopting the mode of yoking cattle practiced by the Dutch and Spaniards, and in which the animals draw by a strap passing across their foreheads as represented in the cut given below.



[Ox Gearing—Fig. 46.]

Our attention has been drawn to the subject by some notices which have appeared in the European Journals in favor of this mode of harnessing cattle, and by the following communication on the subject from our respected correspondent, Wm. Bache, Esq., Wellsboro, Pa. Speaking of the Dutch mode of working oxen, he says:—"Thirty years ago, I spent some time in Havanna, and was much surprised at the novelty, as it was to me, of seeing oxen haul by the forehead. Oxen were used entirely in drawing the cargoes to and from the shipping, and I was soon convinced of the superiority of this mode over our own. I will not take upon me at this distance of time, to state the number of barrels of flour, or boxes of sugar they would haul on carts or drays of the most clumsy and unwieldy make ; but I felt satisfied I had never seen such loads drawn by one yoke of cattle in the United States. As the streets of Havanna are very narrow, it is necessary that cattle should be under the nicest management and control. A light rope is passed through the cartilage or gristle of the nose of each ox, which the Spanish carter, (who always rides on his cart) either carries in his hands, or hangs on one of the stakes of his vehicle, and in case a team should become restive or attempt to runaway, a slight pull at the rope brings them instantly under command. I think their method of propelling them forward is better than ours. I never saw a Spaniard belabor an ox with a heavy stick as if he was striking on a wool sack, but he carries a small goad fixed in the end of a long stick or rod, the slightest application of which is found to possess a much more stimulating power than any quantity of blows from a heavier weapon."

E. H. Barnaby, Esq. of Brookfield, N. S., in a communication to the Cultivator, says—"For some years past, I have been in the habit of using oxen more or less, yoked both in the English yoke with bows, and in the Dutch mode with straps, and now find the Dutch mode to be the best. This way of yoking, has the decided advantage over the English yoke ; cattle yoked in this way will haul more, and they will back nearly as much as they will haul, and will travel with greater ease." See page 19 of the Cultivator, vol. 7th.

We can see no good reason why such yokes as here recommended, might not be substituted for the common yoke in working cattle here ; at least a trial might be made, and their comparative merits fairly tested. Innovations on long established usages might be expected to make slow progress, but if they are not only innovations but improvements, they may be expected to succeed in establishing themselves. Let the Dutch yokes be tried.

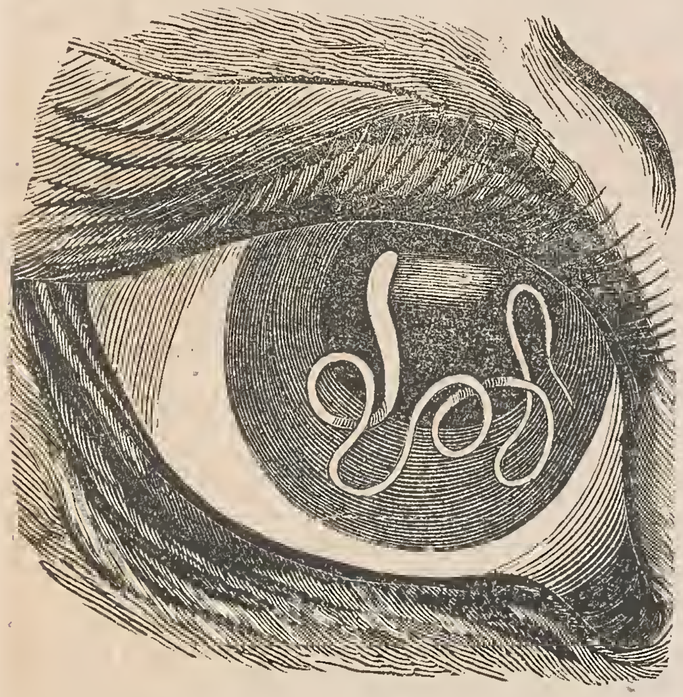
English Berkshires and Bacon.

Wm. Bache, Esq. of Pa., in a paper on the subjects here named, says :—"I think a great deal that has been said or written on the subject of Berkshires, may without any censoriousness be called Hog pedantry and Breeding Quackery. I have known the hog called the Berkshire from my boyhood, and that you may place back at least half a century, and my recollection of them answers precisely to the description, (as pictured and written) of the Berkshires of the present day, except that he never attained any thing like the weight he is now said to reach. They were not the 'Farmer's hog' to make bacon of ; they were the hog of small families, such as kept a pig and lived much as the Irish now do, and were much valued for their quiet habits, and the facility with which they took on flesh at an early age. They were much esteemed for making pickled pork, that is pork scalded, not singed in dressing, and preserved in brine as is now done. They were generally, I may say always, a spotted white and black hog ; black spots on a white ground. The China hog I also well remember, the smallest of all the breeds of hogs, and the fattest. They were kept in many cases as pets, as they were nearly destitute of bristles or hair. There were two kinds, the black and the white, and sometimes black and white, (I suppose from a cross) the colors being in large masses, and not in fine spots as the Berkshires. They were much kept by the hucksters (on account of their great fecundity, and the ease with which they were kept,) for the purpose of supplying the market with roasters.

"The farmer's hog was a large framed, big boned animal, with long lop ears as big as a cabbage leaf, dangling down over his face, and generally two or three years old when they were fed. They were always dressed by singing the hair off with straw, and cut up into halves the whole length, first taking out the spare rib. It was salted in long oval tubs about a foot deep, and long enough to hold the whole side straight, where having lain a sufficient time, it was taken up and hung hock and shoulder, under the joists of the farmer's kitchen ; and many times I have seen a dozen or two suspended under one ceiling in goodly array. It has in this state acquired the honorable title of a *flitch* of bacon. There it hangs and dries, and gets no other smoking, than what it receives from an ill constructed kitchen chimney, which often answers the purpose of smokehouse tolerably well. These flitches are sometimes whitewashed in the summer to preserve them from the flies ; and when the good wife gets up on a chair, with the big butcher's knife, the slices she cuts off are rashers of bacon. So you will see that I think you have partially erred in your definition of 'Bacon.' It may be bacon without being smoked, but not without being dried ; and I doubt whether a right old fashioned English plowman, would consent to call any thing by that name, which had its bristles taken off in any other way than by singing. The farmer who indulged in the luxury of cured hams, hung them up in his capacious chimney, where they generally burned refuse wood, brush, or other matters, and where they were smoked, no house being appropriated for that purpose."

Parasitic Animals.

It is a curious and interesting fact, that there is scarcely an animal from the highest to the lowest; from man, down through the whole series of organized existence to the microscopic infusoriæ, which is not the prey of other creatures, that find in their various organs and tissues a sustenance and a home, where all the changes of animal existence, nutrition, growth, and reproduction are carried on, frequently without the knowledge of the superior. To this class of animals, that live within and draw their subsistence from the bodies of others, the name of Eutozoa has been given, and for the purpose of illustration we have copied from Prof. Silliman's Journal, No. 80, a figure of one of the species which infest that noble animal the horse.



Horse's Eye—(Fig. 47.)

The animal here shown belongs to the *Filaria*, a kind of worm, named from their round, thread-like appearance, and of which many species are known to exist in man and in animals. The worm in the engraving is a representation of one figured and described by Dr. Lee of New-York, as it was to be seen last year in the eye of a horse exhibited in that city. Dr. Lee says, "It was first observed in February last, (1839,) when it was about half an inch in length, since which it has increased so as to measure at present about four inches, resembling a portion of white thread or bobbin, with an enlargement at one extremity of half an inch or more in extent. The animal is confined exclusively to the anterior chamber of the eye. in which it swims with the greatest ease and activity, doubling itself in every direction and performing the most graceful and rapid evolutions." Soon after the worm was discovered, there was some inflammation of the eye, but this had passed away, and the eye when seen by Dr. Lee had as natural and healthy appearance as the other.

In the Transactions of the American Philoshphical Society is an account of a similar worm in the eye of a horse, furnished by John Morgan, M. D.; in this case the worm was white, three inches in length, like fine round bobbin; but instead of being confined to either chamber of the eye, it passed at pleasure and with great rapidity from one to the other, which made it much more difficult of observation than the one exhibited in New-York. The horse's eye was also much swollen and inflamed, and it was with difficulty that the eye could be kept open more than a few seconds at a time. The irritation produced by the passage of the worm over the extremely sensitive ciliary processes is supposed by Dr. Lee to have been the cause of this inflammation.

Singular as this fact of worms existing in the eyes of animals may be, and the cases we have selected here are by no means solitary, it is not this class of worms which are the most common, or of the greatest interest to the farmer. Many of the diseases of man and animals are now satisfactorily traced to these eutozoa, and a short history of some of them cannot fail to be interesting.

1. *Cœnurus cerebralis.*—This parasite is found in the brain of animals, particularly that of sheep, and gives rise to that common and fatal disease called the staggers. It has an elongated, flattish body, and a head furnished with a rostrum, hooks, and suckers. Directions for its extraction may be found in works on the sheep.

2. *Cysticercus.*—Some species of this eutozoa infest the muscular system of man, and have been found in the human eye. They are usually enclosed in a *cyst* or condensed capsule of surrounding substance. These parasites occur in animals, particularly the hog; giving rise to that condition of the muscles called "measly pork."

3. *Diastoma hepaticum.*—This is the fluke worm, found in the gall bladder and ducts of many ruminating animals; and from its being present in the liver in great numbers in the disease of sheep called the rot, it is supposed to be the producing cause of that fatal disorder. This parasite in its shape resembles a melon seed, is hermaphrodite and oviporous. and lives on the biliary secretions of the animal it infests.

4. *Filaria bronchialis.*—This animal is the cause of that distressing and fatal disease in cattle called bronchitis, and causes death by filling the bronchial tubes in such numbers that breathing is impossible. The disease called the Gapes in poultry is also caused by a filaria, (see Cultivator vol. 7, page 116, for an account of this disease and its cure in fowls.) It has been found in the lungs of persons suffering from consumption, and in the lungs of inferior animals when affected as they sometimes are with tubercles.

5. *Tænia solium.*—This is the tape worm of the human body, and frequently attains an enormous length. It is much more common in some countries than in others, though found in all. Those passed, rarely exceed twenty feet in length; but in dissections they have been found extending from the pylorus to the rectum, and then by no means fully stretched out. This is one of the most formidable parasites to which man is subject.

6. *Ascarus lumbricoides.*—This worm occurs in the hog, and the ox, as well as in man, and seems to produce little inconvenience unless occurring in considerable numbers. It is very common in children, and when found in great numbers, as it sometimes is, always indicates serious derangement.

7. *Filaria ovale.*—This is the hair worm found in fishes, found in the liver of some, and the muscular part of others. It is frequently observed in the sun fish of the lakes, in the summer season, rendering them unfit for eating.

8. *Filaria medinensis.*—This is the well known Guinea worm, found in warm climates, "most often seen in the morning dew, sometimes ten or twelve feet long and not thicker than a horse hair." This worm is insinuated under the skin, where it is felt like a tense string or wire, but though sometimes several feet in length, it produces little pain until the skin is perforated. Great care is required to extract this filaria without breaking, and when drawn out, its appearance is like an elastic white thread. It is found in various parts of the body, although most usually in the feet or legs.

9. *Filaria papillosa.*—It is well known that hogs in warm climates are sometimes attacked with a weakness of the loins, which causes them to drag their hind parts after them rather than walk, and frequently proves fatal. This disease is caused by a filaria which multiplies in the muscles of the loins, and causes paralysis of the hind legs. In some instances, where the hog was not too fat, making an incision on both sides of the spine at this part of the back, and making repeated applications of spirits of turpentine to the wounds, has produced a cure. The turpentine probably passes into the muscles sufficiently to reach and destroy the filaria. Horses are sometimes affected in the same way, and from the same cause. In the United States it is uncommon, but may be considered common in India.

10. *Oxyurus.*—This worm which grows to the length of two or three inches, is sometimes found in the lungs of animals, particularly swine, and is doubtless the cause of many casualties in that part of the farmer's stock. Animals in which they are found will sometimes fatten well, and appear to suffer no inconvenience from them; in other cases they form turbercles and evidently cause disease. They somewhat resemble some of the ascari.

The immense number of these parasitic creatures that have been discovered and classified, may be inferred from the fact that about 80 varieties of the *Ascarus* alone are known, and this is by no means one of the most prolific genera. The method of reproduction in some of them is involved in mystery, but some of them are certainly produced from ova, and Prof. Owen of London, the most celebrated comparative anatomist of the age, estimates the number of eggs in one *Ascaris lumbricoides* (the common worm of children,) which he examined, at sixty-four millions.

Perhaps the origin of these parasitic animals is one of the most difficult questions to solve, belonging to animal physiology. Were they only found in the intestinal canal, the opinion of Linnæus that they were taken in with the food or drink, and therefore were terrestrial or aquatic, would seem plausible: but such is not the case, the most secluded parts, as the brain, are infested; and besides if we except some of the filaria, those worms which infest animal bodies, are never found out of them. Writers on this subject are at this time divided into three classes, those who advocate the doctrine of their *spontaneous generation;* those who maintain that these worms, &c. "are produced by some living process or function of the organism, analogous to the secretion, lymph on a serous surface. An organized portion of matter is thus formed, under the influence of the vital principle of the original animal, which is afterwards thrown off, and becomes a separate being, and capable of an independent existence;" and those who attribute the origin and presence of worms, whether intestinal or visceral, in all cases to ova.

The doctrine of spontaneous generation, or that which supposes these animals to arise from an organized portion of the animal in which they are found, will probably find few advocates in this country, as to both there seem indispensable objections arising from the impossibility of there being any limit to the species produced, or any certainty in the order of their appearance, if these theories were true. Besides there has never been a well authenticated case of spontaneous generation, and a reference of any thing to such a cause, can be considered only as an admission that we do not know how else it could be produced. "If this theory were true, it is difficult to explain why the law should be confined to the lower order of animals, and not also extend to the higher. We should expect occasionally to see a man, a quadruped, or a bird, spring up from some dunghill or fermenting vat; but this is a pheaomenon which even Ovid never dreamed of."

The microscopical discoveries of Ehrenberg have done much to elucidate the question of production and propagation of these various animals, proving as he has, that all are provided with organs of reproduction, and in many cases their fecundity and rapidity of multiplying is truly astonishing, thousands if not millions of ova being produced at a time. The old doctrine then, which attributes the origin of all vitality, to an egg or germ, is not likely to be falsified in this case; and it may reasonably be concluded that these creatures that exist in and prey on the higher order of animals, are produced and disseminated in this well known way. The distinguished observer just named maintains that these minute ova can be easily carried by the circulating fluids to every part and tissue of the animal system, but they only fix themselves or propagate in those places to which they are adapted. Thus the *D. hepaticum* is never found except in the gall and bladder, liver, and their ducts; the *F. bronchitis* only in the bronchial passages; the *A. lumbricoides* in the intestines; and the *Trichina spiralis* in the muscular tissue. Those who are acquainted with the writings of some of the most distinguished physiologists, such as Bremer, Blumenbach, and Rodolphi, are aware that numerous instances have occurred in which the existence of worms in the fœtus of man and other animals, and in the intestines of birds just from the shell, was fully proved; and the only rational mode of accounting for their appearance is, that they were derived from the circulation of the parent. It is probable that in this way, viz. by circulation in the blood, the ova of the filaria reached the eye of the horse, where, finding suitable food. it remained until it reached the size shown in the engraving.

Agricultural Census of New-York.

We avail ourselves of the returns of the Agricultural Census of the State, made by the direction of the United States, and lay it before our readers as one of the most interesting statistical tables that has yet appeared. We shall present the table, giving the aggregate of the U. States, as soon as it appears. We may append a few remarks.

Items	*Aggregate.*	*Items.*	*Aggregate.*
Horses and mules,	476,115	Tons of hay,	3,160,916
Neat cattle,	2,202,438	Pounds of cocoons,	2,103
Sheep,	5,381,225	Pounds of sugar,	10,093,991
Swine.	1,916,954	Cords of wood sold,	1,085,048
Poultry of all kinds, estimated value,	$2.373,029	Value of the produce of the dairy,	$10,497,032
Bushels of wheat,	11,853,507	Value of the produce of the orchard,	$1,722,357
Bushels of barley,	2,498,170		
Bushels of oats,	20,728,738	Galls. of wine made,	14,710
Bushels of rye,	2,984,913	Value of home made or family goods,	$16,335,075
Bush. of buckwheat,	2,244,438		
Bush. of Indian corn,	10,085,142	Value of produce of market gardens,	$462,308
Pounds of wool,	14,093,134		
Pounds of hops,	362,762	Value of nurseries and florists,	$76,550
Pounds of wax,	184,021		
Bush. of potatoes,	30,000,508	Number of persons employed,	525
Pounds of tobacco gathered,	6,567	Capital invested,	$258,608

It will be remembered that the census relates to the year 1839, so far as the products of crops are concerned, and that the yield of these in general was much less, particularly in wheat and corn, than in 1840. There are evidently some errors in the report, as printed, such as the number of sheep in Onondaga County, and some minor ones we have noticed; but these may in part be considered incidental to a first attempt, and will not be likely to recur hereafter. To *perfect* accuracy in details, such estimates can make no pretensions; still they furnish a mass of facts most interesting to the statesman and all who take an interest in the progress of the country. From the State census of 1835, it appears that the number of neat cattle was then 1,885,711, giving an increase in five years of 316,727. The number of horses and mules was then 524,895, being a decrease of 108,420. The number of sheep was then 4,261,765, increase 1,126,460. The number of swine then, was 1,554,358, showing an increase of 362,595. It will be seen at once that it would have been very interesting to have been able to have gone through the present table and compare the results; but with the exception of these items, agriculture was entirely left out of the State census. Such an omission we hope will not occur again, and as the United States will probably follow up the system so well commenced, we may hope to be able to review our progress once in five years hereafter, and doubtless with the best results.

Diseased Peach Trees.—A correspondent of the Farmer's Cabinet. who has evidently had some acquaintance with the subject on which he treats, says, "The most effectual remedy for unhealthy trees I have ever seen tried, is to lay bare the immediate roots around the trunk of the tree, and apply plenty of soap suds."

The Morello Cherry.—Such has been the spread of that enemy of the plum and the cherry, the black blight or canker, that these favorite fruits are fast disappearing from some sections of our country. As the carefully cutting out these excrescences from the plum tree, as fast as they show themselves, will preserve that tree, it is probable the same effect would be produced by a similar treatment of the cherry when attacked. Mr. D. W. Neil states in the Frederick (Va.) Herald, that some six years since he removed from a Morello cherry all the black knotty excrescences that had appeared, and by continuing to do so each year since, when they have shown themselves, the tree is still doing well and produces fine fruit.

Original Communications.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

Loretto, Va. March 16, 1841.

Messrs. Gaylord & Tucker—If the only object of my humble efforts to aid our cause, were the approbation of my agricultural brethren, the favorable notices bestowed on these efforts by yourselves and some of your numerous correspondents, would induce me to make no more, lest I should forfeit by future attempts, all the commendation which the past have already procured for me. But much as I confess that such approbation has gratified me, I prefer risking the loss of all I have gained, rather than to be suspected of acting solely, or even chiefly, from so selfish a motive. I shall therefore continue my communications from time to time, or at least so long as you continue to publish them; for *that* circumstance will satisfy me, that you yourselves believe they may contribute something worth a place in your paper, towards promoting the great ends I always have in view, which are, the improvement of American Husbandry, and the elevation of our class to its proper rank in society. Once for all, let this suffice for an explanation, (should any be deemed necessary,) of the motives which have induced me so often to write for the Cultivator. A small degree of success will be deemed an ample reward for my trouble; and should I fail, the consciousness of having earnestly and honestly labored in so glorious a cause, will console me for my disappointment.

A few more preliminary remarks shall bring me to the subjects of my present communication.

There are certain duties to ourselves and others, which are very seldom regarded by young persons as matters of any immediate or particular importance; much less as indispensable to the prosperity and welfare of all mankind. Many of these duties apply chiefly to that portion of those devoted to agriculture, as I propose presently to show; premising, however, that the serious consideration of a single fact, ought to convince all who are thus engaged, of the absolute necessity, the paramount obligation to fulfil them. It is, that if we habitually neglect them in early life, we inevitably subject our latter days to very many grievous losses and crosses, for which no remedy whatever can then be found. The acquisition of wealth and respectability—of health of body and peace of mind—of all the conveniences, comforts and enjoyments of life, depends upon our strict and faithful performance of these duties. And although some of them may seem in their enunciation, to be mere prudential and economical precepts, applicable chiefly to our own individual domestic concerns, yet the greater part will be found, upon due consideration, to involve momentous moral obligations. Being now an old man, I can confidently affirm, that I not only believe, but *know*, all which I have said, or shall say of them, to be true to the very letter—having witnessed numerous most distressing instances of whole families reduced to extreme want, by the failure of those upon whom they depended—constantly to inculcate, both by precept and example, the absolute necessity of unceasing obedience to these duties. Most sincerely therefore, do I hope that at least the youthful portion of my agricultural brethren, in whose welfare I feel the deepest interest, will take my word for it, when I solemnly assure them, that the strict and faithful observance, while they are young, of the maxims and precepts to which I am about respectfully to solicit their earnest attention, is the *only thing* that can possibly secure them in old age, from sufferings, for which they may seek, but will never find entire relief on this side the grave. I mean not to affirm that *all* are equally essential, for I speak of them in the aggregate. But if my young friends postpone the adoption of the most important of these salutary rules of conduct, as is too commonly the case, until their own bitter, dear-bought experience forces upon them the full conviction of their inestimable value, it will then alas! be too late—utterly, irretrievably too late.

Permit me now, to present them for the special consideration of the youthful portion of my readers; and to express the earnest hope, that they will regard them as the offering of one of their most sincere and devoted old friends, who may now, perhaps, be addressing them for the last time.

Maxims and Precepts for Young Farmers.

I.—Regard all persons whose time and labor are wholly at your command, as beings for whose health, comfort, and good conduct in this life, you will be held most fearfully responsible in the life to come.

II.—Never forget that both moral and bodily health depend on the same thing; that is, *temperance* in food, drink, and all sensual indulgences; and *temperance* in the use of means to get rich.

III.—To *wish well*, is not enough; you must also *do well*, or your benevolence, like faith without good works, will be dead and utterly worthless.

IV.—Ever bear in mind, that useful knowledge, and the proper application of it, are to the health of the soul, what wholesome food and appropriate exercise are to the health of the body.

V.—Value as you ought, the experience of others, and your own will cost you far less than without such aid; since to use theirs costs only an effort of memory, whereas the price paid for your own will often be the loss of health, fortune, and character.

VI.—The more you strive to enrich your minds with every good thing which men and books can teach, the greater will be your power to gain wealth, honor, fame, and every rational enjoyment.

VII.—Trust not others to do for you, what you can readily and as well do for yourselves.

VIII.—The farmer who is ashamed of manual labor, will very soon find cause to be much more ashamed of himself.

IX.—If you ever make a business of your pleasures, they will most assuredly soon make an end of your business.

X.—Leave show to spendthrifts and fools, while *you and your families* consult only tasteful simplicity, comfort and usefulness, in all your arrangements and expenses.

XI.—Love not money for its own sake; still less for the power it gives you to gratify selfish and sinful passions. But fail not to regard it as the most efficient means to accomplish all benevolent purposes. You will thus make it a blessing, instead of a curse, both to yourselves and others.

XII.—True economy, consists not so much in *saving* money, as in *spending* it when made, *solely and judiciously* for purposes really useful. This annually increases your profits, instead of diminishing or keeping them stationary.

XIII.—Avoid debt as you would a pestilence, for it humbles, debases, and degrades a man in his own eyes; subjects him to insults and persecutions from others; but still worse, it is a perpetual temptation, however anxiously resisted, to fraud, falsehood and theft—nay, not unfrequently, to despair and self-murder.

XIV.—To take advantage in a bargain, is *virtually* to take money out of another's pocket, who is not aware of it. Worldlings call it "*fair play*," but all honest men call it "*cheating and swindling*."

XV.—The only just means of increasing wealth, are constant industry—true economy of time as well as money—well directed labor, and the regular application of a portion of our fair profits to increase our capital.

XVI.—Never expect your lands to give you *much*, if you give them *little*; nor to make you *rich*, if you make them *poor*. Therefore, always manure them to the full extent of your means, and they will ever make you ample returns in rapidly increasing productions.

XVII.—Economy, not less than humanity, requires you to keep all your farming stock in thriving condition; for a working animal in good order, will do much more work, and eat less than a poor one; while the rest of your stock, *well kept*, will yield more of every thing, than double their number, if half starved, as such animals often are.

XVIII.—To "*save at the spigot, and let out at the bung*," will soon empty the biggest hogshead; so will economy in small matters, and waste in large ones, speedily squander the largest estate.

XIX.—In all your farming operations, never forget that *time*, like *money*, if once lost or mis-spent, is forever past recovery.

XX.—Constantly arrange beforehand, the daily work of your farms. Then none of your laborers need ever be idle in waiting to be told what he has to do.

XXI.—Provide a place for every thing, and misplace nothing. No time will ever then be lost in searching for what you want.

XXII.—Keep double sets of such plantation implements as are most used, and most exposed to wear and tear. The whole cost of extra sets, will be amply repaid by saving the whole time lost in waiting for repairs, where only single sets are kept.

XXIII.—Never resort to what are called "*make shifts*," when it is possible to avoid it; for they encourage carlessness and sloth, of which they are almost always sure signs.

XXIV.—The very reverse of the lawyer's maxim—"*de minimis non curat Lex*,"—the law regards not the smallest matters—must be the farmer's guide, or his largest concerns can never prosper as they might.

XXV.—To keep good gates and fences, saves much time and labor in preventing tresspasses; much loss of crops from depredations; and best of all, it saves much wrangling and ill will among neighbors, about mischievous stock.

XXVI.—If you would excel in your profession, the diligent culture of your mind is as indispensable as that of your fields.

XXVII.—Never commit the self-hurtful folly of looking upon any of the honest trades, professions and callings, as inimical to your own; for there is a natural bond of interest and amity between *the whole*, which cannot possibly be preserved, without the cordial co-operation of *all*.

XXVIII.—Encourage, both by precept and example, the true spirit of Husbandry; for it promotes harmony, good will, and social intercourse among all with whom you deal; it tends to elevate your own class to its proper rank; and above all, it advances the welfare of your country, by promoting the most important of all her great interests.

XXIX.—Never flatter yourselves, as some silly people do, that you know all which can be known, even of the most simple branch of your profession, or you will soon know much less than thousands of your more modest, less assuming brethren. But always act under the firm belief, that there is no ascertainable limit to our acquisitions in any art or science whatever; nor any difficulties which constant, diligent study can not overcome. Your progress, then, towards the highest attainable point in whichever you prefer, will be as sure as fate itself. The accidents and vicissitudes of life may possibly interrupt your course; but *only persevere*, and you will finally conquer, with absolute certainty, all obstacles that are not insuperable.

And now, Messrs. Editors, suffer me in conclusion, to address a few deprecatory remarks to the older class of your readers, lest they should possibly suppose I was vain enough to believe, that there was something new to them in what I have just written. My only purpose was the one first avowed; and that is, to endeavor to render some service to my youthful brethren, upon whose characters and conduct so much of their country's good depends; by imparting for their special use, the results of many years experience and observation. In executing this purpose, it occurred to me that to give these results the form of detached maxims and precepts, would probably be more apt to engage their attention, than if I presented them in the more diffuse, connected style of an essay or lecture. With this explanation I leave them to their fate; but with the confident hope that all will approve the motive which prompted them, whatever some may think of the matter and manner of the author. Yours, with regard.

JAMES M. GARNETT.

P. S.—Your correspondent, Mr. George H Chrisman, has requested to know "the character of the soil and subsoil upon which my experiments were made," with cow-pen manure alternately plowed in, and left on the surface, until the following spring; and it gives me pleasure to give him the required information. The soil was dry, shallow, somewhat light, and of a greyish color, with a large mixture of sand. The subsoil was of a pale yellow color, gradually deepening, but still having a considerable portion of sand, to a depth beyond the reach of any plow. The texture however, of the soil, had it been stiff, would not very materially varied the result, if my conjecture be correct, which is, that the fertilizing principles of all vegeto-animal manure, (unless perhaps it be the gases they contain,) *sink* more or less, as soon as the rain dissolves them; and to a depth, in *all arable soils*, if plowed or spaded in, several months before seed-time, below the roots of any but long, tap-rooted plants. If the power of the sun to exhale these principles, were stronger than that of the soil to absorb, to amalgamate with, and to retain them, *then*, even to bury them by the plow, would not secure them in the earth; for we all know that evaporation is constantly going on, and from a great depth below the surface.

With your permission, I will take this opportunity to say a few words to another of your correspondents—Mr. F. H. Gordon, of Tennessee. In the first place, I beg him to accept my thanks for his favorable opinion of myself and my newspaper labors, and to assure him that it would gratify me much to see at my house, either him, or any other such good friend to Agriculture, as he appears to be. But candor requires me to tell him, (and to my shame be it spoken,) that he would find me to be one of those very numerous volunteer teachers of good doctrines and their application, who are far from always "practicing what they preach." This however, should not invalidate the doctrines themselves, nor the most approved modes of applying them; since if it did, the progress of mankind in any branch of knowledge connected with practical morality, would be infinitely slower than it has ever yet been. Once convinced that a thing is right, we must not wait to do it for the example of our instructors, much as they are in duty bound to give it, but commence the good work, without delay, or we may lose the opportunity altogether.

I concur entirely with Mr. Gordon, in thinking that the best use our government could make of Mr. Smythson's legacy, would be to establish with it a great National School of Agriculture, connected with a National Agricultural Society and Experimental Farm, upon which annual fairs should be held. But I much fear, that if Congress should ever be willing to spare sufficient time from their seemingly endless party quarrels, to attend to a matter apparently of such inferior interest to them, as the appropriation of this most munificent and philanthropic gift, their inquiry after the money will be a "*non est inventur*;" and this I say without any allusion to any person or persons whatever; for I know not what has become of the cash.

In speaking of the means most likely to effect the establishment of a National Society of Agriculture in connection with a great Agricultural School, Mr. Gordon asks:—"Cannot half a dozen such men as Mr. Garnett, induce a few prominent members of Congress to take a prominent stand in favor of the measure?" In reply, I have it in my power to assure him, that *one* "such man," even Mr. Garnett himself, did, during the past session, write to three prominent members of that body, on the subject of a National Agricultural Society. Two of them were members of the lower house, and one of the Senate. From the two M. C.'s he received a letter each, full of kind expressions and as much praise of the scheme as the most sanguine among us could possibly desire; but pronouncing the *times* decidedly unfavorable to its consummation;—ergo, *they* were not the men to attempt it. Of course, I neither wished nor expected they should, contrary to their own opinion. From the prominent Senator alluded to, I received a letter, in which he expresses the liveliest interest in the cause of Agriculture; a strong wish to promote it; and an assurance, that should any meeting be gotten up, at the extra session of Congress, for establishing a National Society of Agriculture, he will give it all the attendance which his official duties will permit. This assurance has inspired me with a degree of hope which was almost extinct; for confident I am, that if such a meeting should take place, *that* Senator's moral influence alone would be almost sure to accomplish its object.

Canada Thistles.

Messrs. Gaylord & Tucker—In the last Cultivator, I find an inquiry as to the best method of destroying Canada thistles; in answer to which, I propose to give to the public through the Cultivator, some part of my experience and practice on the subject. For large pieces, the best method is to plow them several times in the course of the season; this may be done without inconvenience on summer fallows, or fields to be plowed the season following; for small pieces, covering with turf, I have found the most effectual. Cutting with a sythe or hoe, will undoubtedly have the desired effect, but is attended with far more labor than covering, on account of its having to be so often repeated. The main root of the thistle grows in a horizontal direction, with buds at a greater or less distance; each of those buds sending up a thistle. I know not to what length those roots will grow, but I have traced them over thirty feet, and found their appearance very similar the whole length; consequently if we pull up the thistle, unless we break it from the horizontal root, so as to destroy the bud, it will sprout again; or if we cut it with a sythe or hoe, it checks the growth for the time being, and as far as the main root depends on the exposure of the sprouts to the light and air for support, so far that is checked in its growth. Judge Buel compares the leaves of plants to the lungs of animals, and says they are as essential to their existence; if so, it is obvious that the complete destruction of the plant, deprives the root of further nourishment, and the desired object is attained. For small pieces, I use a spade, after the plant is six or eight inches high, and cover thin with turf, repeating it whenever more plants appear that much above the ground. Three operations is generally sufficient with the spade; the plough generally requiring more, as it is not so effectually done. Thistles, before the horizontal roots are formed, may be destroyed by once pulling. Pasturing with sheep for several seasons, will very much reduce the number and size of the thistles, and I once thought I should succeed in clearing a field in that way, but on plowing again, I found some left. Sowing with buckwheat, will diminish them very much, and I believe a succession of such crops would entirely destroy them; my experience however, goes no farther than two years. I do not suppose the crop has any tendency to destroy the thistle, but the season of plowing is the most suitable for their destruction.

The larger the thistle, when plowed under, the more likely to be destroyed. There should be no part of the leaves exposed from which the roots can receive support.

DANIEL S. CURTIS.

Canaan Center, N. Y., March 11, 1841.

"Bulleting."

"A Subscriber," at Connellsville, Pa., who inquires respecting the efficacy of the process called bulleting as practiced in Kentucky as a substitute for spaying, is informed that so far as we have been able to learn, the practice, as with him, has been a failure when attempted in this part of the United States. It is probable that spaying is to be preferred, as not essentially more difficult of operation, and certainly effectual in its results.

Shearing of Sheep.

Messrs. Editors—In the last number of the Cultivator, I served up a partial dish to your readers on the subject of "*tagging and washing of sheep*," with an *expose* of the abuses connected therewith.

It is my intention to be equally practical on the present subject, and quite as plain in my condemnation of the slovenliness, and I regret to say, *frauds*, which not a few farmers designedly practice on the manufacturer, during this process. I do not indulge the expectation of being able to enlighten my brother *veteran* wool-growers; my purpose being to throw out some available information for the benefit of those less experienced than myself; and I will add, to endeavor to impress upon all, the importance, on the score of national reputation, as well as the promotion of individual interest, of elevating the character of our wool in point of cleanliness, to at least the standard of that exported by the "*retired gentlemen*" of New South Wales and *Botany Bay*.

The proper time for shearing, varies of course, with the climate; it being a violation of humanity to attend to this important matter before the weather is sufficiently warm. At the eastward, the time chosen is from the 10th to the 20th of June, and in western New-York and Pennsylvania, from the 1st to the 10th. There are seasons, when it is impolitic to begin as soon; but at all events, let me here warn the inexperienced never to commence until the weather is really warm; otherwise, there will frequently be a loss of life, or a foundation laid of diseases, which will eventually lead to the same result. This remark is particularly applicable to the finer grades of sheep. A period of a week should elapse—unless the weather is exceedingly warm—between washing and shearing, in order that the wool may become perfectly dried, and more especially, the oil diffused through the fleece. There is an advantage in this, for the reason that the fleece is somewhat increased in weight, and animation and softness are restored. A writer in relating the Spanish custom, says—"Their shearing buildings are very simply constructed, and consist only of two large rooms, each of which will contain more than a thousand sheep; there is also a narrow, low, long hut adjoining, termed the *sweating house*. The sheep are all driven into one of these apartments, and in the evening, those intended to be shorn the following day are transferred into the low long hut. As many are forced into it as it will possibly hold, and there they are left during the night. As some are liberated in the morning, the others are urged towards the end of the hut, while more from the apartment occupy their situation. In consequence of this close confinement, they are thrown into a state of great perspiration; the yolk, which formed a somewhat hard crust on the fleece, is melted, and thus the whole is rendered *softer*, and is *more easily cut*." This last remark will appear very obvious to a *practical* shearer, as he very well knows that an "oily fleece" cuts easier than a dry one. But the Spanish custom seems barbarous and inhuman, for it must necessarily cause much suffering to the sheep; yet I acknowledge it is somewhat necessary, considering the indurated nature of the yolk peculiar to the Spanish Merino. The writer above quoted, further says, "from 150 to 200 shearers are generally collected, and a flock of a thousand sheep is disposed of in a day, although *five rams*, or *eight ewes* are reckoned a good day's work for a Spanish shearer!" "A lazy set of rascals there, that is clear," says my honest neighbor, Ben Rogers.

It would be proper here, to refer to the inconveniences which many farmers suffer, for want of the proper spirit to rectify them, in regard to yards or pens, for the reception of their flocks; but other matters of more importance, urge me to defer it to another time, when I will give you a plan of my shearing house, and the necessary appendages.

My subject next leads me to remark, how rare is a good shearer? This, considering the aptness and skill of our countrymen in the mechanic arts, and I may say, in all the diversified divisions of labor, appears somewhat singular. It is easily to be accounted for however; the causes are several, the principal of which must be laid to the door of farmers, for the generality are too apt to appreciate a shearer in proportion to the number of fleeces he takes off in a day, not being particular *how* it is done. The consequence is, that the learner "cuts in," and recklessly dashes ahead to accomplish what is called a day's work; and the errors that he then contracts, unfits him ever afterward from attaining perfection in the art. This standard must be thrown aside, otherwise good shearers will continue to be, as now, few and far between. The most skilful man at this business, is he who will shear from thirty to forty full grown sheep in a day, cuts the wool with one clip of the shears, and not in twain, as one shearing too fast will do, shears even, leaves the least wool, and cuts not the skin; one that will do all this, is a good shearer. On the contrary, if a man attempts to shear much beyond the above number, he will violate either a part, or the whole of these rules; and the wool which the sheep will carry away will far more than amount in value to his wages.

With a view to increase the number of *good shearers*, it has been my practice, for a number of years past, to teach some of my monthly laborers this important art; and if your readers will bear with me, I will inform them the points of instruction. The first is, to teach them how to catch a sheep, which I am free to say, not one in five hundred understands. I shall not attempt to describe the common and inhuman method, which might, however, be well compared to the rough and tumble manner of a dog dragging a wood-chuck from his burrow. My way is, to throw the right arm around the body of the sheep, grasping the brisket with the hand, then lift it, and with the other, take every thing off adhering to the feet, particularly straw, which, otherwise finds its way upon the floor, and thence into the fleece. This is one of the sorts of *hair* too often found in the *butter*. The next step is to teach him how to *hold* and *cut* with his shears, for otherwise, there are ten chances to one that he will contract a bad habit, which will result in his cutting not only wool, but as honest Ben says, "as much hide in the course of the day, as will serve for a good sized leather apron." After this, he is taught those positions of the sheep which will much facilitate his work and afford the least pain to the animal; besides many *little* matters not essential to mention, but an observance of which is necessary to prepare the way for perfection. Let your pupil take it easy the first day, and keep him as *cool* as possible, although if you mark how the sweat rolls from the poor fellow, you will think it rather difficult. But let him blow, and give him the line; ten or twelve is enough for him the first day, otherwise he will complain of shearing being a back-breaking business; then succeeds dislike to it, and adieu to his ever arriving at skilfulness. By adopting a judicious course you will fetch him under the yoke. For instance; several years since one of my monthly hands, who was previously wholly unacquainted with the art, commenced and sheared fifteen the first day, and after a service at it of five or six successive days, by exciting his ambition with encouraging language, he accomplished nearly double that number; and the following year he sheared forty per day, and performed his work admirably. This is only one of several instances which was followed with like success.

Now it is the practice of very many wool growers to employ only those who profess to understand the art already; if we all did so, when decrepitude and death had thinned their ranks, where would we look for shearers? One of my neighbors told me, "that he could not even teach a hand to catch a sheep to suit him, much less to shear it." "Do not be so particular," said I, "all beginners are bunglers, and become expert and skillful only by practice; instead of fretting and scolding, speak kindly and encouragingly; say to him the second was sheared better than the first, and the third still better than the second, and then you'll 'come Yankee over him,' not without." It appears to me, Messrs. Editors, if the plan I have adopted and recommended, could become general, we should soon increase the number of good shearers, and thereby remedy one of the many evils, namely, in numerous instances, of allowing sheep to run *too long after washing*.

I will now quote from a London publication, the English *modus operandi*, in reference to this subject, as generally, although not uniformly, followed throughout the Kingdom.

"A barn or shed into which plenty of light can be admitted near the shearers, should be selected, and a part of the floor covered with a large canvass sheet, on which two shearers can operate. The sheet should be nailed down, and a little straw placed under it to soften it as a cushion. The floor of the barn should be swept out quite clean, and a light broom should be at hand to sweep the sheet when necessary. Every thing being arranged, a shearer seizes a sheep and sets it on its rump, and keeps it in this position by resting the back against his own legs. He removes all straws, thorns, burs, &c., that may have adhered to the wool. While thus held, the wool is removed from the head and neck so far as the shoulders, and also from the belly, the scrotum, and the edge of the thighs. The head of the animal is then bent down sideways, and the shearer, placing a leg on each side of the neck of the sheep, pushes out the opposite ribs by pressing his knees gently against the ribs that are nearest to him. He next shears the wool from the far side with his left hand, from the belly to the middle of the back, and as far down as the loins. The sheep is now turned, and the right hand is employed to shear the wool from the near side. The sheep is then laid flat on its side, and kept down by the shearer with his face towards the rump of the sheep, resting his right knee on the ground in front of the neck, and his right toe being brought to the ground a little behind and below the poll; the head and neck of the sheep are thus confined by his right leg, while he uses his right hand to shear the wool from the hind quarter. In this way the clips of the shears will appear in concentric rings round the body of the sheep. The dirty portions of wool about the tail are then removed by the shears and kept by themselves; the outside of the fleece is folded inwards, beginning at the sides, and narrowing the whole fleece into a strip about two feet wide. The strip is then rolled firmly up from the tail end towards the neck, the wool of which is stretched out and twisted into a rope, and wound round the fleece to give it a cylindrical shape."

This method meets my approbation, although it varies somewhat from rules to which I have long adhered. A few days before the commencement of shearing, the floor of my shearing house is thoroughly scrubbed; on which stands, during the process, two long benches or tables, placed against the long side of the building, which are some 12 feet in length, 4 in width, and about two in height; one of which is used for rolling the fleeces, and the other for the sake of convenience, for placing them on until it is full, and from them they are removed to the wool loft in the second story. After the shearer catches his sheep, if it is in the least filthy, (which by the way is rare in my flock, owing to having been well tagged) it is at once carried to the door, and the dirty wool taken off, in order to prevent its being intermingled with the fleece, which cannot otherwise be well avoided. Then the shearer resumes his particular stand, placing the sheep on its rump, and instead of beginning on the head and neck, according to the English mode above quoted, commences on the brisket, thence down the belly and about half of the sides to the edges of the flanks; also the thighs inside and out; after which he ascends from the brisket along the neck, cutting the front and both sides of it, as well as both sides of the head. The sheep is then laid flat on its side, its neck being between the knee and toes of the shearer, he cuts in a continued line from the flank to the poll until the line of the back is reached; the sheep being then carefully turned, to permit the fleece from being torn, the other side is served in the same way, which completes it. The sheep is then taken near the door, and the legs are neatly trimmed, all the wool of which, that is of any value, is scraped up and put in a large basket; all else is swept out of doors. Then the sheep is marked, not the ears, for this is done when they are lambs at the time of weaning, but with an iron formed to represent the letter O, or a diamond, with a handle attached, and with black paint, marking the ewes upon the left shoulders, the wethers on the right, and the bucks on the rump. This is surely much better taste, than a huge daub of Spanish brown, or ill formed letters made of tar, and covering the whole broadside of the sheep.

The fleece having been removed from the floor to the rolling bench, the dirty locks, if any, are put into the basket, the good put with the fleece, and the shearer's stand swept clean. The fleece is carefully spread out, the inside next to the bench; after which it is pushed together from all parts, for the sake of compactness and ease of rolling; the skirts and ragged sides separated, and thrown into the center; all the sides are then laid over so as to form an oblong square; after this the long sides are rolled towards each other till they meet, which is done by resting one of the arms from the elbow flat upon the wool, and rolling with the other (which by the way cannot be very well done without the aid of a boy) making a strip of from 6 to 10 inches in width; next the boy rolls from his end and stops at the middle, where he is met by my end, and then his part is rolled on top of mine, where it is held until the twine is passed around and tied; after which I pass the twine around crosswise, which effectually secures it, no matter how roughly handled. This mode differs from many others, but it has ease and despatch to recommend it. I have for many years rolled, with the aid of a small boy, all the fleeces shorn on the farm on which I reside, and have had no difficulty in keeping up with six or seven shearers, besides attending to the floor. One word here in regard to securing fleeces. Mr. Lawrence, in his letter appended to my last communication, recommends the example of his friends, H. D. Grove and Daniel Rogers, which is, to bind the fleeces by twisting a band from the tail or flanks. I fear not until all our flocks have been brought to the requisite fineness of those gentlemen, will the course he commends be adopted, for the reason that wool growers in general do not like to expose the coarsest part of the fleece. Small and very fine wooled fleeces can be thoroughly secured in this way; not so with medium or coarse. It is too bad however, to make the manufacturers pay for more twine than is necessary; *sixty-six feet* around each fleece is just twenty times too much. [Vide the letter above referred to.] My fleeces after being folded and secured, represent somewhat the form of a cheese, which enables me to store them in my wool loft, without falling down, or presenting a slovenly appearance. I arrange my wool on three sides of the store room; so as to represent the ascending seats of an amphitheatre; and in this situation—excuse my laudable vanity—it would do your eyes good, gentlemen, to take a look at it.

I have already alluded to the inhumanity of beginning to shear before the weather is suitably warm. I again warn the inexperienced against the cruel practice of permitting sheep, immediately after they are shorn, to be exposed to *cold rains*, for it not only causes excruciating suffering, but death will be often the result, especially if the sheep are grades of the Merino and Saxony. This hint will be approved by every old wool grower, for there are few of us who have not had our knuckles well rapped by neglect of it. A warm shower need not alarm; but I repeat, *beware of cold rains*, and let your sheep be driven under cover at the very commencement of it, and you may rely from their extreme sensitiveness to cold at this time, they will gladly remain until it is over.

At the time of shearing, there are other matters requiring particular attention, namely, sawing of horns which are likely to grow into the head or eyes of the sheep, and cutting the hoofs, which, with fine wooled sheep, not uncommonly grow to an uncouth length. Formerly, I attended to these things at this time, but I have learned that shearers are so careless, unless constantly watched, they are liable to let some go, not minding this attention. One thing at a time, whatever it is, secures its being well done. There are other matters, also, which I will refer to in my next chapter.

It was my intention to have "showed up" the abominable frauds practiced by many farmers on the manufacturer, by enclosing within the fleece, *dung locks and trash* of all descriptions, with a view to increase its weight. But, gentlemen, it is a lovely day, and to attempt it, would only destroy my present very amiable mood; besides, I have already encroached much farther on your valuable columns than I intended. *Apropos* the anecdote of the "traveler and hostess," which will suffice, and brings me to a conclusion.

Once upon a time a traveler stopped at an inn and called for a repast, which, on being spread before him, he discovered something which caused not a little disgust, and at once betrayed the sluttishness of the hostess, namely, *hairs in the butter*. The traveler being possessed of more than an ordinary share of equanimity of temper, instead of being indignant at this outrageous departure from the *clean thing*, he only mildly and graciously requested of her ladyship, that the next time he called, she would oblige him by putting her hairs on one plate, and the butter on the other; and if he thought it desirable, he would *mix* for himself. So with the manufacturers. If we will persist in enclosing within our fleeces, *filth, burs*, clippings, &c., they implore us to put *all that sort o' thing* in one sack, and our *clean wool* in another, in order that they may determine the relative value; and peradventure they find it to their interest to *mix* them, that they may have that privilege to themselves. But they greatly prefer, for our especial benefit, that we retain all "ding balls" or lumps of manure, for the improvement of our soil.

Now, my brother wool growers, inasmuch as we may *surely* depend on receiving remunerating prices for the coming clip, let us clear the track, all start fair, and go for a *clean* race, and the prizes will be a *clean price*, and *clearer consciences*.

Yours truly, L. A. MORRELL.

Lansing, Tompkins Co. N. Y., Feb. 26.

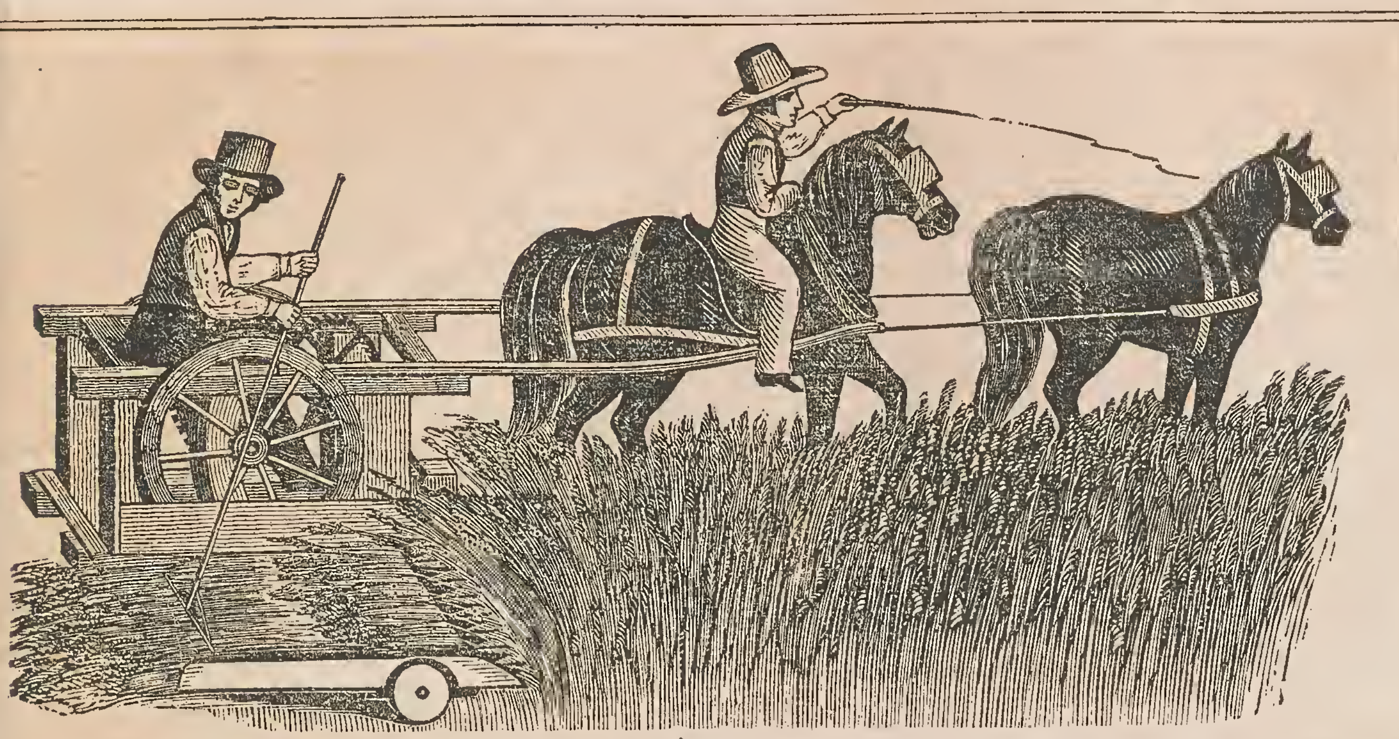
Transportation of Cattle.

Messrs. Gaylord & Tucker—The calls have been so frequent for information as to prices for transportation of cattle, pigs, &c., that to save future inquiries, I send you for publication, the following. Messrs. Gelston & Evans, responsible forwarding merchants of Buffalo, as agents for "The Western Transportation Co.," will forward them during the coming season, at the following rates, and furnish them ordinary food and attention on their passage:

For grown cattle between New-York and Buffalo,	$16 00
One pair young pigs in compact box,	4 00
One sheep,	4 00
For grown cattle between Albany and Buffalo,	12 00
One pair pigs in box,	3 00
One Sheep,	3 00
For grown cattle from Buffalo to Detroit,	7 00
One pair pigs in box,	1 50
One sheep,	1 00
For grown cattle from Buffalo to Chicago,	15 00
One pair pigs in box,	4 00
One sheep,	2 25
For grown cattle from Buffalo to Portsmouth, thro' the Ohio canal to the Ohio river,	16 00
One pair pigs in box,	4 00
One sheep,	4 00

There is no species of freight so variable in price, as live stock; it being a most undesirable article of transportation, it is always avoided when other freight is to be obtained; and it was with considerable reluctance, Messrs. G. &. E. were willing to name prices at which they are willing at all times to carry them. It may be proper to add, that where persons accompany stock, and furnish their own food and attention, the price would be considerably lessened; or if a considerable lot was sent at once, and especially during the middle of the season, when freight is less abundant. Respectfully yours,

Buffalo, March 20, 1841. R. L. ALLEN.



Hussey's Reaping Machine.—[Fig. 48]

Messrs. Gaylord & Tucker—At the request of several farmers of your State, I send a description of my Reaping Machine and its mode of operation, accompanied with such certificates as I can procure near at hand. The machine consists of a low frame resting on a pair of common wheels, with fills for one horse; the second horse is geared tandem. The main axle is square in the hubs of the wheels; on this axle is a cog wheel which communicates motion to the cutters. The part thus far described, follows directly behind the horses, and wholly on the stubble; the right wheel tracking very near the standing grain. A platform about five feet square extends from the right side of the frame, one edge of which is attached to the frame by hinges; the opposite edge rests on a truck wheel. This platform lies near the ground and can be regulated to cut a stubble from 5 to 12 inches high.

The cutting apparatus is placed on the front edge of the platform, and is constructed as follows:—A number of steel blades, 4 or 5 inches long, about 3 inches wide at the base, formed like lancet points, sharp on both edges, are riveted on an iron rod side by side, forming an instrument something like a coarse saw. In addition to this, there is a row of strong iron spikes fixed firmly to the edge of the platform and pointing forward horizontally; each spike is formed of an upper and a lower piece, leaving a space through each spike for the blades to play in. As each blade occupies three inches on the rod, so there must be a spike to every three inches of the platform. The rod on which the blades are riveted, is moved by a crank having a sweep of three inches, causing all the blades to move at once; each blade vibrating between two spikes, passing out of one spike into the other, cutting the grain as it comes in between the spikes as the machine progresses; each double spike forming a bearing to resist the straw both below and above the edge of the blades. The crank which moves the blades is connected with the cog wheel on the main axle, which must necessarily cause the vibration of the blades to be in proportion to the speed of the horses, whether that be a walk or trot.

The motion of the machine forward, causes the heads of the grain to fall backwards on to the platform as it is cut; in this manner it accumulates on the platform in a heap leaving the stubble clean. The raker is seated on the main body of the machine with a rake of peculiar construction with which he pushes off the grain in separate heaps for binding. I cannot better describe the manner of using the rake than to say it is like paddling a boat, except instead of putting the paddle into the water, he puts the rake into the grain which has accumulated on the platform, and slides it off in a body behind. It may appear on first consideration, that the bundles could not be distinctly separated while the grain is constantly falling; experience proves that there is no difficulty in this whatever, for the grain under the rake will readily pass from the machine without dragging with it any part of the next bundle. But the operation is still more complete when the rake, instead of being put down on the prostrate grain, is put down a few inches in advance of the cutters into the heads of the grain not yet cut; by this means, the bundle is swept clean off before other grain falls on the rake. The rake is used in this manner to great advantage, in lodged and tangled grain, also when the wind blows strong from behind, by way of assisting the grain on to the platform. Besides the raker, a boy is required to drive, who rides on the shaft horse. As heavy grain is cut as fast as light, the number of bundles will depend on the quantity of grain to the acre, and the speed of driving, say from 4 to 10 binders, as the case may be.

By several years experience, I have been enabled to add much to the durability of the machine, which I apprehend can now receive but little improvement further than I shall make this year. I manufacture machines in Baltimore, and my brother Thomas R. Hussey, will manufacture them in Auburn, N. Y., this year. The machine is warranted to cut 15 acres of the heaviest wheat in a day, and save it much cleaner than is usually done by a good cradler, and to cut the whole season without sharpening. The price at the manufactory is $150. The following certificates are from gentlemen of the highest respectability.

OBED HUSSEY.

Baltimore, Md., April 10, 1841.

Certificates.

Last year I purchased a Reaping Machine of Mr. O. Hussey, and it answered my expectation fully; it is very expeditious and saves the grain better than in any other way with which I am acquainted.

H. SCHWARTZE.

Baltimore, April 9, 1841.

This may certify that I have used a Reaping Machine which I purchased of Mr. Hussey, in Baltimore. I cut my crop with it last harvest, to my entire satisfaction and without the slightest accident or interruption. It cuts clean and rapidly and leaves the grain in perfect order for binding, and is in every respect equal to the recommendation given it by Mr. Hussey, in the American Farmer and other papers. As I found a decided advantage in the use of it myself, I can with confidence recommend it to others; I have not the least doubt that before many years, the cultivators of wheat will find they cannot well do without it.

WILLIAM TRIPP.

Easton, Talbot Co., Md,, April 6, 1841.

Having been applied to by Mr. Hussey, for my opinion of his Reaping Machine, I can freely say that is impossible for me to entertain a higher opinion of any machine than I do of the one which I purchased of him last year. It greatly exceeded my expectations in every respect. Such was the condition of my crop, that I should have sustained material loss without the machine. I cut my heavy lodged wheat with it entirely clean; I could at any time cut as fast as seven men could bind while doing their best. I feel no hesitation in recommending it to every cultivator of wheat, as a great grain saving, as well as labor saving machine.

WILLIAM JESSOP.

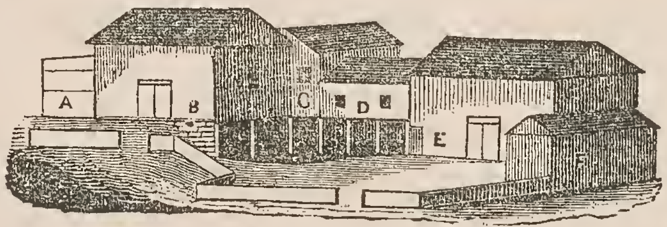
Cockeysville, Baltimore Co., Md., April 7, 1841.

Those wishing machines for the coming harvest, should send in their orders as early as possible.

Plan of Barns and Cattle Yards.

Messrs. Editors—I consider it to be of the utmost importance in so cold and variable a climate as this, that all our animals should be well protected from the weather during the cold season, by good warm and comfortable stables and sheds; and not be left to shiver under the lee of a hay-stack, or even a rickety barn. This consideration, together with a request in one of the back volumes of the Cultivator, for plans of improved farm buildings, has induced me to send you a ground plan, together with a perspective view, of mine—not because I think them perfect, but because I think the plan as well or better adapted to the wants of many of the larger farmers in this portion of the country, as any I have seen.

I prefer to have the ground sloping a little to the east, say about one foot in seven or eight, for convenience of digging a basement, which in this plan is of the same size as the barns, B. and C.; under the west end of the barn B. is a cellar for ruta bagas and potatoes, of one third the size of the building, partitioned off by a wall of sixteen inches in thickness, composed of two tiers of brick, with a space of four inches between them, which effectually excludes that enemy of roots—Jack Frost. The remainder of the basement is to be used as a shelter for stock, or a portion may be partitioned off for a cart and wagon house.

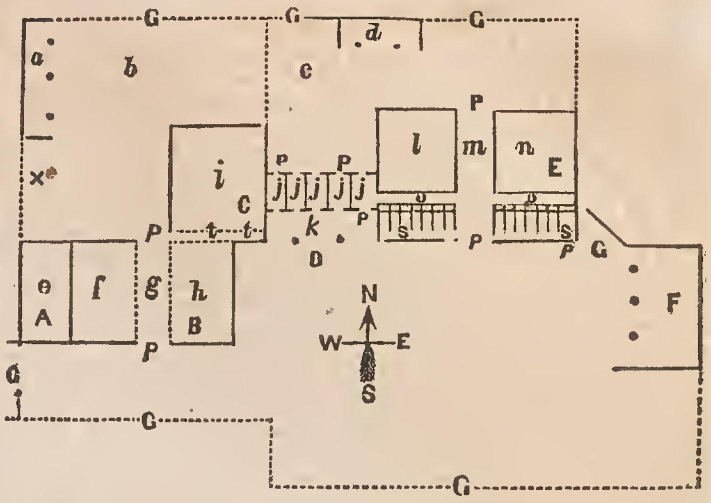


Perspective View—(Fig. 49)

A. is a "lean to" for hay 20 feet by 30. B. is a grain barn 45 feet by 30. C. is a building 33 feet by 20, used for storing hay. D. is a building connecting the two hay barns C. and E. 16 feet posts, the upper part is used for coarse fodder, &c. the south side of the lower part is an open shed 9 feet wide; the north side is divided into five stalls, each 9 feet by 11, with doors opening into each yard (as seen in the ground plan *j. j.*) which I find very convenient for storing implements, cows to calve in, to keep large stock, &c. &c. E. is a barn 50 feet by 35, in which are stables for stock. I prefer stables, and having the cattle secured by a rope around the horns to stantials, because the animals are more comfortable (which by the way is requisite to their thriving well) than where huddled together, with their necks jammed between 2 unyielding posts, and without room to extend their limbs, to say nothing of the risk of getting besmeared with their ordure (in which they are obliged to lie) if one comes in contact with them. The floors of the stables should slope backwards a little, say about three inches, to cause the liquid manure to run off. I keep my stables well littered with straw, buckwheat haulm, &c. to absorb the liquids, much of which would otherwise be lost.

F. is a building placed on the east side of the yard, and is 35 feet by 20, 16 feet posts, lower part 8 feet high; is used as a shed; the upper part is for storing coarse fodder, &c. My fences about the yards are 6 feet high, and made of boards very tight, and effectually break the wind, which I consider of nearly as much importance as having sheds.

Explanation of Ground Plan—[Fig. 49.]—*a.* Open shed—*b.* sheep yard—*c.* is a yard for young cattle—*d.* is a shed, they also run under the barn *i.*—*e.* is a "lean to" for hay—*f.* is a bay—*g.* threshing floor—*h.* bay—*i.* barn for hay—*j. j. j. j. j.* stalls for large stock, &c. with doors *p. p.* opening into each yard—*k.* opens shed—*l.* bay—*m.* floor—*n.* bay—*o. o.* passages four feet wide in front of the stables for feeding stock—the two narrow parallel lines represent the feeding trough which is 2½ feet wide, 1 foot deep and raised 8 inches from the floor—the back side is 3½ feet high and made sufficiently strong to *tie* the cattle to—*p.* doors—*s.* stables; there is, you will observe, a door leading from the stables to the floor—*t. t.* passage leading from the threshing floor in barn B. through C. and D. to E. I have windows over each of my great barn doors; also over both the stable doors. At each end of the passage *o. o.* is a bin to contain oats and salt for horses and cattle. There is a watering trough in the basement under the passage *t. t.* to which the cattle in both yards have access. Another in the sheep yard at *x*—G. gates. There are, you will observe, 2 stables wide enough to drive in a span of horses or pair of oxen to bait without unyoking them.



Ground Plan—(Fig. 50.)

I keep my stock yarded constantly, and disapprove altogether of the plan of permitting them to stroll about the neighborhood where they please, and thus become a nuisance to myself and neighbors, to say nothing of the manure lost thereby.

I have excavated the middle of my yards so that they are of a concave form, being about three feet lower in the middle than at the sides, leaving a margin of about fourteen feet wide that is nearly level, and which is wide enough to fodder upon. I use racks altogether, not choosing to have manure made of my hay before it is eat. To these reservoirs go all the liquids of the yards, and into them every spring and fall, I cart swamp mud, vegetable mold, leached ashes, potato tops, coarse grass, weeds, in short almost every thing of a vegetable nature, (which has no seeds of noxious weeds among it, which will be like to grow. By noxious weeds, I mean *every* useless plant. I think that a *useless* plant requires as much to support it as a *useful one*, and returns nothing therefor—I endeavor to exterminate them all.) These substances I spread about, and generally have enough to cover the yards to the depth of 6 or 8 inches, and during the season repeatedly turn them over with a plow, that they may the more thoroughly become incorporated with the dung of the animals, and they thereby increase in value very much; and, indeed, I find swamp mud is of comparatively little value without undergoing this process which induces fermentation, and fits it to afford that nutriment of which all plants stand in need, in order to form vegetable fibre; thus I make several hundred loads of *choice* manure, to say nothing of my hog dung.

I intend soon to connect my hog pen with my barn yard in such a manner that the hogs may have the run of the yard, and perform the labor of turning over the manure, and thus save me the trouble; a labor which I doubt not they will willingly perform, as they are a very accommodating animal, always being willing to do just as you wish to have them, provided you wish to have them do just as they have a mind to.

I have got to the bottom of my sheet without giving you a description of my hog pen, and management of my stock, which I intended to do, but may still at a future occasion should this meet your approbation.

One word more and I have done. In your last I noticed a communication from Solon Robinson on the subject of an "American Society of Agriculture." In my estimation it is the best thing that can be done to promote the cause; and he shall have at least *one* ardent co-operator in this state; a state which needs the benefits to be derived from such a society as much as any other, for we are truly in the dark with respect to the improved modes of cultivating the soil, as well as other subjects relating to improved husbandry.

I think that barns and other out-buildings, look enough better for a coat of whitewash to pay the cost; all mine have received it. Directions for making an excellent kind are to be found in the fifth volume of the Cultivator.

The above, such as it is, is at your disposal.

Yours truly, J. F. L.

West Windsor, Vt. Feb. 1841.

To Preserve Hams from Flies, &c.

For a score of hams, take about 3 quarts of salt, 1 pint of molasses, ¼th of a pound of black pepper, and 2 ounces of salt petre pulverized; mix well together; lay the hams on a table with the rind downwards; rub the mixture over them with the hand, taking care to apply it to every part where there is no rind; let them lay a week, and rub them over with clear salt, which continue once a week for four or six weeks, according to the size of the hams, and they are ready to smoke; or if you choose after the mixture is sufficiently struck in, put them into brine for two or three weeks and smoke; when smoked, hang them in a dry place. We hang ours in the garret where they will keep all summer, secure from flies. When a ham is cut for use, hang it or lay it where you please, the flies will not touch it. We have practiced this method for several years, and have no reason to abandon it.

We have fed our milch cows about a peck of carrots per day each, through the winter; and the butter is as yellow as that made in summer, and equally as good.

Great improvements have been made in swine in this section by the introduction of the Berkshires. We fatted 12 pigs last fall, (about nine months old when killed;) average weight 200 pounds. Their food was one bushel of beets to two bushels of potatoes, cooked in a cauldron kettle and meal mixed in —the right kind of food for hogs, now-a-days.

D. G. MOSHER.

Springport, Cayuga Co. N. Y., 3d mo. 1841.

To Cure Scratches on a Horse.—Wash the legs with warm strong soap suds, and then with beef brine. Two applications will cure the worst case.

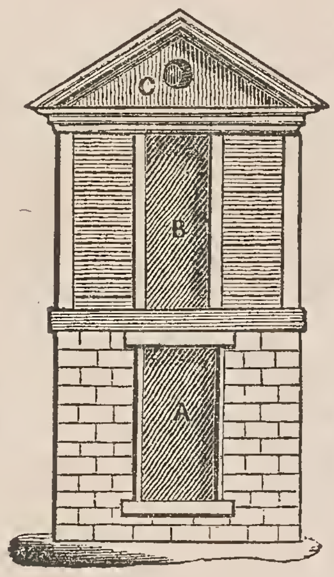
The Hessian Fly.

Messrs. Editors—Although much has been written and published in the different agricultural journals of our country, respecting the natural history and habits of the so called Hessian fly; and more particularly as to the mode which it instinctively takes to propagate its species, this seems yet to be an unsettled and disputable point among both entomologists and farmers. I profess to be but a humble member of the latter class, making no pretensions to rank amid the scientific corps. Having some time ago made some observations, and an experiment, not so fully carried out as I could have wished, with the view of satisfying *myself* on the subject, I will proceed now to detail them to you, for the purpose of casting in my mite towards elucidating this much vexed question. Many years past, perhaps as far back as twenty-five, a species of wheat was introduced into this section of our country called and known as the "Lawler wheat;" it was, I believe, at the time, said to have been first propagated somewhere in your State, and brought thence into Pennsylvania, by a traveling Methodist minister in his saddle bags, (whence it was sometimes called the saddle-bags wheat;) from the latter State it gradually found its way into Delaware, Maryland, &c. Like most farmers in this part of the State, about twenty years ago, (I was then a green one,) I procured some of this said Lawler wheat for seed, principally because it was then recommended as possessing the power or faculty of resisting, or recovering from the attack of the Hessian fly, better than any other species of the plant heretofore known among us. Owing to this supposed quality, I commenced sowing it on the 19th of September, being some twenty to twenty-five days earlier than my usual time; by the second week of October, the first sown wheat being well up, and having generally put forth its second and third blades, I resorted to my field to endeavor to satisfy myself by occular demonstration, if I could do so, whether the fly did deposit the egg on the blades of the growing plant, having seen it then lately asserted, by a Virginia writer on the subject, that such was the fact. Selecting what I deemed a favorable spot to make my observation, I placed myself in position, by reclining in a furrow between two wheat lands. It was a fine, warm, calm, genial forenoon; and I had been on the watch but a minute or two, before I discovered a number of small black flies, alighting and setting on the wheat plants around me; and so strong seemed to be their predilection for the wheat, that I did not observe a single fly to settle on any grass, or other thing within my view, but the wheat. I could distinctly see their bodies in motion when settled on the leaves or blades of the wheat, and presently one alighted and settled on the *ridged* surface of a blade of a plant completely within my reach and distinct observation. She immediately commenced disburdening her apparently well stored abdomen, by depositing her eggs in the longitudinal cavity between the little ridges of the blade. I could distinctly see the eggs ejected from a kind of tube or sting, or by the elongation of the body; the action of the insect in making the deposit, being similar to that of the wasp in stinging. After she had deposited, as I supposed, some eight or ten eggs, I easily caught her upon the blade, between my finger and thumb, not giving her time to complete her operation, lest she might escape me; having sufficiently wounded, I wrapped her up in a piece of paper, and put her securely in my waistcoat pocket. I then proceeded to take up the plant, on the blade of which I saw the eggs deposited; which I did, with as much as I conveniently could of the circumjacent earth, and wrapped it all securely up in a piece of newspaper. After that, I continued my observations on the flies, caught several similarly occupied, and could see the eggs uniformly placed in the longitudinal cavities of the blades of the wheat; their appearance being that of minute reddish specks. My own mind being thus completely and fully satisfied as to the mode in which the egg was deposited, I proceeded directly from the field to my dwelling, and having procured a large glass tumbler, put the plant with the eggs upon it in the tumbler, added a little water to the earth, and immediately secured the aperture of the vessel, by covering it so securely with paper that no insect could get access to the interior. The paper was sufficiently perforated with pin holes for the admission of air, &c. The tumbler with its contents thus secured, was placed in a south window of my dining room, and daily and anxiously watched by myself, to endeavor to discover the hatching of the eggs. Being but little about the house, however, I was disappointed in my wishes in this respect, until coming in about the middle of the fifteenth day from the time of the deposit of the eggs, I was so fortunate as to discover a very small maggot or worm, of a reddish cast, making its way with considerable activity down the blade, and saw it till it disappeared between the blade and stem of the plant. This, I have no doubt was the produce of one of the eggs, and would I presume have hatched out much sooner, had the plant remained in the field in its natural position. It was my intention to have carried out the experiment, by endeavoring to hatch out the insect from the flax seed state of the larvæ, into the perfect fly again; but being called from home, the plant was suffered to perish, and thus terminated my experiment and observations in this instance. That the insects I saw making their deposit in the wheat plants in the field, were the real so called Hessian flies, I had no doubt at the time, nor have I since had any reason to change that opinion. The fly that I caught on the blade of the wheat as above stated, I enclosed in a letter to Mr. John S. Skinner, the then, as now, Editor of the American Farmer of Baltimore, who, having examined it, as well as I now recollect with a microscope, pronounced it to be a genuine Hessian fly, and identical in appearance with others then recently received from Virginia. I have not the American Farmer by me, and cannot therefore refer more particularly to Mr. Skinner's article on the subject. I have not myself, for, say the last twenty years, had the least doubt that the Hessian fly deposits its eggs on the blades of the growing wheat principally; that in a few days, how many I don't pretend to determine, the egg hatches into a worm, which descends to its resting place between the blade and stem of the plant, where it is to be found in the maggot state, in which it does the principal, if not the only injury to the plant, by extracting and feeding on its juices; thence it changes into the flax seed, or dormant state, and thence hatches out into the perfect fly. And I further believe that this most destructive little insect does not always confine itself to the wheat alone, but occasionally resorts to other plants somewhat similarly constituted, on which to deposit its eggs. I well recollect, that many years ago, while examining a species of grass growing luxuriantly in the yard of the dwelling house at Swan Point, in Kent County, I discovered therein [illegible] of an insect, which I then thought, and still believe, were those of the Hessian fly in the flax seed state. That grass had leaves or blades with a ridged surface, similar to the wheat plant. There is another insect which probably does more injury to our growing wheat, than is generally apprehended; the larvæ of this, may sometimes be found in the spring of the year, in the center of the main stem of the plant, in the shape of a small worm. It was once shown to me, about the first of May, 1820, in plants taken from my wheat crop here, by the late Dr. Ewnalls Martin, of Easton, Talbot County; but he wholly repudiated the idea of its having any connection with the Hessian fly; he called it, I think, the bud-worm. It is my belief that the eggs of the Hessian flies, deposited in the fall, remain in the torpid flax seed state during the winter, and hatch out thence during the first apparently warm weather in the succeeding spring. I have frequently had many of them alight on my clothes, while passing about the farm in the months of March and April. I have thus, Messrs. Editors, given you my observations and crude notions on this, to farmers at least, most interesting subject; and in doing so, have extended my letter to much greater length than I had any idea of doing when I first took up my pen to write to you. Should you however, deem the communication worthy of a place in the columns of the Cultivator, I shall not regret the time or trouble it has given me to make it, as perhaps it will lead others much more capable than I pretend to be, to make more minute investigations on this most important subject, and give the result of their observations and experiments to the agriculturists of our country, through the medium of your most interesting and useful journal. Yours truly,

EDWARD TILGHMAN.

White House, Queen Anns County, E. S. Maryland.

Ash House and Smokery.



[Fig. 51]

Messrs. Editors—Having the season past had occasion to erect a dwelling-house, together with carriage-house, wood-house and other out buildings, I have endeavored to make what I considered some little improvement in their construction, and adaptation to use. I herewith send you a rough draught or sketch of my ash and smoke-house. The ground plan is 7½ by 5½ feet; the lower part, or ash-house, built of thin quarry stone, the edges dressed to a line with the stone hammer and laid in lime mortar; the walls 6 feet high. The upper part, or smoke chamber, of wood; the sills six inches square, and secured with iron anchors incorporated into the walls below, to prevent injury from wind. Sleepers or joists, 6 inches deep, are framed across the sills, and a tight, rough floor laid; the sides planked with seasoned hemlock 1½ inches thick, the edges made to fit close, and clapboarded outside. The floor to ash-house stone; the ceiling lathed and plastered, so as to be nearly fire proof; four tin tubes introduced through the floor of the smoke chamber and ceiling of the ash-house below, serve to supply the chamber with smoke. We build the fire in the ash vault, which is nearly air tight; a small supply of fuel is sufficient to supply the smoke chamber with smoke for some length of time. By this method we avoid the danger of over heating during the process of smoking, (occasioned frequently by carelessness in the fire builder,) which, in some cases, proves ruinous to the ham, for summer use; the danger of firing the building is greatly diminished. The labor and hard work of reaching to and fro in putting up and taking down the hams or other meats, is greatly lessened, as we can at all times have a clean floor to stand upon during the process. The hams are kept clean, and free from dust, ashes, &c. Should they be allowed to remain through the warm season, by closing the ventilators, are secure from flies and other insects. The chamber being dry, an occasional fire in the ash vault will prevent them from moulding.

A. door to ash vault—B. door to smoke chamber—C. ventilator which should be in each gable end. CURTIS MOSES.

Marcellus, N. Y., March 15, 1841.

Suggestions to the State Agricultural Society.

Esteemed Friends—I perceive in your last paper, a criticism by *Holkham*, on a communication of mine, (inserted in the 7th volume of the Cultivator, page 197,) in which he charges me with gross blunders and palpable contradictions. Since reading his remarks, I have reperused my letter, and am free to confess that it is wanting in that perspicuity which ought to characterize the writings of all who assume to instruct the public. On that account the rebuke is merited, and should I hereafter write any thing for your columns, I will endeavor to be more careful in this respect. As a *partial* excuse, however, I would observe that the paper in question was not intended to teach agricultural chemistry, but to show how much would be gained by farmers if scientific knowledge was superadded to their practical skill; and it was my intention to have followed up this with another, in which the facts and reasonings contained in it, would have been applied to establish the necessity of an *agricultural school;* but as I saw from your notices to correspondents, that your columns were overburthened, I forebore to send it.

If Holkham will carefully reperuse my letter, I think he will find that he was wrong in charging me with self contradiction. I stated that the sulphate, as well as the soluble salts of iron, are injurious to those soils in the composition of which lime is *not* an ingredient. This I reassert to be true. A simple and obvious experiment will satisfy Holkham of its correctness. But sulphate of iron may become *useful* on *calcareous* soils, because, as soon as it is incorporated with the soil, it ceases to be sulphate of iron; the sulphuric acid quits its combination with the iron, and unites with the lime in the soil, forming sulphate of lime or plaster of Paris. Dissolve lime in some water and sulphate of iron also, pour the solutions together, and a buff colored precipitate will fall down. Let this be analyzed, and it will be found to consist of oxide of iron and gypsum. Surely there is nothing contradictory in this, nor is it, as Holkham erroneously supposes, purely a theoretical statement; it is as much a fact as that 2 and 2 make 4; it is as fully susceptible of demonstration as that 3 from 6 leaves 3. Again, your correspondent does not believe that dung can by decomposition, unite with the oxide of iron so as to form a sulphate. If he is not familiar with chemistry himself, I am not surprised that he refuses to take the word of an anonymous writer for it. But it would occupy too much space in your columns, to describe all the experiments which are necessary to prove it. The better way would be for him to consult some able chemist in whom he can confide, and my word for it, he will be told that my statement is correct.

My principal object in writing at this time, is to propose a plan for giving increased interest to the meetings of the State Agricultural Society, which I had intended to have laid before it at the last annual meeting, had I not been providentially prevented from attending it. It is admitted on all hands, by the enemies, as well as the friends of book farming, that farmers want FACTS. Scarcely any thing is settled in agriculture. Farmers are not agreed as to the best time for sowing plaster, nor on the soils to which it is applicable. It is not certain whether it is better to plow under a crop of clover in a green or a dry state, nor whether whole or cut potatoes are best for planting. We cannot tell whether a load of horse manure is better or worse than an equal quantity of cow manure; and it is still a matter of dispute whether we ought to plow our manure under, or spread it on the surface. There are plenty of experiments on record, with regard to all these subjects, but the misfortune is, that no two of these have been conducted alike. The results of them differ as widely as the poles; and as the collateral circumstances are not stated, we cannot detect the source of the fallacy. Now it appears to me that the State Society might settle these vexed questions conclusively and satisfactorily by the adoption of a plan something like the following. Let the executive committee convene some time before the annual meeting, and select a list of subjects for experimental investigation; in order to ensure uniformity, and to enable the Society to compare the results with each other, let them frame accurate and minute instructions under each head of inquiry to be rigidly observed by each member of the experimental committee. Suppose one of the subjects selected is "the comparative value of horse and cow manures." As latitude, or rather climate, will probably have some influence on the result, it will be necessary for the report to state the name of the county and town where the experiment is made, and if practicable, its elevation above tide water. The aspect of the land, whether north or south, ought also to be stated. Soils will also influence the result; hence each experimenter should make the trial on 4 different soils, viz: clay, sand, loam and gravel. To facilitate comparison, equal quantities of each kind of soil should be staked off, say 2 square rods on each of the 4 kinds of soils. Let equal quantities of manure be placed on each square, say 4 bushels of horse manure on the one, and 4 bushels of cow manure on the other. When the grass is fully ripe, let all the squares be cut as nearly as possible, at the same time; and when it is dry, let the hay on each square be carefully weighed; the difference in the weights of the two squares will give the relative value of the two manures on the 4 soils respectively. The committee should consist of at least one from each county in the State. It is obvious that these reports, arranged in a tabular form, would be very valuable. Suppose on the sandy meadow, the square which was manured with cow manure, yielded 40 lbs. of hay, and that with horse manure yielded 30 lbs., then by a simple statement in the rule of three, a farmer can accurately determine which of the two kinds he can most profitably purchase for a sandy meadow; suppose the price of horse manure is 50 cents, then 30:40::50c.:66; hence he determines that cow manure at 66 cts. per load, would be as cheap to him as horse manure at 50 cents. Many other obvious results would follow from these experiments, interesting alike to the farmer, the statesman and the political economist.

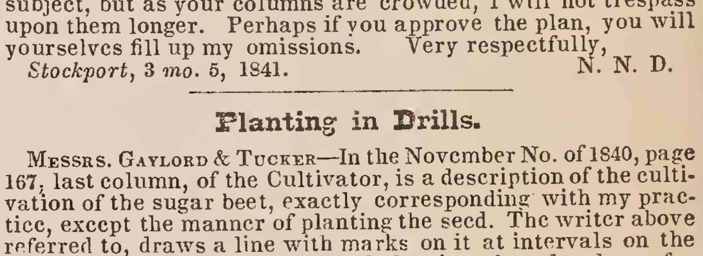
Though the above experiments would only give the comparative value of the two manures as applied to grass, yet the same committee might be charged the next year with similar experiments in relation to potatoes, and the next in relation to corn, and so on, until their respective values for all crops were fully ascertained. The meetings of the Society, as at present conducted, are not very interesting to farmers; to be sure there is an interesting address from the President, and valuable reports from the committees, but these can be as well read in the Cultivator, by his own fire side. To be sure, the great magnates of the profession are there, but the farmer is unacquainted in Albany, and has no one to introduce him to them; hence he derives no pleasure from their society. There was no living man with whom I was so desirous of becoming personally acquainted, as with the late Jesse Buel, but as I was not acquainted in Albany, I could not be introduced to him, and hence I forever lost the pleasure and advantage of his acquaintance; but this is a digression. The truth is, that when a farmer attends the meeting of the Society, he has nothing to *do* and nothing to *see;* hence he feels like a blank, and does not care to repeat his attendance. This in my opinion is the grand cause of the apathy which is manifested by our brethren in the prosperity of the State Society. But if the proposed plan is adapted, this apathy will, I verily believe, be succeeded by eager interest. If carried out, it will give ample employment to *all* the members, each one will have his appropriate business to perform, his own report to make; he will feel anxious to hear the measure of commendation which is bestowed on his labors; he will feel a proper and consoling sense of his own individual importance in the body, and hence will be anxious to attend its meetings.

If the plan should work as well as I suppose it will, it might be a means of inducing the farmers of our country to establish a National Society on similar principles; and as this is such a favorite object with our friends Garnett and Robinson, perhaps they will raise their "trumpet" tones to give the scheme a fair trial. Much more might, and perhaps ought to be said on the subject, but as your columns are crowded, I will not trespass upon them longer. Perhaps if you approve the plan, you will yourselves fill up my omissions. Very respectfully,

Stockport, 3 *mo.* 5, 1841. N. N. D.

Planting in Drills.

Messrs. Gaylord & Tucker—In the November No. of 1840, page 167, last column, of the Cultivator, is a description of the cultivation of the sugar beet, exactly corresponding with my practice, except the manner of planting the seed. The writer above referred to, draws a line with marks on it at intervals on the ridge, thus denoting the place of planting, &c. In place of a line, I have constructed a wheel as follows: The cogs on the surface made 2 inches long and 1 inch in diameter at the base and 8 inches apart; the wheel of any circumference you please; the larger the circumference, the better it will work. With this wheel, a man may, after the ridge is prepared, mark out the ground as fast as he can walk; small children may drop the seeds in the holes thus made, followed by another person with a small hand roller, as fast as he can walk, covering the seed, and the work is accomplished. I consider passing over the ridge with the hand roller very important. It presses and pulverizes the earth around the seed nicely, and causes it to vegetate quickly and with more certainty. I have an excellent variety of Indian corn, and shall seek an opportunity of sending you a few ears. Respectfully yours. C. OSBORN.



[*Marking Roller—Fig.* 52]

Westfield, N. J., Feb. 16, 1841.

Cultivate your head and your heart as well as your fields.

Farm Report.

Messrs. Gaylord & Tucker—I furnish for the Cultivator the following account of the crops raised on my farm, and manner of cultivation. I do not make the statement because I think that I have outdone others, for I do not doubt that many, very many, have done much better than I have. My object has not been to raise a large crop at great expense, to boast of; but to pursue a regular system of permanent improvement, which should not only render the land each year more productive, but should pay for all improvements, and return a moderate profit. In this I have succeeded; my farm is annually becoming more fertile, and is cultivated with less labor and expense.*

My farm contains 140 acres, 30 of which is wood land, 3 in highway, and the last year 24 in mowing, 15 in summer fallow, 15 in pasture, and about 53¾ in tillage crops. The cultivated part is divided into fields, which average about 10 acres each, by fences of chestnut rails laid up in what is called Virginia or worm fence, occupying about 7 feet in width.

Wheat.—On 24 acres I raised 625 bushels. The field was occupied by pasturage in 1839. In June it was broken up, harrowed in July, and cross plowed in August, by laying it in beds about 24 feet in width by back furrowing. The first ten days of September it was sown with a trifle more than 1¼ bushels of wheat per acre, harrowed thoroughly lengthwise of the beds, then rolled down with a heavy roller, and the furrows between the beds opened with a plow. In the spring of 1840, a quantity of clover seed in the chaff, sufficient to seed it well, was sown.

Corn.—In the spring of 1840, I planted 10 acres with corn, on land that the year previous had borne wheat, (one acre excepted which bore corn,) 7 acres were covered with wheat straw, 2 with barn-yard manure, and one acre received no manure. The straw was turned under by one good plowing, the land was then made fine and mellow by harrowing, and planted between the 8th and 24th of May with corn, in hills 3½ feet apart each way. It was twice hoed, after having had the cultivator run through it twice each way. The product was 634 bushels.

Potatoes.—I planted six acres of potatoes, which were manured and cultivated much in the same way as the corn, and produced 1400 bushels.

Barley.—With one plowing, two harrowings, and one rolling, I sowed 4 acres of barley, on corn stubble, which produced 160 bushels.

Peas.—A piece of land containing 5½ acres, which in 1839 was mown, early in the spring of 1840 received one plowing, then was rolled, sown with peas, harrowed thoroughly and rolled again, produced 166 bushels. After the peas came off, I gave this piece one more plowing, harrowing, and rolling, and sowed wheat, which at the setting in of winter looked well.

Oats.—Three acres of corn stubble were sown with oats, after one plowing, harrowing, and rolling. The oats lodged some, and the whole piece suffered very much from the grasshoppers. Produce 125 bushels.

Carrots.—Three-fourths of an acre was planted with carrots, on corn stubble, after two plowings and two harrowings; rows about two feet apart. Produce 500 bushels.

Sugar Beet.—Half an acre of ground, like the above, received similar treatment, and was planted with sugar beet. Produce 300 bushels. The beets and carrots were hoed twice.

Hay.—I mowed 24 acres, which yielded at least two tons per acre, or 48 tons. Since I have pursued a rotation of crops, I have never had occasion to complain of light grasses. Fifteen acres have been summer fallowed, and sown with wheat the same as in 1839.

The stock which has been pastured on the farm the past summer, consists of three cows and one heifer, three horses, twenty-five hogs, (and through the latter part of the summer and fall 15 pigs,) and 225 sheep.

Seeding Lands.—My method of seeding lands to grass, is to sow five quarts of clover seed, and the same quantity of timothy seed per acre on wheat, on some of the last snows of March: or if on spring grain, I use the same quantity of seeds, harrow them in lightly, and make all smooth with the roller. When the grass seed is up, sow two bushels of gypsum per acre. If it is intended for pasturage, sow the same quantity of gypsum the second season; but if it is intended for mowing, omit the second use of gypsum, as it causes the growth to be too great, makes bad mowing and poor hay, because clover when lodged soon becomes moldy and rotten. Since I have followed the practice of sowing gypsum after grass seeds, I have found no difficulty in their vegetating well and living through the summer. I think it assists the young plants to withstand the drouth. I would advise every farmer to pursue a rotation of crops; plow, mow, and pasture each field in its turn. If you have fields which are so wet as to prevent this, make them dry by judicious draining. Ample directions for this may be found in the former volumes of the Cultivator, and in no other way can capital be more profitably employed on a wet farm.

Keep a crop of some kind at all times growing on your fields; if you have no grain or roots on them, be sure to have a good quantity of grass there. To this end sow grass seed, and especially clover, often and plentifully. The opportunity of making thousands of dollars annually, is lost to our farmers by failing to sow clover. The fields, which a few dollars worth of clover seed would cover with a luxuriant crop of grass, to fatten the cattle and fertilize the earth, are for the want of such seeding, often seen a barren waste, or what is still worse, a vast receptacle of thistles, daisy and johnswort, from which the adjacent fields receive a large supply of these noxious seeds. One thing more respecting the management of my own farm, and I close. No intoxicating drinks of any kind are used upon my farm; neither is any thing raised upon it, allowed to be converted into such drinks, and this course I would respectfully recommend to my brother farmers.

Navarino, Onondaga Co. February, 1841. E. MARKS.

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*It is for the reasons here stated by Mr. M. that we take a pleasure in laying such papers before our readers. They are the results obtained by a practical, intelligent, reading farmer; such as any well informed, persevering, cultivator may obtain. There has been no extraordinary effort for an extraordinary effect; but what has been done is the result of system, and therefore permanent. Such examples are far more valuable to the great mass of farmers, than those in which much extra capital has been expended, or means adopted not within the power of all.—Eds. Cult.

Herefords vs. Short Horns.

Messrs. Gaylord & Tucker—I have read with much amusement the highly facetious letter of Mr. Henry S Randall, in your last Cultivator, and laughed at its contents, almost as much as he says "the impudent yankees" did at my steeds and pigs. My mirth, however, was mingled with a feeling of regret, that I had incurred his wrath, and that his good sense, (of which I had previously a high opinion) had allowed him to stoop to ridicule and ribaldry, as a "dernier resort;" certain signs of a weak argument.

I know nothing of his friend "Mr. Ezekiel Peabody," and therefore give Mr. R. all the credit he can gain by his acquaintance; and I leave all such passages, dictated as they are, by any thing but *good breeding* and gentlemanly discretion, to pass for what they are worth; which I think will be very little, less even than the shadow of one of the Kilkenny cats, so wittily served up in the "Olla Podrida," with which we are regaled. Such insinuations are unworthy of Mr. R., and are beneath my notice. I will merely answer those parts of his letter which appear business like.

In the first place, I am aware I spoke highly and confidently, regarding my purchases; but it was not bravado. I knew the prejudices I had to contend against, *the true worth of my animals*, and was willing to back my own opinion. I see by your last paper that I have raised up opponents who will throw out every obstacle against me, but "*Truth is mighty and will prevail*," and they shall not drive me from my purpose.

I did not intend to say any thing regarding the judges at Niblo's Fair, but only wished for an opportunity to test their judgment. Mr. R.'s article has given it to me. I will show "Matchless" against any cow in the U. States, of any breed, as the most valuable animal, for a cup of the same value as was there given, adding the expenses of the judges, who shall be selected in the following manner:—I will name mine, my opponent his, these two selecting the third; and to prove that I am not actuated by any exclusive feeling, I will show a three year old Durham heifer lately imported, against the one produced by my opponent, whether winner or loser, on the same terms. I will also shew a Berkshire boar and sow now in the possession of Mr. John Thomas of Albany, nine months old, which were a part of the identical stock so cruelly "*laughed at*," against any thing in this State, of the same breed, excepting Mr. Allen's herd of Buffalo, (as I think him the best judge to decide,) for a prize similar to the one given by the Institute. I will go still further; Mr. Clift has the two ewes shown at the fair, now in his possession, and I presume both have lived together, and fared alike since then; if so, they shall be exhibited at Mr. C.'s farm; I will accompany Mr. R. there, who shall be the judge without knowing to whom either originally belonged; and I will venture a similar cup to the one Mr. C. gained on his decision.

As regards the milking dispute, I shall not go beyond the proposition I have made, but am ready to fulfil that "*in earnest*." My cow shall be a pure Hereford, but I could not agree to forfeit if not in my possession; she shall be one of the "24" I imported last summer. It is not my wish to make any sort of a gambling contest of this business, but to give an excellent breed of cattle a chance of being appreciated as they ought to be, and to silence their traducers; and I refer the public to Mr. R.'s various epistles, to say whether or not they have made it incumbent on me so to do, or whether I had any alternative but to reply or submit in silence, to his injurious misrepresentations. Should my offers be taken, and the triumph be mine, I shall value the prizes as mementos worth preserving; should I fail, a second trial may be more successful, as I am resolved on perseverance.

Mr. Randall says I have "seduced" himself and others into this controversy; let him refer back to the Cultivator, if his memory fails, he will soon see who commenced it, and I will leave it to your readers to say, which of us has most violated that amenity of feeling, which ought always to accompany us, however eager we may be to impress our own opinions on the minds of others, or controvert those of our opponents. I ask Mr. R. what accusation can be more opprobrious, than that of "*stealing?*" And has not Mr. Hepburn endeavored to fix this charge on the breeders of our cattle? I also again ask him to cross his pure Berkshires with the "Landpike" he speaks of, exhibit the produce to *proper judges*, with *his* certificate of pedigree and purity, and if he is not detected by them, the said produce and his own conscience, he may then venture on the "Alligator;" and I will believe that "*stolen*" crosses *may* be concealed. I say now, what I have said before, that a cross with the Hereford and Durham, is an excellent one; probably better than the pure breed of either, but cannot be brought under the observation of a *judge* without immediate detection.

I must now call your attention to Mr. Youatt's text book, to which Mr. Randall and Mr. Hepburn seem to have pinned their faith with an obstinacy, which regards any thing that may differ in the smallest degree with its dogmas, as an innovation and a heresy not to be tolerated. Mr. Youatt is unquestionably a man of great talent and judgment; he however is but a man, and is liable to error like others; while therefore his opinions have all the weight which they so justly deserve, with practical men in his own country, these men do not, like Messrs. Randall and Hepburn, make an agricultural Pope of him, or consider his book (excellent though it be) as the agricultural gospel. Science and improvement are too much on the advance to rest long on any particular point; but to return to the text book. In the 11th page he says, speaking of Devons: "They have been long celebrated for a breed of cattle beautiful in the *highest degree*; and in *activity* at work and *aptness to fatten, unrivaled.*" In speaking of the Herefords, page 32, he says—"They are even more kindly feeders than the Devons, *and will live and grow fat, where a Devon will scarcely live.*" And further in the same page—"The Devons will acquire bulk and hardihood, *and the Herefords a finer form and activity.*" These are his exact words. Gentlemen reflect on these conflicting statements and reconcile these contradictions if you can. When Mr. R.'s classical knowledge, backed by Mr. H.'s "*intelligence*," have shed their light on them and converted such language into reason and proof, I shall then believe there is real and sound advantage in studying the classics; but till then, I shall be content to make my quotations in humble dog latin; to "gallus meus ego et nunquam animus," notwithstanding Mr. R.'s terrific range of literary acquirements, from the "Kilkenny cats" and his friend 'Peabody' to Galileo and Copernicus," his highly sportive and illuminating prose, his poetic taste, and "*slaughtering*" satire; but enough of this. I will turn to another attack. When I sent you the "Earl's Letter" for publication, I did not expect my motives to be impugned, or my character calumniated by an illiberal suspicion; my object was to show that men of the highest rank in England, know the value of good stock, equally well as the practical breeder; and the advantages to be derived from a *careful selection;* the letter was a "*genuine*" off hand, business like communication, in which forms and phrases were evidently less thought of, than the sound information conveyed in it; and I very much regret it did not please the fastidious taste of your several correspondents; doubtless some of them thought that an "Earl" should convey his information on the science of breeding cattle, in a most *labored* and elegant pastoral composition. For the criticisms on myself, I care not; I write with a view only of promoting the farmer's welfare and the cause of truth; I am not so easily pulled down therefore, by an error in etymology and syntax. I have taken my stand and purpose to maintain it. Now Messrs. Editors I shall be very much obliged if you would tell me the names of your private correspondents, or publish their communications, so that I may distinguish my friends from my enemies.

I send you a letter from Mr. Turner, Court of Noke, Herefordshire, a gentleman well known in the agricultural world, so that you may again state you have seen the "*original*" from which my extracts below are taken:

"It is a well known fact, that there is no other breed that can compete with the Herefords as regards a *profitable stock;* for instance, the memorable old Mr. Westcar, the Buckinghamshire grazier, at the dinner of the Christmas cattle show, some years ago, when the first prize in the first class was awarded to a Durham ox, the owner in the heat of the moment, rose and offered to bet a wager that he won the same prize the following year with an ox of the same breed. Mr. W. silenced him with this public challenge. He would go to the next October fair at Hereford and purchase one hundred oxen of the Hereford breed, which he would feed and show against the same number of all the breeds in England, for one hundred guineas per head, or two thousand guineas, which offer no one dare accept." This was done to show the rich men who then possessed the Durhams, that he was ready to support the Herefords with his purse. "He then told the company that during his experience as a grazier, *he had fed and sold twenty Herefordshire oxen to the butcher, at an average of one hundred guineas each, and he would defy all the breeders of Short Horns, to say they had done the like.* As regards my own breed of Herefords, I can boast of having bred the last ox sold to the slaughterer for one hundred pounds, which was in 1827; since that, several steers under four years old, from sixty to seventy. I have much pleasure in saying my herd has not degenerated, as will appear by the show at Hereford last week; all the prize cattle were either bred by, or descended from bulls of my own breed. Mr. Perry purchased the 'Goldfinder' of me when a yearling.

"As regards the Hereford breed for dairy purposes, I can speak from experience, that when well kept few will answer better. I can give an instance of a prime cow of my father's producing *thirteen pounds of butter per week, when allowed hay and cabbages, the whole of the winter;* but the principle of the Herefords being the stock, little attention is paid to the dairy. We all know to keep up cows to their milk, requires the most nutricious food, which is seldom allowed to cows in this country. We have experienced a very severe winter, and the epidemic so prevalent I fear good stock will not be very plentiful this spring; the present prices are very satisfactory to the breeder. The fair at Hereford was very pleasing to do business at, a complete clearance of all the good stock, particularly the bulls, of which there was a most splendid exhibition."

I now conclude with one remark for the satisfaction of Mr. R. that "Matchless" was bred by Mr. Turner, purchased by Mr. Hewer for Mr. James Walker; and the only reason I altered her name was, I had one named "Spot" in my first importation. I will give my views on sheep breeding at some future period. I think nothing is a better test for profitable animals, than those that get the greatest weight of animal food with the least weight of vegetable.

WM. H.'Y SOTHAM.

Perch Lake Farm, April, 1841.

Experiments in the Culture of Corn.

Messrs. Editors—In the spring of 1839, I turned over a clover sod of two years standing, as early as it would admit of plowing. The first week in May I planted one half the field to potatoes, and after planting my corn, I plowed the other part of my potato patch three times more, dragging between each successive plowing, and planted the potatoes the last week in May, the ground being in first rate order for any crop, as judged by the workmen. After this, each piece received like treatment. I would here observe, that I plant my potatoes a little below the level of the surface, and cover some deeper than is required for corn; while the potatoes show like rabbit's ears, I hoe for the first time, and second and last, before the vines fall. The result of the operation was decidedly in favor of the once plowing. I would here remark that my corn was planted on once plowing, rolled down, dragged fine, planted on a level surface, plaster and ashes, (two parts ashes and one plaster) put on before hoeing, hoed three times; not much hill made. The result was an extraordinary crop, to the astonishment of most that saw it.

In 1840, I had about thirty acres for corn—previous crop wheat on summer fallow. I let neighbor P. have three acres, (not the choice of the field but a grade the poorest,) that he fitted for himself by twice plowing; planted about four feet apart, plowed very deep between the corn, and hoed twice. The result was about thirty bushels per acre. Neighbor W. had five acres, plowed once and ridged; planted four feet apart; hoed three times; a heavy hill made around the corn. The result about forty bushels per acre. The remainder of the field plowed once; dragged fine, and planted on the surface. Six acres being planted from three and a half to four feet apart, yielded fifty bushels per acre. Nine acres, planted three feet apart; hoed twice and weeds cut down the third time; not much hill. The result from sixty-five to seventy bushels per acre. The remainder of the field yielded from fifty to sixty-five bushels per acre. A Subscriber.

Camillus, Onondaga Co. N. Y.

Cooking-Stove Ovens, often burn the bread, by the plate getting too hot; spread a layer of clean ashes over the iron and it will prevent it. This is much better than putting in bricks; bricks cause the plate to burn out, ashes preserve it.

Weight of the Berkshires.

Messrs. Editors—In the April number of the Cultivator just at hand, I noticed the great weight of a lot of swine, a cross of the Berkshire on the Mackay, lately slaughtered by Mr. Phinney, of Massachusetts; as also the weight of pure Berkshires bred by the Shakers of New Hampshire, which go to show, that when great size is wanted, it can be had from this very popular breed as well as another. In a late letter from Munson Beach, Esq., a distinguished and spirited breeder of various kinds of improved and domestic animals, in Lebanon, Ohio, I have the results of the crosses of the smallest prick ear Berkshire males, on the common hog of Warren County:

"Mr. Samuel Irons who resides in this county, has stood pre-eminent for twenty years as a breeder of fine hogs; he denied the further improvement of his breed by crosses with the Berkshires. His son, however, having procured a short fine boar of me, prevailed on the father to send a sow to him. He did so, but selected one of his poorest, evidently with the design of *disgracing* the produce, when it came to be reared with his own favorite breed. The sow had nine pigs, two of the best of which were sold away for breeders, the other seven at twenty months old, averaged nett 435 lbs., while his own hogs six weeks older, and fed precisely as the cross of Berkshires were, averaged only 333 lbs. nett, being less than the former 102 lbs., or more than one-fourth less, upon at least an equal, if not a greater consumption of food. Mr. Ebenezer Hathaway slaughtered a lot of ten half Berkshires at twenty months old, that averaged nett 373¾ lbs.; and Mr. H. gives it as his opinion, that it cost him no more food, care, or attention, to get that weight, than it would have done with the common hogs he formerly had, to have grown 250 lbs. on an average nett. Messrs. Steddom and son had a lot of forty half to three-fourths bred Berkshires, which at sixteen to eighteen months old, averaged nett 350 lbs.; and these were the culls and runts, all *the choice* pigs having been sold for breeders. This lot of hogs was only grass fed during the summer months. Mr. Tache of Springboro, lately slaughtered a half Berkshire, gross weight 900 lbs. nett 814 lbs.! Sufficient other instances of great weight, could be produced of the crosses of the Berkshires, to convince the most sceptical of their size, early maturity, facility and easiness of keep, were it necessary."

Mr. Michael L. Sullivant, of Columbus, Ohio, informs me that though possessing the best breed of large white hogs to be found in the State, probably a high cross of the Woburns and Leicesters, still the full bred Berkshires running at large with them, are the largest and in the best condition and apparently at a less consumption of food.

In addition to weights, I have plenty of evidence to show, short as their legs appear, that condition for condition, the Berkshires and their crosses beat all other hogs in traveling. I consider this as a very important point settled in the great West, for all the hogs have to be driven to market to be slaughtered, from a few miles up to many hundreds. A full bred Berkshire boar weighing 450 lbs. sold to Captain Simon Bradford, of Nashville, Tennessee, in a warm, dusty day, was driven 30 miles; others have been driven their 20 miles per day without effort; and I have myself seen them travel off 10 and 15 miles in a few hours without the least apparent fatigue.

John Mahard, Jr. Esq. of Cincinnatti, one of the most extensive pork packers in the State, assures me that the crosses of Berkshires the past season from Kentucky and elsewhere, have invariably come to market with the most ease in traveling with large herds of other breeds. He does not recollect an instance of their giving out on the road, while he has repeated details of animals doing so of other breeds in the drove.

I believe all the above statements to be perfectly true, for they are derived from the most reputable men in the State; and were volunteered me without the slightest solicitation, and my only motive in making this communication, is to do away unfounded prejudices. It is easy enough to import wild boars from the forests of Germany, that will give fleet hounds a pretty sharp run; and again we can cultivate the great Miama hog, such as was grown by the late Mr. Saterthwaite of Wainsville, Ohio, weighing 1,400 lbs., but the question arises, are these the most profitable animals to the agriculturist? Distinguished and scientific breeders say not, but request an animal that will grow up in good condition on grass, roots and coarse grain offals, and fully fatten them with a two months' feed on corn, and give a nett weight at sixteen to eighteen months age of 300 to 400 lbs. My own experience confirms all this, but my opinions have been so often protruded in the columns of the Cultivator, that it would be considered obtrusive to add another word. Respectfully yours,

A. B. ALLEN.

Experiments in Maryland.

Messrs. Gaylord & Tucker—In my experiments, as given in a communication published in volume 7, page 14, I stated that I would give the issue of another experiment upon a different plan of cultivation to those in common use among us. Although I have not succeeded in making a hundred dollars to the acre, as I flattered myself, yet it may not be uninteresting to some of your readers to know the result. The lot, when measured by a line, made four and thirteen sixteenths of an acre, but at least five sixteenths should be deducted for ground lost on four sides used as turning ground, which would leave only four and a half acres on which the tobacco grew. As I have given the texture of the soil, I will only add that the north side of this lot, skirted by a body of large trees, is of a bluish clay so compact as not readily to receive moisture; therefore when thoroughly wet, after long rains and hot suns, is liable to hardness. As soon as feeding time had passed in the spring, I hauled out all the manure I could gather in my little yard, and dry straw, which was thickly spread over two acres, beginning at the woods. I judge there was over 200 horse cart loads. Upon the remainder of the lot, I had carted about 25 loads of black earth and oyster shells, partly decomposed; and spread in places to suit my judgment. It would be proper to say this lot the last year was covered with a good crop of clover, which was not grazed until in bloom, and then only moderately so. This experiment in manure, like many others I have tried, did not accord with the views of scarcely any of the knowing ones around me, but to the contrary, to amuse and make merry at my folly, was the effect. If you will suffer me for a moment to digress, I will ask the question, why is it that farmers generally are so much attached to old style and so averse to any thing new in the way of experiments? Is it because they have reached perfection in their business? The casual observer would say no; what then and why is it they refuse so obstinately to make use of the means actually in their way to enrich their farms, clear them of the cancer debt, and ever eating worm, interest, and ultimately to make them happy? The answer could easily be given by those who have tried the matter to their own satisfaction. Would the self-conceited farmers read the agricultural works published among us, and have faith to believe their reports, and candor sufficient to admit truth, they would be constrained to say that experiments in tilling the soil, have been the means of agriculture keeping pace with arts and sciences, and doing her full part in the improvements of the day. It should gladden the heart of every American when he sees what has been done in this new country, towards the comfort and happiness of man, by the issue of successful experiments. As a votary of choice and not of necessity to Agriculture, I feel willing to throw my mite in her behalf; and as a proof of her profuse liberality, I will come to the point and state that the lot here described, was got in good order, checked off and hilled, making 34,000, or about 7,500 to the acre, being near 2 feet apart. It was planted in tobacco in good time, during an excellent season; it took root and grew off finely. I had it worked once a week for six weeks with the hoe, plow and harrow, when I had to desist on account of the rapid growth, the leaves reaching from one to the other, which soon shaded the land, thereby retaining a moisture and preventing the growth of weeds. The success in part of my plan, I must attribute to the weekly stirring the land; while my neighbors, who pursued a less difficult plan in the beginning, had more to contend with in the end, with less profit for their labor and prejudice. I believe there was not 1,000 plants but what matured. I had it cut early, with as little waste as possible, and from 9 to 10 plants speared on a 4 foot stick, and the whole hung from 6 to 8 inches apart throughout a 60 feet tobacco house, 30 wide including the shed, which was built expressly for the crop. It may seem a large house for the product of 4½ acres, but there were only 2 rooms in the 10 feet shed left vacant. When cured, I was particular in having it weighed. The gross amount was 9,000 lbs., 1,000 less than I promised myself, but when I received my account of sales, the nett amount was 8,250 lbs., sold for $4.10, or $91.22 cents per acre, produced from the same lot on which I raised 22 bushels wheat and 60 bushels oats.

I have by actual experiment, and to my own satisfaction, tried corn, oats, wheat and tobacco, and think I am prepared to judge of the relative value of each crop produced from our soil. I will now give the gross amounts and expenses of my best crops upon a clover fallow. I will make the statement as accurately as I can, by beginning with tobacco, the most expensive and decidedly the most profitable: I have endeavored to count every cost, so as to bear the scrutiny of an examination.

1840.		
1832 lbs. tobacco from an acre, selling less than $5 per cwt., or for		$91 22
Expenses in plowing, harrowing and hoeing,	$8 00	
Plants, planting, topping, suckering, worming, cutting, spearing, hauling and housing, say,	8 00	
Stripping and packing,	5 00	
House room and interest on land,	5 00	
Freight and commission,	2 00	
Manure and sundry expenses,	3 22	
		31 22
So much for tobacco under 5 cts. per lb.,		$60 00
1837.		
22 bushels wheat sold for $1,50 per bush.; and straw $2,		$35 00
Expenses of plowing, harrowing, rolling and seeding,	$5 00	
2 bushels seed at $1,50,	3 00	
Cutting and securing,	2 00	
Interest on land and use of barn,	2 50	
Thrashing, freight and commission, 12½ cts. per bushel,	2 50	
		15 00
So much for an acre in wheat above its usual price,		$20 00
60 bushels oats sold at 45 cts., straw worth $3,		$30 00
Expenses of raising should be considered less, but the freight and commission brings up for near treble quantity,		15 00
See the yield from so good a crop of oats,		$15 00
40 bushels corn worth 50 cts., tops, blades and shucks, $5 00		$25 00
Preparation and cultivation of land, same as tobacco,	8 00	
Planting and securing the crop,	4 00	
Interest on land, house room, freight and commission,	3 00	
		15 00
So much for the universal crop per acre,		$10 00

It may be seen from the above statements which have been prepared with some care, that an acre in tobacco at 5 cts. per lb. is equal to 3 of wheat, 4 of oats and 6 in corn. For fear prejudice might be thought to be in favor of tobacco and against corn, it is but just to say it was precisely the reverse; for when I commenced in my little way, it was to find out in what my farm would give the greatest return from. My neighbors will please pardon me, for calling it by the same name their 4, 5 and 600 acre tracts are called by, and bear with me and hear me out; then compare your nett gain upon stock in trade, after deducting 6 per cent as I have done throughout, which you can procure for money without trouble.

I will now give you a short recapitulation. System and economy have been my watchword from the start. I commenced with the three lot rotation as follows:—I sow a lot every spring in clover on wheat. I have a lot to graze after blooming, and the third lot having been long enough in clover, is fallowed and put in tobacco in the spring and wheat in the fall, and clover in the following spring, and so on in succession. By this course, with the application of all the manure I can procure conveniently, I have improved the soil both in depth and quality, to produce what I have stated. I have also taken some pains to find the manure which acts best upon the soil, and think I have succeeded, which is in the power of every farmer, yea, his duty as a faithful steward; but I have not room in this letter to give my trial of manure, but will merely say the absorbents have all the advantage over the cohesive articles, such as lime, ashes, &c. I will give a statement of 3 years product from my 7 acre lot, 1st and 2d years: in tobacco and corn, $500; wheat $200—3d year, in grazing, in beef, veal and butter, $50, making $750; and although my farm contains but about 26 acres, yet not ¾ths of that has been in successful cultivation, owing to a meadow marsh and a public lot; yet I find by turning to the folio in my ledger, the products of 17 acres in the 4 years, have amounted to $2,500, including my present crop of tobacco, though only a half a crop, owing to a scarcity of plants; for the great quantity of worms and scarcity of plants will form an epoch in the history of the beautiful plant. I pursued the plan of debiting and crediting every thing to my farm, and striking a balance at the year's end, and working interest on the same; and I find after estimating the purchase, buildings and labor, and every expense whatever, that I have $500 over and above cost, and my little patch of earth clear; the worth of which I am willing to have estimated by the reader's own judgment from this communication.

DAVID G. WEEMS.

Tracey's Landing, A. A. Co, Md., Feb. 4, 1841.

Culture of the Hop.

Messrs. Gaylord & Tucker—As I have derived much useful and practical information from the perusal of your columns, and more particularly the communications of those correspondents who have given us the practical result of their labors; and as I practice farming by what I call the *Debt and Credit System*, I herewith send you an account of four successive crops of Hops, four acres, grown on a dry, gravelly soil. First, land made rich by 100 loads manure per acre, and plowed in; then marked in the rows 6 by 7 feet, or 7 by 8, as suits convenience; then drop from 4 to 6 cuttings to a hill, and cover 4 inches. This completes the operation for the first year. Corn or potatoes may be planted between the rows the first year.—They should be kept free from weeds through the season. Now the account:

East Hop Yard Dr. in 1837.

To sticking poles, cultivating and tending through the season,	$50 50
To picking, at 12½ cents per box,	106 75
To box tending, including board,	45 37
To boarding girls, while picking,	65 00
To 110 yards hemp bagging at 20c. per yard,	22 00
To pressing 8,060 lbs. hops, at 12½ cents per hundred,	10 07
To coal and labor in drying,	49 50
To interest on first cost of land, at $60 per acre,	16 80
To transportation to Utica,	12 00
To decay of poles,	6 00
Whole expense,	$383 99

East Hop Yard, Cr.

By 8,060 lbs. hops, sold on contract at 14c. though market was but 5c. amounting to	$1,128 40
Deduct expense, leaves a gain of	745 41

I do not include the cost of manure or poles, as the yard was ready for working when I purchased the farm.

Second Year—Oct. 14, 1838—East Hop Yard, Dr.

To labor in tending and cultivating, and 55 loads manure at 25 cents per load,	$70 50
To picking, including board,	113 36
To labor in box tending,	13 50
To 150 bushels coal and drying,	18 00
To hemp bagging,	16 00
To pressing into bales,	6 50
To cartage,	2 00
Interest on first cost of land,	16 80
Decay of poles,	8 00
Whole cost,	$264 66

Oct. 14—East Hop Yard, Cr.

By 4,068 lbs. hops, sold to U. Leland, at 12½ cents per pound, amounting to	$508 50
Cost deducted, leaves	343 84

Third Year—Sept. 30, 1839—East Hop Yard, Dr.

To 50 days labor including board,	$42 20
To picking 555 boxes, at 12½ cents per box,	69 38
To board in harvesting, at $1 per week,	51 00
To box tending,	29 00
To 150 bushels coal and drying,	19 00
82 yards sacking, at 20 cents per yard,	16 40
To pressing,	5 50
To transportation to N. York, at 48 cents per 100 lbs.,	21 31
To 55 loads manure, at 25 cents per load,	13 75
Interest on land,	16 80
Decay of poles,	8 00
Whole cost,	$292 34

Oct. 19, 1839—East Hop Yard, Cr.

By 5,480 lbs. Hops, sold to C. & S. Milbank, at 18½ cents per pound,	$1,014 86
Cost deducted, leaves,	722 46

Fourth Year—Oct. 8, 1840—East Hop Yard, Dr.

To 60 loads manure,	$15 00
To cultivating and tending through the season,	46 87
To picking 427 boxes, at 12½ cents per box,	53 38
To boarding hop pickers,	48 00
To labor in box tending,	31 50
To drying,	10 00
To 150 bushels coal, at 6*d*. per bushel,	9 00
To 63 yards sacking,	12 60
To pressing,	5 00
To hauling to canal,	2 50
Interest on land,	16 80
Decay of poles,	8 00
Whole expense,	$258 65

Oct. 8, 1840—East Hop Yard, Cr.

By 4,000 lbs. hops, sold to U. Leland, at 30c. per lb.	$1,200 00
Expenses deducted, leaves	941 35

Assuming 5 cents per pound for the crop of 1837, which was the market price, the aggregate of profits of the four successive crops, is,

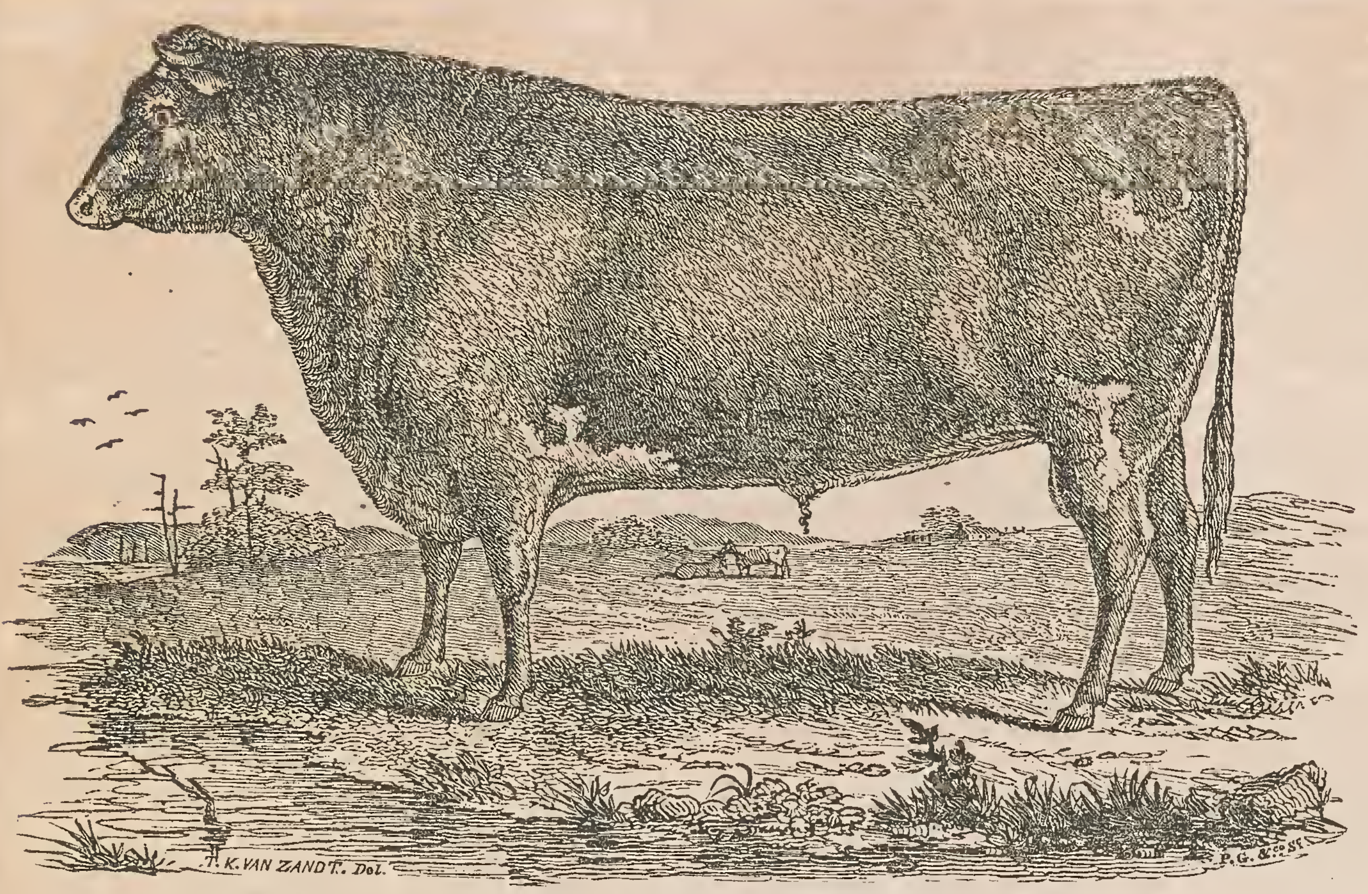
Crop of 1837, gain,	$19 01
Crop of 1838, gain,	343 84
Crop of 1839, gain,	722 47
Crop of 1840, gain,	941 35
In all,	$2,026 66

Now deduct the outfit:—400 loads manure, at 25c.	$100 00
5,600 cedar poles the man set on the yard, at 6½ cents apiece,	364 00
which, deducted from the sum total, leaves of actual gain for crops,	$1,552 66

Hamilton, N. Y., 1841. JAMES H. DUNBAR.

Messrs. Editors—We send you the weight of two lambs, dropped on the 22nd of Feb. by two half-bred South Down ewes. They were weighed at fourteen hours old—one weighed 13 lb. 2 oz. and the other 13 lb. 6 oz. One was got by a pure bred South Down buck, and the other by a Cotswold. As the weight was much above that of ordinary lambs, we are induced to publish it that our brother farmers may avail themselves of the advantage to be derived from good stock.

Alamuchy, N. J. 3rd Mo. 1. J. & S. ADAMS.


T. K. VAN ZANDT. Del.
P. G. & Co. Sc.

SHORT HORN BULL NORTHUMBERLAND.—[Fig. 53.]

Messrs. Editors—You have here a portrait of my Short Horn Bull "Northumberland." He was two years old on the 23d of Dec. last—his color is principally red, though interspersed with a few white spots—his form is thought by connoisseurs to be very perfect; and his pedigree I believe will satisfy the most fastidious; but as it will be given in the next vol. of the Herd Book now about being issued, I will only say, that his dam was "Appolonia," selected and imported by myself in the spring of 1838, and his sire the "Prince of Northumberland," of whose merits, several in this country as well as in England, can bear witness. As an evidence that they were thought to be of no ordinary character, I was told that an offer of £500 from some Kentucky gentlemen, had been refused for him. Truly yours,

E. P. PRENTICE.

Mount Hope, near Albany, April 23, 1841.

Pitt's Thrashing Machine and Separator.

Messrs. Editors—Living as I do, near where Mr. Pitts manufactures his Thrashing and Separating Machines, I am frequently called on for information in regard to its merits, which has led me to investigate its operation; and as some information of its utility may be interesting to some of your readers, I now intrude myself again on your notice, and will give such information as I have been enabled to obtain, together with my opinion of the machine. I would premise, however, that I have no concern or interest in the manufacture or sale, nor have I been solicited by Mr. Pitts to say any thing in its favor; and I have no motive in recommending it to the public, other than to aid the farmer in procuring a very valuable and useful article, and to assist a worthy, ingenious and industrious mechanic.

It is only about ten or twelve years, I believe, since the energies and mighty genius of our countrymen was first aroused to this subject, since which improvements have progressed, and I will venture to say, more has been accomplished in simplifying and bringing them within the reach of our prudent and calculating farmers, than had been accomplished for thirty years previous.

The first notice of Pitt's machine for thrashing and cleaning grain, we find in the "Maine Farmer, vol. 4," published at Winthrop. The Editor, Doct. Holmes says, "We were invited the other day to witness the operation of an improvement in the mode of thrashing and separating or cleaning grain. The machine is the joint invention of Messrs. J. A. & H. A. Pitts of this town. It thrashes the grain clean, carries the straw off, and at the same time separates the grain completely from the chaff."

In the 5th volume of the same paper, we find the following testimony of the same machine. "An improvement in the mode of thrashing and cleaning grain has been effected by Messrs. J. A. & H. A. Pitts of Winthrop, which we think exceeds every thing we have heretofore seen or heard of. The improvement consists in adding a separator of a simple kind to the common thrashing machine, whereby the straw is separated from the grain, and the grain winnowed from the chaff and foul seeds, in a complete and expeditious manner, all at one operation of the machine." This is the testimony of ten gentlemen who had seen the machine in operation.

It also appears that this machine was introduced into the State of Mass. in the fall of 1837, where after it had been fairly tested, it received the unqualified approbation of those who had purchased or employed the machine. This will appear from the following testimony. "We own one of Pitt's Machines for thrashing and cleaning grain. Since we have had it, we have thrashed for about forty different farmers, and we are happy to say, all have been perfectly satisfied with its operation; and we will add, it is the best mode of thrashing and cleaning grain we have ever seen, the machine having answered our most sanguine expectations." Signed by Samuel March, Luther Stockwell and Leonard Dwinnell.

It was also exhibited at the Essex County Agricultural Society's Fair, where it was highly approved of, and a gratuity of ten dollars bestowed.

In July 1838, the Editor of the "Maine Farmer" again says: "Having frequently recommended this machine to the consideration of farmers, it is gratifying to find that in every trial it has sustained its good reputation. It is, beyond a doubt, the best apparatus for thrashing and cleaning grain that has as yet been introduced. The experience afforded by two years almost constant use, corroborates the high recommendations which have been heretofore given; and the unceasing demand for it, is a proof that it performs to the entire satisfaction of all who have employed it."

We next find this machine in the State of New-York; and how was it received here?

The first notice of it was published in the Oct. number of the Cultivator in 1839, by the late Judge Buel, who had one in operation on his premises for five days, which gave him a fair opportunity to test its usefulness. He says, "This machine was patented in June 1837, to J. A. & H. A. Pitts, Winthrop, Maine; of course its merits or demerits can yet be but partially known to the American farmer. We heard it highly spoken of, but as hearing is not seeing, and as it is our practice not to recommend any new implement, till we are satisfied of its utility, we have waited for ocular demonstration, before we would venture to join in its praise, but now having seen it in operation some days on our premises, we are prepared to give it our unqualified approbation, as an excellent machine for the purposes intended." He then goes on and describes the machine and its advantages over the common thrasher; that it can be used in the field in fair weather, without wasting the grain, &c.

The writer, in company with Rev. H. Colman, of Massachusetts, and H. D. Grove of Hoosick, witnessed the operation of the machine at the time above mentioned, and were highly gratified with its performance.

In October 1839, the incidental committee of the Kennebec Agricultural Society, reported as follows: "Pitts' Separator—The machine for thrashing and cleaning grain, invented and patented by J. A. & H. A. Pitts, was exhibited by Capt. Benjamin, of Winthrop. As this machine has formerly received a premium, we can only say that the construction of it manifested skill and faithfulness in the manufacturer. The merits of the machine are now well known and duly appreciated; one hundred of them having been sold from one shop, in a comparatively short time."

In December 1839, the writer was one of a committee invited to witness the operation of one of these machines; and for our report, I would refer the reader to page 82 of the 7th vol. of the Cultivator; and so thoroughly convinced was our chairman *of its superiority*, that he purchased one for his own use.

In January following, we find in the Utica Observer, four certificates signed by six farmers who had employed and witnessed the operation of this machine in that vicinity for some days, who give it their unqualified approbation; and as evidence of their sincerity, two of the number purchased a machine.

We hear nothing more of this machine until August 1840, when Mr. Tucker, in the Cultivator of that month, says—"We witnessed the operation of this machine last week, at the barn of Mr. Bennett, Watervliet, and its performance equaled our expectation; it is a great saving of labor over the ordinary thrashing machines. The operation of thrashing and cleaning being performed at the same time; it has, wherever it has been put in operation, been received with the highest approbation; and was considered by the late Judge Buel, as the best adapted for its purpose, of any machine he had ever seen. It was at his suggestion that Mr. Pitts removed to this city for the purpose of manufacturing his machines; Albany being, from its water communication to every part, one of the best locations for such a branch of manufacture."

In the 7th vol. and 11th number of the same paper, in a communication by R. Harmon, jr., where an allusion is made to one of these machines exhibited at the fair at Rochester, he says,—"Mr. Pitts was present with one of his grain thrashers and cleaners, and he deserves the thanks of the wheat growers of Western New-York for his perseverance in constructing a thrasher and cleaner whereby grain can be thrashed and cleaned for a less sum than can be done with any machine that has yet been introduced."

At the Ontario County Fair held at Canandaigua last fall, the first premium was awarded to this machine, but I am informed was withheld on account of not having been manufactured in the County.

In 1839, this machine found its way into Maryland, and the account given of its operation by R. J. Jones, Esq. in the American Farmer, published at Baltimore, almost exceeds credulity. Mr. Jones says,—"The machine got out in fifteen minutes, ten bushels white wheat, as clean as it could be done by passing it through the fan three times, if got out in the common way. Since that period, I got out in $4\frac{3}{4}$ days 1,081 bushels of wheat and 336 bushels oats. First day 204—2d day 249—3d day 206—4th day 252, and 5th day 173 bushels red wheat, weighing 66 lbs. by the steel-yards, which will be an average of about 240 bushels per day. Some time was lost, too, by the breaking of the large band of the horse power. The wheat got out by this machine commanded three cents per bushel more than any other in market," &c.

I might go on and give other testimonials of its usefulness and reception in different sections, but I think enough has been said to satisfy any reasonable person, that it is a very valuable and useful invention, and well worth the attention of the farmer who consults his own interest.

I have seen these machines in operation, and managed by the farmers themselves, driven by two and by four horses; and in all cases, so far as I have any knowledge, it has given entire satisfaction.

Some one may ask if I am so much in favor of these machines, why I do not have one myself? In reply, I would say, that about five years ago I purchased one of Hale's one horse power and thrashing machine, and so far as thrashing was concerned, it worked well, but then it took two hands nearly as long to clean the grain as it did to thrash it. For this reason I felt a great desire to have one of Pitt's separating and fanning machines attached to my old thrasher; and after considerable persuasion, I finally succeeded in getting Mr. Pitts to undertake it, and am now happy to say he has succeeded beyond my most sanguine expectations. I can now say I have one of Pitts' separators and fanning machines in successful operation; and he is satisfied that he can adapt his separator to any common thrashing machine, and in such form that the straw carrier can be laid off from the fanning mill, and the fanner will be used in the common way if necessary.

As regards the amount of grain that can be thrashed and cleaned in an hour or a day, with one of these machines, much depends on the kind, quality and situation of the grain, as well as the power applied. Those things should be taken into account in doing a great day's work with any thrashing machine. I have seen certificates from Maine and Massachusetts, where they are extensively in use, which fully sustain me in the opinion often expressed, "*that this machine will thrash and clean in a day as much as the ordinary machines will thrash; each machine being propelled by the same number of horses.*"

Now, if I am correct, it is easy to see what would be gained by using one of these machines; but as some farmers seem to think the labor of fanning is of little consequence, it would be well for them to make a calculation. It should be understood, however, the labor of two hands is saved in the first operation, in addition to the labor of fanning.

The only objection I have ever heard against this machine is the price, which is $150 without the horse power, and $250 with the power. In calculating the difference in expense between this and the other machines, the fanning mill should be taken into the account.

In view of what has been said, it would seem that this mode of thrashing and cleaning grain will soon be adopted throughout this country; and I would therefore respectfully suggest to those who are having new thrashers made, to have the shafts at each end of the thrashing cylinder, of the same length, so that another pulley may be added; and then they will be prepared to attach the separator and fanner, at any time they may think proper.

One thing more; Pitt's thrasher is calculated to turn one thousand times per minute. A horse on a ten foot lever, will go round three and an half times per minute. I mention this to show that when Pitt's separator is attached to the common sweep power, it must give the thrasher no more than one thousand revolutions, while the horses are going round three and a half times; all above this is useless and unnecessary, and calculated to make the machine run hard.

In conclusion, permit me to say, the improvements Mr. Pitts has lately made in the construction of his machine, carry it still nearer perfection, and give it additional claims to the patronage of the public. C. N. BEMENT.

Ornamental Gardening.

Messrs. Editors—The article on Ornamental Gardening, which was given in a recent Cultivator, seems to have awakened some interest on the subject, and many applications have been made to me, some personally and several by letter, for further information on particular points, especially respecting the artificial fountain and the sun dial. It appears to be a general desideratum to find where or how those articles can be obtained, and some would like to know the cost. I have no doubt that this will meet the eye, through the wide extended circulation of your little traveler, of some ingenious mechanic in Albany, New-York or elsewhere, who will furnish the articles in good taste, and at such prices as will accommodate both the purchaser and the manufacturer, and be a source of pleasure to the one and of profit to the other. I would particularly recommend the sun dial, as from the cheapness with which it could be constructed of cast iron or some other suitable material, it is natural to suppose no farmer would be without it. A. WALSH.

The Weight of Six Hogs.

Messrs. Gaylord & Tucker—I send you the weight of six half blood Berkshire pigs, which I have just sent to market. They were littered the 6th day of May last, and run through the summer with a lot of hogs (ten in number,) which had been wintered, and were fed only with them on slops and the whey from a dairy of twenty cows, with the addition of about four quarts of cob meal each day to the whole lot. The 21st of Dec., I commenced feeding them with cob and oat meal, and in about three weeks with corn and oat meal (about two thirds corn,) all they would eat, which was daily, about one and a half bushels. On the 22d of March, they were butchered and weighed, being ten months and fifteen days old, as follows: two 355 pounds each; two 330 lbs. each; one 345 lbs.; one 281 lbs.; total 1,996 lbs. *Brimfield, Mass.* S. HOMER, Jr.

American Society of Agriculture.

An address to the farmers of the United States; to every friend of agricultural improvement; to every citizen of the United States who desires to see elevated the character and standing of the cultivators of American soil.

Most respected and most respectable friends and brothers, give me your attention for a few fleeting moments; your humble brother, who now addresses you, published a suggestion about three years ago, for the purpose of arousing your attention to the subject of forming a National Agricultural Society; that suggestion was then responded to with a hearty good will throughout the country. But action upon the subject has been overwhelmed by the political whirlwind that has swept over our country. In the first lull of the succeeding calm, the proposition to form such a society has been renewed, and with one exception, has met with a cheering "God speed the project." None doubt the utility of the proposed society, yet doubtless there are many who would like to see the object, end and aim of the society more fully explained. To such I now offer some of my views, and in doing so, invite you all to give yours; for this is one of the objects of a National Society to interchange our views.

Many warm friends of the measure, who are anxious to see the society in operation, cannot see how it is to be organized. They say, "No doubt if once organized, it would daily increase in strength and usefulness; but it is like a great complicated piece of machinery, of great use and value when once in motion, but difficult to start." Now, to me there is no difficulty in the way. All that is wanted is a few active engineers to put the machine in motion. Immediate and decided action of a few of the active friends of agricultural improvement, who must assume the responsibility to act as engineers as well as pioneers for the whole Union; and having once given the society an existence, it will flourish and increase in strength just as our political Union has done.

The following plan of organizing the society is suggested to your consideration:

Let as many of the friends of the project as can be induced to do so, meet at the city of Washington, on some day of the autumn of 1841, (the particular day to be hereafter fixed,) and there form a constitution for the society, and elect officers, to wit: a president, a vice president for each state, a recording secretary, a general corresponding secretary, and a corresponding secretary for each state, county, city and principal town in the United States, a treasurer, and probably a publisher of a national paper, to be called the Journal of the American Society of Agriculture.

The first officers will hold their offices until the next annual meeting, which should be held at the capital of that state which had furnished the greatest number of members at the time when the president of the society should issue his proclamation to convene the second meeting.

The place of each annual meeting should be fixed at the preceding one, in some state other than the one where it was then held, so as to give the members in each state an easier opportunity of attending.

As in the formation of all such associations it is necessary to have some cash funds, are you willing to donate "a mite" to accomplish this great national object?

If so, an opportunity will hereafter be offered you to do so. Upon some of you I hope to make a personal call for that purpose, should it be thought advisable, after due reflection, to proceed in the organization; therefore, I pray you to give this subject your serious consideration.

If you should aid in the formation of this society, will not your children "rise up and bless you?" For one of the first objects of the National Agricultural Society should be to connect with it a "National Agricultural School."

Not such a "National School" as is the only one we now have, which has, with too much truth, been called "a nursery of aristocracy"—where the humble son of a farmer is rarely admitted, and if admitted, what is he taught? Not how to cultivate his mother earth, and make her sons glad; not how to increase life, but the art of destruction, the trade of blood!! Such is now your only national school.

Such will not be the only one, in a few short years, if you will lend your energies to form a National Society, whose motto will be, "to elevate the character and standing of the cultivators of the American soil." For when once organized, you will soon show a united force of many thousands, whose voice will be heard in the halls of congress, demanding our birthright. Be assured we shall be heard. "Let all our energies be concentrated, and we can do any thing in the power of man; but divided and scattered as we are, we spend our forces, as it were, drop by drop; whereas, *union would make us mightier than a torrent.*" We *can*, shall we say we WILL form such a torrent as will overwhelm our political rulers, unless they will do justice to the agricultural class of the community.

As soon as the National Agricultural Society is formed, let us ask Congress to appropriate the "Smythsonian fund" of half a million of dollars to establish a National School. If we unite as we should do, our "torrent" will be too strong for time-serving politicians to resist.

I look upon the National Agricultural School as the greatest blessing to flow from the National Society.

But the Journal of the Society will also prove of immense advantage. It will embody a vast amount of matter, useful and interesting to every cultivator in the Union. The most carefully prepared tables of the productions of the earth, from every section of the Union, will be kept constantly before the reader, totally different from those vehicles of deception, and often fraud upon the farmer, called "prices current." It is by the quantity produced, and the probable demand therefor, that we can understand whether it is for our interest to sell our crops now, or store them up. At every meeting there would be numbers from every state in the Union, as ready to impart as receive information.

"All the inducements of the business of a National Society, a National Fair, and a National School," and the honor of being a member of such a society, would be enough, I think, to make us all feel that it would be a greater honor to be elected a state delegate to one of the annual meetings of the National Society than to be elected a member of Congress.

It cannot be expected in this short address, that I should point out all the good that would flow from the action of the proposed society. But if we are convinced that the effect would conduce to the interest and happiness of the great mass of agriculturists of the Union, let us act, and with spirit too.

And now, my friends, one and all, do you approve of the plan of organization? Speak out boldly if you do not. And if you do not object, the leading friends of the measure will fix upon a day for the first meeting, and proceed in the manner proposed.

There has been an argument raised against organizing such a society at present, "because the public mind has not been sufficiently instructed, and does not sufficiently appreciate the advantages of such an association to render it successful."

Now it is on this very account that the friends of the proposed National Society wish to see it established, that the operations thereof may wake up an excitement throughout our "wide scattered population," that shall be the moving cause of changing the "condition of the country."

It is also argued that the failure of several state and county societies is proof that a national one must fail also.

Let me ask if this is a valid argument? This short quotation, in my mind, is sufficient to knock the whole force of the argument into nonentity: "Divided and scattered as we are, we spend our forces as it were, drop by drop, whereas UNION would make us mightier than a torrent."

The object of all state and county societies has been of a local nature. Their existence has been known only in their own locality, and they have been too weak in numbers to command legislative aid. Who can tell what would have been the effects if all the members of all the local societies in the Union had been attached to one National Society? If all the exertions of all these societies, collectively and individually, had been concentrated upon one object, would it not have formed a "torrent" as mighty, comparatively speaking, as the thundering Niagara. If the nation, instead of individuals, had received all the light of the intelligent minds that have been devoted to these local societies, would it now be said "that the public mind was not sufficiently enlightened to appreciate the advantages to be derived from a National Society?" If all the money that has been devoted "drop by drop" upon "model farms" and local schools had been concentrated, should we not now have an institution worthy the great country we inhabit?

If our population is scattered; if "long distances intervene between the most efficient friends of agricultural improvement," so much the more need of forming such a society as shall draw them together in "one strong bond of brotherhood."

Is it a fact "that the time has not yet arrived when such an association can be organized with a reasonable certainty of success?" If such is the fact, I am disappointed in the character and energy of my countrymen.

Once more I call upon you to answer me this question; am I so disappointed in your character?

Do not refuse your countenance to the measure because it does not originate in high places. For "if we are ever to have a National Society of Agriculture, it must be got up by the farmers themselves;" & as one of that class I now address you.

If the present attempt at organization fail, the matter may be considered as decided for the present generation.

The only question then is, shall the matter sleep until you and I are past waking?

I am a devoted friend to present organization of a National Society of Agriculture, and a National School, *that will elevate the character and standing of the cultivators of the American soil,*

And your friend and brother,

Lake C. H., Ia., April 1, 1841. SOLON ROBINSON.

Inquiry—Raising Chestnut Timber.

Messrs. Gaylord & Tucker—Will you or your numerous contributors give me accurate information on raising chestnut timber from the seed? In this State, we can buy the nuts ready for market at $1 per bushel on the high ridges; and as the chestnut timber is fine and durable for fencing, it would be of much advantage to many farmers could we fall upon some cheap and certain mode of propagating the trees from the seed. Must we plant the nut where the tree is to stand, or can the trees be best raised in a nursery and then transplanted? If the former be the only mode, when must we plant the seed, in the fall or spring, and at what distance? If the chestnut will bear transplanting, at what season must this be done? I wish to plant, as soon as I can learn how, two rows of chestnuts, on both sides of the road for a mile in length, and should be thankful for early information.

Any information on producing the red cedar from the berries, would be also gladly received. Ours is a woody country, it is true, but it will soon be bleak, unless we resort to some method of restoring timber as fast as we destroy it.

FRANCIS H. GORDON.

P. S. It may be well to let some of your readers know, that we have tried the Jerusalem Artichoke here and find it to surpass every other food for hogs; because they grow without culture and the hogs root for their living and keep fat and saucy. In this vicinity, the artichoke is in high repute. I have 20 acres in this prolific root, and consider the product worth more than the same number of acres in corn, although the artichokes require no culture, while the corn requires much. *Clinton College, Tenn., March* 18, 1841.

Farmer's Song.

[Extract from a manuscript, still in the hands of its author, and probably, with him, destined to the ocean of oblivion If you think the scrap worthy of the little space it would occupy, it may meet a better fate. A. W.]

In a sweet healthy air with a farm of his own,
  Secluded from tumult and strife,
The farmer, more blest than a king on his throne,
  Enjoys all the comforts of life.
When the sweet smiling Spring sheds its perfumes around,
  And music enchants every tree,
With his glittering plowshare he furrows his ground,
  With a mind independent and free

When Summer to fruit the sweet blossoms transforms
  And his harvest fields wave with the breeze;
Sweet anticipation unfolds all her charms,
  And points to contentment and ease.
When bountiful Autumn her treasures bestows,
  And her fruits are all gathered and stored;
His heart to the Giver, with gratitude glows,
  And plenty presides at his board.

When Winter howls dismally over the earth,
  And want tells her tale at his door;
Serenely he sits by his clean blazing hearth,
  And dispenses relief to the poor.
Then let idle Ambition her baubles pursue,
  While Wisdom looks down with disdain,
The home of the farmer has charms ever new
  Where health, peace, and competence reign.

Light on the Silk Culture.

Messrs. Editors—In my communication in the December number of the Cultivator, I mentioned that I had discovered a very great improvement in the feeding of silk worms, which not only compelled the worms to clean themselves, but saved more than half the expense of gathering and feeding out the foliage, besides accomplishing other objects so important as to make this improvement absolutely indispensable to all who expect to make the silk culture a regular and profitable business. The value of my improvement is acknowledged by all who have any practical acquaintance with the subject; and the principles it embodies are so self evident as to command the assent even of those who are not. My frame for feeding silk worms, will be in operation the whole of the present season, in a cocoonery now building in Burlington for my use, in which four to five crops of from two to three hundred thousand worms each will be reared, beginning in April next. I respectfully invite all of your readers who may be interested in the silk culture, to visit my establishment during the season. They will there see my improvement in operation on a scale of magnitude sufficient for the notice of the capitalist. The reeling of the cocoons, and probably the weaving of silk, will also be carried on during the season.

In other places my frame has been introduced, and such of your readers as reside at remote points, may be disposed to investigate its merits by visiting the several cocooneries mentioned below, where it will be found in use, in many of them on an extensive scale:

James Anderson, Louisville, Ky.; Oliver Morse, Forsyth, Ga.; Daniel Spaulding, Hancock, N. H.; Rev. A. Ross, Kingsport, Tenn.; Charles G. Aikin, Cleveland, Ohio; Jesse Shelly, Jamestown, N. C.; Dr. Joseph E. Muse, Cambridge, Md.; Charles P. Cummins, White House, Cumberland Co. Pa.; Rev. J. R. Barbour, Oxford, Mass.; Dr. E. B. West, Braintrim, Luzern Co. Pa.; H. Wilks, Halifax, N. C.; Miller Hallowes, Saint Mary's, Ga.; Gen. Jno. C. Johnston, Catskill, N. Y.; P. Cage, Woodville, Miss.

Besides these, a much larger list of names might be added.

It is important that the many gentlemen who are about embarking in the silk culture, should be made acquainted with all that is new or valuable in relation thereto. To contribute my share in the general diffusion of such, I have printed several small pamphlets on the silk culture, for the express purpose of distributing them gratuitously to those who write for them at their own expense of postage. Many of your readers have been supplied with them by mail, and there are several hundred copies still on hand, to which those who may be really interested in the silk culture are entirely welcome. They embody facts and suggestions not to be met with in any previous publication.

The recent returns of the late census in Pennsylvania, show us that in fifteen counties, 6362 pounds of cocoons were produced, and 892 pounds of reeled and thrown silk, during the past year. In this state, the marshals return but 1966 pounds of cocoons, as the product of the same year. All of these state returns are exceedingly imperfect, and do not give anything like a fair account of the quantity of silk actually produced, because the marshals commenced their operations while numerous large crops of silk worms were yet feeding. In Burlington county alone, I have no doubt the quantity of cocoons produced would nearly equal 1,500 pounds. In Pennsylvania, the state treasurer paid out $2,101·89, for premiums on cocoons for 1840. As the state bounty is twenty cents per pound, this sum would pay for upwards of 10,000 pounds of cocoons. But it is well known that many persons who reared considerable crops of worms, made no demand for the bounty. Probably the whole silk crop of Pennsylvania for 1840, was equal to 25,000 pounds of cocoons, equal, if of good quality and carefully reeled, to at least 2,500 pounds of silk.

Respectfully yours, EDMUND MORRIS.

Burlington, N. J., Feb. 12, 1841.

Culture of Corn.

Messrs. Editors—I have taken the Cultivator from its commencement, and have derived much information and satisfaction from its pages, and have all the volumes singly bound for future reference. Being bred a mechanic, I was obliged to look to the practice, and learn from the experience of farmers, on commencing the business myself.

Although unable to command but a small capital, still I have been able to succeed on a small scale, so that I am perfectly satisfied with the honorable and pleasant employment of tilling the soil.

I now proceed to give you an account of the culture of a small piece of corn last year, which I believe was the heaviest ever raised in this town, yielding at the rate of 90 bushels to the acre, 900 bundles of stalks, and 1,500 pumpkins. The land had been in pasture about three years. I broke it up early in the spring; being stony, and other circumstances unfavorable, I could not turn it smooth, so I let it lie until near planting time, then dragged it thoroughly; then drawed on twenty-five wagon loads of long manure to the acre; then dragged again, then cross plowed. I then drew shallow furrows three feet apart, and drawed ten loads of manure, which was piled up the year before, so that it was thoroughly rotted, and dropped half a shovel-full in rows across the furrows, near three feet apart. I put my seed to soak at night in warm water, in which was dissolved half a pound of salt petre; in the morning turned off the water, put a small quantity of tar to boiling water, let it cool and then poured it on the corn, which formed a coat of fine varnish on it. I then turned off the water, and stirred plaster with it, as much as it would take up; this I know will prevent crows from pulling it. I then proceeded to plant, first hauling a thin covering of dirt on the manure. After weeding, I put a handful of plaster and ashes, mixed in about equal quantities, on each hill. I plowed among my corn at hoeing, and raised a broad flat hill around it, which I believe to be better than to let the earth remain undisturbed, especially on a hard soil. I have no doubt but there are soils on which corn will do best on a level surface. The variety I planted was the Dutton. Some farmers contend for manuring broad cast and some in the hill; as for myself I contend for both, but be sure to have rotten manure for the hill, which gives corn an early and vigorous start, and the coarse manure yields food to the filling grain.

I have tried many ways in seeding potatoes, and feel confident that I have discovered the best. Let others try it. I believe it will commend itself to any farmer. What farmer has not noticed that when his potatoes sprout in the spring, those eyes on the seed end produce the largest and most vigorous sprouts. My practice is to have storeage in the cellar, and in the latter part of the winter or in the spring, commence cutting off the seed end of my largest potatoes which I feed or which are used for cooking, say about one third of the potato. In this way you have the best part of the potato for eating and the seed end ready for planting. I had rather have one third of a large potato cut from the seed end for a hill than the whole potato at the same price. I would say a few words as to the much talked of Rohan. I procured a bushel and half from Albany last spring, planted them the last of April, raised one hundred bushels of grand potatoes. I consider them the best of several kinds I have raised for eating. I would advise farmers when they can procure seed reasonably to try them; plant early, three feet apart, three eyes in a hill, hoe twice and make large hills.

Respectfully yours, HEMAN H. BARBER.

Summer Hill, N. Y., March 20th, 1841.

Notice of Improved Cattle.

Messrs. Gaylord & Tucker—I had occasion to visit your city a few days since, and took the opportunity to go and see the fine cattle, sheep, &c. in the vicinity. My curiosity led me to this from several notices and portraits of animals that have appeared in the Cultivator.

The Patroon's stock are large and beautiful animals, about 30 in number, which are, as I was informed, descendants from the imported bull Washington and cow Panzy. Ajax is a bull of great weight, good form and fine in many valuable points, and his stock is well deserving of the reputation the public has given it.

The herd of E. P. Prentice, Esq. at Mt. Hope, are a specimen of the qualities of good improved Short Horns. His bull Leopard, bred by the Patroon, is a beautiful animal. I only saw him standing in the stable, did not handle him, but by his general appearance I thought him the best bull I ever saw. Fairfax, bull calf, 10 months old, pure white, (not the best color,) yet in point of substance, beauty, and other good qualities, is not equaled by any calf of his age that I have ever seen. His dam Splendor was bred by Mr. Whitaker, England, and imported by Mr. P. about a year since. His sire was Sir Thomas Fairfax, owned by Mr. Faux, England, and is said by many good judges of stock to be the best bull in England. Bull Northumberland, a beautiful red color, from Appolonia, got by the Prince of N——— from the herd of Whitaker. The cow Matilda and a number of her heifers, are beautiful animals, in reality what they have been represented to be in the description of them annexed to their portraits in the preceding numbers of the Cultivator. But as it would be impracticable to give a description of all these fine animals, I would ask Mr. P. to insert (particularly his bulls) their portraits, with a description of them in the succeeding numbers of the Cultivator, as it would interest your readers and favor the public.

The portrait of Mr. Vail's imported heifer Dutchess, is a poor or bad likeness, as it appeared in the September number of the Cultivator, as one would judge from it that she was a large, coarse, inferior heifer, when in fact, I know not where an equal can be found, or one in which are so admirably combined fineness, substance and beauty. Duke of Wellington and Dutchess, Mr. Vail's bull and heifer, show the result of scientific breeding, that is a reduction of too great a size and retaining a full development of valuable points, and keeping in view their constitution, substance and beauty, for which these animals are so highly valued.

I noticed a few lots of South Down sheep. They have the appearance of being a hardy race of animals and I should judge that they would return more in value of wool and mutton for the quantity of keep, than any other breed of sheep.

As it is my design to keep the best breeds of cattle, I took the opportunity to look at a number of lots of Hereford cattle. That they are a good breed of cattle for beef, or that they will improve our native stock, I doubt not, but to compete with Short Horns seems impossible; at any rate I believe no man who has the improved Short Horns and whose farm is well adapted to them, will dispose of any to make room for the Hereford. Yours respectfully, J. PASCO.

Ware House Point, Ct. Feb. 1841.

The Rohan Potato at Quebec.

Editors Cultivator—Gentlemen—Having seen several notices in your useful and highly interesting publication, respecting the prolific qualities of the *Rohan potato*, it may not be uninteresting to some of your subscribers who reside far south and west of us to know the result of an experiment, in trying the growth of this vegetable in our northern climate, as a comparison with similar experiments in their warm and more genial regions. On the 10th May last, I purchased two Rohan potatoes from Mr. John Musson of this city, who had imported a small quantity of them from New-York. The weight of the two potatoes when bought was a little over one pound. I divided them carefully and found 15 eyes in one and 14 in the other, having kept the pieces in a warm room for 5 or 6 days, till I could see the eyes in each piece beginning to enlarge, I planted them on the 15th of May last, in my garden a few miles north of this city. I deposited one eye in each hill, which I made 22 inches apart, putting in each hole the usual quantity of stable manure; about the 1st June the plants appeared above ground, and grew with extraordinary rapidity; about the 20th June, we were visited with a severe storm of wind and rain from east, which broke off close to the ground 4 of the plants, when the sprouts were from 10 to 12 inches long. These broken plants never after recovered, and I consequently lost 4 hills out of the 29 which I planted, leaving but 25; these hills had a deep hoeing twice or thrice during the summer. The plants grew with amazing luxuriance, and when I had them dug up on the 15th day of October last, some of the stalks were exceeding 8 feet in length and none were under 6 feet long. The result of the crop was a little over 2½ bushels, weighing 152½ lbs. The potatoes were unusually large and very unsightly, with deep indentations. One potato in particular excited a great deal of surprise amongst our Canadian farmers, its weight being 4 lbs. and 2 oz. and a great many weighed from 2 to 3 lbs each.

H. GOWEN.

Quebec, March 15, 1841.

Root Steamers, &c.

Messrs. Gaylord & Tucker—The columns of the Cultivator are too crowded with valuable matter, to be made the vehicle of querulous self-love. I will therefore simply remark that your correspondent has assumed to himself much more of my article than belongs to him, and has given to both himself and it greater consequence than the writer intended.

As to the incognito complained of, it was much like the darkness that held Falstaff at such odds, when he assures Prince Henry that "three misbegotten knaves, in *Kendal green*, came at my back, and let drive at me;—for it was *so dark*, Hal, that thou could'st not see thy hand."

One more quotation and I have done:

"*Resolved*, That J. B. Nott, *C. N. Bement*, and Volkert Bullock be a committee to examine such agricultural implements as may come under observation, and present their views of the utility of the same at the next annual meeting." See Cult. Feb. 1839.

Allow me to put aside the "curtain" which has been thread-bare this many a day, and subscribe myself

Respectfully yours, R. FRAN'S ROTCH.

Butternuts, April 8, 1841.

Wool Growing in Buenos Ayres.

Messrs. Gaylord & Tucker—The fertile "Pampas" in the interior of South America have been long celebrated for the immense herds of cattle and horses reared upon them. So abundant are they and so easily reared that they are slaughtered in many places for their skins and tallow alone. Sheep too of native breed, with coarse hairy wool, have been so plentiful that their carcases were used for fuel in burning brick. The expense of transportation and the absence of timber and salt for barrelling alone prevents us from the competition of their meat in our own parts. The attention of agriculturists there has been of late years turned to improving their stocks of sheep by large importations of Saxony from this country and from Europe. An English gentleman by the name of Sheridan began the business with a stock of 60 Saxony and 3,000 native ewes, and in the year 1835 he had increased the number to 45,000, and the grade was very nearly increased to full blood. In the year 1837 he had 90,000, and intended to keep on until he numbered 200,000, which quantity he has doubtless attained ere this time; others were copying his example until the business bids fair to outstrip that of cattle, within a few years. I have a small sample of Mr. Sheridan's clip of 1837, which I enclose to you; I was assured it was below the average of the flock. The prices at which these grades of wool have sold has been from 8 to 12 cents per pound in Buenos Ayres.

The price of government lands there is ten cents per acre. It is laid off in "*estancias*," a league square, containing 5,760 acres English; the face of the country almost a dead level, no timber, but a luxuriant coat of grass.

A cottage is erected in the center of the farm for the keeper, and an ample yard enclosed by driving the trunks of the common peach into the earth, and watling the interstices with the branches. An "estancia" will support 3,000 sheep, (which is about the size of their flocks.) The only care they require is to yard them at night and during a storm. They will seldom wander beyond the landmarks during the day; at the approach of a storm they turn their heads to the leeward, and feed on until turned by their keeper towards their place of security. An instance has been known where 900 of a fine stock, and the best sheep in it, were destroyed by being in a storm, pressed by the rear ranks into a run of water, until the chasm was filled with dead bodies, and the remainder of the flock passed over. The shepherd does not remain with the flock, but at the cottage, having a horse already saddled and bridled (ready for a sudden call) always at the door in the day time. The streams are few in number, sluggish and muddy. Thus far very little attention has been paid to cleaning the wool for market. It is generally sold in the dirt. Perhaps this has been encouraged by our tariff admitting all costing eight cents or less per pound duty free. But after this year, when our leveling tariff shall have brought down the duty on wool to 20 per cent on its cost, it is calculated that these evils will be remedied and this wool will be fairly brought into competition with our own clips in our own market. Even now I have reason to believe that Mr. Sheridan's large clips have been purchased for this market so as to bring them in duty free. The consequences I leave to those interested to judge of. But while the "Senior" has a farm of 5,760 acres of first rate land for 576 dollars, *affording pasture the year round*, with *semi-yearly and twice increase*, and wool equally fine and valuable, how can our growers compete with him, with a 20 per cent tariff!!! I have derived these facts from an American high in authority at Buenos Ayres. I do not own a sheep, and my personal interest, if any, is the other way. But I have some American feeling, and would not willingly see this great branch of our national wealth crippled or destroyed, as I fear it will be, except the compromising tariff be amended in due season so as to leave the duty not reduceable by filth or merely nominal on clean wool. It is time for wool growers to be up and doing. The next congress will confirm or remodel the tariff. Shall this great interest be left to protect itself, or shall it claim a protection equal to the superior advantages of the foreign grower? Let northern men look to the subject in season. A Northern Man.

Buckthorn for Hedges.

Messrs. Editors—As the subject of hedging is of great importance to many of your readers, especially those residing in the prairie west, and as you invite all to "do good and communicate" any item, however small, to the common stock of knowledge, I will relate a bit of experience, which may be of essential benefit to many of your subscribers. Last June I received from the east three pounds of buckthorn seed; accompanying the package were printed directions for sprouting the seed of the *hawthorn*. which, like you, I "presumed" were applicable to the buckthorn. Accordingly, I mixed them with an equal quantity of sandy soil, confined the whole in a coarse bag, and buried it in a hillock of earth in the garden, expecting they would sprout in something less than two years. In about three weeks, perceiving that the squirrels had dug a hole in the hill, I opened it, and was much surprised to find the seed all finely sprouted. I immediately transferred them to seed beds, and in a fortnight they made their appearance above ground. It was so late in the season that they grew only one or two inches, and I am afraid the winter has killed them. From this trial I conclude that no preparation of the seed is necessary, but to plant them in early spring, and they will vegetate as quick as onion seed. I think the buckthorn will prove to be better adapted for prairie fencing than any other plant. Very respectfully, C. L. SHEPHERD.

Buffalo Grove, Ill. Mar. 1, 1841.

The Howard Plow.

Messrs. Gaylord & Tucker—As respects the Howard plows, we can say, that for the last fifteen or sixteen years we have sold at least 20,000 plows; and although every plow has been *warranted*, we can safely say, that not a dozen have been returned. Mr. Howard is a first rate workman both in iron and wood, and every plow is made under his own eye. As to materials, nothing is used but the very best, which accounts for his plows being preferred for heavy work; as for strength, durability, ease of draft, and doing the work in the best possible manner, they cannot be surpassed by any other plow. We should have been pleased to have seen you at Worcester, for then you could have judged for yourself. You would there have seen the Howard plow run rods without a holder, taking the furrow up and turning it completely over, turning every thing from the top directly to the bottom, leaving the bottom of the furrow as smooth as it possibly could have been done by shoveling the dirt out by hand. You will notice by the report of the committee, that Howard's plow run about seven per cent lighter draught than any other plow on the field. I presume you have noticed the report, where they recommend the Howard plow, where *strength* is wanting. There can be no mistake but the Howard plow is far the best plow for all purposes that has been introduced, as respects strength and durability, and for doing the work in the best possible manner. JOSEPH BRECK & Co.

Boston, Feb. 9, 1841.

Animal Manures.

Horses prefer coarse hay, and cows prefer fine hay. A cow, therefore, may be profitably kept by him who keeps a horse: for the horse is offended, and objects to feed on hay in his own crib, after breathing on the finer part of the hay, while eating the coarser parts: yet the cow appears to prefer the refuse part and leavings of the horse, after he has selected and eaten the coarser parts of the hay.

In speaking of the qualities of manure—it is common to say *rich horse manure*. There is probably some error or misunderstanding on this subject, as to the quality of different manures.

The droppings of the cow is termed the poorest of all animals, and that of the horse stable and hogpen are called the richest, and produce the greatest effect on vegetable growth All these distinctions and qualities owe their richness to promote vegetable growth, to the quality of the food of the cow, horse or hog, &c.

If the horse is fed solely on grass or hay, his droppings are of no greater value or richness than that of the cow which feeds on the like food. It is the same with the manure from hogs. If the hog eats manger swill, void of grain, &c. or is fed on grass, as the cow is (and the hog will pasture on grass as well as the cow or ox,) his droppings are of the same value and quality only, to promote vegetable growth.

The horse is generally fed on grain largely, and so is the hog to fatten him, and then their droppings are rich in proportion to the quality of the grain they eat, and are more valuable as manure.

So the reason why night soil or poudrette is richer than other manures, is because the human food is of richer materials.

I think, however, that the manure from sheep, when fed on grass, is richer than that from the horse, cow or hog; and the reason appears to arise, not from a departure from the same principle, or different doctrine than that I have stated—but because the sheep will not eat good and long grass, called the best pasture for the cow and the horse; but they feed only on short grass, too short for the cow and the horse.

Here the same rule obtains. The grass of new growth and close to the roots, is much more sweet, nutricious and of richer quality over the same grass of larger growth.

Hence the droppings from sheep are richer in that proportion, as stated. The manure, therefore, takes its quality for promoting vegetable growth, from the quality of the food the animal feeds on, from which the manure is dropped. Respectfully, D. TOMLINSON.

Schenectady, 12th March, 1841.

Proper Time for Cutting Bushes.

Messrs. Gaylord & Tucker—When I first settled in Yates county, I bought a farm which was much neglected, and the bushes and briers were grown up round those fields which had been cleared, almost to the tops of the fences. I took a strong sythe and cut them close as I could to the ground about the second quarter of the moon in June, when the leaves were nearly the full size, and the sap flowed the most freely of any time of the year; and they seemed to bleed to death, (that is, the sap flows from the root and dies;) not one out of fifty ever sprouted again. The experience of 25 years has, in all cases, proved successful—also in cutting all underbrush and saplings of almost any size; not one in ten ever sprouted. I have practiced it on oak land and on low lands and almost all kinds of timber. I have often plowed out the stumps with a single team, where it had not been cut over four to six years, that were a foot through; and from my experience I would pay treble wages at that time of the year if I wanted to clear land, rather than have them cut at any other time of the year for nothing. But do not cut any other timber which you want to preserve, without you split it or take the bark off, for it will soon decay and rot and be full of worms. I am well convinced that if you want timber to last, it should be cut after the leaves begin to fall, say in October or November. I think it will last in the ground or out, nearly twice as long as it will if cut at any other time of the year. Try it and see for yourselves. ABEL PECK.

Benton, Yates co., N. Y., Feb. 25, 1841.

Horses vs. Mules--Correction.

Messrs. Gaylord & Tucker—There is an important error in my last communication in the part which relates to *mules*, which it is desirable to correct. Having taken no copy, I don't know whether the fault is with me or the printer, but what I fully intended saying was this: "Probably, it would be overstating the case to say, that with little grooming, half the attention and feed, and no disease, they will out live the laboring lives of *three* (3) horses, and do the whole work of each." Thus, if the average termination of a horse's *working age*, including all that die from disease, exposure and the effects of labor, or are rendered unfit for its performance, be fixed at 16 years, deduct from this 4 years before it should commence, we have 12 years as the average working age of the horse; and if the average life of a mule be 40 years, including all that die from disease and the effects of labor, deducting 4 years for the colt, we have 36 as his working age. This I have no doubt is overrating the endurance of a mule in all the privations and hardships he would have to undergo in ordinary employment; but I am sure the full capacity of the horse is given for our country, including all that are disabled from unsoundness and otherwise.

It has been asserted that the natural age of the ass is nearly twice that of the horse, and that the hybrid combines in himself the ages of both. This assertion requires proof, and it is for the purpose of eliciting information on this subject rather than imparting it, that these suggestions have been made. It is to be hoped some of your readers will do us the favor to communicate some facts to enlighten us on this point.

Buffalo, April 8, 1841. R. L. ALLEN.

Mississippi Agriculture.

Messrs. Editors—I take it for granted that from the deep interest you feel in the advancement of agriculture throughout the country, you will not hesitate to lay before your readers the accompanying bill,* recently enacted in this state. It was drawn up by a citizen of this county, and received the sanction of the people's representatives with great warmth and cordiality. The destructive and desolating consequences of the entire neglect of our citizens of all the other branches of husbandry and agriculture except our staple, and the wild and restless spirit of speculation which pervaded the whole community, has carried with it its antidote. This bill is the omen of an utter change in the policy of the citizens of this state. With a degree of energy peculiar to the people of this new and growing country, a spirit for the improvement of her native stock by importations from Kentucky and from abroad—a desire to become independent of other states for the necessaries of life, by the application of labor and capital towards the raising of her own supplies, and a determination not to be excelled either in the quantity or quality of her products, has aroused a laudable and noble rivalry among her own citizens, which cannot but be productive of much good to the country. A gentleman from Kentucky has recently settled in an adjoining county to this, with some choice specimens of improved Short Horn Durham cattle, (among them I find the cow "Julia," whose portrait was published in the Cultivator,) several imported Berkshire, Leicester and Grazier hogs—several genuine imported South Down and Saxony sheep, and a number of mixed blood sheep of a superior quality. Other gentlemen in the same county have recently received some fresh importations of Berkshire hogs. The cross of these fine bloods on our native stock cannot but prove most beneficial. The contrast too, will be so great as to create a general desire to participate in the improvements going on. You will perceive too, from the bill, that even in these wild woods we expect to support annual fairs, for the exhibition of fine stock and the products of domestic industry. In justice to you I cannot fail to add, that the "Cultivator" has been seriously instrumental in getting up this feeling, and by way of encouragement I shall embrace the earliest leisure day I have towards procuring you subscribers. Cincinnatus.

Tellabusha Co. Miss. 6th March, 1841.

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* The bill enclosed, is an Act of the Legislature of Mississippi, incorporating a State Agricultutal Society, with auxiliary Societies in the several counties, for the details of which we cannot make room.—*Editors.*

Messrs. Gaylord & Tucker—I am much obliged by Mr. Thurber's remedy for blind staggers in pigs; had I known it sooner, it would probably have saved me $30. I would like to have him, or some of your correspondents, go a step further, and say *what are the causes* and *preventives*? It is stated that it is owing to too great confinement, but I have known it occur occasionally when they had not been kept up close.

Also—can any of your correspondents say whether sows may, in ordinary health and condition, continue to breed till 6 or 8 years old, two good litters annually, or whether by obtaining more than one, the health of the sow or her capacity for producing *strong, good and perfect pigs, and large litters*, is impaired? Isolated animals will not answer the above query; a considerable lot of sows well taken care of for a series of years, will alone solve it satisfactorily. R. L.

USEFUL RECIPES.

To Kill Lice on Cattle.—Feed them a quantity of sulphur, a small dose at a time, mixed with cut roots or other feed. It will affect the blood and kill lice. F. W. Sipperly.

For Keeping Apples through the Winter.—Gather them without bruising and after they have laid a few days to sweat, barrel them, putting a little dry straw at the top and bottom and around the edges in the barrel; let the barrels lay in a dry place in the air till if unpacked they would freeze, (whether they freeze in the barrel or not I do not know,) then put the barrels in a dark cellar to use when you shall think desirable. I have kept apples in this way till in August, and on one occasion till I gathered winter apples the next year.

To cure the Bots in Horses.—Pour down the horse a quarter of a pound of alum dissolved in a pint of water, (milk warm;) in five or ten minutes after pour down him a pint of Linseed oil or other mild active purgative; in ten minutes the horse will rise and eat. Amicus.

Cure for Scratches on Horses.—Feed a horse one or two table spoonfuls of sulphur per day, (in order to cleanse the blood) for three or four days, wash the feet in clean soft warm water, then put on dry sulphur and wind a linen cloth around the sore, and twice or three times a day drop in dry sulphur between the cloth and the sore. Be careful to keep the feet dry, as it is of no use to doctor the feet until the blood is put in order. This seldom fails in the worst cases.

New Haven, Vt. 12 mo. 1840. A. M.

Protection of Vines.—Plaster sprinkled over squashes and cucumbers when they *first come out of the ground*, will protect them from that "little destroyer," the striped bug.

Cure for Corns.—A subscriber to your valuable paper told me a few days since how he had cured several corns, which had compelled him to wear mocasins. He paired them off with a sharp knife, bathed them freely with Spts. Turpentine, and laid upon them a linen cloth which he frequently wet with turpentine. In a few days the corns came out root and branch, to the great relief of the sufferer. The remedy is simple, attainable by all, and from its effectual cure in the case cited, is worthy of a trial by such as are suffering from these painful visitants. J. R. S.

Fultonville, Jan. 26, 1841.

Cure for Poisoned Lambs.—In your Feburary number you published a recipe for the cure of lambs poisoned with "withey," which shrub answers the description of what is here called "low laurel." I herewith send you a recipe which is far preferable, as the materials cost nothing and are always at hand. Take two quarts of red or yellow sand from under the soil, pour in water enough to cover it, boil it a few minutes, then drain off the water and give two or three table spoonfuls at a time; three or four doses generally effects a cure. I have never known this to fail. Otis Soule.

To relieve Bloated Cattle without fail.—Take about a wine glass full of powder, mix it with cold hog's lard, make it into balls and put it down the creature, and commence driving it about and it will very soon relieve the patient. I have seen the above remedy applied frequently and have never known it to fail. *Shaftsbury, Vt.* J. M. Olin.

To cure the Black Tongue.—Take 1 oz. of copperas, 1 oz. of salt petre, 1 oz. alum; to be pulverized and mixed with 1 pint of honey, 1 pint of Jamaica rum or spirits, 1 pint of strong sage tea. The blister on the tongue should be stripped of skin and the composition applied with a swab on every part affected, especially around the roots of the tongue. About 15 or 20 minutes after applying the liquid, swab the mouth well with *another swab* dipped in a vessel of linseed oil; pour 1 gill of the oil down the horse once a day to prevent his throat swelling. A. D.

Notices to Correspondents, &c.

To enable us to publish as many of the favors of our friends as possible, we have this month omitted the Dictionary of Agricultural Terms, used smaller type than usual, and given quite a number in a condensed form; but still we have not been able to insert several, to which we had intended to have given place in this number; among these is the Essay of W. A. Seely, Esq. on Vegetable Nutrition, which, with a number of others, is already in type. We trust our correspondents will bear with us with patience, when they see the efforts we are thus making to publish their favors as rapidly as circumstances will admit. Absence from town during the greater part of the past month, has prevented an answer to several inquiries and private correspondents.

Our thanks are due to J. W. Proctor, Esq. for the "Transactions of the Essex Ag. Society for 1840," of which farther notice will be taken hereafter. Can complete setts of the Transactions of the Essex Ag. Society be had? Our thanks are also due to Dr. Akerly of Staten Island, and C. Osborn, Esq. of New-Jersey, for handsome specimens of Indian corn cultivated by them. Also to the Hon. Mr. Ellsworth, for seeds of the Tomato and Capsicum, from the Island of Cuba.

Communications have been received during the past month, from F. Rotch, L. F. Allen, A. Walsh, S. Robinson, O. Hussey, W. H. Sotham, N. Darling, J. B. Dean, S. B. Jones, A. B. Allen, T. T. Roberts, P. E. Pease, Cor. Bergen, J. W. Knevels, G. C., A Planter, J. N. Smith, T. R. Hussey, Cephas, S. Homer, Jr., Uncle Jo, One of your Subscribers, (who will see from the crowded state of our columns our inability to comply with his request,) C. M., J. C. Robertson, T. W. Wells, E. C. Frost, F. H. Gordon, G. W. T., S. R., S. Wood, D. G. Mosher, J. N. Keeler, Pearl, R. L. Allen, W. A. Seely, R. L., L. A. Morrell, S. E. Todd, Wm. Kingham, A Northern Man, H. C., O. F. Tucker and B C. Leavell.

We have unpublished communications from the following gentlemen, received previous to last month, which we have thought best to acknowledge, as it may be some time before we can publish all of them:—S. W. Jewett, S. Robinson, A. C., L. A. Morrell, L. R. Jr., J. M. Dupré, J. Bowen, A. S. Rice, L. B., B. E. Bowen, A. C. Stevenson, M. Y. T., Henry Stephens, E. Westfall, P. Diehl, E. S. B., A Friend to Agriculture, B. S., S. Hecox, Viator, J. Lewis, H. Van Kleeck, J. S., J. Mines, C., J. C. Mather, R. M., J. Cain, S. Wood, L. Durand, S. H. Nichols, C. G. Page, J. P., S. Henkel, P. P. Bonesteel, S. Stewart, and Senex.

☞ The proceedings of the Executive Committee of the N. Y. S. Ag. Society, at their monthly meeting on the 21st ult., are necessarily deferred till next month. The next meeting of the Committee, it should be remembered, is to be held on Wednesday the 19th of May

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

National Agricultural Society.

We are pleased to perceive from the public journals, particularly those devoted to agriculture, that the subject of a National Society for the promotion of Agriculture, as proposed by our public spirited friends Messrs. Robinson and Garnett, through the Cultivator, is beginning to be discussed in a manner which shows it has attracted much attention, and is looked upon with great favor. We do not the less rejoice at these indications of public feeling, because we were so unfortunate as to differ from these gentlemen, and some others of our excellent friends, not as to the utility of such an institution, but as to the expediency of attempting its formation at the present time, and as our columns have shown, shall not the less willingly render every aid in our power to the formation of such an institution, when the agricultural public shall signify their willingness to support it in a proper and efficient manner.

To succeed in the organization of a National Society, one which shall answer the end designed, and be an honor to the men who have projected it, and the country which supports it, union and concert of action is necessary; funds must be procured and secured; and nothing, so far as it can be prevented, left to uncertainty. Of the ability of the country, we have never doubted; of the zeal, public spirit, and intelligence of many, we have received the most ample assurance; and should the result of the effort prove that we have been mistaken as to its expediency at this time, none will more heartily rejoice than ourselves at this correction by the public voice. Means alone are wanting; provide these, and the most serious obstacle vanishes at once.

State Aid to Agriculture.

We are gratified to announce that the bill introduced for the aid and improvement of agriculture, into the Legislature of this State, has become a law, and that, if not all that some of our agricultural friends expected, still its influence must be powerful for good. It appropriates eight thousand dollars annually, of which $700 goes to the N. Y. State Ag. Society, and the remainder is divided among the several counties in proportion to their population, on conditions and restrictions which must ensure its faithful application to the use intended by the State when granting the aid. It will be seen that no county can receive its share of the money unless a County Society is organized, and a sum equal to that appropriated is raised by the association to be added to and expended with that for premiums. This is a very important provision, and one on which we think the great efficiency and utility of the aid afforded, will depend. Every county in the State, therefore, which has not already an efficient society organized, should make no delay in effecting this object. Men of spirit, talent, enterprise, thorough farmers, or who feel a deep interest in the advancement of agriculture, must take the lead in this business, and the many will soon be interested in the result, and cheerfully follow the movement that we think will eventuate in so much good. Let every thing like sectional or political feeling be religiously eschewed in the management of these societies. They are intended for the people, to benefit the many, and so the funds appropriated must be sacredly regarded.

We think it may reasonably be anticipated that the Reports which are to be made to the Secretary of State from the State Society, and the County Societies, will form an annual volume of the most instructive and useful kind, and which will form a record or history of Agriculture in this State, invaluable to the farmer. The Agricultural law of 1817, has done much for the fame of De Witt Clinton, and the good effects resulting from it, have not yet ceased to be felt. The farmers of the State have demanded, and the Legislature have again granted aid to the agriculture of the State. Let such a use be made of this money, and such a spirit awakened in the community, that the agricultural prosperity of the State shall be commensurate with its unequalled position, and its immense resources.

☞ We would call the attention of County Clerks to the duty devolving on them to give the requisite notices for meetings, in such counties as have not already organized Agricultural Societies. These notices should be issued immediately.

An Act for the Encouragement of Agriculture.

[Passed May 5, 1841.]

The People of the State of New-York, represented in Senate and Assembly, do enact as follows:

§ 1. The sum of eight thousand dollars per annum, shall be and hereby is appropriated for the term of five years, for the promotion of agriculture and household manufactures in this State, in the manner following, to wit: to the county of

Albany,	$205	Oneida,	$255
Allegany,	123	Onondaga,	204
Broome,	67	Ontario,	130
Cattaraugus,	86	Orange,	152
Cayuga,	151	Orleans,	75
Chautauque,	143	Oswego,	131
Chemung,	62	Otsego,	148
Chenango,	122	Putnam,	38
Clinton,	84	Queens,	91
Columbia,	133	Rensselaer,	180
Cortland,	75	Richmond,	34
Delaware,	106	Rockland,	36
Dutchess,	157	Saratoga,	121
Erie,	186	Schenectady,	51
Essex,	71	Schoharie,	97
Franklin,	50	Seneca,	74
Fulton and Hamilton,	60	Steuben,	138
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Greene,	91	Suffolk,	97
Herkimer,	112	Sullivan,	47
Jefferson,	183	Tioga,	61
Kings,	143	Tompkins,	114
Lewis,	53	Ulster,	137
Livingston,	117	Warren,	40
Madison,	120	Washington,	123
Monroe,	194	Wayne,	126
Montgomery,	107	Westchester,	146
N.Y. to Am. Institute,	950	Yates,	61
Niagara,	93	N. Y. S. Ag. Society,	700

§ 2. When the New-York State Agricultural Society, and any county agricultural society now formed, or which may hereafter be formed in this state, or the American Institute in the city of New-York, shall raise by voluntary subscription any sum of money, the president and treasurer shall make and subscribe an affidavit of the facts of the formation of such society, and of their having raised a certain sum, specifying the amount thereof, which affidavit shall be filed with the comptroller of this state, who shall draw his warrant on the treasurer for a sum equal to the amount of such voluntary subscription, not however exceeding the amount to which such county or state society would be entitled, according to the apportionment aforesaid.

§ 3. The New-York State Agricultural Society and the several county agricultural societies now formed or which shall be formed in this state, during the continuance of this act, shall annually elect such and so many officers as they shall deem proper; and it shall be the duty of such officers annually, to regulate and award premiums on such articles, productions and improvements, as they may deem best calculated to promote the agricultural and household manufacturing interests of this state, having especial reference to the nett profits which accrue, or are likely to accrue, from the mode of raising the crop or stock, or the fabrication of the article thus offered, with the intention that the reward shall be given for the most economical or profitable mode of competition; provided always that before any premium shall be delivered, the person claiming the same, or to whom the same may be awarded, shall deliver in writing to the president of the society as accurate a description of the process in preparing the soil, including the quantity and quality of manure applied, and in raising the crop, or feeding the animal, as may be; and also of the expense and product of the crop, or of increase in value of the animal, with the view of showing accurately the profit of cultivating the crop, or feeding or fattening the animal.

§ 4. The president of the State Agricultural Society, and the several presidents of the said county societies, who shall receive or expend any of the moneys hereby appropriated, shall annually, in the month of December, transmit to the comptroller a detailed account of the expenditure of all the moneys which shall come into their hands under this act, and stating to whom and for what purpose paid, with the vouchers thereof; and the said presidents of the several county agricultural societies shall annually transmit in the month of December, to the Executive Committee of the New-York State Agricultural Society, all such reports or returns as they are required to demand and receive from applicants for premiums, together with an abstract of their proceedings during the year.

§ 5. The Executive Committee of the New-York State Agricultural Society shall examine all reports and returns made by the presidents of the county agricultural societies, and condense, arrange and report the same, together with a statement of their own proceedings, to the secretary of state, in the month of January in each year.

§ 6. The presidents of the several county societies, or delegates to be chosen by them annually for the purpose, shall be ex-officio members of the New-York State Agricultural Society.

§ 7. It shall be the duty of the county clerks in the several counties of this state to cause notice to be given in one or more newspapers in each county, of the time and place of a meeting to be held in such county for the purpose of organizing such county agricultural society; and notice thereof shall be given at least four weeks previous to such meeting.

§ 8. This act shall take effect immediately.

State of New-York, } This act having been approved and sign-
Secretary's Office. } ed by the Governor, on the 5th day of May, 1841, I do hereby certify that the same became a law on that day.
JOHN C. SPENCER, *Secretary of State.*

New-York State Agricultural Society's Fair.

LIST OF PREMIUMS.

In another part of our paper for this month will be found a notice of the time and place of holding the autumnal Fair of the State Agricultural Society, and the list of premiums which will be awarded on that occasion. It is to be hoped the arrangement is such as will meet the approval of the friends of agriculture throughout the State, and that all will unite to aid by their advice, contributions, and presence, the progress and usefulness of the Society. New-York *can* have the most efficient State Society in the Union; it depends on the friends of agriculture now to say whether they will *will* it. We are unwilling to believe that the liberality of the State, to the State and the county Societies, will not give an impulse to agriculture which shall be most beneficially felt. There must be no jealousies, no rivalries, except in doing good. Let every journal in the State lay the bill for the promotion of agriculture, before its readers. Let every farmer read it, and at once resolve to become a member of the county or State Society, or both. Let those counties in which no Society has yet been organized, if there are such, see that it is done without delay; there is no time to lose if one is expected to go into efficient operation this year, and without such Society, the money granted by the State, must be lost to the County. Fairs, cattle shows, plowing matches, &c., are our holidays; and when the labors of the summer are over and the golden harvests of autumn gathered to the barns, we should not deem the two or three days required to attend them, or the annual dollar or two essential to their support, time and money thrown away. If we wish to see agriculture assume the interest and importance here, it does in Great Britain, we must awaken the same zeal and liberality towards fairs and shows that is felt there.

Cuyahoga Agricultural Society.

This active and flourishing Society held its annual meeting at Cleveland, and appointed the following officers: M. Lindly, President, A. Sherwin, 1st Vice President, A. M. Coe, 2d Vice President, J. Houghton, Treasurer, G. B. Merwin, Secretary.

Committees were appointed on the following subjects: Agriculture, Farms, Silk, Manufactures, Cattle, Horses, Hogs, Sheep, Plowing Match, Grasses and Horticulture.

Premiums to the number of 91. on the several classes of articles above enumerated, are offered, exhibiting a commendable spirit and liberality in the Society. We are particularly gratified at noticing that a part of the premiums are in valuable agricultural works; and we would hope that all societies will keep this mode of disseminating agriccultural information, steadily in view. Among the works offered as premiums in the several divisions, we find the Cultivator, Chaptal's Chemistry, Buel's Farmer's Instructor, Colman's Agricultural Survey of Massachusetts, Jackson's Geology, Book on Sugar Beet, Practical Farmer, Bridgman's Gardener, Kenrick's Orchardist, American Silk Journal, Grazier's Guide, Cobbett's Advice to Young Men, Treatise on Sheep, Ellsworth's Swine Breeder, and Western Farmer. There are few farmers who would not be better pleased, and would not receive more benefit, by the reception of such works as are named above, and others that might be added, than by the same, or a greater amount in money. Let Agricultural Societies remember this. in making out their premium lists.

Sales of Berkshires.

Mr. Lossing of this city, informs us, that he has recently sold his famous breeding sow *Maxima* to Mr. Curd of Kentucky, for the handsome sum of $300. The animal is well known to breeders of Berkshires, as one of the largest of her kind in this country. Mr. Lossing has also sold his imported boar *Newberry*, to the same gentleman, for $200. He was shipped a few days since, and weighed, including cage, 880 lbs

Inquiries, Correspondence, &c.

Peach Worm.

> MESSRS. EDITORS—Has there been any preventive discovered to the ravages of the peach worm or grub, which threatens to destroy this most delicious of fruits. I have some fine trees which I find have been attacked. I am loth to lose them, and any information you may be able to give, will be thankfully received by one, at least, of your many SUBSCRIBERS.

If the trees are already infested by the grub, let them be carefully examined around the root, and every worm dissected out of the bark. Complete excision will alone save the tree; at least such is the opinion of some of the most successful peach growers. With this evil, prevention is better than cure, and fortunately since attention has been directed to this point, methods have been discovered which appear to be effectual in preventing the attacks of the parent moth or fly. Planting the red cedar with the peach tree in the same hole, and leaving the roots and stems in as near contact as possible, has been found by experience to preserve the peach, the odor of the cedar being offensive to the parent of the grub, and the slow growth of this shrub preventing any injury to the peach. In an excellent article on the peach worm, by Prof. Kirtland of Ohio, after a description of the parent insect, and its mode of injuring the tree, he says—" Tansy and wormwood contain large quantities of essential oil, which is peculiarly offensive to this insect; and it is found that if the body of the peach tree be surrounded by half a dozen sprouts of either of these vegetables, it will be perfectly secured against the approaches of this destructive enemy. They should be planted in the spring nearly in contact with the body of the tree, and so as to surround it. During the summer they should be cultivated, and kept free from grass. In this way they form a permanent and successful means of defence against the insect that has nearly exterminated the peach tree from many sections of our country."

The Curculio.

> MESSRS. EDITORS—Can you inform the friends of the Cultivator how the Curculio, the bug which destroys so many plums, cherries, &c., ascends the tree? Whether on wings or legs? If on legs like the female of the canker worm, I can manage them with a lead trough, but if on wings, I want help. J. P.
> *Meriden, Ct.*

The Curculio about which Mr. P. inquires, rises from the ground a perfect insect, provided with wings, and although not so much inclined to use them as some insects, does use them in short flights, and generally, if not always, reaches the young fruit by their aid. The damage sustained from the Curculio, is usually accomplished in a few evenings, and a sudden violent jar or blow on the tree, will cause most of these insects to fall to the earth, where if they are received on sheets or canvass, they may be easily gathered and destroyed; and if this operation is daily or nightly repeated, they will soon disappear, and the fruit be saved. If convenient, a fruit orchard should have pigs run in it the early part of the season to gather the worm-eaten fruit as it falls. Multitudes of the Curculio worms that would otherwise escape into the earth, and be ready to attack the next year's fruit, are thus destroyed. Geese, by devouring the first fruit that falls, are of much service, and even a coop of chickens will render aid by destroying the bugs as they emerge, or securing the worm as it endeavors to hide in the earth.

Building Chimneys.

" J. R." of Sing Sing, says:

> "I think you would confer a favor on the universal public by publishing directions for the construction of fire-places or chimneys on philosophical principles, that will be sure to draw well. We know that heated or rarified air, is lighter than cold air, and consequently ascends; that makes the draft; but to make that draft constant and certain, is what is wanted in building."

The subject here alluded to, is an important one; and if any of our friends who understand these " principles," will furnish us a paper on the subject, with such drawings as may be required to illustrate it. we will lay it before our readers with pleasure.

The Apple Tree Borer.

" J. H. R." of Wickford, R. I. in a communication, says:

> "A gentleman who has a very beautiful and thrifty nursery of fruit trees, has suffered much for the past year or two from a very destructive little insect in the shape of a worm or grub, frequently denominated the '*Borer*,' about the size of, and white like the potato worm, which has attacked the trees near the root, or perhaps an inch or two above the surface of the soil, perforating the trunk, and leaving a hole about as large as that commonly made by a small nail gimlet, checking the growth of the young tree materially, and soon causing their decay. Any information throwing light on this matter through the columns of the Cultivator, will be thankfully received."

The grub or worm alluded to, is the larvæ of a small black beetle or bug which is furnished with an ovipositor, aided by which, the bark of the tree is pierced, usually, but not always, near the surface of the ground, and an egg deposited, which in time is hatched, and becomes the destructive grub or borer alluded to. There are many kinds of this insect, some infesting one species of tree and some another, as the apple, peach, oak, locust, &c., but all inflicting much injury. The eggs are in most cases deposited in July, and a careful examination of the trees will show a spot from which the juice oozes, and the young worm be detected. If the boring has commenced, a small pile of fine dust will mark the place of the insect. At this time, a sharp pointed knife will extirpate him at once. If the boring is deeper, a flexible barbed wire may be used to extract the grub. For prevention, the mixing such substances with the earth around the tree, as are disagreeable to such insects or destructive to them, appears the most successful, although nothing as yet has been discovered that can be fully relied on. Ashes, or lime, spread around the tree to the depth of an inch, and 8 or 10 inches in width, appears to have been the most effectual remedies yet tried; yet it is possible the cultivation of plants having a strong odor, and disagreeable to insects generally, such as wormwood, tansy, mint, &c., near or among the trees, as recommended by Prof. Kirtland of Ohio, in the case of the peach, might be still more successful. We think the experiment worthy a trial.

Green Fly or Aphis—Inquiry.

> "MESSRS. EDITORS—Will you inform your readers what will prevent or destroy the small green lice found on cabbage and turnep leaves while young, as some fine fields of ruta baga were destroyed the past season by them in this region?
> *Brandon, Vt.* R. V. M."

We have found the Aphis, or green plant louse, alluded to in the above, very difficult to destroy, after being once permitted to establish themselves on the turnep or cabbage, as they multiply with astonishing rapidity, and in a manner as yet unknown in any other insect. The surest remedy is to make a frequent examination of your cabbages or turneps, and if a colony is discovered, to pick the leaf and crush the whole under the foot. In this way their multiplication may be in part at least checked. Mr. BRIDGMAN in his excellent work on gardening, advises the gardener " to have a hogshead always on hand in dry weather containing infusions made of waste tobacco, lime, soot, cow dung, elder, burdock leaves, &c." A portion of these ingredients, or others, poisonous to insects, used moderately on plants, will produce a good effect. " As liquid, however, cannot be conveniently used on a large piece of land, it may be necessary, if insects are numerous to sow tobacco dust, mixed with road dust, soot, ashes, lime, or charcoal dust in the proportion of half a bushel per acre every morning, until the plants are secure from their attacks." Would not fumigating plants by turning a barrel over them and burning a sulphur match under them, be as fatal to the aphis, as it would to the bee?

Hint to Agents.

A friend who has taken much interest in procuring subscribers to the Cultivator, says:

> "I have invariably given all the benefit of your terms to the individuals whose names I have forwarded, six copies for $5, or $0,83 per copy, and have by even that small difference, induced some to receive the work, that otherwise would have declined. I fully believe, that should your agents generally give this opportunity to subscribers, your list would be increased one-third, and the benefit to community incalculable. The small *trifle* I pay for my paper, I consider lays me under other obligations for the benefit received."

Silk Culture.

The readers of the Cultivator are aware that there was last year much disappointment among silk growers, arising from the loss of the worms by sickness. The following from J. M. DUPRE, Esq., of New Orleans, relates to the subject. We have our doubts whether the cause assigned is the correct one; and think that the disease and the cure will be found the same here as in Europe, and which will be found described in another part of this number of the Cultivator:

> "I have lately had some conversation with some gentlemen from the south of France, on diseases of the silk worm; one from Valence, and the other from Lyons, and they agreed perfectly in opinion as to the best method of preventing or providing against the disease of silk worms which occasions their destruction in the last period of their existence. These gentlemen pretend that the leaf of the multicaulis imbibes too much moisture, and produces a kind of malady which kills these worms at the fourth time of shedding their skins. They affirm with confidence, that the leaf of the Chinese White Mulberry, called *Elata*, is more nutritious, and far less susceptible of fermentation. The worms fed on this leaf are more strong and vigorous, and finish the winding of their silk; but supported by the Multicaulis, they often die before commencing their work, or in the cocoon before completing it. The Elata, or White Chinese Mulberry, thrives better in the open fields, whatever may be the climate, and suffers no injury from the cold; but the leaves should not be gathered the first year after they are transplanted, as there would be great risk of their failure."

Corn Suckers—Inquiry.

> MESSRS. EDITORS—I find that some of the best cultivators of our great crop, Indian corn, differ in opinion as to the propriety of pulling the sprouts or suckers from the growing crop; some contending that it adds to the crop to remove them, while others maintain they are useful. I should be pleased to learn your opinion. *Ohio, April*, 1841. L. H.

We never remove the suckers from Indian corn, as we think the practice not warranted either on the score of labor or productiveness. Some experiments, made a number of years since, convinced us that it was better to let them remain, and we have seen nothing since to induce a change of opinion.

In the first place, it is no inconsiderable labor to remove the suckers from twenty acres of corn. and when removed, they are usually lost to all economical purposes, when if suffered to remain, they form a large quantity of the very best of fodder.

In the second place, it seems that in many cases, the blossoms on the suckers are necessary to the perfection of the grain. The main stalks shoot up their stems, blossom, and shed their pollen or fructifying dust, all in the course of a few days, impregnating the principal ears through their silks, and then drying up. Now there is in every corn field many later ears set, which require the application of pollen, or no grains will be produced; and the blossoms from the suckers appear exactly adapted to this emergency.

It is possible a vigorous sucker may detract something from the size of the main stem, and perhaps diminish in some slight degree the ears growing upon it, but the additional ears gained always more than compensates these partial deficiencies, and leaves the additional fodder as a clear gain.

Since writing the foregoing, we have noticed the results of an experiment on this subject, communicated for the Southern Planter, which corroborates the opinion we have advanced above. The experiment was made in a field of thirty-five acres, and eight rows in a place were operated upon. The extract is from the journal of farm labor, &c., a book that should be kept on every farm:

> "August 15.—I counted nineteen ears of corn upon eight hills of corn in one place, upon which the suckers had been left. On the same row adjoining, I counted sixteen ears upon eight hills, upon which the suckers had been taken away.
>
> "In another place, I counted upon eight hills, nineteen ears upon the corn and suckers, and thirteen ears on the same row on eight hills upon the stalks without.
>
> "In another place, fifteen ears upon the stalks with suckers, and twelve on those without.
>
> "The fodder on the eight rows throughout the field, must have been treble as much as upon any other eight rows in the same field.
>
> "November 17—Measured the corn taken from thirty-two hills, (four rows of eight hills each) upon which the suckers had been left, and thirty-two hills adjoining, (four rows of eight hills) from which the suckers had been taken away and the result was as follows:—The stalks with suckers made sixteen quarts and a half pint (of shelled corn) and the stalks without suckers made even sixteen quarts."

From a variety of similar experiments on record, it appears that in pulling the suckers from corn, the labor is worse than thrown away, and in respect to quantity of grain, fodder, and saving of labor, it is best to let them remain.

Disease of Cattle.

The following is from a gentleman of Virginia, and its object is to draw from some of our subscribers " the name and cure of the disease" described. We think it a case of the swelled head or jaw, which sometimes occurs in the south and west, and which, judging from the representations given of it, is usually incurable:

> MESSRS. EDITORS—A short time since, I had an ox taken with a swelling under his jaws and throat, together with a considerable swelling under his tongue; the tongue itself did not seem to be affected. The swelling remained perfectly hard to the last; I stuck my knife into it, but nothing but blood came from it. He neither eat nor drank from the time he was taken, seemed to suffer much, had a high fever, judging from his appearance, (not knowing where to feel for the pulse,)—[the best way to ascertain the pulsation of the ox, is by the beating of the heart itself, known by placing the hand on the left side, a little within and behind the elbow. The average pulse of a full grown healthy ox, is about 40.—Eds. Cult.] and died on the fifth day. It has been suggested to me, that the disease was the murrain, and that to cure it, nothing more was necessary than to cut a hole in the dewlap, and secure a piece of tobacco in it.
> S. B. J.

Cedar Hedges.

HUGH GASTON, who makes some inquiries on this subject, is informed that the berries of the Cedar are to be gathered in December, thoroughly cleansed by rubbing off the resinous matter, put into unslaked ashes, and after two weeks, plant them in rows like peas. They may be transplanted in about two years, into a rich light soil formed for the purpose, and in seven or eight years with proper trimming, make a beautiful hedge. If at the expiration of the two weeks' preparation in ashes, the ground should be frozen, they must be mixed up with earth in a box, and placed in an exposed situation, until the first thaw, or till the earth can be fitted for their reception. In trimming the cedar or pruning, care must be taken not to disturb the center or leading shoot, as in that case the tree frequently perishes

Making Mush by Steam.

GEO. ESTERLY, Esq., of Wisconsin. inquires " whether mush can or cannot be cooked by steam; and if so, what kind of mush boiler and fixtures, would be best adapted to a ninety gallon boiler. He wishes an apparatus sufficient to fatten 150 hogs, and feed them on mush and roots."

We have never known a *steamer* for mush, but presume one might be constructed, for either boiling or steaming on a large scale. In making mush in the common way, it is continually burning on the kettle. This might be obviated by having a double kettle or boiler made so that a stratum of boiling water would intervene between the two. Sheet iron double vats might be made in this way of any desired capacity, and the mush boiled readily without the possibility of burning. If any of our subscribers are acquainted with a mush *steamer*, they would confer a favor by sending us a description for the Cultivator.

Rotation of Crops.

" P. E. P." of Charlotte, Vt. inquires respecting the proper course of rotation, and the treatment of a particular field last year in rye, now in clover.

Give your manure to your roots and corn; follow these with your spring grains and clover; and let wheat follow the last. The time or rotation must depend on circumstances, the crops you wish to cultivate, &c. Clover should not be plowed up until the third year. It may thus be pastured the fall of the first, and the whole of the second year, and mowed the third, before being plowed for wheat; or pastured the whole time. which is done by many of our wheat growers. The man who manages his farm upon system, who has every field in a state to grow any crop he wishes to put upon it, and who adopts a well digested rotary course, can hardly fail of success.

Inquiries.

Our esteemed friend D. G. M. of Springport, has forwarded a few inquiries respecting the opinion, that land may be made too fine for profitable cultivation ; the value of Pitt's "Thrasher and Separator," and the cost of the Hot Air Furnace described by J. J. T. at page 39 of the current volume of the Cultivator.

We think the opinion entertained to some extent, that land may be by repeated plowings made "too fine or mellow to produce a good crop," a serious error, which has scarce the merit of plausibility in its favor. All theory would certainly be against it, as from the known manner in which plants derive most of their fertility, it is clear that the more completely every particle of the soil is exposed to atmospheric agency, the more its productive power will be increased ; and the experience of every well cultivated district or farm in Europe or the United States, would be equally opposed. The great object of tillage is to make the soil fine and mellow, and thus increase the chances of a good crop. Soils vary much in the labor required to make them mellow, and some light soils after being made fine, and sufficiently aerated, may require consolidation by rolling or otherwise, but the best wheat lands are not of this class. They generally contain considerable clay, and on such, the tillage can scarcely be too thorough. To be satisfied of this, one has only to become acquainted with the mode of summer fallowing, practiced in the best wheat districts of England or Belgium, as described in foreign works on agriculture. Look at our best gardens too, those in which the productions are the greatest, and do we ever hear any complaints that the soil is too mellow? On the contrary, the great object, and one on which success is depending, is to make the soil rich, deep and mellow ; and it should always be remembered that a garden is a farm in miniature.

We refer our correspondent to the article by Mr. Bement in the last Cultivator, on "Pitt's Thrasher and Separator," in which its merits, &c. are clearly set forth. The great loss which takes place in the usual manner of thrashing with machines, seems to render some method which shall obviate it very desirable, and the machine of Mr. Pitts appears to supply this desideratum. Were it not for the difficulty with which wheat is thrashed and the necessity of marketing it in the fall, there are many farmers who would not employ them at all ; but as they are indispensable in wheat districts, we are glad that attention has been turned to their defects, and the best method of removing them.

If any of our friends at Palmyra or Macedon will furnish us with the cost of the Hot Air apparatus, described by Mr. Thomas, and furnished at Palmyra, they will probably confer a favor on many of our subscribers as well as ourselves. Many who are building, or intending to build, have expressed their intention of adopting that, or some similar method of warming their houses, a method we think far superior in every respect to the common modes.

Broom Corn Seed.

"W. W. H." who inquires as to the value of broom corn seed for feeding animals, is informed that it is used extensively for this purpose, and considered by those who raise the corn, a valuable article. We have known it ground and fed with other grain to horses with the best effect. It was deemed best with other grain, as alone it was said to make horses scour. Fed to other animals, we have known no such effect produced ; and there are many growers of broom corn who scarcely use any other grain for their cattle, pigs, or poultry. When the brush and the seed are taken into consideration, there are few crops pay better than broom corn, as many of the farmers on the rich intervales of the Connecticut river can testify.

Curl in Potatoes.

An intelligent correspondent at Ascot, L. C. in a communication on this disease, after controverting the opinion that it arises from the age of the variety, goes on to say, that the celebrated Horticulturist, Mr. Dickson, attributed the disease to the tubers being exhausted by over ripening. "In 1808, and 1809, Mr. D. observed that cuts taken from the least ripened end of a long flat potato, produced healthy plants, while those from the dry end did not vegetate, or produced diseased or curled plants." Subsequent experiments proved the correctness of Mr. D.'s observations that setting over ripe seed was one cause of the curl ; and another, employing seed stock that had been any considerable time *exposed to the light and air*, instead of being *closely covered up with earth, sand or straw*. To remedy and prevent curl, it is recommended, 1st, to use for seed, potatoes that are immature, or not fully ripened. 2d, to plant late what is intended for seed the following year, and prevent them flowering by picking off the flower buds as they appear. 3, carefully pitting or covering up the seed stock from the time they are lifted, until they are to be used in the spring. It was ascertained by a variety of experiments, that when seed potatoes are put into barns or out-houses, and exposed to the air in spring, the crop seldom fails of being curled, or should they escape the first year, if the produce of these is again planted, it is probable more than the half will be diseased the following year. Mr. Rhoades may perhaps trace the curl in his "long keeps" to over ripening of the stock, or exposure of the seed in spring to the air sometime before planting ; it would be useful to himself and others to test the accuracy of the above experiments by repeating them on his "long keeps" if he has not already discovered them, and perhaps the result may be, that they will be 'long keeps' still."

Disease of Lambs.

> "In this section of Canada there has been a very great loss of lambs this season. I have lost eighteen out of twenty-three —almost all others in a greater or less proportion. The lambs, when dropped, are as fine in appearance as usual, but have swellings (hard lumps) in their throats, some larger, some smaller, which disables them from swallowing, and they die of suffocation. Will you have the goodness to ask through the Cultivator, 1st, the cause; 2d, the cure, if any; by which means you will confer a great favor on our farmers. I should observe that the effect is the same on both high and low lands."

We give place to the foregoing, willingly, and hope it will elicit replies from some who are acquainted with the cause and cure of the disease, should there be such among our readers. We have never seen among our lambs a case of the swelled neck ; but from the notices that have appeared in the Genesee Farmer, particularly vol. 6, page 217, and vol. 8th, page 13, it would seem to have been quite a common, as well as formidable disease in some parts of our country. Some, it appears, attribute the complaint to feeding the ewes on oats, and most seem to consider it as consequent on a high condition of the ewes. Some of the most skilful sheep growers in this State, have suffered much from this disease in their lambs.

Hoof Ail.

A correspondent from Apulia, Onondaga Co., after controverting the position that this disease is usually caused by ergot, and correcting some errors into which he thinks former correspondents of the Monthly Genesee Farmer and the Cultivator have fallen, in mistaking other diseases for the hoof ail, thus details his own experience with the disease, and his mode of treatment.

> "A few years since I had a boy to do my foddering while absent on a journey. While I was gone, a thaw came on and broke up the brook where my cattle were watered, so that my cows got into it. The weather came on suddenly severely cold and freezing, and when I returned home, I discovered one of my cows to kick her hind feet, and appear in great distress. I at first supposed she had slipped in the yard, but after a while found I was mistaken, as on examining her foot, I found matter had formed under the upper edge of the hoofs, and that these were in a fair way to come off. I immediately applied spirits of turpentine to her feet, but they were so bad I had hard work to save her hoofs. I continued to use the turpentine liberally, and her lameness abated, till in the month of April her lameness returned suddenly, and her legs swelled much. I took a solution of saltpetre and beef brine, washed her legs twice and then used the spirits of turpentine until a cure was effected. The foot must be clean and dry or the turpentine will not penetrate. It should be put on the foot as soon as lameness is discovered, and as a preventive against the effects of frost, I frequently put it on the feet of my well cattle. As this cow had been fed on good timothy that contained no ergot, I suppose her feet had been frozen."

In a variety of other instances among his own cattle and calves, our correspondent imagines he was able to trace the disease to freezing, and in every instance, by a free use of turpentine, succeeded in saving them. He says—

> "I think the reason why the hoof comes off, is, it is frozen at the toe, and maturates, as no vent can be found short of the heel. When the hoof grows and turns up, it has been frozen, but not sufficient to maturate."

Worm in the head of Sheep.

John Cain, Esq., of Rutland, Vermont, wishes some information "respecting the disease in sheep called the 'Grub in the head ;' whether there is any preventive ; and whether there is any remedy after the attack."

The disease is doubtless caused by the sheep fly called the *Œstrus ovis* depositing its egg within the nostril of the sheep. These soon hatch and the larvæ find their way at once to the interior of the nose into the frontal sinews where they remain till the following spring. If in considerable numbers, they cause great distress and irritation, and not unfrequently death. The best preventive we have ever known, was to smear the sheep's nose with tar, and if during the summer the appearance or conduct of the animal indicated that the fly was present, (which may be known by their restless agitated manner,) let the operation be several times repeated. Perhaps a better way is, have troughs for the sheep, the bottom smeared with tar, and this frequently sprinkled with salt, as in this way the sheep will secure the benefit derived from the tar and its odor, without trouble. As to a "remedy," we give the following from Blacklock's celebrated Treatise on Sheep, but we have never had occasion to try the prescription, and cannot speak from experience of its value :

> "For the grub or worm, tobacco smoke is the only available remedy, and a very good one, being easily brought in contact with the worms, and when properly administered, certain in its effects. One person secures the sheep, holding the head in a convenient position, while another having half filled a pipe with tobacco, and kindled it in the usual manner, places one or two folds of a handkerchief over the opening of the bowl, then passes the tube a good way up the nostril, applies his mouth to the covered bowl, and blows vigorously through the covering. When this has been continued a few seconds, the pipe is withdrawn, and the operation repeated on the other nostril."

Wm. Kingham is referred to the preceding article for a reply to his query respecting the Sheep Worm.

Labor Saving Machines.

Our friend "H. C." in the western part of this State, has furnished us a description of a machine invented by him for loading manure, hay, or grain, and unloading the same, which so far as we understand it, is certainly ingenious. It appears to us, however, to lack the great recommendation of any implement intended for general use among farmers, simplicity, as the more complicated any machinery is, the more liable it must be, in inexperienced hands to get out of repair. It does not seem that "H. C." has ever put his invention into actual operation, which after all, must be the test in such matters. Any machine which can be made to do what he proposes to have his perform, would be most acceptable to the farmer.

The Wool Market.

We have room only for the conclusion of "A Wool Grower's" article on the price of wool the ensuing season. After giving several reasons why farmers should not submit to last year's prices, he says :

"Aside from all I have advanced, another very important fact must be mentioned, that our markets were never more bare of wool than at the present time ; and again, the diminished quantity of *fine* wool which will be shorn this year, owing to the immense slaughter of grade Saxon sheep, within the last eight months. I am aware of an individual having butchered, in an adjoining county, over 3,000, the profits of which was principally derived from the sale of the pelts. In forming an estimate, therefore, from what I have said, which has been based on what I deem correct data and some reflection, I would say, that *fine wools* will command from 5 to 10 cents beyond last year's prices ; and that medium wool, from its greater abundance, not so much, say 4 to 8 cents advance.

"Now, let us all be cautious and firm. Manufacturers and wool speculators will overflow as usual, with "cock and bull" stories. We shall have a deranged currency and "all that sort of thing, and every thing else in the world," told us over and over again, to gull and humbug ; but ☞ let us beware and not be caught with *tainted* bait. Now having exhausted the argument, let us one and all stand by our——wool."

Tompkins Co., N. Y.

Poudrette—Inquiry.

"B. C. L." who inquires respecting the manufacture of Poudrette, is informed that the process is the subject of a patent, and therefore kept secret ; still enough is known to enable any farmer to prepare an article from his night soil that will prove a most valuable manure. Lime, ashes, plaster, charcoal, and other similar substances, if mixed with the night soil, absorb the escaping gases, and render it a dry inodorous substance. Spreading and drying is however requisite.

To his inquiry respecting a bone mill of little cost or power, we would say we have noticed no such in this country ; but as they are in common use in England, and consist only of fluted or grooved iron rollers, (usually two pair, one for the first crushing, and the other for pulverizing them,) they might be easily constructed by any one who wished a machine of the kind. The cost could not be great. Some have attempted the grinding of bones in a common mill, but the effluvia produced in the process is intolerable. By English farmers, what are called half inch bones, or bones crushed to that degree of fineness, are preferred to bone dust, as their effect, if not quite so quick, is greater and more permanent.

Hart's Plow.

Our correspondent at St. Stephens, Ala., who inquires the price of Hart's plow, noticed in the first number of the current volume, is informed that the implement alluded to, is an English one, and that the price or cost of procuring one, is unknown to us. In its construction and ease of draft, it nearly resembles Howard's wheel plow made at Boston, and we presume the latter implement will work equally well. The prices of Howard's plow vary from 10 to 15 dollars, with, or without wheels, cutters, &c.

Weight of a Yearling Bull.

A letter from J. & H. L. R. Sanford, of Volney, Oswego County, says :—"We have a Short Horn Durham bull, which was one year old on the 29th of April last, and on that day weighed ten hundred and fifty pounds. He is of a dark red color, except some spots of white on the head and belly, and was bred and owned by John Stevens, Esq., of Lysander, until the 20th of March last.

Millet—Inquiry.

A "Subscriber" at Killingly, Ct. inquires whether millet may not be raised with profit ; at what time it should be sown ; what kind of soil is most suitable, what quantity of seed per acre ; and whether for enriching land by plowing in as a green crop it would not be as valuable as oats, buckwheat, or clover?

The best soil for millet, is a kind, rich soil, and one in which vegetable mold is abundant, is to be preferred ; but it will produce a good crop on any land of fair quality. From three pecks to a bushel of seed per acre is used. If intended to be mown for hay, more seed is to be sown ; if for the seed, a smaller quantity is better. It may be sown any time between May and July, as it will come to maturity in from 70 to 90 days. On good ground, it will yield three or four tons on an acre. To cure it for hay, it should be cut and exposed to the sun one day, then made into cocks, which are to be opened and turned as usual ; it cures easily, and is eaten with avidity by all animals. If the grain is wanted, let it stand till the head turns yellow ; dry it and thrash out the seed, and then mow or stack it away for hay. It will not be quite as good as when cut earlier ; but still it is a valuable and nutritious food. As a green crop we have never known it used; but as its growth is rapid, there can be little doubt that it would be very useful in the manner indicated.

Constant supply of Eggs.

J. G. Bergen, Esq., of Brooklyn, says—"We never miss obtaining eggs throughout every day of the year, and simply because we always feed our fowls as much Indian corn as they will eat."

American Forest Trees.

We learn with great pleasure, that a new edition of the North American Sylva, will soon be issued from the press of J. Dobson, No. 106, Chestnut-st., Philadelphia. It will contain a description of the *Forest Trees of the United States, Canada, and Nova Scotia;* with a description of the most useful of the European forest trees. Illustrated by 156 finely colored engravings. Translated from the French of T. A. Michaux. To this will be added an additional volume, containing the Forest Trees discovered in the Rocky Mountains and Oregon Territory, down to the shores of the Pacific, as well as in various parts of the United States, by Thomas Nuttall, F. L. S. The figures will comprise about 40 plates, executed and colored in the best manner under the eye of the editor. Additional remarks will be added, so as to render the work as complete as possible in every respect.

Michaux's magnificent work on our Forest Trees needs no commendation of ours; and the well established reputation of Mr. Nuttall, the editor of the additional part of the work, is a sufficient guarantee for its accuracy and style of execution. The plates, about Two Hundred in number, will be finely and faithfully colored, and the whole will form one of the most splendid works ever published in this country.

The work will make four volumes, in Imperial octavo; the first volume to be ready in May or June, and the succeeding ones at short intervals, so as to be completed within the year. The price of the whole work will be thirty dollars. The 1st, 2d and 3d volumes, eight dollars each, and the 4th, six dollars. Those persons who possess the former edition of Michaux's work can complete their copies by the addition of the 4th. Seven dollars, colored—uncolored, five dollars.

We will forward with pleasure, the names of any of our friends who may wish to receive the whole, or the last part of this truly national work.

Security against Lightning.

The damage which the country, and particularly the farming classes, sustain from lightning, is very apt to be under-rated by those who have not paid attention to the subject, or ascertained the number of such disasters reported annually in the public journals. There is scarce a thunder shower during the season, in which more or less buildings or lives of men or animals are not destroyed, and the aggregate is a serious one. During a single shower in Western New-York last season, in three counties, some fifteen or twenty buildings were burned, and though few showers are as destructive, all are more or less liable to produce disastrous results. The importance, therefore, of protecting buildings can hardly be too frequently, or too earnestly urged upon the owners; and what is done in this way, should be done so as not to invite, but to divert the attack of the destructive agent.

The common faults of lightning rods are, first, being made of too small iron rods, a fault that prevents sufficient surface for the free transmission of the fluid. This fact is shown by the frequent breaking and fusion of small rods, an occurrence which never happens to large ones. Rods less than five-eighths should never be used, and three-fourths or even an inch, are still better.

A second fault is in not having the rods properly joined; and their termination in the earth of the right kind. The rods should be united by a screw joint, in such a way as to enlarge the rod at that place as little as possible, and the lower part should enter the earth to such a depth as to ensure a certainty of its being always in contact with moisture; if the lower part is forked, the fluid will pass off still more readily.

A third fault is in the construction of the elevated points. This part sometimes ends in a single point, sometimes in two or three; but these are usually blunt, covered by rust, and consequently forming very imperfect conductors. It should be remembered the more numerous the points the better; that the points should be fine and sharp, and should be made of some metal not liable to oxydate or rust. Silver or platina are the best metals for this use. A dollar will furnish material for a dozen points.

Another fault is founded in the manner of putting up such rods. They should be secured to their places on or about the buildings to be protected, by such substances as are poor, or perfect nonconductors, such as wood or glass, and all things considered, the first is doubtless the best article that can be used. If attached to a house, it should be so as to command the most exposed or elevated part, such as the chimney, and when there is more than one of those of equal height, then the one in which the fire is usually kept, as it is found that a column of heated air constitutes a powerful conductor. If applied to out buildings, those most exposed should be selected, and particularly those in which the greatest value is generally found. The barns in which large quantities of new grain and hay are stored, are found more frequently struck by lightning than others, a fact that may be attributed to the heated air rising from the partially fermenting masses within, conducting the electric fluid to such buildings. Some may prefer insurance, to the trouble of erecting rods, and with such we shall not contend; all that is desired, is, that the owner of property, and especially the farmer, will adopt some certain method of securing himself against such loss.

Weeding Wheat.

Mr. Fuller, in the 'Farmer's Monthly Visitor,' thus describes his method of performing the process of clearing his wheat from weeds, &c.:

> "I always weed my wheat twice. The first time when it is three or four inches high; then again just before it begins to head out. I use an instrument called a grub. It is like a cabinet maker's gouge, about one and one fourth of an inch in diameter, with a socket into which I put a handle, say four or five feet long. With this instrument, one man may go over a large piece of ground in a day. The method is to take the grub and cut off a thistle, dock, or any thing that is injurious to the wheat at the surface of the ground, and leave it on the spot where it was cut off. A field that has this dressing will look much better; weeds always take the start of the wheat, and retard the growth. This practice always pays the farmer a great price for his labor."

Mr. Fuller's remarks relate to spring wheat, but they are applicable to winter wheat, and the farmer always finds his account in selling or sowing clean grain. A friend of ours last season had two fine fields of wheat, one of winter, and the other of spring, and he wed them both carefully, so as to leave nothing but pure wheat. Both kinds were principally sold for seed at such an advance in price as to amply compensate for the extra labor expended, and the increase in the quantity of the grain from its being freed from weeds, was far from inconsiderable. Weeding wheat is common in Europe, and there can be little doubt the practice may be advantageously adopted here.

Agricultural College.

Massachusetts was the first to institute a Geological Survey; to provide for an accurate examination of her agricultural resources; and she seems destined also to be the first in establishing a school where agriculture shall be taught and practiced scientifically and practically. We honor the old Bay State, not only because of her historical associations, because she possesses a Faneiul Hall, Lexington, and Bunker Hill, but because her public spirited sons appear to understand and appreciate the great truth, that knowledge is the mighty power which alike governs the world of matter and of mind.

We learn from some papers which have appeared in the Boston Recorder, that measures are being taken to convert that branch of Phillips' Academy at Andover, called the Teacher's Seminary, into what may be called an English College, in which young men may be prepared for every department of business, except what are termed the learned professions. This school was the first *Normal school*, or school for the preparation of teachers, established in the United States; and its effects have been most happy; and in its proposed enlarged sphere of operation, it will open a new era in the agriculture of the country. The paper to which we have alluded, says:—

> "This school embraces a three years' course of study in the department of English literature, mental, moral, and Natural Philosophy, Mathematics and the Natural Sciences; a course substantially the same as that of our colleges, with the exception of the ancient languages. It now has four teachers, three of them permanent, and the number of students by the last catalogue, was 136. Arrangements have been made to introduce agriculture as a branch of study during the spring term, which is soon to commence, in connection with the lectures and experiments in chemistry. Should this effort be sustained by the community, as we have good reason to hope it will, the institution in all its prominent features, will be an English college, such as the wants of the country demand. * * * The buildings are sufficient to accommodate 150 students. In addition to a good farm, there are two farms belonging to the trustees, which might be devoted to the purpose of the institution if they were needed. All that is now necessary to give permanency and success to the plan, is the endowment of one or two professorships, requiring less than one-half the sum which would be necessary to establish a similar institution, where no such foundation existed."

Of the eligibility of the location there can be no doubt; and when we remember the princely liberality already extended to the justly famed institution of Andover, there can be little doubt that the necessary sums for the endowment of the agricultural department, will be speedily forthcoming. Should it go into successful operation, as we trust it may, this school will become a model school, the influence and advantages of which will be felt in all directions. The plan is no new one, no untried and hazardous experiment; if such schools can succeed in the depressed States of Europe, can we reasonably have a fear as to the result in such a State as Massachusetts, or among the enlightened farmers of the United States. If we have as yet no such men as Von Thaer, Chaptal, Davy, Liebig, Dombasle, &c., it is because the exigencies of our country have not demanded them. The talent, the zeal, are here; in short, we have the *men* among us, and nothing is wanting but to have these qualities called out, and directed to the pursuits which have given so much usefulness and honor to the individuals we have named. We did indeed hope that New-York would have set an example to her sister States, of the establishment of a school for the advancement of agriculture; but if Massachusetts bears the palm from the Empire State in this respect, we shall not complain. "Example is more powerful than preaching," is probably as true now as ever; and success in the old Bay State, will doubtless abate some of the fears about interference in agriculture which unfortunately appear to have the ascendancy in this State, and if not anxious to lead, we may be at least induced to follow in the march of improvement.

Kentucky Corn Crops.

> "We expected ere this to have procured the statements of Messrs. Bryan and Young of Jessamine, who produced 200 bushels of corn to the acre, last year. The extraordinary crops grown by these gentlemen were scarcely more remarkable, than the fact that neither of them has published a statement of his practice. They owe it to the cause of good husbandry to detail their practice. Mr. Williams of Bourbon, who produced nearly as good a crop (about 170 bushels) promptly gave the country the benefits of his experience."—[*Kentucky Farmer.*]

We think with the Farmer on this subject, and hope our friend Stevenson will not let the matter rest, until full details of the course pursued to produce such an "extraordinary" crop are laid before the public. We remember when a reported crop of 100 bushels to the acre was considered a great story, and old farmers did not hesitate to assert that 100 bushels could not be made to grow on an acre of land. That crop has, however, now become comparatively common, and when we hear of that crop being doubled we think the farming community have a right not only to the evidence on which the claim rests, but the practice which produces such successful results; for it must be remembered that in farming, what is once done can be done again, and by others also under favorable and similar circumstances. We know that in fine cattle, and great corn, Kentucky is hard to beat; let her sons reveal, as far as possible, the secret of their success.

Fattening Pigs.

Mr. E. Marks, of Onondaga county, has, at our request, kindly furnished us with the following statement respecting the pork made by him on his farm in 1840. It will be seen that it adds an important item to the products enumerated in the Farm Report published in in our last:

"*First Lot.*—Six pigs ten months old. Weaned when eight weeks old, and received through the summer the slop of the dairy of three cows, and, perhaps, in the whole time one bushel of barley meal each. Weight of the heaviest 286 pounds, average weight 258. Total 1,548.

"*Second Lot.*—Twelve pigs sixteen and a half months old, turned to pasture in the spring, and fed no more until about the 10th of October. Weight of the heaviest when killed 381 pounds. Average 295 pounds. Total 3,440 pounds.

"*Third Lot.*—One sow two and a half years old, raised two litters of pigs during the season, and was fattened with the others, weight 393 pounds. One boar, purchased of Mr. Bement, three and a half years old, castrated the fore part of October, and fed with the others; weight 454 pounds. One boar pig sixteen months old, castrated the same time as the foregoing, and fed; weight, when killed, 390 pounds. Total 1,237 lbs.

Recapitulation.—	1 lot,	6 pigs,	weight	1,548	Strained lard
	2 "	12 "	"	3,540	from these hogs
	3 "	3 "	"	1,237	676 pounds.
				6,325	

"The regular feeding of these hogs commenced about the middle of October, and they were slaughtered on the 5th of January, and weighed from one to three days after being killed. The six pigs were three-fourths; the twelve, from one-half to three-fourths; and the boar full blood Berkshires. The sow was half blood, and the boar pig nearly full blood. They were fed as follows: about the 10th of October they were turned in the orchard, and fed twice a day with steamed potatoes for a week or two, when they were confined in a yard, and fed with steamed potatoes and barley meal mixed in, at first at the rate of one bushel of meal to twenty-five of potatoes, but the meal was increased until three bushels were used with the same quantity of potatoes. They were fed in this way until about 600 bushels of potatoes had been used, when their feed was changed to barley and pea meal, commencing with one-fourth peas, and ending with three-fourths. The meal was prepared as follows; water was heated to boiling, a little salt added, and then meal was stirred in, until it was as thick as would conveniently pour. This soon began to ferment, and was then fed out while warm. None was kept until much soured, and very little was fed before fermentation commenced. To have had the feeding properly and most profitably conducted, the fattening should have commenced thirty-five or forty days earlier; as the same quantity of food will make more pork in September and October, than in December and January."

We may add to this statement, that the last pig in the third lot, exhibited a striking instance of the rapidity with which the Berkshires, and, indeed, some other pigs, will take on fat. His gain, from the time he was put up until slaughtered, being at the rate of about three pounds five ounces daily. This, it is true, is not quite equal to the gain of Mr. W. P. Curd's Berkshire, (see Cultivator, vol. 7, page 188,) still we imagine few instances can be found of an equal gain in the same time.

Profitable Cow.

We find in the Essex Ag. Transactions for 1840, a statement of C. F. Putnam, respecting his cow which obtained the premium, giving the quantity of milk produced monthly for the year, the value of the milk and the cost of keeping. The quantity of milk was 4,214 quarts, or an average of 12 quarts daily for the year. The value of the milk was $244; and the total expense of keeping, milking, &c., was $91.53. Leaving a nett profit for the year, of $152.50. Mr. Putnam resides at Salem. Several other cows scarcely inferior were also offered for premiums; and such instances illustrate the propriety of keeping none but the best animals, since the cost of keeping is no more. and the product so much greater.

Colored Cheese.

Considerable complaint has been made in England, as to the effect of colored cheese, and it is strenuously maintained by competent judges, that the use of Annatto, which is the principal coloring material, must have a pernicious effect. The matter is like to be fully investigated.

New-York State Agricultural Society.

At a meeting of the Executive Committee of the New-York State Agricultural Society, at the Exchange, Albany, on the third Wednesday of April, 1841,—present Messrs. Walsh, Vail, Randall and Tucker. The President being absent, the chair was taken by Geo. Vail. Esq.

On motion of Mr. Randall, seconded by Mr. Walsh, the follow resolution was unanimously adopted :

Resolved, That the New-York State Agricultural Society will hold their autumnal Fair in the village of Syracuse, on *Wednesday* and *Thursday, the 29th and 30th days* of September next.

The report of the committee appointed to make out a Premium List, was taken up, and after discussion, referred to Messrs. Randall, Bement and Tucker, to report complete at the next meeting.

The following gentlemen were admitted members of the Society :

Annual Members—[*Paying $1 per year.*]

Abbott, Warren, Otisco.
Angell, Job, New-Hamburgh.
Clift, L. D., Carmel.
Curtis, Roswell, Owasco.
Dill, John B. Auburn.
Fountain, Tyler, Peekskill.
Gaylord, Eber, Otisco.
Gaylord, Hubbard M. Otisco.
Griffin, Lewis B., New-York.
Holme, John, Lansingburgh.
Hopkins, Ira, Auburn.
Pelton, Elisha, Otisco.
Pomeroy, Stephen, do.
Randall, H'ry S. Cortlandville.
Thompson, Jas. ($5) Ballston.
Williams, Wilmot, New-York.

Letters were read from A. Dey, Esq., and Wilmot Williams of New-York, Hon. James Thompson of Saratoga, T. C. Peters of Genesee, Willis Gaylord of Onondaga, Gouveneur Morris of Westchester, L. D. Clift of Putnam, and S. Colman of Otsego.

Resolved, That Gouveneur Morris and Jerrod Crane. be added to the General Committee for the county of Westchester—that L. D. Clift be added to the same Committee for the county of Putnam ; S. Colman for the county of Otsego, and Charles Broom for the county of Sullivan

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At a meeting of the Executive Committee of the N. Y. State Ag. Society, held at the Society Room in the Exchange, Albany, on the 3d Wednesday of May, the President of the Society took the chair—Present, Messrs. Bement, Nott, Prentice, Walsh and Tucker. F. Rotch, Esq., Ex-President of the Society, and President of the Farmer's Ag. Society of Otsego, being present, was invited to unite with the Committee in their deliberations.

Letters were read from Orlo Steele and A. Rice, of Oswego, Eli C. Frost of Chemung, D. D. Campbell of Schenectady, and Elon Comstock of Oneida.

The following new members were admitted to the Society :

Life Members—[*By the payment of* $50.]

ARCHIBALD McINTYRE and JOHN TOWNSEND, of Albany.

Annual Members—[*Paying $1 per year.*]

Brockway, Joseph, Albany.
Broom, Charles, Fallsburgh.
Campbell, D. D. ($5) Sch'y.
Catlin, Phineas, Catherine.
Clark, Zenas, Pottsdam.
Cook, Charles, Havana.
Crawford, Jno. p. m. Moreland.
Dayton, John A., New-York.
Eames, Lewis, Stokes.
Frost, Eli C., Catherine.
Geddes, George, Geddes.
Goodwin, E. H., Havana.
Johnson, Benj. P., Rome.
Leonard, Fred. Lansingburgh.
Marks, Enoch, Navarino.
Park, John B., Hannibal.
Rice, Arvin, do.
Savage, Hon. John, Salem.
Skinner, James H., Hannibal.
Steele, Orlo, Oswego.
Strachan, J., Waterford.
Thorburn, William, Albany.
Titus, John, Hannibal.
Wiltse, Martin, do.

Mr. Randall, from the committee to prepare a premium list, made a report, which, after a prolonged discussion, and various amendments, was adopted, and ordered to be published.

The President, and Messrs. Grove and Tucker, were appointed a committee on Diplomas and Medals.

Resolved, That the next meeting of the Committee be held in Troy on the 3d Wednesday of June.

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CATTLE SHOW AND FAIR

Of the N. Y. State Agricultural Society—to be held at Syracuse, Sept. 29 and 30, 1841.

The New-York State Agricultural Society will hold a Cattle Show and Fair at Syracuse, on the 29th and 30th days of Sept., 1841, at which time the following Prizes will be awarded. The Premiums offered, are numerous rather than large, the Society preferring to make their appeal to the emulation and public spirit of our agricultural population, rather than to that avarice which can alone be called into action by the inducement of large rewards.

—

LIST OF PREMIUMS.

ON CATTLE.

I. BULLS—*Of any breed, 3 years old and over.*

For the best, ···············	$20	For the third best, ········	$8
For the second best, ······	12	For the fourth best,	*Diploma.*

II. BULLS—*Of any breed, over 2 and under 3 years old.*

For the best, ···············	$20	For the third best, ········	$8
For the second best, ······	12	For the fourth best,	*Diploma.*

III. BULLS—*Of any breed, under 2 years old.*

For the best, ···············	$12	For the third best, ········	$5
For the second best, ······	8	For the fourth best,	*Diploma.*

IV. COWS—*Of any improved breed, 3 years old and upwards.*

For the best, ···············	$20	For the third best, ········	$8
For the second best, ······	12	For the fourth best,	*Diploma.*

V. HEIFERS—*Of any improved breed, 2 years old and over.*

For the best, ···············	$12	For the third best, ········	$5
For the second best, ······	8	For the fourth best,	*Diploma.*

VI. HEIFERS—*Of any improved breed, under 2 years old.*

For the best, ···············	$10	For the second best, ······	$5

For the third best, *Diploma.*

VII. COWS—*Cross between the native and improved breeds.*

For the best, ···············	$12	For the third best, ········	$6
For the second best, ······	9	For the fourth best,	*Diploma.*

VIII. HEIFERS—*Cross between the native and improved breeds.*

For the best, ···············	$10	For the third best, ········	$5
For the second best, ······	8	For the fourth best,	*Diploma.*

IX. COWS—*Native breeds.*

For the best, ···············	$10	For the third best, ········	$5
For the second best, ······	8	For the fourth best,	*Diploma.*

The greatest combination of those points or properties which indicate milking qualities and an aptitude to take on flesh on the more valuable parts, together with general beauty of form, (size in itself not being considered a criterion of excellence,) will be the considerations which will govern the viewing committee in awarding premiums in the above classes.

—

ON HORSES.

For the best Stallion, ·····	$20	Best breeding Mare & Colt,	$20
For the second best, ······	12	For the second best, ······	12
For the third best, ········	8	For the third best, ········	8
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

A variety of horses possessing size, strength, and endurance for field labor, combined with that action which qualifies for the carriage or saddle—in short, the horse *of all work*, is probably the most profitable class which our farmers can now engage in rearing, and to such therefore, will the preference of the Society be given.

—

SWINE—*Over* 10 *months old.*

For the best Boar, ········	$10	For the best breeding Sow,	$10
For the second best, ······	8	For the second best, ······	8
For the third best, ······	5	For the third best, ········	5
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

In awarding premiums on hogs, reference will not be had exclusively to size or to present condition, but to that form and that proportion of bone and offal to more valuable parts, which promises the greatest value from the least amount of feed.

—

SHEEP—I. Long Wooled.

For the best Buck, ········	$10	For the best pen of 3 Ewes,	$10
For the second best, ······	5	For the second best, ······	5
For the third best,	*Diploma.*	For the third best,	*Diploma.*

II. Middle Wooled.

For the best Buck, ········	$10	For the best pen of 3 Ewes,	$10
Fot the second best, ······	5	For the second best, ······	5
For the third best,	*Diploma.*	For the third best,	*Diploma.*

III. Fine Wooled.

For the best Buck, ········	$10	For the best pen of 3 Ewes,	$10
For the second best, ······	5	For the second best, ······	5
For the third best,	*Diploma.*	For the third best,	*Diploma.*

The term " long wooled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—the " middle wooled" the South Down, Norfolk, Dorset, Chevoit, native, &c.—the " fine wooled" the Spanish and Saxon varieties of the Merino and some of their crosses.

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FARM IMPLEMENTS.

For the best *Plow*, ········	$30	Best *Thrashing Machine*, ··	$20
For the second best, ·····	20	For the second best, ······	10
For the third best, ·······	10	For the third best,	*Diploma.*
For the fourth best,	*Diploma.*	For the best *Horse Rake*, ··	8
For the best *Harrow*, ·····	8	For the second best, ······	5
For the second best, ······	5	For the third best,	*Diploma.*
For the third best,	*Diploma.*	For the best *Fanning Mill*,	8
For the best *Cultivator*, ···	8	For the second best, ······	5
For the second best, ······	5	For the third best,	*Diploma.*
For the third best,	*Diploma.*	For the best *Straw Cutter*,	8
For the best *Drill Barrow*,	8	For the second best, ······	5
For the second best, ······	5	For the third best,	*Diploma.*
For the third best,	*Diploma.*		

Discretionary premiums will also be awarded to manufacturers of the best sub-soil and side-hill plows, hoes, shovels, spades, forks, rakes, and other farming utensils.

The economy and durability, as well as the excellence, in other respects, of farming implements, will be taken into consideration.

Discretionary premiums will be awarded for the best samples and best varieties of winter and spring wheat, corn, rye, barley, oats, peas, beans, buckwheat, hemp, flax, broom corn, maple, and beet root sugar, &c. &c.

Also, potatoes, turneps, sugar beets, mangel wurtzel, carrots, pumpkins, and horticultural products generally.

Also, fruits of all kinds, and flowers.

The varieties, when different from those in common use, should be properly explained, the method of culture, &c.

Prizes to be Awarded in Albany.

The following premiums will be awarded at the annual meeting of the Society on the 3d Wednesday of January, 1840 :

BUTTER AND CHEESE.

For the best sample of Butter, not less than 100 pounds, ············	$20	For the best sample of Cheese, not less than 100 pounds, ···········	$20
For the second best, ······	12	For the second best, ······	12
For the third best, ········	8	For the third best, ········	8
For the fourth best, ·······	5	For the fourth best, ·······	5
For the fifth best,	*Diploma.*	For the fifth best,	*Diploma.*

FIELD CROPS.

For the best acre of *Wheat*,	$20	The best acre of *Potatoes*,	$15
For the second best,	*Diploma.*	For the second best,	*Diploma.*
The best acre of *Barley*, ··	$15	Best acre of *Sugar Beets*, ·	$15
For the second best,	*Diploma.*	For the second best,	*Diploma.*
For the best acre of *Rye*, ··	$15	Best acre of *Ruta Baga*, ···	$15
For the second best,	*Diploma.*	For the second best,	*Diploma.*
For the best acre of *Oats*, ·	$15	The best acre of *Carrots*, ··	$15
For the second best,	*Diploma.*	For the second best,	*Diploma.*
Best acre of *Indian Corn*, ·	$20	For the best acre of *Peas*, ·	$15
For the second best,	*Diploma.*	For the second best,	*Diploma.*

The rules and regulations which will govern the Society in awarding their Premiums, will be published in our next.

The prizes will be paid in plate or cash at the option of the winner. Should not the Society obtain a Diploma in season, some Agricultural Work or Print may be substituted for the Diploma

County Agricultural Societies.

Ontario.—The Fair of this society is to beheld at Canandaigua on Tuesday the 12th of October next. Their premium list is extensive and liberal, and embraces three premiums each on the best crops of wheat, corn, barley, oats, peas, beans, potatoes, ruta bagas, white turneps, mangel wurtzel, carrots, and clover seed, amounting to $152. Premiums amounting to $90 are offered on various household manufactures, including butter, cheese, flannel, carpets, cloth, silk, cocoons, &c. For mechanics, $34. On maple sugar, $15. On animals, the prizes amount to $329. Discretionary prizes to females, $25. In all, over $600.

The Executive Committee of the Ontario Ag. Society on the 18th May examined nine samples of maple sugar, of 100 pounds each, which were presented for the Society's premiums. The committee say—" All the samples were good, and most of them superior." They awarded the 1st premium for the best 100 lbs. maple sugar, to *Benj. Gauss, Jr.* of East Bloomfield—the 2d premium to *Fred. Munson*—the 3d, to *F. J. Munson*, and the 4th to *Fred. Rice*, all of E. Bloomfield.

Tompkins.—The Ag. Society of this county, have issued their Premium List for 1841. The prizes are small but numerous, embracing a larger variety of articles than usual, particularly in the mechanical and household arts. Their Fair is to be held at Ithaca on the first Wednesday of October.

Saratooa.—The Clerk of this county, in pursuance of the Agricultural Law, has issued a spirited and appropriate notice, calling a meeting at the Court-house in Ballston on the 24th of June, at one o'clock P. M. for the purpose of organizing an Agricultural Society in accordance with the provisions of said law.

Oneida.—The following letter shows with what spirit the farmers of this county have entered on the work of agricultural improvement :

Messrs. Gaylord & Tucker—We organized the Oneida County Agricultural Society on the 21st of April, when a very excellent address was delivered by H. S. Randall, Esq. of Cortlandville.

Hon. POMEROY JONES, President.

Thos. Goodsell, John Parker, Harvey Bradley, Ingham Townsend, Vincent Tuthill, A. Carmichael, Riley Shepard, Lester Barker, Erastus Jeffers, Salmon Case, V. Presidents.

B. P. Johnson, Corresponding Secretary, Rome.
S. Moulton, 3rd, Recording do.
Jay Hathaway, Treasurer.

Managers.

Elon Comstock,
Wm. B. Wright,
George Walsworth,
Isaac G. Greene,
George Bristol.

The officers of the society held a meeting to-day, and resolved to hold a fair on the 3d Wednesday in October. It was also resolved to raise $400 in addition to the sum appropriated by the State.

A list of articles for premiums was agreed upon, and will be published in all our county papers. I believe from the spirit manifested already, that this county will enter into the work with zeal and energy ; and that we shall soon witness the happy results from a combined effort to improve our agriculture in its various departments. Such an effort has long been needed in this rich and populous county. Although the products of our dairy, perhaps equal any in the State, still, in many particulars, we are very deficient. In fine cattle we are far behind many other counties ; and our breed of horses is most miserable. We trust an impulse will now be given to the work, that will carry forward improvement, until the Empire County shall at least equal in every respect the other counties in the State.

Yours, B. P. JOHNSON."

American Butter Abroad.

In the London Commercial Journal of March 27, there are some remarks on the subject of American butter, part of which we copy as worthy the attention of our butter makers. There is every probability that butter and cheese to a considerable amount will be annually exported from this country, and it seems very desirable that it should be of good quality. This can never be the case, particularly with butter, unless more attention is paid to its manufacture. There is no disguising the fact, that immense quantities of butter find their way to the market, in a condition which renders it unfit for any thing but grease. Hot weather, or the shortest voyage, renders it intolerably rancid. New butter made in Holland, may be carried to any distance, and in any climate, without suffering material deterioration, and hence it is in such demand for exportation. Vast quantities annually find their way to Great Britain for domestic consumption and otherwise, and the high prices demonstrate the estimation in which it is held. There are no finer pastures in the world, than in the United States, particularly those north of the Ohio, and if proper attention and skill was given to the products of the dairy, those products might be unrivalled. There is a considerable amount of excellent butter made in the country, but it is used for domestic consumption, and the proportion of the first rate article bears but a slight comparison with the whole. There is less difference in the cheese of this country and European ones, than there is in the butter ; and consequently less difference in the prices. But in both butter and cheese, so far as the great mass of these products are concerned, there is room for a decided improvement, and we doubt not our dairy women would consult their own interest, as well as the credit of the country, in giving more care to the production of superior articles ; but to the extract.

" At a public sale of American butter at Liverpool it fetched the best sorts, 84*s.*, seconds 72 to 74*s.* duty paid ; while inferior, sold only at 43a44*s.*, in bond of which the parcel chiefly consisted. The quantity arrived at the London market, show the same results, the principal part being sold for greasy purposes. The American makers of butter are very far behind the Irish, English or Dutch ; from the first operation to the last, all seems to be done without system or care. The same materials would, if managed by experienced hands fetch in this market 25 or 30*s.* more money. There is evidently no proper attention paid to the making, salting, putting down or packing. A correspondent of one of our commercial papers says—" The best American butter imported into England this year, has sold not higher than 95 shillings, while the best from the continent has fetched 110 to 115 shillings ; this latter will keep for years."

WORK FOR THE MONTH.

The seeds of the farmer are by this time usually sown or planted ; and the labor now is principally such as relates to their after culture. This is at all times important, as on it the goodness of the crops are mainly depending.

Wheat.—But little can be done to promote the growth of this grain now, but much may be done to add to its value and its quantity. Weeds are sad detractors in both these respects ; and the farmer who weeds his wheat fields thoroughly, will find his account in doing it. Chess, cockle, charlock, red root, and the whole tribe of intruders, may be checked, or extirpated in this way.

Sheep.—Look well to your sheep after washing and shearing. We have known a cold storm make bad work with a flock of fine wooled sheep, soon after shearing ; and protection is rarely more necessary than at such times. Exposure to such storms, if not immediately fatal, lays the foundation of numerous diseases. Keep the bottom of your salt troughs covered with tar, and your sheep will rarely be troubled with worms in the head.

Corn.—If your land was deep and friable, and properly fitted for corn, there is little advantage in hilling it. It is sometimes said corn requires hilling to support it. Nature disproves this argument by the stiff, bracing roots thrown out by this plant, at the time they are wanted, and for this very purpose. On wet lands, planting on ridges and hilling may be advisable, but such lands should never be chosen for corn. If wet, drain thoroughly in the first place. Allow no weeds to grow in your corn, and do not fear to stir the surface in dry weather. Every weed absorbs nutriment enough to make a good ear of corn, and if any remain after the plow cannot be used, pull them up, or cut them with the hoe.

Potatoes.—Some have recommended that after the last hoeing of this root, a coating of straw be spread over the plants and between the rows. This will check weeds, keep the ground moist, and add to the crop. If potatoes are hilled, it should be with one broad and flat, and the same remark will apply to those made around corn.

Ruta Baga.—This is an excellent crop, and if not quite as certain and valuable here as in Britain, it is one which ought not to be neglected by any farmer. Here, where we have no bone dust to give the turneps a start, a little fine well rotted manure put under or in the drills will aid them much. The most critical period is before the formation of the rough leaf ; afterwards all they require, is clean culture, and proper thinning. If you have not a quantity of carrots or sugar beets in the ground, do not neglect the ruta baga. The proper time of sowing here, is from the tenth to the twentieth of June. The average crop may be estimated at five or six hundred bushels per acre.

Weeds.—Wage an unceasing warfare with weeds in every form. They are continually increasing on most farms, and new ones are yearly added to the catalogue of nuisances. It is not too much to say that in many cases, the annual profits of a farm are diminished from one-third to one-half by this cause alone. Thorough fallowing in the English method is the best remedy for the thistle ; cutting Johnswort, and applying plaster to invigorate the other grasses will check, if not destroy this weed ; the annuals, such as wild mustard, cockle, steinkrout, &c., must be pulled by hand carefully before ripening their seeds ; and the elder, life everlasting, and others, must be cut up by the roots.

Plum Blight.—Examine your plum and Morello cherry trees very carefully this summer, and if you discover on any branches those unsightly swellings or black excrescences that are a sure precursor of the ruin of the tree, if left to progress undisturbed, cut off the limb at once and burn it. It is distressing to the lover of these fine fruits, to witness the destruction going on in these trees, without an effort, or scarce one, to save them. Attention will preserve trees, and it seems nothing else will.

Pear Blight.—This disease, doubtless caused by an insect, may be detected by the drying up of the leaves on a branch, and as soon as noticed, the branch should be separated at once, and the infected part burned. If left on the tree, it will in most cases spread in a little time over the whole, and cause death. It is better to cut the branch a considerable distance below where the bark appears affected, so as to be sure of eradicating the evil.

Summer Fallows.—If the fields you are intending to sow with wheat in the autumn, be infested with weeds, or the sward be tough, you had better commence your fallow as early in the season as possible. There is no danger of making the land too clean, or the soil too fine ; and each plowing should go a little deeper than the preceding.

Manures.—It is not a good plan to apply manures directly to the grain crop. It is better to give them to corn and roots ; and have these followed by spring grains, and grass seeds with clover, which, after being mown or pastured, (the last is best,) may be followed by wheat. Applied directly, they give too much straw, while the berry is inferior. Corn and roots require all the forcing they can receive from manures. If put on wheat, manures should be made into compost, by being placed in alternate layers in heaps, with turf, lime, swamp mud, or other substances, that in the process of decomposition, will retain the active or soluble parts of the stable manures, and which are too frequently lost to the farmer.

The Garden.—The farmer's garden will now require care and attention, and will well reward him for both. Thin out your onions, carrots, beets, &c. Sow beets for fall or winter use. Do not leave too many melon or cucumber plants in a hill. It is good to put in plenty of seed so as to guard against casualties, but three or four of the most vigorous and healthy stems only should be allowed to remain for fruit, the rest to be pulled up. Kidney beans planted in June, will sometimes bear profusely and are always welcome.

Watering Plants.—Heat and moisture are indispensable to the growth of plants ; and a drouth in June frequently has a most injurious effect. Garden plants may be much aided by watering. A rose nose watering pot should be used, and rain water is always to be preferred. If well or spring water is used, it should be kept in a tub or other vessel exposed to the sun and air for a day or two before using.

Strawberries.—After giving their strawberry beds a thorough clipping and cleaning, some at this time cover the spaces between the rows with long straw, which not only keeps the ground more moist, but prevents the large stems of fruit from becoming dirty by contact with the earth. The strawberry is a delicious, easily cultivated fruit, and if you have not a bed of them, don't forget next September or October, to provide a supply of the best kinds.

Cabbages.—Transplant cabbages for late fall or winter use. They may sometimes require a little protection, if the sun is hot and the sky cloudless ; but usually, if well set, and the earth not shaken off in removing, they will suffer but little. Early cabbages are frequently attacked by a small white worm that preys on the stem in the ground. Judge Buel found that hot water, while it did not injure the cabbages, freed them from the worm effectually.

Agricultural Statistics.

We give below, a table embracing the wheat, corn, and other grain, and the potatoes grown in the United States in the year 1839, according to the returns made by the Marshals, with the exception of North Carolina, Kentucky, Florida and Wisconsin. We hope hereafter to give full returns of all the items of agricultural and manufacturing industry in the country, believing that such statistics will be welcome to a large part of our readers. Of the amount of other grain than wheat, in the table, more than 300 millions of bushels was corn, the remainder, oats, rye, &c. Of the wheat grown in the U. S., it will be seen that more than one-sixth—of other grains, about one-tenth, and of potatoes, nearly one-third were produced in this State. Ohio gives the greatest amount of wheat ; and from other returns, we have seen Tennessee produced the greatest crop of corn. A very large part of the immense potato crop of this State, was used for making pork, it taking, in this respect, the place of corn in the western and southern States. Can it be wondered at that the fiscal affairs, and general condition of the State of Ohio, should be prosperous, when it is known that that State last year sold nearly ten million bushels of wheat ; while its resources in every other kind of produce are most ample. In the present table, the immense importance of the cultivated crops is seen at once ; the aggregate of the domestic animals, manufactures and crops other than those intended for food, will, when collected, exhibit an amount truly enormous. It is not, perhaps, too much to estimate the total value of the products of this country in a single year, at twelve hundred millions of dollars. Truly, this is a vast empire ; one, the resources of which are unlimited, and one in which plenty and competence are always the attendants of forethought, honesty and industry.

States.	Bushels of Wheat.	Bushels of oth'r grain	Bushels of Potatoes.	Population.
Maine,	848,166	2,630,996	10,392,380	501,793
New Hampshire,	442,954	3,084,854	6,234,901	284,574
Vermont,	642,963	4,051,818	8,206,784	291,948
Massachusetts,	158,923	3,604,082	5,385,662	737,699
Rhode Island,	3,088	697,408	904,773	108,839
Connecticut,	86,980	3,995,175	3,414,227	310,015
New York,	11,853,907	39,540,501	30,058,000	2,428,921
New Jersey,	774,023	9,922,044	2,074,118	373,306
Pennsylvania,	13,029,756	40,198,521	8,626,925	1,724,022
Delaware,	215,165	3,086,705	200,712	78,085
Maryland,	3,511,443	12,772,280	1,058,919	469,232
Virginia,	10,066,809	50,054,336	2,873,447	1,239,797
North Carolina,	....	....	....	753,110
South Carolina,	705,925	16,236,512	2,697,713	594,398
Georgia,	1,732,956	18,703,310	1,184,386	*677,197
Kentucky,	....	....	....	‡777,397
Ohio	16,214,260	48,797,112	5,600,586	1,519,467
Tennessee,	4,547,372	49,545,443	2,373,034	829,210
Louisiana,	105	6,622,398	845,935	351,176
Alabama,	746,106	16,146,577	1,560,700	†569,645
Mississippi,	196,476	13,669,940	1,538,628	375,651
Missouri,	946,077	13,840,190	684,492	381,102
Indiana,	4,154,256	34,086,545	1,548,190	683,314
Illinois,	2,740,380	28,354,932	1,956,887	474,404
Michigan,	2,189,263	6,152,273	2,051,339	211,705
Arkansas,	112,200	4,084,712	290,887	95,642
Florida,	....	....	....	54,207
Wisconsin,	....	....	....	30,752
Iowa Territory,	157,747	1,559,230	234,060	43,068
Dist. Columbia,	12,147	60,717	12,035	43,712
Total,	66,089,947	419,776,871	102,459,926	17,100,572

* Returns from nine counties wanting, seven of which contained in 1830, 55,881.

† Returns from five counties not included. Four of the five counties contain, according to the marshals returns, 85,701.

‡ Returns from Carter county wanting.

The amount of population in seven counties of Georgia in 1830, and that of four counties of Alabama, mentioned in this note, are included in the sum total.

Diseases of the Silk Worm.

It is known to most of those who take an interest in the silk culture, that in many places, particularly at the south and west, the hopes of the grower were wholly destroyed by the attacks of a disease which sooner or later proved fatal to most of the worms. Mr. G. B. Smith, Editor of the Silk Journal at Baltimore, has announced to the public, that by a comparison of the disease, and the condition of the worms, with one described and figured in a new French work on the Silk worm, he has discovered that the disease so fatal here last summer, was the one well known and dreaded in Europe as the La Muscadine, and which destroys annually where no preventive measures are used, not far from 50 per cent of the worms. The preventive and the remedy for this disease is "*air slaked lime* sifted through a fine sieve on the worms, three times a week if healthy, and once a day if diseased, in the morning before the first feeding, and after cleaning the hurdles. The quantity of lime sifted on the worms may be sufficient to whiten the worms and leaves well, and it should be commenced when the worms are half grown, say twelve to fifteen days old. This remedy has, during the past two years, enabled those persons in France who used it, to save and obtain cocoons from 97 per cent of all the worms hatched."

This annunciation and discovery, particularly of a remedy, we consider a very important one. Although Mr. Smith has not alluded to the fact, this disease constitutes a striking instance of what is called *animal dry rot ;* that is, where death occurs in consequence of the spread of a parasitic fungus, which like other funguses is contagious, and wherever it appears, spreads with astonishing rapidity. The following extract from an European publication will show its nature, and perhaps furnish a clue to the reason of the efficiency of lime as a remedy :

> "A common instance of animal dry rot, is found in the disease of silk worms called La Muscadine. Silk worms of all ages are liable occasionally to become sickly and die, soon after death becoming stiff, and acquiring such a degree of firmness, as to be readily broken. They then throw out from their surfaces a sort of white efflorescence, which is the fructification of the fungus called Botrytis Bassiana, their inside being filled with the thallus of the same plant. If some healthy worms are placed beneath a bell glass, along with a small portion of a worm killed by the Botrytis, they soon catch the disease, exhibit the same symptoms as those already mentioned, and eventually perish. If healthy crysalis are inoculated by the introduction below their shell, of a little of the Botrytis matter upon the point of a needle, they also sicken and die."

The Season.

That our readers may compare the present with some past ones, and thus judge of their agricultural prospects, we give the temperature, &c. of the first five months in each, for a few past ones.

Month.	1838.	1839.	1840.	1841.
January,	33	25	19	28
February,	14	32	35	24
March,	40	35	37	36
April,	39	54	49	44
May,	57	61	64	

It will be seen that the average temperature of the first months of the present season is much lower than before, (the time noted here being two o'clock,) while at nine o'clock, the difference appears still greater. There has been an unusual number of cloudy days, with frequent rains and snows, the whole combining to produce one of the most backward seasons known in many years. We have not as yet (May 15,) seen a single fruit tree in blossom, and the buds have hardly began to put forth. It is clear there is this year to be no spring, but we are to pass from the snows of winter to the heats of summer. The season has been a very severe one for animals, as in many parts of the Northern States there has been sleighing for six months, and we still hear that in the present month snow has fallen to the depth of 18 or 20 inches in northern New-York and Vermont. Fodder for cattle has in consequence advanced to unprecedented prices, is extremely scarce, and many animals have perished. The journals from Vermont, New Hampshire, Maine, and the northern counties of this State, as well as private letters, assure us the distress has been, and still is great, as there is as yet little or no grass. We have had much N. E. wind, and this has been invariably accompanied with bad weather, sleet and snow, preventing labor, and giving a gloomy aspect to every thing. The immense quantities of drift ice encountered in the Atlantic for a month or two past in uncommonly low latitudes, will in part account for our N. E. storms and cold, and indeed up to this time, a change of the wind to the N. or N. E. brings with it an icy atmosphere clearly indicative of its origin. So wet has been the season, that on many farms, a plow has not yet been started, nor a seed sown. The chimney swallow has however, appeared to-day, and it is to be hoped it will be the harbinger, as it usually is, of a clearer sky, and breezes from the sunny south. One of the worst results, is the immense amount of work it throws upon the husbandman at once, producing a haste in getting in the crops which is necessarily unfavorable to their being done in the best manner. There is no reason, however, for despondency. Seed time and harvest are certain ; and careful after culture will in a great measure supply the loss of time to the farmer. Winter wheat, so far as we are able to learn, presents an appearance quite equal to the usual average of the country ; and if the season forbids the culture of one crop to the desired extent, the farmer must supply the deficiency by another. [*Otisco, May* 15.]

Subsoil Plowing in Massachusetts.

In the Transactions of the Essex Agricultural Society for 1840, Mr. Phinney, of Lexington, Massachusetts, has given an account of the use of an implement constructed for him by Prouty & Mears, for breaking up the pan that is very frequently found in lands that have long been plowed, at the depth to which the plow usually reaches, occasioned by the pressure and consolidating effect of the repeated passage of that implement, aided perhaps by the treading of the animals employed in the work.

In cultivating a field which had been many years under the plow, Mr. P. noticed what in England is called the "upper crust." It was so hard as to be apparently as impenetrable to the roots of plants as a piece of marble, and discovered at once the cause of the failure, in a great measure, of the potato crop the year previous. To remedy this obstacle to successful culture, Mr. P. had a plow constructed "the beam five feet long and six inches square, of white oak, well ironed, with three tines in nearly a straight line, made of the best Swedes iron, one and a half inches square, and extending twelve inches below the beam, with a spur at the foot some less than that of the tine of the cultivator, with strong handles, and an iron beam extending from each handle to the centre of the beam, by which the balance is easily preserved." This implement followed the drill plow, and drawn by two yoke of oxen, broke up the "crust" and loosened the earth to the depth of fourteen inches. By the use of this simple but effectual implement, Mr. P. nearly doubled his root crop, and by giving the roots an opportunity to strike deep, the severe drouth which injured the crops on other lands was not felt on the deep plowed soil.

We are glad a farmer of Mr. Phinney's skill and experience has brought this business of deep plowing before the public; and as there are large quantities of land in this country that require such a thorough breaking up, and as the implement described is both simple and effectual, it is to be hoped that many will avail themselves of it to improve and deepen their soils, and as a necessary consequence increase the quantity and quality of their crops. Mr. Phinney's subsoil plow is much less costly and complicated than the English one, and apparently quite as effectual, while at the same time it works much easier.

Discovery in the Preparation of Timber.

We are indebted to our friend, C. Carmalt, of Friendsville, Pa., for a copy of a translation from the collection of *Savans Etrangers*, of a report made by a committee of the French Academy on a method discovered by M. Boucherie of Paris, "for rendering wood more durable, preserving its elasticity, preventing the shrinking and variation in size from dryness or humidity, diminishing its combustibility, increasing its tenacity and hardness, and even giving it a variety of durable colors and odors."

The possibility of impregnating wood with fluid substances, has long been known; and the fact has been taken advantage of for many economical purposes; but where this has been done, powerful forcing machines, and a prolonged action have been required to complete the impregnation. The discovery of M. Boucherie, consists in causing the various fluids required, to penetrate the tree by the simple operations of nature itself. One of the most beautiful proofs of the fact that solutions of various substances are taken up unchanged, may be seen by sprinkling the soil in which a white hyacinth, in a state of blossom, is growing, with the juice of the *Phytolaca decandra*, when the white blossoms assume in one or two hours a red color, which again disappears in a few days under the influence of sunshine, and they become white as before. The colors of some other flowers may be changed in a similar manner.

The method of Dr. Boucherie is to place the bottom of a trunk, in the fluid you wish to have absorbed, and in a few days it will be found that the liquor has ascended to the highest leaves. "For instance, let a tree full of sap, be cut off at its foot, and plunge the foot in a vessel containing the liquor you wish to have aspired, and the liquor will rise to the most elevated points. All the vegetable texture is invaded except the heart of the tree, which with the old nuts, resist the penetration of the absorbed substance." We have room only to state some of the principal results; the applicability of the method to a multitude of cases will be seen at once by the intelligent reader.

1. It is not necessary that the tree should retain all its branches; a single boquet of branches and leaves at the summit, is sufficient to produce the requisite circulation, or rather ascension of the fluid.

2. It is not necessary the tree should remain erect. It may be felled, the branches, (the terminal ones excepted,) trimmed off, and then the base being put in connection with the liquid to be absorbed, it will gradually penetrate every part.

3. It is not indispensable to cut the tree down. A cavity made by an axe, or dividing a large part of its substance with a saw, will suffice, for in placing the liquid in contact with the cavity or cut, it will be rapidly absorbed.

4. The substance chosen to give durability to wood, by preserving it from dry or wet rot, is the pyrolignite of iron. To render it incombustible, or not liable to shrink and swell from dryness or moisture, chloride of calcium, and the mother water of salt marshes or works, is used.

The pyrolignite of iron is made by putting old iron into pyroligneous acid, produced from the combustion of wood in making charcoal. The colors are given by preparations which will affect the wood directly, or the substances previously introduced. Thus the color of ebony is produced by saturating the tree with the pyrolignite of iron, and following this with a tanning matter which will dye the whole black, by converting the first liquid into ink.

The effect which such preparations of iron must have on the durability of wood, may be considered one of the most important parts of the discovery, taken in connection with the ease of the saturating operation. Numbers of experiments have been made in the wine cellars of Bordeaux, on hoops prepared by the author of the process. Common hoops fell to pieces at the slightest touch or strain, when the prepared ones were as solid as on the first day of their use. We consider this an important discovery, not only as relates to its economical purposes, but for the light it seems capable of throwing on some hitherto unsettled questions of vegetable physiology.

The Peach Worm.

The peach is one of the most delicious and easily cultivated of fruits, in any country where the climate does not interpose obstacles to its success; but within a few years a disease called the yellows, has destroyed many of the best trees or orchards in the northern and middle States; and where this disease has not appeared, the worm called the peach worm, which bores through the bark around the surface of the earth or below, and by feeding on the juices, eventually destroys the tree, has produced great mischief.

For the yellows, there does not appear to have been any preventive or cure discovered, and its cause is enveloped in uncertainty. The disease is contagious, and is propagated by budding or grafting from diseased to healthy trees. The greatest care is therefore required in selecting or transplanting trees, that none but those perfectly healthy be used; as one unsound one may be the destruction of an orchard. The worm may be destroyed by removing the earth around the tree, when if the worm is present, holes will be seen in the bark, and quantities of the cuttings of the bark or wood thrown out, will be around them. A flexible barbed wire, will in some instances extract the worm; in others he must be cut out with a knife; in any event he must not be allowed to remain, as it will be at the expense of the loss of the tree, if permitted. Saturating the earth around the tree with soap suds occasionally, has been highly recommended as a preventive, and in some instances, hot water has been poured around them with success. It is very possible that injecting hot water into the openings made by the worm might destroy him; if so, it would be better than deep or extensive cuttings after the depredator.

Dr. Anderson of Virginia, has stated in the Farmer's Register, that he has been very successful in growing the peach, and in preventing the attack of the worm. He says:

> "Having observed in the practice of medicine, that the cedar berry, [red cedar, we presume,] was a powerful vermifuge, I planted cedar cions and peach cions together six years since, in the following manner: I set one of each in a hole, with the roots entangled and set close together, believing that the strong odor peculiar to the cedar, would prove efficacious and sickening to the worm, and thereby prevent its approach to the peach tree. Every circumstance seemed to unite in favor of the experiment; there was no danger of the peach tree being choked by the cedar, because the former is a rapid, while the latter is of very slow growth. The peach trees bore the second year, and have put forth their leaves black as a cloud every season, and bore most luxuriantly every season until the last, which was the sixth year. I have set out a number since in the same way, which are all flourishing. I think a soil should be selected much mixed with sand in order to prove successful."

Theory of Manures.

From the earliest speculations on the nature of manures, down to a very recent period, manures have been divided into two classes, nutritive and stimulative, or such as furnish the direct food of plants, and such as act as stimulants or excite plants to take up and assimilate such kinds of food as is presented to them. In the first class has been placed all decayed vegetable matter, farm yard manures, animal excrements, night soil, and such other matters as having been derived from plants were considered as capable of being reconverted into vegetable matter. In the second class it has been the custom to place gypsum, lime, such salts as are found to produce a favorable effect on vegetation, as the phosphates of lime in bones, and the nitrates existing in saltpetre, soda, &c. Recent discoveries, however, serve to render it probable, that the whole system so constructed of the action of manures must undergo some essential modifications, if not a total reconstruction. It is now maintained with great plausibility, "that dung itself acts not by any power which it possesses, as having formerly been a part of living bodies, animal or vegetable, but as uniting those chemical elements, some of them mineral, which constitute the food of plants; and that a compound of these elements, artificially brought together, would act precisely in the same manner as dung.*

Thus the potash contained in a soil, or applied to it in the form of ashes, converts the silex into a silicate of potash, and in the form of a solution of that substance, acts most decidedly in promoting the growth of all the grasses, corn, wheat, and indeed all plants that contain silex in their stems or in their grain. To make grain perfect, however, other substances than those required to create straw are necessary. It is found by experience, that a great growth of straw may be produced in wheat, while the grain will be very imperfect and inferior. Farm yard dung will make as much straw as the farmer pleases, but there must be all the elements required to perfect the berry, or straw will be all that he will gain. Ammonia has been found to be one of the most efficient of fertilizers; and as this substance is a compound of nitrogen and hydrogen, and as the gluten of wheat is mainly nitrogen, it was reasonably inferred that ammonia, or such agents as would furnish it to plants, would aid a wheat crop materially. Here gypsum, burnt clay, and other things that absorb ammonia from the atmosphere rapidly, are found to produce a good effect, giving a more perfect grain than could have been expected without the use of such articles. Such absorbers of ammonia are indeed useful in other respects, than the perfection of a single crop of grain, as by the cultivation of clover and other green crops to be fed off on the ground, or left to decay there, humus, or in other words a supply of carbonic acid, so indispensable to the formation of the carbon of plants, or their woody fibre, is thus provided. It is thus by simplifying the elements of nutrition, and showing the manner in which this important function of plants is performed, that science is conferring the greatest practical benefits upon agriculture.

Things not to be Done.

Sowing spring wheat without soaking in brine, and rolling in lime, is a thing not to be done. According to C. W. Johnson, salt acts an important part in germination and promoting the growth of plants; and lime, every one is aware, seems to be necessary in some form to the perfection of plants and their seeds. Both, then, should be used in sowing wheat.

Attempting to keep cattle, sheep and horses, through our long winters on straw or even hay, without roots, is a thing not to be done. Every good farmer, will therefore make his arrangements so as to secure a plentiful supply of turneps, potatoes, or carrots, for winter and spring use. These fed with the hay, will improve the stock, promote health, and bring the animals through the most trying season of the year with safety and profit.

Making a yard of the highway, and allowing your cattle and sheep to be fed, and to drop their dung where it is lost to the farm, is not to be done. This practice, though a common, is a wretched one, and should be reformed altogether. Feed your animals in stalls, if you can; if not, in yards. To do otherwise, is wasteful in the extreme.

Allowing your cattle in the spring of the year to go roaming about, poaching your meadows and pastures with their feet, is a thing not to be done. The small amount of food they can get in this way is a poor compensation for the damage they do, and besides it destroys their relish for hay, without offering any substitute.

Suffering animals to perish for want of attention, at any season of the year, is a thing not to be done. But if any do die accidentally, they should be converted to use by being covered with earth, to absorb the gases of oxygen and ammonia that are the inevitable results of animal putrefaction, and which are indispensable to the growth of plants.

Having your pig stye in such a state, or place, that your pigs shall not work for a living, is a thing not to be done. They should have a yard into which weeds, swamp muck, straw, and the scrapings of roads and ditches should be thrown to be converted into manure; and if they seem at any time reluctant to begin the task of mixing such materials, a few handfuls of corn scattered over the surface will set them to work most industriously.

Permitting the chips, pieces of bark, sawdust, &c., of your wood yard to accumulate for years, is a thing not to be done. Remember that all, which has once formed part of a plant can be converted into a plant again, and place all such matters where their decomposition will be most useful, and soonest effected.

Nearly every farm has some pond, marsh, or bog which receives a large portion of the wash of the cultivated land; and to allow this to remain without being returned to the soil, is a thing not to be done. There are some such places that may be considered as inexhaustible deposits of fertilizing matter, yet have never been drawn upon for a single load, by the neighboring farmers. Let those who have such deposits look to them.

Allowing your work to drive you, is a thing not to be done. The man who is half an hour behind his work, finds labor forever an uphill business. There is here a serious mistake committed by many farmers. They lay out more work than they can do well, or in season, and the consequence is, nothing is done at the time, or as it should be. What you do, do in season, and be sure to do well.

Being content to allow a single year to pass without correcting some error, or making some improvement in husbandry, is a thing not to be done. In conversation with an intelligent farmer the other day, he remarked that the practice of all fell behind their knowledge, or in other words, none did as well as they knew how. To put the knowledge we acquire from our own or other's experience to use, should be the aim of every one, and would soon do away the reproach that farmers are a stationary race of men

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* See remarks by the President of the English Ag. Soc.

Original Communications.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

Letters from the West--No. 6.

It was on the morning of the 16th inst. that I found myself with a single passenger from Missouri, rolling along in a comfortable stage over the National road from Columbus for Cincinnati. I had just had a hearty welcome to the country in the way of a severe shake of the ague, but this we think nothing of here, as Quinine pills with proper care will break it up in twenty-four hours, and then we have only to get well again as fast as convenient. It was a raw, rainy day, but wrapped up in a thick cloak, with a slight fever upon my brow, and a reasonable exaltation of spirits, I do'nt know but I enjoyed the scene quite as well as if the sun had been shining out ever so fair. I was glad, however, to find a turn in the everlasting straight road soon after passing Jefferson, and that the tall monotonous forests with their wretched, staring, stumpy clearings had given place to a still somewhat flat, yet beautiful prairie country, interspersed with clumps and masses of trees, quite park-like, the green grass rapidly coming forward over its extensive fields, and giving a good bite to the numerous herds of cattle that were turned out to feed upon them. There were few buildings however on the road, save miserable log cabins, the land being owned in large tracts by persons resident in towns, or by others who have little taste as yet for the neat farm-house and noble barns, that so generally adorn the acres of our own more advanced State.

The season this Spring is said to be cold and backward, and at least a fortnight later than usual. No fruit trees were here as yet in blossom, but were rapidly leaving out, as well as many of the earlier forest trees. The wild willow and buckeye were quite green in their leaves, and the soft maple, beech and white elm fast following in vegetation. We arrived at Springfield in the afternoon; it is a pretty town situated in a valley of a branch of the Mad river, and contains as near as I could judge about 2000 inhabitants. Here we left the National road and turned off for Dayton, on quite as good a McAdam.—We arrived at this place late at night, and were off early in the morning, so that I had no time to examine any of the fine stock that is said to be owned in this vicinity. Dayton is quite a flourishing business place, and has been the head of canal navigation from Cincinnati north for several years; this internal communication, however, is rapidly extending, and the canal will soon be completed to the Maumee, thus connecting the waters of the Ohio again with those of Lake Erie; and as it passes through a remarkable fertile section of the State, the probability is that it will soon do quite as good a freighting business as the one now connecting Cleveland and Portsmouth. In the hotel at which we stopped at Dayton, there was to me a most agreeable and refined sight. At the head of the dining room the windows were absolutely festooned with beautiful green-house plants, mostly in full bloom. I counted not less than forty-three pots, besides some larger boxes of them. If these could be changed to the bar-rooms for the glitter of whiskey and brandy bottles, huge rolls of segars and tobacco, it would be a great triumph for refined taste, to say nothing of the gain to the health and morals of the community.

From Dayton on, it is a charming rolling country, the hills rising so high at times as almost to be classed among the picturesque. The soil is good and friable, reminding me much of our own Onondaga county, though the rocks here are more generally of the sand stone than lime formation. Butler and Warren are said to be the crack farming counties of Ohio; not that the soil there, excepting the bottoms of the Miami, is as rich and deep as in many other counties of the State; but upon the whole it is perhaps better adapted to a general rotation of crops, and being exceedingly well watered, of a varied surface, a healthy region, mild climate, and originally settled mostly by northern people, who have retained their habits of industry and thrift, and divided into moderate sized farms cultivated by the owners, and adorned with neat houses and barns, it is said to be the most agreeable part of the State for the agriculturist to travel over.

At Lebanon I called upon Mr. Beach, and regretted to find that his grown Berkshires were at Mr. Reed's, some eight miles off. His imported Reading is flourishing there in great and deserved popularity, and has quite as much business in his harem as he can well attend to. His stock is much liked, and his pigs two months old are readily sought for at $50 to $60 per pair.—He has stretched himself out considerably, I understand, in this country, and if any thing, is now thought to be almost *too large*. I am glad to hear such a complaint upon the part of the pork raiser; it shows him that whenever the public desires it, we can produce *big* Berkshires as easily as medium sized ones. A very fine portrait of Reading, as well as a grand young sow of Mr. Beach's stock, Miskwa, adorns the April No. of that capital, spirited little work, the Western Farmer and Gardener. Mr. B. has also quite a number of blood horses.—The Muly mare, upon the whole, pleased me the best among the fillies, she displayed so much stoutness in her frame and structure. Admiral is a beautiful figure of a horse, and won quite a reputation on the turf; and I regret to say that there is not patronage enough in the neighborhood to repay his standing there. He has made two seasons almost entirely at his owner's expense, and is now withdrawn from the public. This ought not to be the case, for a cross from him could not but be a decided improvement on the horse stock of the country, giving it more vigor, spirit, and endurance; and I do not know a finer region for raising good horses than the beautiful rolling lands of Butler, Warren and Hamilton counties. Crosses of the Berkshire abound all along the road, and drovers to the south-west are said to be doing a capital business by purchasing the darkest colored pigs, *trimming their ears* to the true point, and then disposing of them at the rate of $5 per head, as the genuine animal. Well, if people please to buy under such circumstances of those they might know have neither integrity or honor, it is their affair, not mine.

At Dayton, the blossoms of the peach, the cherry and pear began to show themselves, and at Cincinnati all the trees, with many garden shrubs, on the 17th, were in full bloom, and the air was redolent with their fragrance. It is true, in descending the hills and approaching this last named town, one begins to *smell pork*, but let him not, in consequence thereof, turn up his nose *a la Trollope*, and think that there is neither taste, elegance or refinement to be found here; quite the contrary; for I do not believe a more beautiful town of the size exists in the United States. Cincinnati stands on a broad platform of the right bank of the Ohio, gradually rising to the base of the surrounding high conical hills from low water mark 108 feet. Its streets cross each other at right angles, are well paved and sufficiently spacious, with generally good substantial brick or stone buildings of three and four stories high. Including the villages opposite and above, that are in fact but a part of the town, it contains a population of 60,000 inhabitants, and carries on a large trade with the remotest confines of the west.—It has also extensive manufactories, especially of iron castings and machinery, and rapid as has been its growth, I see nothing to prevent its continuing steadily to increase and maintain its present predominance, of being the largest inland town of the United States.

With a taste deserving the highest commendation, many gentlemen have preserved, right in the heart of the city, the adorned grounds that originally surrounded their houses, adding, in the absence of public parks, much to the rural beauty of the town. Among the most extensive and beautiful of these is Judge Burnet's and Mr. Longworth's. The latter adds a fine garden, and an extensive range of green house, the fragrance from which was almost overpowering to the senses, altho' its full blooming season had not yet arrived. It is said to be particularly rich in the cactus, and contains a greater variety of this singular and beautiful species of plants than any other conservatory in America, perhaps in the world. Nor in cultivating the foreign flowers and plants has Mr. L. neglected those of his own country, but has stocked his grounds with most every thing indigenous to our country, presenting a more varied and beautiful show than one could have imagined. He has also paid great attention to the grape, and adopting our own natural varieties, has been eminently successful.—He gave me a taste of two kinds of wine made from them.—One I could not have told from Maderia, and the other seemed most capital Rhenish. I do believe that the Ohio Valley will one day be a large exporting wine country, and the returns from cultivating the grape are already profitable; single acres, I have been told, in their produce netted as high as $200 to $300 per acre. The Swiss have not suceeded in this business at all, mainly because they cultivate their own foreign grape exclusively, and in their own foreign manner. They allow nothing for difference of soil and climate, and can't be made to believe that our natural vines are generally superior. To eminently succeed in this thing, I am confident our own countrymen have got to take it up, and with their knowledge, skill and perseverance, I cannot but think that their efforts will one day be crowned with marked success. It may seem to some that I have dwelt too long on this subject, but when we consider that we are annually importing wine to the amount of millions from countries that will take nothing, comparatively, of us in return, in the present depressed state of our agriculture, it behoves us to see if we cannot turn a small share of our lands to greater profit than producing corn at 10 cts., and wheat at 30 cts. per bushel.

The Hessian Fly.

Messrs. Gaylord & Tucker—I have not been a subscriber for your valuable paper, till the present year, as your list will show. Thus far, I find it deeply interesting, and well calculated to excite and promote a spirit of inquiry and improvement among agriculturists.

I notice a piece, in the number for this month, (March,) headed "Hessian Fly—A Lady Observer." Honor and praise to the ladies! I have derived from them the far greater portion of my earthly comforts. I feel much gratified at the interest and inquiry, which the discovery of Miss Morris, respecting the Hessian fly, has elicited. The great desideratum is the discovery that the ovum, or egg, is deposited in the grains of the wheat before it is harvested; because, knowing the hiding place and fortress of the foe, we can the more surely adopt the means of his destruction. I will, therefore, give you my observations, confirmatory of those of Miss Morris.

More than twenty years ago, while I lived in Leesburg, Va., I adopted the opinion, that the Hessian fly deposited its eggs in the berry or grain of wheat, in its ripening state, and that instinct directed the deposit to the germ or bud, which was to produce the new stalk. The eggs, being deposited in that part of the germ, which adheres to the grain, are enclosed within the first two leaves that spring directly from the germ. They are not often found at the third blade, though this may occur without violation of the general principle, as they may be deposited a little deeper in the germ, or may be moved in the growth of the plant.

I was led to this opinion while walking in my garden between the rows of peas, ripening for seed. The pods had become yellow, but not dry, and opposite to every full pea in the pods, I observed a white circular space, from which the juice had exuded, and in the center a perforation. This was done by the insect, which deposits in the pea the egg that produces the pea bug. And this is the general habit of insects to deposit their ova or eggs, in some soft and moist substance, as cherries, plums, &c. The fact, observed in the peas, led me at once to the opinion that the Hessian fly deposited its eggs in a similar manner in the grains of wheat in their ripening state, before they became hard.

Some time about or in the year 1820 or 21, I published an essay on the Hessian fly, setting forth my opinion, in the Port Folio, edited by Harrison Hall, Esq., Philadelphia. In that essay I recommended a trial of the following remedy, which I have used in a small way, and never found it fail. Soak the seed wheat in lime water, kept milk-warm, till the grain is swollen to the point of almost sprouting; then roll in plaster, after draining, till well coated, to prevent injury to the seedsman's hand, and to promote vegetation.

I was led to this recommendation by reflecting that two agents, *heat* and *moisture*, are necessary to quicken or vivify insect's eggs. The eggs being in the grain, the warmth of the water would quicken them, and the lime would so corrode the membrane or coating of the eggs, as to destroy their vitality.

Early and Late Sowing.—Wheat sown early is often destroyed by the fly in autumn; because there then remains, generally, warm weather enough to quicken the egg and bring it into the "flax-seed" state, and sometimes to the fly state, and then the mischief is done in autumn. In very late sowing, there does not, usually, follow warm weather sufficient to quicken the egg, and it remains protected in the earth till the warm weather of spring, commonly in this climate about the 10th of May, when its progress to maturity shows its ravages at every stage.

In our climate, fifteen miles north of Washington city, the safest time, to avoid both the foregoing risks, is found by experience to be from the 1st to the 10th or 15th of October. The reason of this selection of time is, that in ordinary seasons, there will remain warm weather sufficient to quicken the eggs, but not enough to advance them to an injurious state before the hard frosts commence, which will destroy them easily, after being quickened. The general rule, however, as to the time of sowing, must be regulated by the latitude of the place, so as to avoid the extremes of *early* and *late*, in reference to that latitude. And, after all, the rule and the reasons above assigned for it, will be subject to infringement and exceptions, owing to the difference of the weather in different autumnal seasons.

Cold Winters with little Snow.—Fifty years ago, before the inroads of the Hessian fly, the farmers were delighted to see their fields covered with snow during the winter, as a protection to the growing crops. Not so now. Our best wheat crops follow winters, in which the snows are light, and the ground generally bare or nearly so, and hard frozen, so that little of green appears in the wheat fields, and then they are not troubled by the fly in the spring. I have observed this for thirty years. The reason, I presume, is that the eggs of the fly and other insects, in their unprotected state, are destroyed by the severe frosts; whereas, this effect is prevented when the ground is deeply covered with lasting snows.

Lawler Wheat.—This wheat, a species of the smooth white, was recommended to me as *fly-proof*. I cultivated some small lots. I procured some and sowed it about twenty years ago. About the first of May I thought it was failing, the two ground blades having become yellow. They soon dried away. Herein I supposed was its *fly-proof* virtue. The leaves that protected the eggs, dried away before the larvæ were enlarged and thus they perished. Such kinds of wheat may, therefore, be less subject to injury from the fly than those, the ground leaves of which remain longer green, such as the red chaff bearded.

In conclusion, I must say, that Miss Morris deserves the very best husband that your country can afford; and that I would consider myself honored to have the privilege of celebrating the rites, and assisting to demolish the cake.

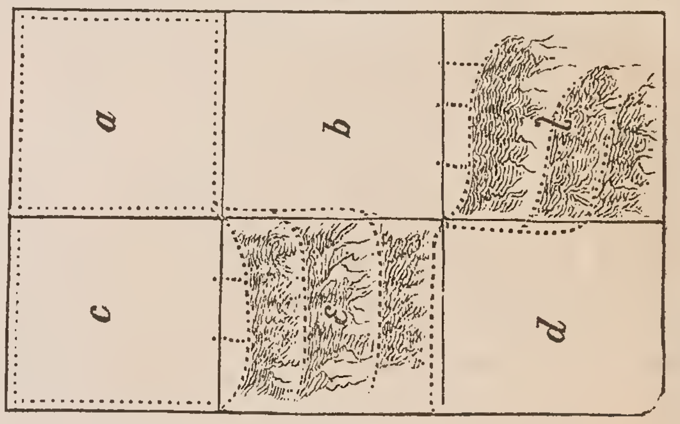
Sincerely yours, JOHN MINES.

N. B. Please ask your correspondents, so to note the place from which they write, that your readers may know their *latitude* and their "*whereabouts.*"

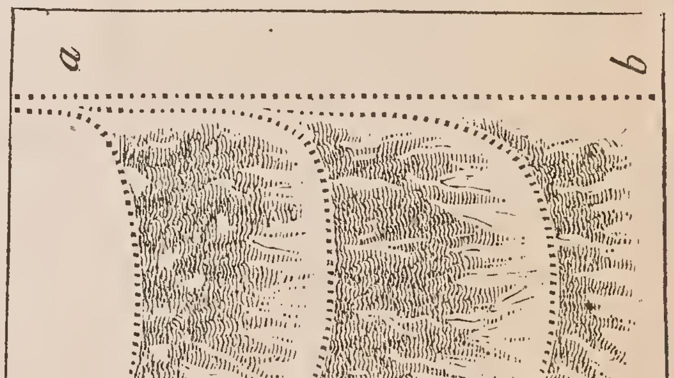
Rose Hill, near Rockville, Md., March 18, 1841.

Draining and Irrigation.

Messrs. Gaylord & Tucker—The advantages and disadvantages of draining and irrigation having occupied the attention of the farming community to some extent recently, I am induced to offer a few observations, suggested by my own experience. My method of draining has been decidedly profitable, and can be adopted by others with the like advantage, until the question of the benefit of thorough draining shall have been decided; which is scarcely likely to happen in our day. There are exceptions to all general rules; so with draining, and doubtless much land in the vicinity of cities and small portions of farms throughout the country may be profitably drained. My plan is to irrigate one part of my farm with the surplus water drained from another part. Where a farmer has it in his power to irrigate his meadows or pastures with surface water from roads, barn-yards, swamps, marshes or plowed fields, (especially those bearing Indian corn or root crops,) it will be for his interest to avail himself of every such chance. For instance, see plan, (fig. 54,) with six fields sloping to the north; this year I plow *a*, *b*, *c* and *d*, and mow *e* and *f*—here my plan would be to prevent surface water from running on to any of the plowed fields, and to carry it on to the meadows. To do this. I make a ditch (see dotted lines) round the outside of the field *a*, and if nearly level, I back furrow it north and south into lands twenty-four feet wide, which would drain the water to the north side of the field, from whence the ditch would carry it to the north-east corner, where a furrow will turn it on to meadow *e*. A ditch on the south and east of field *c*, carries the water by another furrow on to the same field. Plow field *b*, east and west, and carry the water on to meadow *e*. To keep the water from field *d*, plow a furrow across the north side of meadow *e*, leading to meadow *f*. Plow field *d*, east and west, and carry the water on to meadow *f*. When other fields are plowed, manage the drains accordingly. The ditches should be in all cases plowed on the upper side of the fence.



[*Fig.* 54.]



[*Fig* 55.]

A brook or swail (see fig. 55) runs from *a* to *b*; if a swail, it would be likely to have the wash of two or three fields, perhaps the wash of the barn-yard. If the field is meadow or pasture, drain it in the direction of the dotted lines; in this way your water is carried on to the field and evaporated or absorbed. The quantity of hay in the swail will be doubled by draining, and the fields much benefitted, and by this process the individual farmer becomes a benefactor, by causing "two blades of grass to grow where but one grew before." Where it is desired to plow the swail, and the water cannot readily be carried off, under-draining should be resorted to on the lowest ground, or it may be plowed in ridges. If you have a brook instead of a swail, carry the water from that on to the meadow or pasture, as in the case of a swail. In irrigating from brooks, be careful that you can turn the water off or on at pleasure. Water for irrigation is most valuable in the spring, and after rains in summer. Care should be had not to let on too much when the grass is nearly grown, otherwise your grass becomes lodged and gritty. Following the foregoing plan, water may be taken from its original channel of uselessness or worse, and made to enrich and beautify the neighboring fields. It sometimes happens, that after covering a field with manure, and before it is plowed, heavy rains come on and the manure leached into brooks or swails, by which it is lost to the farmer in a great measure; but where a judicious system of ditching is adopted much may be saved to the up-land.

This plan of draining and irrigation is not as well adapted to sandy or gravelly as to clayey or tenacious soils. My plan for plowing land, which is injured by surplus water, is to back furrow into lands twenty-four feet wide on the first and second plowing; third plowings, commence the ridge three feet from the former plowing; plow the dead furrows deep, by which, when you have reached to twelve feet, the whole surface will have been plowed about two feet deep. ELI C. FROST.

Catharine, N. Y., April 1, 1841.

Wintering Sheep on Oat Straw and Oats.

Messrs. Editors—I will tell you and your readers one of the ways I have adopted to economise. It is simply keeping sheep through the winter on oats and oat straw. Winter approaching, and perceiving that I had not sufficient hay to keep my sheep (more than 300) on that exclusively, and not willing to sell my stock at a sacrifice, I was obliged to enter upon an untried experiment, of wintering one-fourth on oats and the straw, thrashed. I am happy to say I have succeeded far beyond my expectations.

I have fed to a flock of 105 ewes, (with lamb,) the past winter, one bushel of clean oats per day, and straw three times; and from many years' experience in *sheep husbandry*, I say in all candor and honesty, I never succeeded so well in keeping up fine condition, none have died, and neither have I perceived that any (not in a single instance) *scoured*, which I was fearful would be the case. I have, with some care, drawn up the following estimate of wintering 100 sheep on hay. I think, taken one year with another, it will be found nearly or quite correct. I allow fourteen tons is sufficient to keep 100 sheep through the winter and spring, admitting at once, however, that they may be, and often are, kept on a less quantity—at a tremendous loss sometimes to the grower. If fed fourteen tons, you will perceive that eight acres is necessary, producing one and three-fourths tons per acre. Fine hay I give greatly the preference for sheep; and meadow, that produces more than the above quantity, (1¾ tons,) I do not consider exactly the right kind for sheep.

14 tons of good hay is worth $6 per ton,	$84 00
Expense of cutting eight acres, say	14 00
	$98 00

Now look on the other side of the picture—

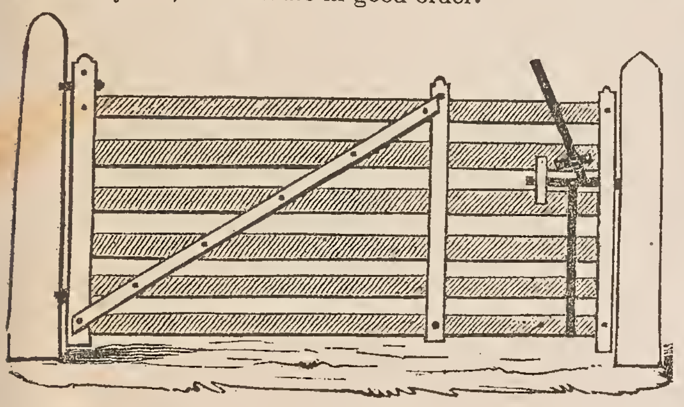
Expense of plowing eight acres,	$8 00	
Seed for the same, 16 bushels, at 2s., is	4 00	
Sowing and dragging,	3 00	
Cutting and securing, say	8 00	
Threshing,	12 00	
Estimating it to produce 40 bushels per acre, is 320 bushels, worth 2s.,	80 00	
		$115 00

I have fed my sheep one bushel per day, 150 days, which deducted from the estimated yield, would leave a surplus of 170 bushels, at 2s. is $42.50, which, deducted from the whole cost of production, would show the expense of wintering 100 sheep on oats and the straw to be $72.50—showing an actual *saving* of $25 in the expense of wintering one flock of sheep. Brother farmer, is not my plan, based on experience, worth adopting? C. M.

Ludlowville, April, 1841.

Farm Gate.

Messrs. Editors—Having been a reader of the Cultivator from its commencement, and not having noticed what I should consider a plan of *a complete farm gate*, I here send you the plan of a gate, similar to some fifteen or twenty which I had constructed, and which have been in use for the last ten or twelve years, and still are in good order.



[*Fig.* 56]

The cut above, represents a gate, twelve feet in length, and five feet in height, counting from the lower edge of the lower slat to the upper edge of the upper slat. The slats are six in number, one inch by six inches, and twelve feet in length. The heel piece is three by six inches, and six feet in height. The middle and head pieces are three by three inches, and five and a half feet in height. The braces one inch by three inches, and nine feet in length. The slats ought to be made of good yellow pine, or good white oak, without any sap; the braces, heel piece, middle and head pieces, of white oak. The spring, trigger, bolt and both brackets are made of locust. The heel piece, middle and head pieces, have each one rivet near each end, so as to keep them from splitting. The braces, one being applied to each side of the gate, are fastened on by six rivets passing through the braces and slats, and join the heel and middle pieces by a shoulder, as shown in the cut. Two rivets pass through the two bottom slats and the springs. Two rivets confine each bracket, and one passes through the middle of the upper bracket, the trigger and slat; making in all nineteen rivets. The spaces between the slats are graduated, so as to leave a space of two and a half inches between the two bottom slats, and seven inches between the two upper slats. The whole of the stuff ought to be planed and painted with Venetian red. The hooks and hinges are made of tough iron, not very heavy. The hinges pass through the heel piece, and are secured by taps. The lower hinge is kept from crushing the heel piece, by a plate three inches square, having a hole through it, through which the shaft of the hinge is passed up to the eye, so as to keep the gate from swagging. The upper hook ought to be somewhat longer than the lower; it ought to be nine inches in length, and bearded on two sides, so as to keep it from drawing out. In order to keep the gate from being thrown off the hooks, it will be necessary to have a tap put on one of the hooks. The posts ought to be made of good white oak, or locust; the back post ten feet long, and the front one nine feet. The back post ought not be less than eighteen inches in diameter at the lower end, and should be sunk in the ground three and a half feet; well filled in with stone at the bottom, and another layer near the surface of the ground; and the balance of the hole should be well rammed with clay. The front post will be deep enough, if put into the ground three feet. The posts, before putting them up, should have the bark taken off, and the upper ends cut to a cone. The bolt may be constructed so as to slide along a level leading to a mortise made on the inner side of the front post. Two locust pins inserted into the front post and projecting two inches, will answer for the gate to rest against.

Where the gate is to be used to a field, I should prefer hanging it level; but where it is used to a barn-yard or mouth of a lane, I should give it what we here call the "double swing," so that when it is thrown open, it will remain open without being propped; and when half shut, will fall shut of its own weight. SOLOMON HENKEL.

New-Market, Shenandoah, Va., March 22, 1841.

To Western Emigrants—No. 5.

THE FIRST TRIP TO MILL—THE EMIGRANT'S FAMILY OUT OF PROVISIONS—A LOG CABIN SCENE.

Messrs. Editors—And you my kind readers, who have read my previous numbers, if you think I am becoming prolix, lay the present one aside. I was led away in my last number from the subject which I was prosing upon in No. 3. I told you of the first night on the prairie, but I have not yet told you of many other nights and sunny days that I have spent here. The month of November, around the head of Lake Michigan, (which is in lat. 41, 38,) is usually a mild pleasant month. Such was the month that followed "the first night on the prairie." This was indeed propitious to the newly arrived emigrants, for there was much to do to prepare for the expected rigors of an approaching northern winter.

There was neither hay nor grain within many a long mile, for man or beast, and to one accustomed to look upon the gloomy side of things, the prospect of making a new settlement under such circumstances would have looked gloomy enough. But an emigrant to the West should not be one of that cast of temper. He should be able to look beyond the many discouraging circumstances attending the beginning of his new mode of life, to the bright prospect of the future. There was but one fleeting moment of gloom resting with me during the first winter. The first month had been spent in the numerous duties of preparation for winter, and the beautiful sunny days of November had given place to cold and snowy December, when it became apparent that the little magazine of provisions must be replenished, and that right speedily. And although "delays are dangerous," yet, waiting better weather, delay was made to that point, that upon calculation proved the stock on hand barely sufficient to supply the five or six days that it would take to make the journey where a supply could be obtained, and return again while there was yet a little left. So a trusty and persevering messenger was dispatched, with due, though little needed caution, to hasten his return. The weather again was mild and pleasant, and our spirits all buoyant and bright as the winter sunshine, as the cheerful cheering notes of the departing teamster's joyous morning song floated away upon the breeze, that swept unobstructed over miles of prairie, now blackened by the annual fires, to a somber hue, and cheerless winter aspect.

Never were such appetites seen before, as those which daily diminished the fast failing stock of provisions of our little family in the wilderness. Before them I kept a cheerful face, but oh, how my heart sunk within me on the evening of the fifth day, as I descended from a tall tree which I had climbed to try to discover the expected team. For I easily perceived that the weather had been such as to ice over the unbridged streams, though I feared not sufficient to pass over a wagon. On this evening, too, I was still further pained by the arrival of some hungry wanderers, to whom hospitality could not be denied.

On the sixth day, the only neighbor within a dozen miles, came to *borrow a little meal*. He looked upon the bottom of the empty barrel and turned homeward with his empty bag. The knife had scraped the last bone for breakfast, and the next resource was a small bag of wheat bran, which made very palatable batter (not better) cakes, though they would have been better, but that the lard was gone, and butter was, in those days, among the unknown things. Bran cakes and cranberries, sweetened with honey, then were sweet diet. Although the owner of a gun that rarely failed to perform good service, it seemed that every living thing in the shape of game had hid up in winter quarters. 'Tis true, that I suffered a degree of nervousness, that might have rendered my hand too unsteady to endanger the life of game, if it had come in the way; not that I heard one word of repining or fear, nor that there was any immediate danger of actual starvation; yet the thought was not a pleasant one, to think I had brought a wife and children into a wilderness to suffer, even through fear of want.

On the sixth, seventh, eighth and ninth days, anxious and watchful eyes scanned the prairie by day, and tended beacon fires by night, for this precaution was necessary, as there was nothing to guide the expected teamster home, should he undertake the perilous passage of the prairie just at night fall. It was about midnight of the last day, and I had tired of watching, and had lain down, but not to sleep. The question of "what is to be done?" was working up some horrid visions before me, when my ear, which had grown remarkable quick of late, caught a faint sound like steps upon the frozen ground. Sentinel upon his post never started quicker than I. The sounds grew more and more perceptible, but there was nothing like the rumbling of wheels. For the first time, then, did the deep seated anxiety of the good wife and mother show itself. Hope was fast sinking, when the well-known voice of the ever cheerful teamster was borne along the midnight air. How little do we know how to appreciate trifles, until placed in trying situations. What joyful sounds! But the joy was soon damped, as it became manifest that he drove a team without a wagon. Where was that? was the first question. "Fast in the river, a few miles back on the prairie." "Do you know we have nothing in the house for your suppper?" "I expected so, and so I brought along a bagful; here is both flour and meat."

Reader, can you imagine yourself for one moment in my situation? Can you realize that the happiness of that moment was sufficient to pay for many weary, watchful days of anxiety? No, you cannot realize that, until experience teaches you. Happiness is only realized by contrast with misery. And it is because the emigrant's life is full of such exciting scenes, and because the days of pleasure are long remembered, when those of pain are buried in oblivion, that induces thousands annually to add themselves to that irresistible wave of western emigration, that is rolling onward to the Pacific Ocean.

The happiness of the teamster too, was such as he will never forget. For he had endured a night of actual peril. When the ice gave way under the wagon, it became necessary for him to plunge into the water to extricate the team, and when he reached the lone log cabin, his outer garments were frozen stiff, and in a short time he would have become an immoveable mass of ice, and perhaps have sunk to his final rest upon the bleak prairie.

Those who have seen a real log cabin fire of hickory logs, may picture to themselves a scene in the first cabin of the first settler, in the first winter on the prairie; and those who have never seen such a scene of real comfort, must imagine as best they can, a picture of such a scene as was realized in that cabin on the night of the return from "the first trip to mill."

Such scenes of excitement, of pain and pleasure, often occur to the western emigrant. I have in memory's store many that may or may not yet be told; but for the present, I will leave those who have perused this, with the sincere wish that they may ever enjoy their fast fleeting moments of life in a splendid mansion, with as great a zest, as a portion of life has been enjoyed in a log cabin, by their old friend,

Lake C. H., Ia., February 1, 1841. SOLON ROBINSON.

Management of Manures, &c.

Editors of the Cultivator—Having been a constant reader of the Cultivator for some years, I have become convinced that we must improve by careful observation, and also by adding the experience of others to our own; and if practical farmers were more willing to furnish the public with their experience in their various modes of tillage; of collecting, preserving and disposing of their manure, &c., much information might be gained. I am, therefore, willing to state some of my experiments, together with the results.

For twenty years past, I have been in the practice of rotting my manure in the yard, and in order to effect this, would turn it twice in the course of the summer, and in the fall apply it to ground previously prepared for wheat. The summer of 1835, I varied from my common practice, by taking out my manure about the 1st of 6th month, spread it broad cast on a field of thin land, which had previously brought little beside strawberries and five-finger vines; the manure was immediately turned under. Six or eight weeks after, it received a second plowing, and early in the 9th month a third plowing, and sowed it with wheat the 17th of said month, one and three-fourths bushels per acre; timothy seed four quarts per acre, and clover seed in the spring following, six pounds per acre. The result was a good crop of wheat; since which, this field has produced as great crops of grass as any field on my farm; and to the admiration of my neighbors. I think the manure worth one-third more than when rotted in the yard.

In 1837, I took out my manure on the 1st of 6th month, spread it broad cast on a piece of land containing three and a half acres, of a description similar to the above, thirty-five loads to the acre, coarse yard manure, plowed it three times as before, sowed it with red chaff bearded wheat, 25th of 9th month, one and three-fourths bushels per acre; grass seed as above; from which I harvested 105 bushels, or thirty bushels to the acre. I judged one-eighth of an acre fell down and was nearly lost. Westchester county is not a wheat growing county—average yield not more than from twelve to fifteen bushels per acre, and frequently much less. I have used no fallow crops in the above experiments, as the land was thin, and I wished to improve it as much as possible.

In 1839, I put my yard manure on a piece of rather cold meadow land early in 5th month; turned it under and sowed it with oats. They were only middling; after which plowed twice, sowed wheat, with grass seed. Wheat good, and prospect for grass very fine.

Many of our Westchester farmers are in the practice of feeding their cattle from stacks on their fields; the dung is left by the side of fences, or on some rich corner of the field, the least exposed to the chilling blasts, where it is scorched with the sun and dried with the wind, until it is worth but little.

I have, for a few years past, raised the Italian Spring Wheat with tolerable success; average yield about fifteen bushels per acre. It has some advantages over winter wheat; one is, it does not need land as strong as to grow winter wheat. I sow it about the 1st of April.

I wish your opinion, as well as the opinion of some of your numerous correspondents, respecting keeping cattle in stables through the winter; I anticipate building a barn with stables sufficient to hold my entire stock of cattle. My plan of feeding is to cut my hay and straw and mix them together in such proportions, as I find my cattle will do well on; in feeding in this manner, there will be but little wasted. Their drink to be furnished from a pump in the barn, so that they need not go out of their stables during the winter.

My principal object is to keep more cattle with the same feed, and thereby increase the quantity of manure. I am aware that it will cause extra labor to cut their feed, and take care of them in the manner prescribed above, and wish information to know, whether cattle will be likely to do well, kept up through the winter; and whether it will be likely to pay expenses. Information upon the above subject will be thankfully received by, S. WOOD.

Cherryhill Farm, Westchester co., N. Y., 3d mo., 1841.

Use of Calcined Gypsum.

Messrs. Gaylord & Tucker—I trouble you with this communication, merely to say, that I have wished that the simple suggestion might be made to your numerous readers, of the *probable* advantage to the cultivator of CALCINING, or burning, GYPSUM before using.

We know that a certain amount of pure sand, mixed with stiff clay, will greatly improve such soil for arable purposes, as much, probably, as any single ingredient which could be added, scarcely excepting any kind of manure. On the same principle, a certain amount of LIMESTONE *reduced to powder* of suitable fineness, would have a similar effect; but who thinks of using limestone in this way?

My belief is, that if gypsum, before cast upon the ground, was subjected to the action of *fire* as *limestone is*, that is, *calcined*, it would then be found altogether a more energetic article for promoting vegetable growth; indeed, I think as much better as the limestone is for burning. The expense of burning is trifling. It may be done (having been previously ground) in a cast-iron pot of almost any kind. I should think "Motts'" new portable cast-iron kettle and furnance would be excellent.

Hartford, Conn., 1841. L. B.

Management of Bees—No. 2.

Messrs. Editors—The series of essays I proposed to publish in your valuable paper some time since, on the management of Bees, will be predicated principally on four classes of bee-hives, which are divided into three distinct sorts each, making twelve hives in all. The first sort in each class will be a simple swarmer. The second sort in each class will be a perfect swarmer; and the third sort in each class will be the perfect bee-hive, and non-swarmer. The two first classes will be chamber hives. The third class will be box hives, with a chamber and thermometrical chamber in the third sort, or perfect hive; and the fourth class will be a capped hive, with collateral and thermometrical chamber in the third sort, which is called a perfect bee hive. These hives are all managed on the life-preserving principle. Swarms to form new colonies, are divided off only in the perfect hive of each class. I intended to have had the whole before the public at an earlier date than this; but the preparations have been laborious and slow. The specifications are now all made, the drawings all completed, and I hope to have the cuts ready for the next No. of the Cultivator. These hives will be cheap or expensive, according to fancy, varying from fifty cents to fifty or even a hundred dollars.

I ought here to answer the inquiry made by Mr. Quimby, page 76, current volume, concerning dead chrysalis found among the combs in a hive of bees. *Answer*—First, the cause: It is too much ventilation in the spring months. The cold air chills the young broods. *Remedy*—Close up the bottom board, stop all ventilators, and contract the hives' mouth so as to afford no more air than is necessary for the passage of the bees at work, until the weather is hot. These close at every turn of chilly weather during the breeding season. Ventilate in hot weather only during the breeding season; if this is done, I will warrant the combs to be always kept clear from dead and putrified chrysalis. Objections to this practice removed—see page 70, current vol. of Cultivator. JOHN M. WEEKS.

Salisbury, Vt., May, 1841.

Durham Stock as Milkers.

UNDER this title an article, or speech, is going the rounds of our agricultural and political papers, purporting to be from Rev. HENRY COLMAN, which is pregnant with so much error, and, coming from that high and responsible source, of such mischievous tendency, as I believe it, to the welfare of our dairymen and stock breeders, that, although seldom appearing before the reading public, I feel bound at the threshold of its circulation, to enter, as the lawyers would say, my *caveat* against it.

That there may be no misunderstanding in the matter, let me at once remark, that no one can have a higher respect than myself for the exalted character of Mr. Colman, in all that constitutes the true gentleman and the honest man; and that no individual within my knowledge is so capable to accomplish the responsible and important duties of Agricultural Commissioner of the proud Commonwealth of Massachusetts as himself. I have known him intimately for years, and a knowledge of his worth and of the high authority of his declarations compels me, humble as are my pretensions, to assume an attitude in opposition to his remarks.

The value of the neat cattle in the State of New-York, according to the returns of the late census for 1840, is not less than $15,000,000; and probably, exceeding that amount. If to these be added those of New-England, which are at least of equal value, it will present an aggregate of thirty millions of dollars, invested in that branch of agriculture alone. Now, if by adopting an improved breed of these animals, the same number, by exhibiting in their improved forms a superior excellence, and an additional value of 33⅓ per cent, which is a very moderate advance in the improved races, it would swell this already vast capital into the round sum of $40,000,000! This fact will at once show that the subject is of immense consequence to our farmers at large, and of no trifling moment to all in its details.

But for the purpose of illustrating my remarks, and even at the hazard of adding to the prolixity of this paper, I will ask you to insert at once the article in question, requesting you also to number each distinct paragraph of Mr. Colman's essay, for more convenient reference:

[*From the Yankee Farmer.*]

"As we had not room last week to report all the doings at the Agricultural Meeting, and as the subject of Durham stock, as milkers, compared with our native cows, is of high importance to farmers, we now copy Mr. Colman's remarks in full, from his own report in the Courier:

1. "Mr. Colman had not intended to enter upon this discussion, but he felt it due to his official relation to the farmers of Massachusetts, to say that he had had the pleasure of seeing the improved Durham stock of the Messrs. Lathrops, of South Hadley, and he thought them eminently beautiful, and evincing great skill and care in their management, on the part of those gentlemen. He had seen many of the imported animals throughout the country; and one of the herds imported for the Ohio Company, which he saw on their way, was truly splendid, and in beauty and perfection of form, far surpassed any thing which he had ever witnessed.

2. "He must, however, in justice, add, that he yet wanted the proof of the Durham Short Horns being the best stock for our dairies. Seven of the race which he had owned, some full and others half-blood, had been inferior as milkers. The quantity of milk given by many of the animals which he had seen, was remarkable; the quality, in general, inferior; though he had found some exceptions, which, he believed, were accidental.

3. "The Cheshire farmers, who were as distinguished as any in the country or in any country for the produce of their cheese dairies, preferred the native stock. From a dairy of eighteen cows, an average of 633 pounds new milk cheese to a cow, in a year, had been obtained. He had challenged in writing and conversation the owners of the Short Horns in the country to prove, by actual experiment, the dairy properties of this stock; and he would furnish a list of a hundred cows of our native stock, which had made from twelve to fourteen pounds of butter per week, through the season. He was far from having any prejudices against the Improved Durhams. He was an enthusiastic admirer of them; but he wanted their dairy properties tested by actual experiment.

4. "A very distinguished English farmer, Mr. Shirreff, who had made the tour of this country, expressed his regret at their introduction, and pronounced them in his book the poorest dairy stock in England. We could not be said to have formed any distinct race among ourselves, excepting the trials made by Mr. Jacques, and a long continued improvement carried on in reference to milch cows, in another part of the state, upon which he had reported. Much, undoubtedly, yet remains to be done, but nothing in this respect can be effected but by skill, extreme accuracy of observation, and long perseverance.

5. "He thought the Durhams not well adapted to the scanty pastures and negligent habits of many of our farmers. All high bred animals require particular care and the most liberal feed. Two of the finest oxen ever raised in the country were of this stock. One, it is believed, a full blood from Greenland, N. H., weighing over 3,400 pounds, live weight; and one and a half-blood, raised in Claremont, N. H., and sent year before last to England, for exhibition. His live weight was said to be 3,700 pounds; and he was pronounced in England, by the best judges of stock, as unrivaled for weight and thrift, and eminently well formed.

6. "The best breeds would soon run out if negligently or severely treated. This race were undoubtedly well suited to the rich pastures and abundant products of the west of Kentucky and Ohio. There they would flourish. What might be done for our own stock by more liberal keeping, was yet to be seen. He had known a calf from a native cow, at four months old, to weigh nearly 400 pounds; and another, at five months old, to weigh 600 pounds. If the improved Durham stock should prove the best for us, and he kept his mind on this subject open to conviction, we could at once avail ourselves of the distinguished improvements of half a century's skill and toil and expense, so liberally bestowed in England. At any rate, the improvements which they had accomplished in England, so obvious and impressive to the most careless observer, read a most important lesson to us, and showed what might be done by skill and care, by judicious selection, by steady perseverance in a regular system, and by liberal keeping; and presented, at the same time, the most powerful motives to exertion and enterprise in a branch of husbandry, acknowledged by all to be of the first importance."

Now, in reference to paragraph No. 1 of Mr. Colman, I have never seen the herd of Messrs. Lathrop, of South Hadley; but if they are what Mr. C. represents, they must be beautiful and valuable animals, and a great acquisition to their neighborhood; although I exceedingly regret that he did not give the opinions of those gentlemen as to their value and excellence in the Connecticut Valley, and the results of their experience regarding them. A detail of their observations would have been at least more satisfactory than a summary condemnation without a hearing.

Mr. Colman and myself visited the Ohio Company's herd, which he mentions, together in company at Buffalo in 1835, as they were passing through from the sea-board to Ohio, on their passage out. They were in high condition, as few or none of the cows were then in milk, and we had no opportunity to judge of their capabilities for the pail; although I have since learned that several of the cows were great and rich milkers. It must be understood, however, that many of the English breeders of high bred Short Horns breed only for sale and the shambles, and do not cultivate the milking qualities of their cattle. This is almost universally the case in Ohio, Kentucky, and the Western States, where the dairy forms no part of the farming business, and stock is reared mostly for beef; but from the universal tendency of the *true* Short Horns to excel in milking properties, when appropriated to that purpose, I can have no doubt they would show as advantageously over the pail as in the stall. When it is considered also, that owing to their scarcity and high value in America, all the females are employed in rearing their calves, and the bulls, instead of being converted into stores for the shambles, are preserved as stock getters, it is evident that comparatively but few examples can be adduced of their real superiority over the common stock of our country as milkers. Still, a sufficient number of specimens have been shown, both in milk and beef, to demonstrate that in each of these qualities the improved Short Horns have excelled all that has yet been produced of our native American stock.

In paragraph No. 2, Mr. C. remarks, that he *wants proof* of the milking qualities of the Short Horns. His own, seven in number, proved inferior milkers, although he admits that several of them, either of his own or which he had seen, were large milkers; but he believes these, exceptions to the general rule. That his own cows proved bad milkers, proves nothing. What was their blood? Were they of *true* and *improved* Short Horn descent? No data is here given for us to judge of their properties in this particular, and we are forced to pass on to

Paragraph No. 3. The Cheshire and many other dairy farmers have long had an excellent stock of selected native cows, which have been propagated with particular regard to their milking properties for many generations. Mr. Colman has traversed the whole State of Massachusetts several times, and out of the whole number of cows that he has seen among many thousands, he presents a list of one hundred of the native stock which had made from twelve to fourteen pounds of butter per week. He has also challenged, both in writing and conversation, the owners of Short Horns to prove their dairy qualities.

I doubt whether one hundred *thorough bred* Short Horn cows can be conveniently produced at all in the whole States of New-York and Massachusetts, so few are there in comparison with the common stock of the country. Nor do I believe five times that number of grade cows of half-blood and upwards, can be easily found in either State; but I will venture the assertion, that where such cattle do exist, no matter what their parentage may be on the *native* side, if they were directly bred from *improved* Short Horn bulls, four out of every five of them have proved superior milkers; and at least twenty per cent better in the aggregate than the *ordinary* cows around them. And I will also assert, that of the whole number of *thorough bred* cows in our country, nine out of ten are excellent, if not superior milkers, and twenty-five per cent above the *average* native cows. To illustrate this matter, as I have bred a large number of improved Herd Book animals of the highest blood, within the last six years, as well as many grade cattle from the native, Devon, and other breeds, I will state the results of my own experience, and also the opinions of sundry other breeders, with such facts as a hasty reference will permit.

In 1835, I bred ten or twelve half-blood heifers from three Devon, and several common cows of inferior quality and appearance. They were sired by my Short Horn bull Favorite, bred near Boston, Mass., whose pedigree will be found at No. 2,009, 3d vol. Coate's Herd Book. These heifers proved, without an exception, good milkers; much above the average, both for quality and quantity. In 1836, 7 and 8, I bred several one-half and three-fourth blood heifers, also from Devons and others, which, although many of them were sold, have, so far as I have heard from them, proved superior milkers. A part of these were sired by my Short Horn bull Devonshire, No. 966, 2d vol. Coate's Herd Book. I also had, during the years from 1834 to near the close of 1839, a herd of full bred improved Short Horns, varying from four to ten milking cows, of which all, with one exception, (and that cow suffered an injury in her udder when young,) were *first rate* milkers. One cow gave often thirty quarts of milk per day of good quality. Several of them gave over twenty quarts daily in summer feed, and not one of them gave *poor* milk, or, as the term is, milked hard. They were individually easy, pleasant milkers, with beautiful silky udders, and handsome taper teats, and were, taken together, much beyond the average run of native cows as milkers. I have now a Durham cow that has made her twelve pounds of butter per week, and of four full-bloods now in milk, every one is a superior milker. I have also five or six half-bloods, all of which are above the average of our native cows, by twenty per cent in their milking properties.

To corroborate my experience, I need only mention the evidence of such gentlemen as John Hare Powell, of Philadelphia, who asserted to my father, that one of his full-blooded Short Horn cows had made twenty-two pounds of butter per week for several weeks in succession; Gov. Lincoln, and Messrs. Wells, Derby, and Dearborn, of Massachusetts, who have been the owners of several grade and thorough bred cows; Francis Rotch, Esq. of Butternuts, in this State, who has repeatedly testified to the superiority of *his* Short Horns as milkers, and to his entire experience, probably equal, if not superior, to that of any other gentleman in America, of the superiority of the Short Horns in their purity and in their grades, as milkers. I need not add the names of many other individuals who have repeatedly testified to these facts, as a reference to our agricultural papers for the last five years will corroborate all that I remark. And last of all, I will assert that Colonel Jacques' fancifully ycleped "Creampot" breed of milkers, and which I saw in company with Mr. Colman himself, are simply a cross of a thorough bred Short Horn bull with a native cow, then at Col. Jacques' farm, of good size and appearance, of a deep red color, and with an apparent dash of Devon blood in her veins. His bull that he then used was nearly or quite a thorough bred Short Horn, and all his heifers were high in that blood. This same stock of cattle, Mr. C. has himself highly recommended in one of his agricultural reports, and we were together living witnesses of the surpassing richness of the milk and cream of these beautiful cows. With a few selected facts, I will close this testimony:

In 3d vol. Cultivator, page 191. Francis Bloodgood's imported cow (she was a Durham) gave, when her calf was two weeks old, thirty-three and a half quarts of milk per day. Her feed was one and a half bushels of brewer's grains per day, with hay.

In vol. 7, same work, page 132. Mr. Gower's Short Horn cow Dairymaid, for seven days gave an average of thirty-three and a half quarts per day.

In New Genesee Farmer, vol. 1, page 143. Samuel Canby's Short Horn cow, Blossom, yielded for seven days over thirty-five quarts per day, which produced thirteen and a quarter pounds good butter.

At page 149, same vol. John Weterhull's Short Horn cow, four years old, gave from twenty-six to thirty and a half quarts of milk per day, and in one week produced eleven and a half pounds butter, and in another week fifteen pounds.

In a Philadelphia paper of 1839. "Col. Wolbert's cow Isabella, a pure Short Horn, gave, during seven days, 194 quarts, or near twenty-eight quarts per day, which produced fourteen and three-fourths pounds butter of the finest quality." So much for the assertion that "Durham cows are not good milkers."

In paragraph 4, Mr. Colman introduces us to the distinguished English farmer, Mr. Shirreff, who has made the tour of this country. If this same Mr. Shirreff, who by the way I never heard of before, be as profound in his remarks upon our country, its inhabitants and their pursuits, as the herd of English travelers who have hitherto trundled rapidly over it for the purpose, as it would seem, of writing libelous books and holding us up to the ridicule of Englishmen at home, his opinion is little to be regarded. His knowledge of the progress of Short Horns in his own country may be well estimated, when he remarks "that they are the poorest dairy stock in England." To this remark I need only observe, that nine out of ten of the intelligent English farmers who emigrate to this country, and all British publications on the subject, assert precisely the contrary; for the high grade, and often the thorough bred Short Horns, have been for many years past taking the place of other breeds for dairy and milking purposes in the grazing counties, and near the large towns and cities. That *he* should regret the introduction of any thing tending to advance our agriculture, and our wealth, is altogether natural in an English book-making tourist. I am only surprised that a gentleman of Mr. Colman's shrewdness should be thus easily deceived. As to the "*distinct* race of American cattle" to be yet formed, the end of all this is to be seen in the continual efforts at blending incongruities by those experimenters who strive, without an accurate knowledge of their subject, to produce what is already better made up to their hands in the improved breeds now extant. Such experiments, as they live and learn, have been always abandoned as impracticable and visionary. There is, nor can be, no such thing as a "distinct American breed," made up as all our cattle are from selections from all parts of Europe; nor, if our agriculture is to be, as we hope, progressive in its excellence, is it desirable. Our cattle should improve with our general agriculture. The last sentence of Mr. C.'s remark is very just, and concedes, as we view it, the *gist* of what we commend.

In paragraph 5, Mr. C. gives us the only good reason why Durhams should not become the stock of New-England, to wit: the poverty of its soil, and the negligence of many of the people! Truly a very broad admission, hardly just, indeed, to the snug farmers of New-England, and not at all within the the desideratum for which the advocates of Short Horns contend:—improved husbandry, improved care, and improved stock. If, upon lands, a thousand acres of which will scarcely graze a goose, and from which the very vermin instinctively flee to escape starvation, the beautiful Short Horns are to be doomed to pine, without care, and without sympathy, I at once admit that the less of them the better. Nor do the miserable animals of the native breeds even, which are doomed to a wretched existence on those "scanty pastures," exhibit any signs of thrift as they daily suffer from the "negligent habits of their keepers." True, a long course of neglect and starvation endured by their ancestors, and perpetuated for many generations anterior to their own existence, may render their wretchedness more tolerable than it would that of a better animal; but what advocate of any sort of improvement is content to bind himself to such hopeless sterility? Did we desire a race of animals that would *starve* the best, we could at once make an importation from the Shetland Islands, and establish a *Shetlo*-"American breed" that would bid defiance to neglect and poverty, and flourish amid both frost and desolation!

But this proposition is not within the category of *our* system. We hold, that if land be worth cultivation at all, it should be at least in a reasonable state of fertility. It should yield in any event a tolerable share of its various products under good and kindly attention with which to feed well the stock of the farm. If cows are not to be decently fed, by no means keep the Durhams, or any other valuable breed. But if it be intended to give "value received," to feed well, and pay attention to your stock, and there is no other way to make any kind of stock profitable, then let the breed be as good as possible, and of as high a grade in blood as *the nature of your soil and the climate will permit*. The admissions made before the close of this paragraph, of the enormous weights of the Durham ox with good keeping, admit to the fullest extent all that we claim, when abundance of feed is given to the animal.

In the 6th and last paragraph, Mr. C. doubts whether the Durhams are, after all, not the best stock for us to have, and candidly admits that his mind is yet open to conviction. Now this, after making the round assertions and denials that are above exhibited, is not exactly what we should expect from one of his observation and astuteness. It is indeed too much in the vein of the old adage: "Hang him first, and try him afterwards." In this last paragraph, all is admitted that the advocates of the Short Horns desire. We have never asserted that they would produce great quantities of beef, or of milk, without sufficient food; nor would they thrive under continual ill treatment, neglect and abuse; nor, indeed, will they bear *so much* starvation and ill treatment as some of our native cattle; but we do fearlessly assert that either thorough bred or grade Short Horns will produce more beef, and more milk, each in their own proper time, with the *same quantities* of grass, hay, or other proper feed, than any breed of cattle ever introduced into this country; and so have they thus far done in England.

My own cattle have never been highly kept. On the contrary, owing to my farm being at some few miles distance from my residence, and therefore not having my daily attention, my herd always received but ordinary care, and sometimes, I regret to say, not even that. But I do say, that so far as my experience has proved, they have, from the highest bred Herd Book heifer, down to the lowest grade, (never less than half blood,) been as healthy and as hardy as the common stock of the country, kept side by side with them. The opinion, therefore, that Durhams are to be rejected for want of hardihood, or constitution, is but a prejudice that deserves to be exploded.

Still I am no enthusiast in this matter. I would not recommend every farmer to introduce into his farm the Durham cow. On the contrary, on very thin and light soils, I would not introduce them; nor any thing else that ever lived on a luxuriant one. But I do say, on lands natural to grass, which afford a fair yield of pasture and of hay, where either the dairy or the fatting of beef, or even the rearing of cattle for sale, be the object, judging from my own experience, and corroborated by that of others who have tried a single cross upon our native, or *any other breed* of cattle, no matter what, even up to high grades, the Durhams are altogether the most desirable, both for appearance and for profit; with the exception, perhaps, of the Devonshire, if the climate be very rigid; and they are no milkers. Were I a dairyman, and desired to grow up a race of the best and most profitable milkers, I would select the best native cows within my reach, then obtain a thorough bred Short Horn bull of a good milking family, and raise my heifers to as high grades as in their natural course would be produced, always using a *thorough bred* bull, for in no other way can the excellence and the true characteristics of the race be perpetuated. Did I, however, admit of any other foreign admixture, it should be a cross of the Devon to give additional snugness to the form; and then but a single *cross*, for more than that would degrade the milking qualities of the herd. These animals, bred as they would be from native cows, would inherit their constitutions and habits, and become identified, as much as the most ordinary stock, with our soils and our habits of keeping. In this way should we at once gain all that we desire, without sudden or prejudicial change.

In 1835, my father imported a most beautiful and valuable cow from England, one of the finest animals and best milkers I ever knew; a very hardy, thrifty, and easily kept animal. She brought us three very superior bull calves, all from Short Horns. They were like herself, of peculiar conformation and character, being the most compact in their figures, possessing more weight in a given compass than any animals I ever saw. In the fall of 1839, the cow, and her then sucking bull calf, were sold to Norman C. Baldwin, Esq. of Cleveland, Ohio, for $800; her two year old bull calf, "Red Jacket," to Mr. Sullivant, of Columbus, Ohio, for $400; and her yearling bull calf, "Sam. Patch," to J. H. Hepburn, Esq. of Jersey Shore, Lycoming co., Pa., for $200. Had I at that time known the exceeding value of that family of Short Horns, I should certainly have reserved one of them. My bulls have proved in the highest degree valuable as stock getters, stamping their calves in the first cross with deep characteristics of their own blood, and no doubt, laying the foundation of a race of milkers that will yet be famous in their respective localities. They are estimated as they should be, almost beyond price. I name these particular animals, because they develop in all points of hardihood, endurance and kindly feeding, the valuable characteristics we desire in our farming stock, and fully corroborate all that I have remarked of rearing up a *native* stock from judicious crosses of pure Short Horn bulls.

Many years ago, the agent of the Holland Land Company, Mr. Otto, purchased a thorough bred Short Horn bull from Mr. Powell, of Philadelphia, for the benefit of the settlers of the company lands in the counties of Genesee, Cattaraugus, and Chautauque, comprising some of the best grazing and dairy counties of the State. As the services of the bull were obtained for little or nothing, and as he was kept in successive seasons in each of the counties above named, a general sprinkling of his stock was soon scattered throughout those regions, and some as high as three-quarter bred animals were raised from his progeny. The bull lived many years, and proved an excellent stock getter. Many of the cows now ranging about the streets and commons of Buffalo and Black Rock, which have been brought in and sold from these counties, are of this stock, and are distinguished for their superior appearance, and so far as my inquiries have extended, they are of the finest quality as milkers; and yet none but those who are conversant with the Durham blood know that they are any thing but common cows. These cows are celebrated among many of our dairy farmers for milkers; and numerous fine and extraordinary fat oxen that have been slaughtered at Buffalo from the surrounding country, were descendants of the "Otto Bull," either of the first or second generation.

I have now done with the speech of Mr. Colman, which, for his own sake, and the welfare of our agriculture, I regret he had not more maturely considered. Yet, if he be still sanguine in his confidence of the superiority of the Massachusetts "native stock" as milkers, could the thing be made practicable, I would gladly make a trial of merit by actual test. I would propose that Mr. C. or his friends produce ten or twenty cows, which should be a *fair average* of the native stock, without admixture of foreign blood; against which, I would produce a like number of grade, or thorough bred Short Horns, of *average* quality, or taking them as they rise, in any fair herd. The time of their calving should be noted, and the cows should be of nearly corresponding ages—the trial should commence on the first of June, and continue one month; the cows all to be kept in one field, or in as good grass, and on pasture only, as each party should please, if not convenient to bring them together. The quantity of milk should be accurately weighed, and the produce, either of butter or cheese, duly registered. When the trial should be fully made, the winning party to be entitled to the whole herd, with the product, after paying expenses. If the advantage should be on the side of the native owners in value, as it probably would, each animal should be appraised, and a sufficient sum to make up the difference should be deposited to render the premiums thus submitted of equal value. This would test the whole question, and give it sufficient of interest to engage in the trial with spirit. The season is, perhaps, now too far advanced to make the trial this year; but if this proposition be accepted, I would enlarge it, and name the first day of November next, for selecting the animals on both sides; they should be then placed together on one farm, and both subjected to the same treatment through the winter, and kept together till the trial was thoroughly made, which, if either party preferred, might extend through the next season, or until the first day of October following.

If it be objected, that this proposition will incur too much expense, or inconvenience, I will at once propose that Oneida county, in this State, shall be the place of trial; and that myself, or my friends, the advocates of the Short Horns, will furnish a farm for the operations, the fitness of which shall be assented to by the other party. The importance of an accurate knowledge on this subject is a sufficient object for such a trial, and it is perhaps the only method of testing this mooted question fairly. It will be readily seen, therefore, that this proposition arises in no spirit of banter, or gambling, but in that of an earnest desire to settle an important and doubtful point, of great interest to our agriculture generally.

I may, at a future time, pursue this subject further, but have for the present trespassed sufficiently upon your patience.

Very truly yours, LEWIS F. ALLEN.

Black Rock, April 10, 1841.

Hawthorn Hedges of England.

Messrs. Editors—There appears to be considerable desire to introduce into our meadows and fields, that most beautiful of all fences, the Hawthorn hedge. But the prevailing opinion, that it will not thrive here, seems to retard its introduction; the severity of the winter, and dryness of summer, are both urged as causes of its failure.

In England the thorn is considered to be one of their most hardy plants; and it makes a fence which endures for ages. It grows and preserves its beauty on hills which are almost bare of soil, and are, consequently, liable to be parched with the summer's sun, and are also exposed to the severities of winter; it bears the extremes of seasons, and difference of situations, much better than several other English plants which flourish here; hence it is, at least, reasonable to suppose that its failure must arise from some other cause than that of change of climate. Its proper cultivation may not be well enough understood; or, some little alteration may be required to adapt its cultivation to the difference of climate; such, for instance, as trenching *very deep* where the plants are to stand, which would have a greater tendency to preserve them from the injurious effects of the extreme heat and dryness in summer.

The general mode of cultivation, in England, is as follows: The plants are those of the white thorn. This thorn will, if left to grow singly, attain the bulk and height of an apple tree. It bears white flowers in great abundance, of a very fragrant smell, which are succeeded by a little egg-shaped berry, which, when it is ripe in the fall, is of a red color. Within the red pulp is a small stone; and this stone being put in the ground produces a plant or tree, in the same manner that a cherry-stone does. The red berries are called *haws;* whence this thorn is sometimes called the hawthorn. The leaf is precisely like the gooseberry leaf, only smaller; the branches are everywhere armed with *sharp thorns*, and the wood has a fine grain, and is very flexible and very tough.

The berries are ripe in November. They are beaten from the trees, and cleared from leaves and bits of wood; then they are mixed with sand, or earth, four bushels of sand or earth to a bushel of haws, and kept in a cellar, or other cool place; and, soon as the frost is out of the ground in spring, they are sown as thick as peas, in drills one foot apart; here they come up and stand till the next year, when they are taken from that situation, assorted, the strong from the weak ones, and planted very thick in rows one foot apart in a nursery, where they stand another year; then they are ready to be planted to become a hedge. In England, there are two ways of planting a hedge as to position of ground. One on a *bank*, with a ditch on the side; the other on the level ground.

The soil is prepared by plowing twelve or fourteen inches deep; or, which is better, by trenching two feet deep and making the earth very fine. The plants are selected, from the nursery, as near as possible of *equal size*, else some get the start of others, subdue them, and keep them down, and this makes an uneven hedge, with weak parts in it. If the plants be two years old, have been transplanted, and are at the bottom as big as *a large goose quill*, they are every thing that is required.

The roots of the plants are pruned to within four inches of the part that was at the top of the ground; or, in other words, the root is left but four inches long, and all the fibres are cut clean away, or they would die and do harm if left.

The ground and the plants being thus prepared, a straight cut or drill is made about six or eight inches deep, and the plants are put in, but not deeper than they stood before taken from the nursery. The distance between each plant is six or eight inches; some people prefer them twelve inches apart, and plant another line drawn six inches from the first, and put in the plants, not to stand opposite those in the first row, but opposite the middles of the intervals. When the plants are in, the soil between and around them is gently pressed down with the foot, then hoed a little and left neat.

This work is done early in October, or as soon as the ground is suitable in the spring. The first or second week in October would be the most proper time to plant here, even though the leaves should yet be on the plants, as the roots would strike, in this fine month, before the severe frosts commence, and the plants would be more vigorous and start earlier in the spring. If the planting could not be done in the fall, it should be done as soon as the ground is fit in the spring; or the heat and drouth might come and retard the growth of the plants.

In both cases, the plants are cut down almost close to the ground. If planted in the fall, they are cut down as soon as the frost is out of the ground in the spring, and *before the buds begin to swell;* if planted in spring, they are cut down as soon as planted. This cutting down to within half an inch of the ground is indispensably necessary, for without it there would be no hedge. The ground between and all about them is also kept *clean and frequently hoed.*

Some people cut down again *the next spring*, but it is much better to defer the second cutting until two years after the first one, and then to cut all close down to the ground as possible in the spring; the shoots then come out so thick and so strong that they never need to be cut down any more. But about the middle of the following July, the top and sides near the top are clipped off a little, and the bottom left still less clipped, so that the hedge may be wide at bottom and narrow at the top. In October, the new shoots are clipped again, but not quite down to the last cut, the sides being still left in a sloped form, wide at bottom and sharp at the top; when kept in that form the hedge grows close and bushy down to the ground, so as to form a completely close fence; but if left broad at the top, the bottom becomes open and the fence is not so good.

The clipping is performed twice in each of the first four or five years, with shears to be had for that purpose; afterwards with a long handled bill-hook.

The ground is also hoed and kept clean near the roots of the plants for the first five or six years from the time of planting; the fence will then be about five feet high, and is usually allowed to attain the height of seven or eight feet in meadows and fields, and ten or twelve feet around gardens and orchards, and from two to five feet wide at the bottom.

Of the beauty of such a hedge it is impossible for any one, who has not seen it, to form an idea. The leaf is beautiful in color and in shape; it is one of the very earliest in the spring, and preserves its bright hue during the summer heats. Its blossoms, which are white and fragrant, burst forth in the middle of May, and give the most gay and fruitful appearance to the meadows, fields and gardens which they encircle. Its usefulness in giving protection, shelter and shade, render it superior to any other sort of fence. The branches grow so thick and present thorns so numerous, and those so sharp, as to make the fence impenetrable. The shelter it gives in the spring and fall, and the shade it gives in the heat of summer, are so much more effectual than those given by wood or stone fences, that there is no comparison between them. This is important to the farmer whose profits depend much upon the good condition of his cattle, which improve more rapidly, and are in every respect more profitable, when thus protected from the chills of cold and wet weather, and also from the scorching rays of the summer's mid-day sun.

Another advantage which a quickset hedge possesses over any other sort of fence, is, that it effectually protects gardens from the depredations of *poultry.* Fowls will alight on wooden, brick and stone fences; but never on a quickset hedge, which affords no steady lodgment for the feet, and which wounds their legs and thighs and bodies with its thorns. It not only gives protection against intruders, but also affords shelter in cold weather and shade in hot. On the south side of a high fence, peas, lettuces, raddish, and many other things, can be had ten or twelve days earlier in the spring than in the unshaded ground; and during the heat of summer all these, and many others, thrive best in the shade, and continue to do so long after they will no longer produce in the sun.

The hawthorn is the favorite plant of England; it is seen as a flowering shrub in pleasure grounds; it is the constant ornament of paddocks and parks; the first appearance of its blossoms is hailed by old and young, as the sign of pleasant weather; the youth, of both sexes, adorn themselves with garlands made with flowers, and join in merry dance and rural sports around the hawthorn bush on the village green; whilst the more aged, seated beneath its shade, direct the joyous throng; and recount, with pleasing recollections, all the pastimes and pleasures of their youth. In short, take away the hawthorn, and you take away the greatest beauty of the English fields and gardens.

And why should America not possess this most beautiful plant? She has some of the English follies and English vices; and, why not English *hedges*, instead of post-and-rail and board fences? If, instead of these steril-looking and cheerless enclosures, the gardens and meadows and fields, in the neighborhood of cities and towns were divided by quickset hedges, what a difference would the alteration make in the look, and in the real value too, of those gardens, meadows and fields? With due regard, yours, R. M.

N. B. If the white thorn plants cannot be procured here, they may be had from Liverpool, or London, in the spring; or the berries may be shipped from any port in Great Britain, in barrels, half sand and half berries, in November. Three barrels would fence a farm; and might be had for little more than two dollars a barrel, at any port in England.

Albany, March 22, 1841.

Letters from West Tennessee—No. I.

Messrs. Editors—Observing but few communications in in the "Cultivator" from this section of the country, I have thought that some thing interesting, and, perhaps, instructive, could be made out of the materials which surround us here; and the following remarks on the Cotton region of Tennessee may not be unacceptable to you and your readers.

This part of the State, called commonly the "Western District," is a newly settled portion of Tennessee, and contains the essentials of great future wealth and prosperity. It is of very recent settlement—a settler of a dozen years being considered very aged indeed. I allude in this more particularly to the counties of Shelby, Fayette and Tipton, occupying the extreme south-western corner of the State. The interior portion of West Tennessee was settled a little earlier, though the entire "District," that is the country lying between the Tennessee and Mississippi rivers, including a dozen or fifteen counties in all, has grown up within twenty years.

The interior counties were settled first, because the river counties were supposed to be little better than so many Pandora boxes—luxuriant in disease and death. But the very superior advantage they possessed in proximity to market, soon found adventurers, who, for the sake of the prize, were willing to encounter the risk; and it was then found out that the immediate borders of the Mississippi river were but little, if any, more sickly than the Mississippi Valley generally.

About ten years ago, Jackson, in Madison county, was the largest and most flourishing town, being a nearly central location in the "District;" but since then, Jackson has rather declined, and Memphis is rapidly supplanting it in size and in importance. As a commercial location there are few, if any, in the entire South West of equal promise with Memphis. Situated on a high bluff, on the great Father of Waters, and central to a large scope of cotton growing country, it must inevitably prosper.

The cotton region includes the two southernmost tiers of counties, and those bordering on the Mississippi river are, of course, mostly to be prized as such. Shelby and Tipton on the river, and Fayette and Haywood immediately in the rear, and Hardiman in the rear of Fayette, are the best cotton counties; and of these, Fayette contains most agricultural wealth. In the year ending June 1st, 1840, the shipments of cotton from Memphis amounted to 60,000 bales; from Randolph (some sixty miles higher up the river,) about half that amount. Yielding in a gross estimate, at the present reduced prices, three or three and a half millions of dollars. But the whole of this is not the produce of Tennessee—the northern counties of Mississippi, (late the Chickasaw nation,) send a goodly portion, and some is from Arkansas.

Cotton is planted here about the middle of April, after the corn is "done planted," as the negroes say. The seed is drilled, being covered very slightly in beds three or four feet apart. When it comes up, it is worked with the hoe, and gradually as it attains strength thinned out, until when three or four inches high, a small clump of two or three are permitted to remain about eight inches apart—this being what is called "a stand." It is sowed abundantly in order to procure "a stand," after the many enemies with which cotton is afflicted have concluded their ravages. The first of these is the cut-worm—a similar worm, I believe, to that which destroys cabbages. I have known whole fields cut off almost entirely by this destructive insect. When its ravages are so general as last year, it is called the "army worm." Whether it is different from the garden cut-worm, I am unable to say, but it certainly resembles it very much. Another enemy is of the louse kind. It covers the stem and under side of the leaf—myriads of them upon a single plant.

Cotton requires constant labor with the hoe. Grass grows so luxuriantly here, that it is with difficulty kept down, and the whole crop, be it seven or seven hundred acres, must be handled three times at least with the hoe. About the time of blossoming it is, in the current phrase, "laid by," requiring no more attention until the earliest blooms have ripened into cotton, which, in this latitude, is seldom before the 1st of September. The "bowls" then open and the cotton hangs out. The crop, however, requires several pickings, being dependant upon the successive stages of blossoms of the plant, and it is rarely until Christmas that all is out—indeed, I have seen it in the field until February.

There are few of the class of large planters here, being mostly of a moderate grade. The crops vary of course almost indefinitely in size. From two to three hundred acres in cotton is doing quite handsomely. This requires from thirty to forty hands, the usual calculation being seven acres of cotton and five of corn to each hand. One bale per acre, of picked or ginned cotton, is an excellent yield—more frequently coming short, than realizing that amount. A bale, packed, already for market, weighs from 450 to 500 pounds, perhaps averaging 450 pounds.

Corn yields tolerably well, though the climate is rather hot for it. Thirty or forty bushels per acre is a good yield, and commands almost always from forty to fifty cents a bushel. Wheat is a very uncertain crop, sometimes yielding nothing at all; and even when it yields, it is of an inferior quality to northern wheat. Ohio flour is universally used in the neighborhood of the Mississippi river. Immense quantities of up river produce are brought down in flat boats, which lie in crowds at the landings of Memphis and Randolph. I have counted fifty and sixty flat boats at the landing at Memphis frequently.

Irish potatoes grown here are of an inferior quality; they are good enough during the summer while new, but as a crop they are poor and watery; perhaps the fault is in the mode of cultivation, being permitted to take a second growth, which I think is probably the case; but sweet potatoes are brought to fine perfection, and are everywhere the main dependance for winter vegetables. There are two varieties of sweet potatoes, the yam and the long Spanish potato. The yams grow very large; I have seen them four, five, and even six inches in diameter. The climate is admirably suited to them, and they are, in truth, a most delicious vegetable.

If agreeable to you, Messrs. Editors, I will write you again, if any thing of a local nature should suggest itself to me.

E. H. K.

Fayette County, Tennessee, May, 1841.

Agricultural Geology.

Messrs. Gaylord & Tucker—Ten simple minerals, sometimes called the "Geological Alphabet," form the elements of our globe. These minerals, variously combined, constitute from twenty-five to thirty varieties of rocks, piled into mountains, also appearing in ledges and boulders, or loose fragments, scattered over the earth. Upon the character of the rocks depends the surface of country, soil, mineral wealth, and other facilities and resources for productive industry, and for physical, intellectual and moral prosperity.

The ten elementary minerals are quartz, felspar, mica, hornblend, lime, slate, gypsum, serpentine, talc, and chlorit. By various combinations, the rocks formed from them may be classed into five or six families. The *Granite family* consists of three members, viz: granite, gneiss and mica slate, all composed of quartz, felspar, and mica, in different proportions and arrangements.

The *Hornblend family* consists of three or four members, viz: greenstone, or traprocks, hornblend rock, hornblend slate, and sienite, masses of which are scattered extensively over the world, broken from mountain ranges of great extent in various countries.

The calcareous, or *Lime family* of rocks, consists of members more numerous, and more various in character, and not less interesting to farmers than either of the others mentioned. In this family are common limestone, most or all the marbles, chalk, (all carbonates of lime,) gypsum, or plaster of Paris, which is the sulphate of lime.

The *Magnesian family* of rocks embraces serpentine ridges, noted in agriculture only for their barrenness, but rich in ores which produce some of our most beautiful paints, especially chrome yellow. Soapstone is also a magnesian rock, composed principally of talc.

The *Conglomerate family* is composed of fragments, or scattered remains of the rocks just named, again collected and cemented into large masses, and even mountain ranges. They are pudding-stone, sandstone, and graywack, each appearing under a great variety of forms.

To the farmer, all the simple minerals, the various rocks and the families, or classes under which they may be arranged, are of much interest. Several of them, as they determine the character and constitute the elements of soils, may be considered almost fundamental, both in the science and art of agriculture. Those of special, and even paramount importance, are quartz, which is of the character of sand, and felspar, forming, when pulverized, varieties of clay and lime, which, though not essential to a good soil, like the other two, is still necessary to give a soil the highest degree of fertility.

Stiff soils, light soils, loamy, calcareous, and all other soils, depend much upon the proportions in which these three simple minerals, and especially the two first, are combined. Quartz, or silex, predominates in all soils, even stiff or clayey, as they are denominated. In light soils it is the principal ingredient, though pure silex, sand or quartz, produces entire barrenness; capable, however, in some instances of being rendered fertile by the addition of a small portion of clay.

If it should be asked, how these elementary substances and principles of soils can be rendered available by farmers, the answer must be, let them procure "Geological Cabinets," or specimens, so selected, arranged, labelled and described, as will present in a visible, tangible, intelligible form, the ground work of the whole matter. A small collection of such specimens seldom, if ever, fails to add others and still others, till tens soon increase to hundreds, and a single ray becomes broad daylight.

If such Geological Cabinets could be used and explained by lectures of a familiar practical character, their interest and usefulness would be greatly increased. At present it may be difficult to procure men competent for such lectures; but if a call should be made for them, with a prospect of remuneration, men entirely competent to the enterprise might soon be qualified; some could now be found, already prepared, to make such lectures in a high degree instructive and entertaining. To my mind, no step presents itself as more important for giving to farmers a knowledge of Agricultural Geology, or for promoting the improvement of their farms or their minds, than a call for cabinets and lectures, designed to illustrate this highly practical and popular science.

The "Geological Surveys" now in progress or completed in nearly all the States, present a strong reason why this or some other step should be taken, to diffuse the knowledge collected by these surveys, in large amounts, and at great expense, and which is still liable to be confined to a few ponderous volumes, placed upon the shelves of the State or college libraries, instead of going into the possession and to the use of farmers and mechanics, at whose expense such information has been principally collected.

If the thirty or forty agricultural journals now published in our country, should unite their strength in procuring and sustaining lectures as here proposed, they could hardly fail of a measure of success, which would give to them a large reward, by giving to the country a great amount of light, on a highly important and interesting subject.

New-York, May 10, 1841. JOSIAH HOLBROOK.

We have seen "Geological Cabinets," prepared under the direction of the Universal Exchange Lyceum, which, though consisting of twenty-five specimens only, are selected, arranged and classified in such a manner as to illustrate the elements and structure of our globe. As these cabinets are sold at $1·50 each, they may and ought to be possessed by every intelligent family in our land. They may be had of E. H. Pease, Sabbath School Depository, Albany, and of Messrs. Gould, Newman & Saxton, corner of Fulton and Nassau-streets, New-York.—Eds.

Culture of Tobacco in Connecticut.

Messrs. Gaylord & Tucker—I noticed in the last number of the Cultivator a request for information on the most approved method of growing and curing Tobacco. There is, in this village and vicinity, about 200 tons raised annually. I have for the ten years past made it a part of my farm-work to grow the article, and if you please, you may give your readers my method of growing it, which is nearly the same as other growers of it in this place.

I raise from two to three acres of it annually, this being as much as I can attend well, and cultivate properly the variety of other crops of my farm. In giving a full account of the process I will commence with what the tobacco grower calls the bed, which consists of a few rods of rich moist ground, as well prepared as the most productive garden; on this sow the seed about the 1st of April; as for the quantity of seed, I have no particular rule, probably a spoonful of good seed would be sufficient for one square rod of ground; in about three weeks after it is sown, it will make its appearance. The bed must be kept clean from weeds until the plants are of a suitable size to transplant, which will be generally about the 10th of June. The best method of preparing the land on which the crop is to be grown, is to dress the ground in the autumn with a coat of manure, and then another in the spring; in all about thirty loads of good manure to an acre. The land should be frequently plowed in the spring, that the manure may be well mixed with the soil. When the plants are of a suitable size to transplant, the land on which the crop is to be grown should be well harrowed, then rowed, which is performed by attaching chains to a pole about three and a half feet apart, which will be the distance between rows and drawn across the field, which is usually done by two men. On these rows, with a hoe, the hills are made, two and a half feet apart, in which on some rainy day the plants are set, one plant in a hill. If the season is dry, the plants must be watered immediately after they are set out. If any of the plants wither and die, or if the worms destroy them, as they usually do more or less, other plants must be set in the place. The plow or cultivator should be used between the rows to loosen the ground and destroy the weeds, and the plants be frequently and carefully hoed. The worms should be destroyed, or they will destroy or very much injure the plants. When the plant puts forth its blossom, so much of the top of the stock should be broken off as has not leaves of sufficient size to remain; also the shoots that spring out between the leaves should all be broken off. When the plants are sufficiently ripe, as they are generally about the 1st of September, they must be carefully cut and laid upon the ground to wilt for a few hours, then be carted to the barn and hung upon poles to cure. The plants fastened to the poles with twine wound around the stock across the pole, top downward, spreading them sufficiently for the free circulation of air, with the poles about one foot apart. The barn should be sufficiently ventilated, but not so much open as to expose the tobacco to winds and storms. Two months of mild weather will generally cure it. When the stem in the leaf is cured hard, it is taken down from the poles in damp weather, when the leaf will not crumble, the leaves stripped from the stock, bound in bundles called hands, and packed for further use. Most of the tobacco in this place is packed in boxes of 300 or 400 pounds each, and sent to the New-York or Philadelphia market.

When a barn is built expressly to cure tobacco in, as most of them thus used here are, it should be with ten or fifteen feet posts, twenty-four feet in width, and length as is wanted. A barn with ten feet posts, twenty-four feet wide, and sixty feet in length, will usually be large enough to hold the produce of one acre of land.

The produce from one acre of land, well cured, will average about one ton, or from 1,500 to 2,500 pounds. The quantity depending on the fertility of the soil, season, cultivation and curing. The comparative amount of labor required in growing this crop is about four to one of corn—that is, it requires as much labor to raise one acre of tobacco as it does four of corn.

J. P.

Warehouse Point, Ct., March 24, 1841.

Freezing of Potatoes and Apples.

Messrs. Gaylord & Tucker—I am always eager for the perusal of every communication from your respected correspondent of Essex county, (Va.) and believe I also express the opinions of others, when I say that such a man as James M. Garnett cannot be "zealous overmuch," in the cause of agriculture. On reading an article of his in the February No. of the Cultivator, vol. 8, on the preservation of root crops, the facts therein stated in regard to the Irish potato being perfectly preserved after repeated freezing in the ground, and yet if permitted to freeze out of the ground, is thereby entirely destroyed, brings to mind a fact within my knowledge, which may not be generally known. In the fall of 1837, my winter apples were put up in barrels with dry earth, and stored away in my barn. The approaching winter proved to be uncommonly cold, and in the course of winter, I do not believe there was a single apple in the lot of barrels, eight or ten in number, but was entirely frozen to the core; but as warm weather approached, a gradual thaw took place in each barrel of apples, without, I believe, a single apple having been injured by the freezing; on the contrary they greatly improved by the mellowing process that took place with the thawing. They were a large red pleasant-flavored apple, known with us as Abrams. I do not pretend to know that apples are invariably liable to rot by being permitted to freeze and thaw out of earth, but am inclined to believe so. I have understood from persons engaged in the oyster business during winter, (and do not doubt its correctness,) that if frozen oysters are returned to their own element while frozen, they will not die, but if permitted to thaw by the action of the atmosphere alone, all hope of their recovery is at an end, and to put them in water for the purpose of saving them would be useless.

I like to have forgotten to add that I suffer my Irish potatoes to remain in the beds where cultivated, protected by a heavy cover of fall grass, all winter, and dig when wanted for use, (I only plant a sufficiency for family consumption,) and find them in the spring but partially injured.

C.

Warwick co., Va., March 17, 1841.

Floored and Unfloored Stables.

Messrs. Gaylord & Tucker—Among the many valuable articles which the January No. of the Cultivator contains, one is headed "Stables without Floors." I have been in the habit, for a few years past, of using floored and ground stables, and have concluded that in general for cattle, stables without floors were the best; but for horses, I prefer a good plank floor for this reason: I think that a horse can be kept more comfortably and cleaner on a floor than on the ground; and I think full as much manure can be made on a tight floor as on the ground. One argument which your correspondent uses is, that "horses' hoofs are greatly benefitted by standing on the ground." Now, I do not profess to be much acquainted with horse flesh, but I think it looks reasonable that the cleaner and the more dry a horse's hoofs are kept, the better they will be preserved from disease; and I am certian that they can be kept as dry on a floor as on the ground. We are now using ground and floor stables for our cattle, and I don't know but that we make as much manure on our floor as on our ground stables. But as floor stables will be used by a good many, I would recommend to all those who are about building, to have their plank sawed of an even thickness and jointed so as to make it tight. In laying down the plank, let them be laid so that the hind feet of the cattle may rest an inch or two lower than their fore feet. Let there be, at the bottom of the floor near the door sill, a trough sunk down on a level with the floor. This will serve to catch all the liquids and juices which will fall on the floor, and with a shovel, it can be put in and mixed with the heap. In this way I think full as much manure can be made as upon the ground. With regard to spreading manure about the cattle yard, I am of the same opinion of your correspondent, that to let the cattle tread upon it, it serves to mix it with other manures; if left to lie in a heap it is apt to burn, and become useless. We have found too, upon trial, that one load of manure housed, is worth two loads which are left out to be drenched by the rains and to undergo the action of the frost. It will pay as good interest to house our manure as to house our cattle. Those who have no convenient place to put it, let them erect temporary sheds to keep it in. Yours with respect, L. DURAND.

Derby, Ct., February 4, 1841.

A Journey Contemplated.

Messrs. Gaylord & Tucker—I now have it in contemplation to make an extensive agricultural tour during the coming summer, and it would be a great pleasure to me, and I have reason to believe it would be equally so to some of your readers, to form a personal acquaintance with them as far as practicable; and as I shall "take notes," and you will "print them," it may also conduce to our mutual improvement. I have, therefore, thought proper to make this public announcement of my intention and route. All communications addressed to me before the 1st of August, at this place, upon the subject of the journey, or requiring business done on the route, will be attended to. I shall also be glad to communicate with the friends of agricultural improvement at the following places, and I shall call upon the following named persons, with whom any information for me may be left, viz: Friend Willets, Editor of Indiana Farmer, Indianapolis; Hon. John Sering, Madison, Ia.; Thos. B. Stevenson, Esq., Editor Kentucky Farmer, Frankfort; Messrs. Affleck & Hopper, Editors Farmer and Gardener, Cincinnatti, O.; Hon. H. L. Ellsworth, Commissioner Patent Office, Washington; James M. Garnett, Essex co., Va.; G. B. Smith, Esq., Baltimore, Md.; James Pedder, Philadelphia, Pa.; P. Sather, Esq., Broker, 164 Nassau-street, New-York. I shall also visit Stonington, Ct.; Providence and Boston.

At Albany I shall not only see you, gentlemen, but, I trust, many good friends. Returning, I shall visit Utica, Rochester, and at Buffalo, *sans ceremonie*, I shall invite myself to partake of the hospitality of A. B. Allen, Esq.

I hope to be able to give some information about matters and things in the West, to those of my agricultural brethren with whom I may chance to meet, and I expect to gather a great fund of useful information for my own use, and that of others, at some future time. Among other things, I intend to satisfy myself whether it is yet time to form a "National Agricultural Society."

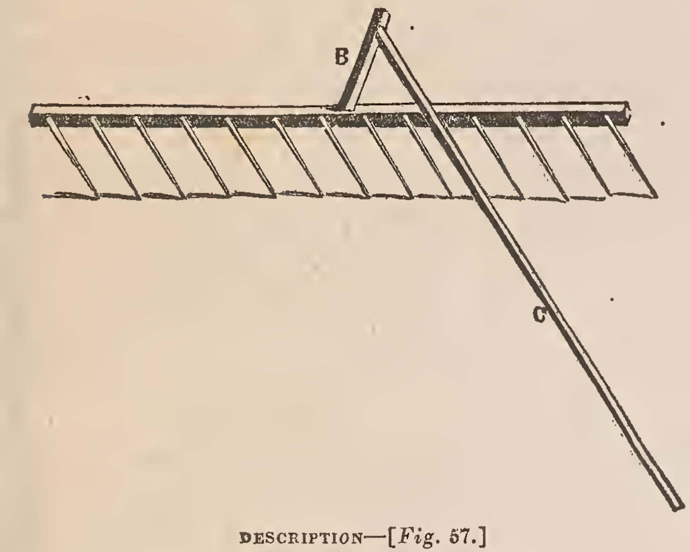
I intend to take the journey at that season of the year when I can witness and compare the growth of crops between different sections, and see the improved stock to the best advantage, and I hope I shall have occasion to speak highly of every portion of the route. I remain with much respect,

SOLON ROBINSON, [Post-master.]

Lake C. H., Ia., April 2, 1841.

Improved Rake.

Messrs. Editors—Below I send you a rude drawing of a rake, made by myself, which I think is an improvement, which, perhaps, none of your numerous readers have as yet beheld:



DESCRIPTION—[*Fig.* 57.]

A, head of the rake, six feet long, one and a quarter inches square, made of good timber. B, a piece to set on the top of the rake in the center, with half inch tenon; C, handle, to go through stick B, with braces running from the head to the handle. The teeth are one foot long, six inches apart, going through the head with half inch hole. The rake runs flat on the ground, like a horse-rake. The advantages of this rake are, that, where persons using a horse-rake, and in raking it over once cannot get it clean, they can finish the operation quicker with this, than two men can with common hand-rakes; and for raking after a wagon, a boy can rake after two men pitching with all ease.

Yours with respect, G. W. T.

Conesville, Scho. co., March 29, 1841.

Gapes in Chickens.

Messrs. Editors—In your April number, a correspondent attributes the gapes in chickens to breeding from too old cocks. Whether this will have any effect to produce the disease, I am unable to say, but I have long since found a *preventive*, and practiced accordingly. This I have communicated to others, who have complained of the malady, and similar treatment, as far as my knowledge extends, has been attended with the same marked result.

The disease is prevented simply by scanting them in their food. Who ever heard of chickens which were not confined with the hen, but both suffered to roam at large and collect all their own food, to be troubled with this disease? The most common food for young chickens is Indian meal, mixed with water so as to completely saturate it. This, when eaten in too large quantities, is almost sure to produce the gapes. Great care should, therefore, be observed in the feeding of them, and the meal should be previously mixed some few hours, or otherwise it will swell in the *stomach* of the chicken, which, when full, is the very cause of the disease.

Brooklyn, N. Y., April 20. GARRET BERGEN.

Water Fountains and Sun Dials.

Messrs. Gaylord & Tucker—I have read with much pleasure an article in the Cultivator, some time since, on the subject of plans for gardens, from the pen of Mr. Walsh, whose name I cannot, with self-satisfaction, pass over without acknowledging the tribute of gratitude, which is due him from every member of community, for the result of his persevering efforts to improve the state of agriculture and horticulture. In that article he made very appropriate mention of artificial fountains, and of a sun dial, the one as, perhaps, the most beautiful appendage to an elegant garden, and the other as a cheap, but very convenient one; and I would add, to every person engaged in practical agriculture. And I perceive, in the last number of your paper, a request from the same pen, to be informed where those articles can be procured.

I, therefore, take a threefold pleasure in giving Mr. Walsh the information requsted; in promoting the interest of my friend, Mr. D L. Farnam, by informing the public that he manufactures, not only the apparatus for fountains of any degree of elegance, accompanied with directions for setting them up at a very cheap rate, and correct sun dials for a mere trifle; but also pumps of most superior construction; fire and garden engines, and almost every article connected with the subject of practical hydraulics; and I think I confer no small benefit on the public, through your assistance, by the vast circulation this information will have in the Cultivator, on a subject in which every section of country is interested.

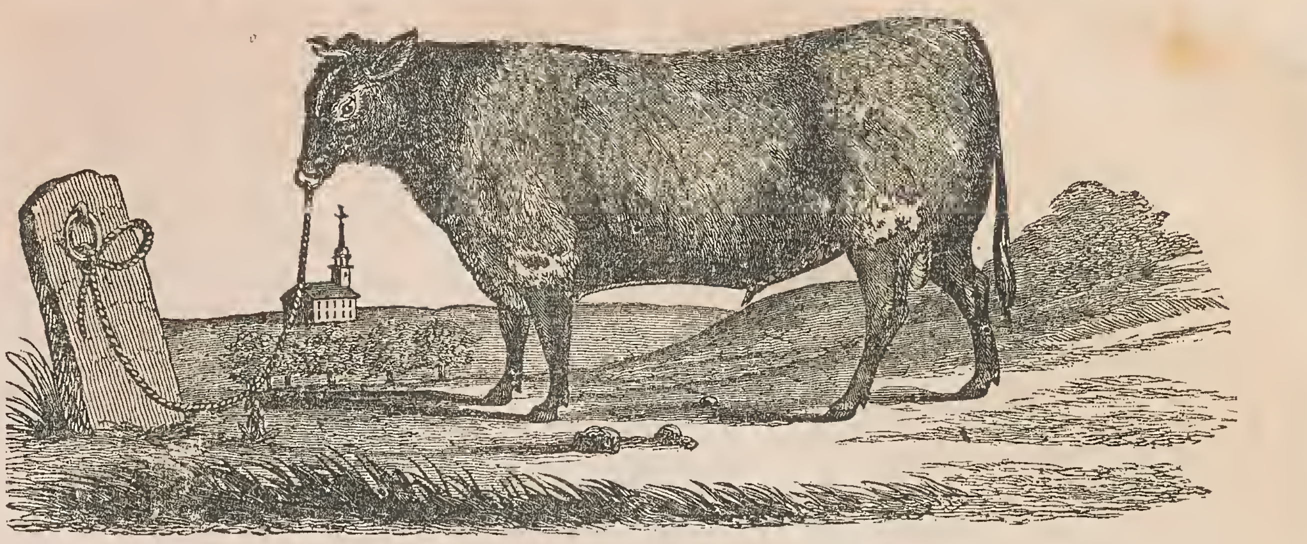
I have consulted Mr. F. on the subject, who has politely showed me his apparatus, and various plans for garden fountains, with ornaments of various descriptions, which, I think, must meet the approbation of every person of taste, who is able to be the owner of a handsome garden.

For the character and utility of his pumps, Mr. F. refers me, and I would refer the public to a communication from Mr. Phelps, in No. 11 of the Cultivator for 1840.

In addition to the above, I would beg leave to suggest that I think, where there is a handsome enclosure in front of a house, one or two artificial fountains, throwing up sprightly jets of water, and surrounded with tasteful embellishments, would have as pleasing an effect as those placed in the garden, and I should imagine, no person in easy circumstances would grudge the expense of both.

S. BLYDENBURGH.

New-York, May, 1841



AYRSHIRE BULL.—[Fig. 58.]

Messrs. Gaylord & Tucker—I have enclosed the profile of an Ayrshire Bull, (fig. 58,) that was sired in Scotland, in the district of Ayrshire. The dam was imported by John P. Cushing, Esq. of Watertown, Massachusetts. The bull was dropped soon after landing, on the importer's farm, two years last grass, which is full middling size. *Color*—deep cherry red, with some spots of white, variegated and interlaid with the red on the fore leg and hind quarters, and some white in the face. *Eye*—the smallest that I ever noticed in a beast of its size, but very clear, bright and prominent, looking well behind. *Forehead*—broad and flat. *Cheek* and *muzzle*—small. The *nose* very small, and of a clear yellow; if possible like the *horns*, which stand forward, crooked, and raised a little at the points, and their roots at considerable distance from each other. *Legs*—straight, short, flat and small below the knees, standing well before and behind, with firm joints. *Neck*—middling size and tapering towards the head, which is small. *Body*—barrel form. *Tail* is set on a level with the back, round and tapering, quite slender as it tapers towards the round bunch of hair at the bottom. The general figure compact, and well proportioned. The bull from which I sketched this portrait is owned by Wightman Chapman, of this town—a valuable present. The donor was Mr. Cushing, who is noted for his liberality and encouragement to agriculture; *liberality*, at home and abroad.

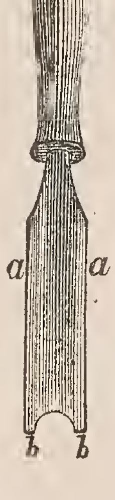
This breed of cattle are in high repute as a dairy stock, and also for their quick fattening properties. They will keep fat on shorter feed, and where many breeds would not thrive at all. It is said that no other breed in England is considered so valuable for the purpose of milking, excelling equally in quality and quantity; they are called the "best possible poor man's cow," from their ability to shift on very scanty keep. This bull has the appearance of hardihood, and more profitable in this dairy zone than other larger breeds that have been introduced here. SOLOMON W. JEWETT.

Weybridge, Vt., February, 1841.

Lunar Pointed Asparagus Knife.

In cutting asparagus with a common knife, it must be obvious to every one that it cannot be done, without frequently destroying the younger shoots below the surface. Moreover, as the knife is passed down nearly perpendicularly and then laterally, to make the cut it necessarily leaves a long scarfed portion, which must be trimmed off in preparing the bunches. The lunar pointed knife obviates both the above objections to the usual mode of cutting, and makes a considerable saving of time. The blade and handle are like a long spatula or spreading knife. The blade may be from six to seven inches in length, and from three-quarters to an inch in breadth, so as to embrace the largest stalks. The end of the blade is cut and sharpened in a crescent or lunar shape. The edges of the blade, and also the extreme points or horns of the crescent edge must be blunt and smooth, to prevent injury to the rising shoots, and the crown of the roots. In using this knife, the blade is passed down near and parallel with the stalk, and by inclining the handle a little from the stalk, the cut is readily made, at least from one to two inches lower than by the usual method. The drawing will afford an idea of the instrument. The edges *a*, *a*, of the blade are blunt and smooth, as also the points *b*, *b*, while the crescent edge is kept sharp. I have given this knife a fair trial, and am confident that any person using it, would never after be willing to dispense with it.

[*Fig.* 59.]



C. G. PAGE, M. D.

Washington, D. C., May 4, 1841.

Feeding Silk Worms, &c.

Messrs. Editors—In answer to the inquiry of your correspondent, "Whether silk worms, partly reared on the white mulberry, may be fed with safety on the large leaf Canton or multicaulis, and also whether they may be fed with these kinds together or alternately, with advantage?" I reply, that for the two last seasons I have fed a few silk worms merely as an experiment. The last season, getting short of white Italian mulberry leaves, I procured from my neighbor, L. A. Spalding, Esq., some morus multicaulis and fed my worms; I followed feeding the two kinds alternately for ten or twelve days, and frequently both kinds together, without perceiving any difference in the health, or growth of the worms. I have also on one or two occasions, fed them common lettuce, without its producing any injury; but they will not readily eat it. It is pretended by some that the worms are more fond of the leaves of the China than of the Italian mulberry; but I could never discover that they gave either kind the preference, when fed to them together. Yet I cannot see that any thing would be gained by feeding them alternately.

I will also add, that as far as my experience extends, the white Italian mulberry is preferable to the multicaulis, for the reason that it stands our climate better, and is reared with less trouble, and although the leaves are much smaller, yet they are heavier, and not so porous as the China, and a leaf of the Italian will afford as much food as one of double its size of the China.

I will add further, that there is no difficulty in rearing the silk worms in this climate. I have scarcely ever lost a single worm, although I have taken no very great pains with them; yet I would advise persons who know nothing about the business, to procure a few trees and obtain a small number of worms, and feed them for one season, and they will then be better prepared to enter into the business more extensively.

In conclusion, I will add, that at the present price of labor, I do not believe the business would warrant a large investment; I am convinced, however, that farmers and others who have large families of children and females, could engage in the business to a moderate extent, and raise say from $100 to $300 worth of cocoons yearly, without interfering with the other operations of the farm, and which would be nearly a clear gain to the farmer. It would be something like the eggs, poultry, &c. of the house wife, which costs the farmer nothing, yet adds very much to his receipts in the course of the year Yours, &c. S. H. NICHOLLS.

Lockport, February 12, 1841

To Destroy Lice on Cattle.

The direction in the Cultivator (February No. page 30, 1841) recommends unguentum, or mercurial ointment, to destroy pediculi, or lice. I am inclined to believe that the virtue of unguentum is not derived from the mercury contained in the ointment, but from the grease or fat with which the mercury is incorporated. Grease, fat, lard, or any oily substance, if applied to neat cattle infested with pediculi, will have the desired effect; but it must not be applied by a string around the neck, but by being well rubbed into the hair on those parts where the vermin are found, and repeated until they are destroyed. Insects have no lungs, but breath by spiracles or minute holes in their bodies; and if these spiracles are clogged with grease or fat, they become suffocated and die. Goose grease, hog's fat, pot-skimmings, will all answer the purpose, and may be obtained in any farmer's family without cost. Tobacco, also, will kill these vermin on cattle, by its operation on them as a poison. A simple infusion of tobacco, applied warm and rubbed into the neck or dewlaps, or wherever found, so as to completely wet the hairs, and repeated at an interval of a few days, will destroy the nits and lice in a short time, and at a cheap rate. The curry comb should be used after the application.

Richmond.

The Canada Thistle.

Messrs. Editors—I was exceedingly gratified to see that your attention, and that of your correspondents, had been called to the extirpation of that most noxious of all weeds, and most difficult to eradicate, the Canada Thistle.

I have determined to communicate my plan of destroying them; and having had much to do with them for many years, I unhesitatingly declare, that I have never tried any method that will do the thing so economically and effectually.

I usually commence about the first of June, cutting them off close to the ground, with a common broad hoe; again in August; and if necessary, should any make their appearance, early in October. In all candor and honesty, I would say, that I have succeeded in two seasons in subduing whole patches in this way.

I cheerfully submit it for the consideration of your Niagara correspondent, and all other readers of your valuable journal, with a firm belief, if they will but try my plan, that they will succeed. C. M.

Ludlowville, N. Y., April 30, 1841.

The Turnep Fly—Inquiry.

Messrs. Editors—I desire, and many of my neighbors would be pleased to learn, the best and most effectual method of preventing the depredations of the insects upon the young ruta baga plant. Three years since I raised about five hundred bushels of ruta baga upon little more than half an acre; but for the two last years, the fly has, comparatively speaking, destroyed my whole crop. Last year I sowed twice, and finally plowed up the same ground for wheat without any regard to the ruta baga crop, it was so far destroyed.

The proposition for the establishment of the "American Society of Agriculture," meets with my decided approbation, and your correspondent, Mr. Solon Robinson, is informed that he may rely upon the subscriber to second his views with all honorable efforts.

I am, gent'n, yours, &c., most respectfully,

B. A. BIDLACK

Wilkesbarre, Luzerne co., Penn., May 12, 1841.

Scalding Peas for Seed.

Messrs. Gaylord & Tucker—In the April No. of the Cultivator, I noticed an experiment of Dr. Plummer on scalding the pea, and I can assure you it may be done with perfect safety. I have practiced it for twelve years in succession: my method is to put a bushel or less in a tub; have boiling water ready, enough to cover them; pour it on, and stir them in it one minute. Pour them out into a basket, and throw a pailful of cold water on them, and stir them; no matter how quick, after they have been in the hot water one moment, the larvæ of the bug will be completely destroyed, and the germ of the pea uninjured. If you wish to have your peas come forward early, soak them twenty hours in urine, and dry them by rolling in dry unleached ashes or plaster; but ashes are best. Respectfully yours, R. JENKINS.

Glenn's Falls, April 22, 1841

Agriculture is the most ancient, the most honorable, and the most useful of Arts.

Theory of Vegetable Nutrition—No. 2.

Messrs. Gaylord & Tucker—In your August No., 1840, you were pleased to insert a communication as to some of the views entertained by me, of the "Theory of Vegetable Nutrition." Those, like the present, originated in the hope, that some person of scientific acquirements and of studies better suited to the exigency, might be induced to take up the subject, and to enforce the accuracy, or demonstrate the misconceptions there suggested.

Physiology, or those branches of it which may be considered referable to agriculture, and the study of anatomy, (I would say, no less human than comparative,) are so closely connected, that, as Haller imagined, they can hardly be separated even in idea. In his opinion, the man who should attempt to become a Physiologist without anatomy, would act as wisely as the mathematician, who, without seeing the wheels or the pinions, or without knowing the size, the proportions or the materials of any machine, would yet presume, from mere calculation, to determine its powers, its properties and uses. Assuredly, without it, no one is able to prosecute such studies, much less to impart their results to others, with half that pleasure or success which he otherwise might, in either the animal or vegetable kingdom.

Indeed, when we view the subject in the broad aspect into which vital existence, animal as well as vegetable, leads us, and, independent of agricultural observation, the branches of *scientific* acquirements into which a development runs, a practical *knowledge and habit* of chemical essay and demonstration, of experimental as well as natural philosophy, of medical science with its pathological relations to comparative anatomy, functions and derangements, of geology and astronomy, too, seem indispensable.

Such exigencies are calculated to deter, as they unquestionably, in a great degree have, any other than a medical student, and one zealously devoted to every physiological branch, and its connection with his profession, from entering upon them. Nothing is hazarded in the assertion, that almost exclusively all the data from which conclusions may, with any safety, be drawn up to the present condition of those sciences and their developments, have originated from the most zealous and devoted disciples of that elevated pursuit in life.

In the natural desire, however, of arriving for myself at the most intelligible conclusion of which I was capable,—one suggested by interest as well as pride, I have looked with remunerating gratification, into the wide field which such a study opens; and while I, no less than others, have felt the imposing diffidence attendant upon such an effort, I have been unable to resist the conclusion that agriculture was in need of some things, *above* which the wings of science seem recently to have taken and now to hold their ambitious and adventurous flight; soaring from nature up towards nature's God, and fired by the success of our immortal Franklin, seizing upon the elements which surround us; which, as is evident, do blend themselves with vitality; with the "*Callidum innatum*" of Aristotle of old; which seem to maintain and *uphold in unison* the vital relations of the animal and vegetable kingdom, with its æriform influences; such as the etherial and seemingly assimilated principles of electricity, galvanism, voltaism, magnetism, light, caloric and oxygen; again seeking to bring them like electricity down to earth, and within the grasp of genius, endeavoring to subject their relative connections with vitality to the alembic fire of chemical intelligence and essay, to decompose and hold them as it were in the hand to human view, as visible as they have recently brought to light the minute organic structure of animalcular formation.

Without idly seeking to disparage such efforts,—efforts which seem likely to lead to *intellectual* results, perhaps as beneficial to mankind as any that have heretofore been vouchsafed by Heaven to human efforts,—I would with all deference respectfully ask leave to draw the line of demarkation between what is scientific, ethereal, and *yet to be* disclosed to us, what may be *hoped for* of things *as yet unseen*, and what we actually know and possess; and without blending the *utile cum dulce* in study, as far as my feeble intelligence may permit, to separate them; in order that, till the sought for things are known, we may be practically familiar with, and use what we do know, bearing in mind the adage, "while the grass is growing" to look to its sustenance with equal care to that which wisdom suggests, as to every other living thing within the range of our duties, nor hope for thrifty results with either but from like sources.

Vegetation, in this, appears to me to be susceptible of a distinct division, and *for the present* its *better half* to be at the same time of a familiar test for application, referable, as such a one ever should, if practicable, be, to the intelligence or conception of the most limited capacity.

The primary, and as I conceive, the main question, under ordinary circumstances with the plant, is NUTRITION, or that artificial or alimentary contribution to the vegetable or animal organization, (for in my view, with either it is equally imperative) which the sap or the blood equally require for sustenance, and the elaborate and assimilatory functions of its structure, to enable the plant to fill to the full, and ripen each seed according to the peculiar exigency of *its farina*, and which the agriculturist cannot unduly, and without a helping hand, ask of exhausted mother earth to perfect to his use.

Although I would refer with as much kindness to the delusions of Tull, as Sir Humphrey Davy himself, and gratefully award all that is unquestionably due him for his unwearied as well as useful efforts and practical demonstrations of the good effects of *tillage*, the days are past or nearly so, when etherial aliment only, (whatever it may amount to in philosophy,) can be considered enough to support vegetable, any more than our own animal existence.

In my former communication, I ventured the position, that the functions of vegetable life, structure and development, were subject to alimentary as well as medicinal principles essentially similar to those which govern animal or human existence; and I was the more induced to give publicity to that position, because occasionally I had seen influences and results imputed to different substances occasionally recommended for fertilizing the soil or promoting vegetation, little less than wizard or magical, and far beyond any nutrient quality I could suppose them inherently to possess.

If the positions I have taken be true, there can no doubt be abundant proof of its accuracy found to support it. If untrue, there are at least enough to refute it. If true, assuredly no more intelligible standard can be adopted to regulate our judgment in agricultural appliances, than one which, *mutatis mutandis*, refers the alimentary or medicinal requisites of vegetable life and functions, to our own.

That eminent physiologist and chemist, Fourcroy, in speaking of the natural philosophy of vegetables, says—"All those functions of vegetables which bear such striking analogy to those of animals, are liable to alterations by which the vegetable is brought to a diseased state. These diseases to which plants are liable, depend commonly, either on a superfluity or *defect of sap*, or the bad quality," (I would say defective consistency,) "which the sap may happen to acquire; and they bear therefore, no small resemblance to those with which animals are affected. Their causes, symptoms and cure, *come under the general principles of medicine*," (no less than aliment) "and form a branch of agricultural knowledge in which it must be confessed, little progress has yet been made, but which may be greatly advanced by following the directions of some celebrated modern writers." I would ask of whom?

But, to support the position I have taken, let me ask, does the chemist in seeking his demonstrations of the component parts of vegetable or animal substances, through ordinary agents and re-agents stop to inquire whether the matter proposed for analysis be of the one or the other derivation? Has it ever been found that the operations of chemical tests for the one, differed from the other? Do not results on such essays, conclusively demonstrate the similarity of medicinal influences with both? Do not the eccentric results of chemical contact with the vital energies and qualities of plants, while imbued with vitality, equally and alike, baffle physiological and chemical studies and tests? Is there any one simple substance found in the animal fluids that has not also and alike, been detected in the vegetable organization? Are not all alike assimilated to the peculiar properties of either by the one or the other organization?

If we see an analogy in the vital principles attendant on each from the fecundation of the embryo, throughout and up to its repetition in a successor, in the organization and development of its structure, in the instinctive impulses to nutritious assimilation, with an equally blind and mysterious vital tendency to the attainment of congenial, and the repulsion and excretion of offensive matters, in the cellular formations of the frame, the circulation of the vital fluids and atmospheric influences, (as I may hereafter show, we do) distinctly and necessarily the same, in the vegetable as in the animal frame—where, I would ask, is all the supposed embarrassment or mystery in administering to the wants of vegetable, any more than animal life?

Our greatest difficulty plainly lies in the fact, that our fathers, like ourselves, have been nurtured and educated in the habit of cultivating a *primitive soil*. The labor and expense attendant on the accumulation and application of manures with the necessity of *unlearning* (the most inveterate of all difficulties,) old habits, and coming to that *new one*, which the necessities of our position now so audibly begin to require of *us*, as it has for ages heretofore required of nineteen-twentieths of all the earth besides, revolts and discourages us. And as it has driven us to the west, where exhaustion in its turn has overtaken us, still drives us to the *far* west; as it will again to the farther and still farther west, and till the labor and expense of shipment, transhipment and tolls shall find the sea-board exhaustion, and its necessities for manuring applications more profitable than far west, and primitive tillage *for the sea-board*, at these immeasurable distances.

But let us remember, the farmer in this country *owns his* soil, and holds, with a comparatively small capital, a farm, which elsewhere would be called a princely estate; elsewhere, the land is doled off by the square yard, for the benefit of a lordly superior, to a humble peasant and laborer, at an *annual* rent equal to the whole per acre and fee simple price of our land. Not only the soil there, but every requirement and convenience of life is overloaded with taxations and *impositions*, (justly so termed!) to the *ne plus ultra* of exaction; and that alas! required to glut and pamper the bare-faced knaveries, sensualities, and vanities of those gilded toys for full grown children, called kings and nobles! Yet still, for the mere privilege of breathing, these rents and taxes *are* paid. The landlord there is the recipient of a great revenue; and the land taken up in a condition far from primitive, is manured and held at a standard of fertility far above ours. *How is this so?* It is because the only security there against loss, is in the maintenance through tillage and manuring of the maximum standard of fertility in the soil, and one here *with us equal* to theirs.

It may be an unwelcome truth, but we may as well learn the fact, if we do not know it already, that the per acre product with them, with a more discouraging climate than that of the State of New-York, is far above *us;* and therein lies the ability of their tenants to pay the enormous rents and taxes under which they suffer; and which they pay, getting *nett* prices, little, if any greater, than we do.

Tull, mistaken as he was, in the fancy that the plant's existence and nutriment, was like the fabled Chamelion's *aeriform*, only insisted, in common with the prevalent opinion of the seventeenth century, and he demonstrated clearly too "that tillage *without manure*, was better than manure *without tillage.*" Evelyn insisted, and observed with no less certainty, that soils, of whatever standard of fertility, were very perceptibly improved by *mere tillage*, and that aeration and atmospheric contact which attends it; and the more this was done, the more the soil improved.

We find this conclusively shown in the effects of hoed and tillage crops; a consequence, the rationalia of which, independent of a chemical result, which I will seek to explain on another occasion, would be best conceived and readily assented to, if the agriculturist would but advert to the additional and spontaneous extension of those slender and minute roots of the plant, which *thus are aided in their search after food*, and the growth of which are so extended and multiplied by merely stirring, aerating and loosening a well constituted and loomy soil. If he would but advert to the no less obvious fact, that each of those minute roots and branches are *living structures*, having as strongly marked an inclination and desire (if I may so term their impulses,) to go, and as anxiously too, if enabled, to nutriment, as a hungry animal would to a hay stack—that nature has implanted in each similar tendencies, under corresponding facilities for locomotion.

To prove that air and water *only*, (alas! that it should ever have been so conceived,) were "*all the aliment*" required by vegetation, not only Tull and Evelyn, but philosophers of celebrity and undoubted sagacity, such as of the days and age of Tull, Van Helmont (the *alchymist!*) Boyle, Bonnot, Tillet, Duhamel, Braconnot, and "others of that ilk," demonstrated, as they thought, such conclusions. Some of them in fact, induced the germination of seeds, and a sub-modo development of the embryo and its vital organization, with the flour of sulphur, washed and exhausted earth, and leaden shot, and carried some of their plants by dint of watchfulness, watering and labor, even to flowering; and all to do *as is done every day* with the bulb of the hyacinth. They thence sought to have it inferred, nay pretended to insist they had done *all* that was required to support their "*notion.*"

But they dissembled the fact, that those flowers (as is the case of the hyacinth, when fed from *the bulb in water only*) produced *no seeds*. That in a great majority of instances, they (with seeds containing less farina or nutriment than the bulb) totally failed.

But I would ask, *whence* should the plant have matured the *farina* of a seed? For that assuredly, is not only the primitive exaction of nature for the succession of the plant, but it is as all experience shows, the moment for calls upon and exhaustion of the stalk and of the soil; for drafts on their stamina; and it is distinctly when the plant must fail in maturing *and filling the farina* of its seed, if aliment in the stalk be wanting. It never was conceived that a plant could, any more than us, *create a substance*. They do but elaborate such as they obtain and can assimilate; and it is little less than folly to suppose they can, any more than us, give form and visible nutritive matter as a product of mere aeriform or gaseous exhalation, or vapor. The latter may be quite as necessary to give tone and energy to their respiratory and secretional functions as to ours, or as the one or the other prevail, may qualify the assimilated product in the organization, and yet be *no farther nutritive* to the plant, than mere gas is to us.

It will thus be perceived, that in my views of the Theory of Vegetable Nutrition, *good tillage* of a well constituted soil, in due rotation (or progressive exhaustion,) with the aeriform and aqueous assistance to vegetation which *nature* gives, constitutes much,—I would say, with us more than half of all that is required, because it leads the organism into full and healthy action, and *judicious* manuring, assisted in such tillage by frequent plowings, good harrowing, and plowing in green fallow crops,—the natural and spontaneous chemical results from the soil, from the atmosphere, and from manure in *proper condition*, or *due progress* towards their ultimate decomposition, proper medicinal, or calcareous correctives to pernicious acidity, when it is found to prevail, and the seasonable blessing of an ever bounteous Providence, *are all the residue.*

Leaving to a future occasion, the *modus in quo* of obtaining, and the rationalia of applying that manure, let me conclude this topic by an allusion or two to the recent applications of *electric* effects to vegetation.

Tull, even in his early and *benighted* day, saw, and alludes to its influence on wheat; DeCandolle and Sprengel acknowledge its effects on buckwheat; and recently, confining its influence artificially in contact with oxygen, or attracting it to the vital energies of plants, and to the acceleration of embriotic development, physiologists and chemists have shown it greatly to hasten these results. This no doubt, is so; but what do these experiments and effects, unquestionably beautiful, highly intellectual in their exhibition, show? Nothing *practically useful* to the plain agriculturist, or any thing more than mere nitrogen gas, in its administration for catch-penny exhibition to human beings, long since has shown; or more than alcohol at this day deplorably shows, super-excitation of vitality; mere intoxication, (if I may be allowed the expression.) But in its effects, what? Blight in the wheat, *undue* increase of straw; as a necessary consequence, exhausting diminution of the *farina*, and in the number of seeds of the buckwheat; cresses and embriotic vitality unduly, and *prematurely* hastened by super-excitation and stimuli—"coming into this breathing world scarce *half made up*, and that so lame and unfashionable, that" a sterile curiosity only is the consequence—ricketty, short-lived and worthless of course.

When the dazzle of such novelty shall have passed away, it will be seen that the organic structure of plants can no more thus be super-excited and sported with than our own. I would say nothing against such exhibitions or studies as connected with the elementary principles of vitality, from which much usefulness may, probably will, be elicited. But when the results to which these researches evidently tend, are attained; that of showing if not the *identity*, at least the intimate connection of electricity, light, caloric and oxygen, the one with the other, and of each with vital functions, it will be found that their influence on vegetation, is no farther applicable there, than to ourselves.

The plant being, like ourselves, an organic circle for vital action, equally dependant for health on the natural temperature, equilibrium and play of its frame, when driven from that equipoise by stimuli, which every day's experience shows, may be produced with either, not only through the false mediums to which I have adverted, but in the plant, even through the injudicious application of *unfermented manure* itself, wastes under super-excitement, as we would ourselves, its vital energies, and relative exhaustion and sterility with it as with us, is a necessary consequence.

In the medical treatment of human beings, electricity is used to raise a *sluggish action* of the system to its natural pitch—*never beyond it.*

The great and inviting reward which nature ever holds up to the zealous inquiries and ambition of her votaries, is her *uniformity*, from which she never varies; and that characteristic will be found beautifully interwoven with, and illustrated by the analogies of vegetable to animal existence. A principle once attained and well conceived with either, may be viewed as an end of the thread of a mysterious ball, fearlessly taken up, and *cacterus paribus*, drawn out through all its applications as appurtenant to both, and with the assurance, if not so, it is probably not well founded, when they *seem to differ*, the attempt at least should be made to point to the fact, and seek the solution of a divergence from the common principles of their vitality.

As at every step which Newton took towards the development of that stupendous mechanism which he brought to the light of an admiring world, he became confirmed in his belief in the existence of the Deity and strengthened in those hopes in the future, without which *even his* existence here would have been a blot; so in the study of those principles of vitality into which for our purpose, the analogies of animal and vegetable existence lead us, will he find as our reward the most irrefragable proofs in physiology and its attendant sciences, of that most consolatory of all earthly reflections.

The organic formation of plants, animals and human beings, equally forbid the idea of a chance or sponte nascential vital production, or the offspring of either from mere natural influences.

If we could suppose a plant or an animal in its origin, as a self-constituted existence, we must suppose *simultaneously* the existence of *other* plants or animals, or of necessity it must have *perished for want of sustenance.* Because, through all nature, nothing can be found nutritive to vital existence but matter, of *previous vital formation*, or, in other words, of a material which the organism *may assimilate.* The earth, therefore, before vitality was created, could offer, as geological formations anterior to organic depositions show it did, in its previous materials, nothing alimentary.

In the case of the plant, we must suppose its precursors to have *matured*, and to have been already in a state of decay, and solution for aliment, or without provision from some independent quarter for sustenance, the first plant must have perished.

If we suppose a male, or a female in either plant or animal, neither singly will answer the end, or any thing short of a simultaneous production of each, or that at least *within the period* of their mutual existence; and yet again, in their *sexual conformation* to one another.

In the case of the plant, or of an animal, we must *pre-suppose the seed* and the parents, the product in either case, of a male and female *pre-existing*, or we are driven to suppose divine intervention and omniscience to have produced them of *mature age*, and provided for their sustenance till increase had resulted to supply the place of such provision.

I ask of any rational man, would he in a case involving the life of a fellow creature, decide against him on conclusions less irresistible? If he would, should his sympathies award against suffering humanity, an alternative he denies to his Creator?

But there are of plants, probably 40,000 species; and as many more of animals, without adverting to the myriads of animalculæ invisible to the naked eye; each necessarily *as separate a creation*, and as incapable of divergence from its species as man himself.

Although *varieties*, by fusion or by crossing of a species, may be multiplied, *genera* are independent, and never can. Hybrids, animal or vegetable, if by any chance or artifice, produced, are by nature and of an unnatural composition and organization necessarily defective, and ever have been without exception, barren and unproductive.

The vital creation of plants and animals shown in fossil interments, was therefore evidently *simultaneous* and anterior to the present or Biblical creation; and all exhibit (*at this day, man included*) as at the former creation, with an independent and distinctly separate being, a dependance each on the other, as a law of their nature, and of their existence for sustenance.

In the embryo, its development and thence to its maturity and death, the plant as well as the human and animal cellular formations and fluids maintain for assimilation a rigid similitude to the parent; and this in so nice a degree, as utterly to forbid the introduction into their structure, of the fluids of other genera.

Could I overcome the conviction with which I am impressed that there are others of an education and train of study far better fitted to the occasion than myself, I would, with your permission, if none better should be found to attempt it, broach however imperfectly, some of the analogies of vegetable, animal, and human formation. The divergencies in their characteristics, and those principles of embryotic origin, alimentary development, pathological derangement and vitality which connect themselves with each in their relative comparisons to one another, not however, without copious reference to better authority, and a deliberate conviction that more physiological acquirements than I possess, or have the means of attaining, are requisite to such an attempt, accompanied with a sincere wish that some one better qualified would attempt it.

Wheat Sheaf Farm, Staten Island, Feb. 10. W. A. SEELY.

Salmagundi, or Odds and Ends—No. 1.

Messrs. Editors—It is my intention to present to your readers, from time to time, as convenience permits, my views on divers and sundry subjects connected with my profession, in a fragmentory way, under the above caption. The adoption of this plan will enable me to condense, with due regard to fullness, however, when required, and thereby often avoid the prolixity of formal essays. It will, for the most part, be merely a discharge of small arms, but if a bomb-shell should now and then burst and break some shins, why—let them be mended again as soon as possible, together with the *ways* of those to whom the aforesaid shins belong. Peradventure the war should not come up to this brief manifesto, it will not, most certainly, be the first time in the history of nations or of individuals.

The first thing which will claim my attention, is to supply some deficiencies which were, not inadvertently, but for want of space, omitted in my last chapter, and somewhat connected by common usage, with shearing of sheep. And first,

Castration of Lambs.

Inasmuch as this is usually attended to at shearing time, it would be wholly unnecessary to advert to it, were it uniformly performed, as it should be, with reference to humanity and individual interest. The time I have chosen, as well as method, have been sanctioned and approved by some years of personal experience, and therefore I hope will be acceptable, as well as followed. The ewes of my flock, by the 20th of May, are through folding; and soon after, provided the weather is suitably warm, they are washed; and some cool day between this and shearing, the flocks are got up, and the lambs docked and castrated. Provided this is not done when the weather is cool, it should be attended to early in the morning, for the reason, that when the temperature is low, there is less flow of blood, and consequently less exhaustion: a contrary course will endanger the lives of many lambs, especially if the breed is of the finer grade of Saxony. The *modus operandi* is thus:—one strides a scantling or narrow plank, which is placed in an inclined position, and on this the lambs are rested; this is a good way, because they can be more firmly held. Another with a *sharp* knife cuts about two-thirds of the testicle bag off: if left too long it will bother the tagger and shearer; if cut too short, it will prolong the process of healing, and often jeopardizes life, especially if no use is made of an ointment similar to the one which I shall prescribe and recommend. The testicles are then drawn out sufficiently far to reach the connecting cords, and instead of then giving a violent jerk, as is usual, the cords are divided by friction of the thumb nail. This is certainly more gentle and *humane*, because, *apparently*, attended with less suffering. After this the tail is docked, and if you wish to save yourselves the trouble of tagging often during the year, let it be cut as short as possible; besides, what looks more *ungenteel*, and absolutely *vulgar*, than a sheep with a long dock, or indeed with any dock at all. The ointment above alluded to, is composed of, say, one pound of lard, half a gill of tar, and a small portion of spirits turpentine, or in these proportions, warmed to a liquid, and applied by means of a swab, about the mutilations. This not only possesses healing virtues, but keeps at a distance the maggot fly. The great majority of farmers use none, and the loss in consequence, is always more or less, yearly, by neglect of it. Year before last, by using this ointment, I did not lose a lamb. Last year I docked and castrated 540, and but two or three died of this large number. After the whole process is through with, which with the skilful is momentary, they are placed in a separate pound, for the sake of quietness, and there remain until the blood ceases to flow, to prevent the wool of the ewes from being stained.—Allied to this subject, is the

Destruction of Ticks,

a most disgusting kind of vermin, which impoverish and injure materially the health of sheep, as well as the appearance of the wool. A mode was recommended by one of you, Messrs. Editors, in a late number of your paper, which was stated to be the result of actual experiment, and proved an effectual remedy. As near as my memory serves—and if I am wrong you can correct me—the process was performed at washing time, and the material was a liberal use of soft soap, which was rubbed upon the fleece before the sheep was immersed in water; and after a few were washed, being in a vat, the soap would so combine with the water as to produce strong suds; and the lambs were served in a similar way. This mode is not uncommon in England and Scotland, and the philosophy of it is very obvious, for, independent of the deadly ingredients of the soap, it produces thorough *cleanliness*, this being the greatest of all foes to the generation of vermin of similar description. This method is feasible—and I have no doubt efficient—where soft water abounds; but the stream which runs through my farm is strongly impregnated with lime, consequently the water is hard, otherwise, I would be disposed to adopt it, for, aside from accomplishing so desirable an object, it must make the wool beautifully white and clean, *a sight always good for sore eyes!* Please remember this prescription, my brother wool-growers, when you are troubled in this way, it being more efficacious far, than half the nostrums invented; and moreover, will "put more money in thy pockets," when thrown into market. In common with many others, I have used most successfully for the destruction of ticks, a decoction of *tobacco water*, and the process is as follows: buy at the stores, say for 100 lambs, four pounds of poor plug tobacco, or of stems ten pounds, and boil the same about two hours in order to extract fully the strength; and then pour the liquid into a half barrel, or washing tub. In about a week after shearing, all the ticks will have left the ewes and fastened upon the lambs; then immerse them in this decoction up to the ears, care being taken not to remove them from over the vessel until the liquor has been rubbed or squeezed from the wool. There are other objects attained besides this in the use of tobacco water, namely: curing irritations or iruptions, caused by johnswort; and if a little tar is dissolved in the water, it will serve as a guard, for a while at least, against the attacks of flies, for we are all well aware how abhorrent the effluvia of tar is to insects of all kinds. If this plan is adopted, every wool-grower may rest assured that in two years scarcely a tick will be found in his flock.

Humanity to Brutes.

There is yet another small matter which should have been noticed in my last chapter, and which I deem of sufficient importance to mention here, namely: a practice very common among shearers of *kicking* and *cuffing sheep, with a view to make them lay still when shearing them!* Something so, silly, so contemptible, and so brutal, will seem almost incredible to some of your readers; nevertheless, it is too true. But for humanity's sake, I inform them that nothing of this kind is allowed in my shearing house, and on a repetition of the offence with my shearer, he receives due "notice to quit," accompaniedwith an Uncle Toby *blessing*. What, maltreat an animal when it is yielding its harvest, which the God of Nature has provided for our use and benefit! Why, methinks, "I had rather be a toad and live upon the vapor of a dungeon," than ill-use so interesting an animal, at *such* a time, or indeed under any circumstances. Let man ever keep in view that wise and humane proverb, "a merciful man is merciful to his beast," for its observance will confer a two-fold benefit; to the mind *pleasure*, the invariable concomitant of the discharge of duty; to the pockets, an *increased reward*, which I have fancied sometimes, aside from the obvious and known consequences of kind attention to stock, was the *grateful return* on the part of animals to man, for the exercise of humanity towards them. Enough said—more anon of the salmagundi dish.

Lansing, Tompkins co., N. Y. L. A. MORRELL.

The Rohan Potato.

Editors of Cultivator—I agree with Messrs. Grove, Guthrie, and others of your correspondents, that the farming community have been imposed upon and gulled by unprincipled seedsmen and others, by the publication in agricultural and other papers, of the successes (generally under the most favorable circumstances) which have attended the culture of some new importation of roots, grains, &c.; while the numerous failures, with the trouble and expense required in their successful cultivation, are too often kept out of view. It is an old saying, that "murder will out;" give us the plain ungarnished results, the dark as well as the bright side of the picture; for be assured that the farmer's good judgment, and practical sense, will condemn every attempt at imposition, while he is ever ready to patronize and reward the introducer of the useful or valuable. I would condemn all impositions; so far I agree with the above named gentlemen; but the Rohan potato I highly value, and believe them to be a great acquisition.

I purchased in the spring of 1839, one barrel of Mr. Thompson, of Catskill, containing 303 potatoes; these were cut in pieces, containing one eye each, and planted about the 20th of April, on a rich, warm piece of land, highly manured with stable manure. The same land was dressed with salt the year before, at the rate of 8 bushels per acre, and planted to corn. I mention this, as I intend hereafter to give the readers of the Cultivator the results of my experiments in the use of salt as a manure. The Rohans covered about two-thirds of an acre. The yield was 340 measured bushels, at the rate of 510 bushels per acre; a great many of the tubers weighed from 2 to 4 3-4 lbs. each. The summer was dry and hot, and potatoes generally, in this vicinity, were a light crop. I offered last spring to furnish my neighbors with the Rohans for seed, if they would give me half of the extra yield over any other kind that they chose to plant on the same soils. But one of them accepted the offer and he paid dearly for them. The others knowing what my crop was the year before, preferred purchasing them at $2 per bushel. I have the pleasure of knowing that they are generally satisfied with their bargain. The partial failures can all be accounted for—late planting in some cases, want of manure, or moisture in the others. A neighbor of mine, a good farmer, who does not spare the manure, had 94 bushels from 3 pecks of seed. My crop last year was good, and, like Mr. Grove, I can compare their yield with the Merino and other potatoes. I planted rows of the Merinos, Mercers, Irish Whites, and Orange potatoes, (all reputed good yielders,) by the side of my Rohans. They were all planted with the greatest care, to test accurately the result. The Rohans came off triumphant, beating the Merinos by more than one-third, and yielding nearly as much again as any of the other varieties. You will readily observe that my experience has led me to differ with the above named gentlemen, as to the yield of the Rohans. My *success* I can easily account for; I wish the gentlemen had tried to account for their *failures*. I planted good seed upon a good soil, well manured, planted early, and put but two eyes in a hill, which I am satisfied is seed enough, and is the quantity recommended by Buel, Thorburn, Thompson and others. I am not acquainted with Mr. Guthrie. Mr. Grove I know and respect, and am satisfied that I could account for his failure.

So much for the yield. I have a word or two to say about the quality. I think the Rohans the best of all the coarse varieties of the potato for feeding, and nearly as much better than the Merinos, as they are better than good well-soaked basswood chips. I have fed hundreds of bushels of them to all kinds of stock except sheep, and they all prefer them to the Merinos. I supplied a number of Irish families with them last fall, and they all liked them better than any other kind except the Pinkeyes. I can sell all I have on hand in this village for a table potato. If an Irishman is not a good judge of potatoes, no other man is; they say the Rohans are firm, hearty, and more nourishing than the other kinds. I am informed by good authority that they make more starch and command a better price at the Bennington Starch Manufactory than any other potato. Mr. Grove says they do not keep well, are hollow, and smell bad. I have raised nearly two thousand bushels of them and never knew one to rot except it got frozen, and frozen potatoes generally smell bad. It is not my intention to attack Mr. Grove, or any other gentleman—but to defend the Rohans. And to show your correspondents who have condemned the Rohans that I am sincere, I offer any of them a small wager, from $25 to $100, that I can grow more Rohans than they can Merinos on one acre, and that the same potatoes boiled and fed alone will make one-fourth more pounds of pork than the Merinos. The winner to pay the money to the Treasurer of the County Agricultural Society to which he belongs, as a donation for the benefit of said society.

So much for the Rohans. Mr. Thorburn has been repeatedly attacked in the Cultivator for selling his China corn—it has been called a humbug; the old man denounced, and almost cursed as an imposter, and all for what? Why for doing the very thing that should entitle him to a nation's gratitude, and for which he should be lauded as a public benefactor. It seems too, that if the old man has sinned, he is not allowed to repent as other men do; he has offered to pay back the money to any person that will call on him for it, and still the fault-finding correspondents of your paper will not let him alone. I have planted the China corn for two years, and think it one of our best varieties. I observed a number of rows of this corn last fall, in the western part of this state, all well matured, and yielding a most abundant harvest. In my opinion, Grant Thorburn can safely set this down as one of the best acts of his life, and he has not been deficient in his endeavors to do good to the agricultural and horticultural community of this country. Two shillings an ear would pay him for his trouble, I admit, but the corn was valuable, and by asking that price he got it sooner and better distributed than in any other way.

Schaghticoke, March 22, 1841. JOHN C. MATHER.

The importance of associate effort, in advancing any cause is conceded by all classes; for it is self-evident. Yet how small a portion of so large a class as are the agriculturists of the United States, take advantage of it, by combining their efforts to support societies and journals established for the sole purpose of improving the condition of the cultivators of the American soil. S. R

Lake C. H., May, 1841.

Building Mill Dams.

Messrs. Gaylord & Tucker—Having observed in the Cultivator for March, a communication from W. J. W., wishing information respecting the building of mill dams upon a durable or permanent and cheap plan, and as I have had some experience in that business for the last four or five years, I feel willing to communicate my mite of information. In the year 1836, I determined to erect a mill dam across Stony Creek, which is a continual running stream, with banks and bottom quite precarious, as we have no solid rock in our region. Consequently I made my abutments secure by means of sawed flukes, and piling with suitable plank—then commenced felling my trees that grew on the banks of the stream, and rolled them in, brush and all, commencing at one abutment and so on to the other, one tree by the side of another, as close as possible to each other, tops up stream, having the buts even below, laid on the close bottom of the stream; then laid on a pole, say 4 or 6 inches through, across the buts of the trees, (which were about the same size,) and pinned them fast on each trunk near the ends; that being done, another layer of trees was laid on as before, breaking the spaces as well as we could, letting the ends rest on the pole, on which they were pinned as before; then another pole as the first, and so on up to the top of the dam. I should have remarked that the second pole should be laid on the buts some two or three feet above, (or up stream,) from the other, the object of which is to form a proper slope for the descent of the water, so as to prevent its boiling back and undermining the work. About this time or at this stage of the work, we commenced *weaving* in pine or cedar brush as closely (from the bottom up) as possible, to prevent the earth, stones, clay, &c. (or the materials used) from washing through; then commenced wheeling on earth, stones, &c.—all being done in the water, because the water is found to be the best agent in making the work solid and water-tight. The slope should be made easy, or long, so as to prevent the water's washing, which can be determined by the builder, and the slope according—trees, poles, brush, and earth alternately, till the dam is made as high as wished. I then, about 6 or 8 feet below the dam, piled down a sill, which is done by a mortice 3 by 4 inches, and scantling driven through into the bottom of the stream; above this sill, I piled closely with narrow plank; (secure this sill by means of short sills fastened to the foot of the dam.) The box which is thus formed, is then filled up with the best clay and stone, or gravel, and then sheeted over very closely. This 6 or 8 feet is horizontal. I then pile sills from bottom to top of the slope at proper distances, (driving the scantling or piles through or into the tree and brush work.) This being done, fill all the interstices or crevices with the best or most tenacious material possible; then cover over or sheet with thick strong plank, taking care to pin them well—8 or 10, or more feet above the top of the dam, sill and sheet as before, sloping up stream or sloping down from the ridge, from the upper part of which dig down some 3, 4, or more feet, and spile down closely to prevent leaking—then put on as much clay, stones, &c., as will be sure to make a long slope, remembering that it is this which will add permanency to the work.

My dam has now been in use nearly five years, and has withstood during the time some of the greatest freshets that have been known here, for the last half century. My opinion is, that this is the most permanent dam that can be constructed upon a precarious situation. All who have examined it believe it to be perfectly durable. Yours, &c.,

F. TUCKER.

P. S. Fell the trees with all their foliage.

Tuckersville, Sussex county, Va., April 12, 1841.

Editors of the Cultivator—For ten years past, I have had considerable experience in the construction of dams, and other water works, and I find the common brush dam to be inferior to no other in point of cost, durability, and effect. Hemlock brush are preferable to any other, but if not convenient, almost any kind of brush will answer. The building is simple and the labor can be performed by any common laborer.

The commencement in a strong current is the most difficult, which can be effected by placing the body of a tree across the stream for the brush or trees to rest upon, with the tops up stream in all cases. When a good foundation is laid, coat it with stone, then another layer of brush and stone, and so on alternately, until the required height is produced, reserving the largest stones and the lightest brush for the last coating. Make tight with gravel, or clay, and stick bank willows every two feet throughout the whole course, and you will soon have a dam that will want but little repairing, and which will be durable and permanent, and no floods can move it. A. S. R.

Butternuts, N. Y. March 20, 1841.

Messrs. Editors—Having seen in the Cultivator an inquiry relative to the best method of putting up dams, I have been induced to offer the method which my experience suggests as combining the two most essential points, durability and cheapness. There can be but little doubt that stone dams, for almost all situations, have claims to superiority over the frame dam, and I shall, therefore, point out some few of the particulars which I think necessary to insure the durability of the work.

The first essential requisite is, to secure a good foundation; the next, to obtain a good stone layer; and the third, the size and hardness of the stones. Lay your foundation of the same width of the proposed hight; that is, for a dam of ten feet high, there should be a ten feet foundation. In laying your stones, lay them the longest way across the dam, and be careful to fill the interstices in the middle, as compact as possible with small stones. If your foundation is rock, it will add to the durability of the wall, if the down stream face should retreat or fall back from a perpendicular line one foot in ten. On your up stream face, lay in some durable timber about four feet from the bottom as a fastening to your plank, and another in the wall after it has reached the proposed hight, as a fastening to the up stream plank, as well as the feeder plank. The timber should be hewn or sawed so as to have a bevel to suit the inclination of the plank on the up stream side. The top of the dam should be perfectly level, thereby avoiding, in a great measure the danger of having the dam uncapt by the ice, which every one must see at a glance is the life of the dam. In order to secure the cap plank as fast as possible, I would recommend having three timbers laid on the top of the stone work, one forming a face on the down stream side, the other in the middle, and the stay timber of both the cap and the up stream plank. As a fastening to the cap, nails may be used, but I would prefer pins made of some durable wood, as nails are liable to be broken by the frost. There should be at least five pins in each plank, and the cap plank should be jointed to each other and to the face plank so as to be as near tight as possible, in order to prevent the water from running down among the stones and freezing during winter. The face plank should come up a sufficient hight above the upper timber, to be even with, and a protection to the cap plank. The slope or inclination should be such as to leave about four feet width at the top. The plank should be good, sound, and thick, for the face as well as the cap, and should have their edges beveled so as when put together there will be an opening on the upper side of an eighth of an inch. They should also be neatly scribed so as to fit the rocks at the bottom, as it is an experiment that has often been tried that water cannot be *cheated*. Some have tried the method of filling in earth, on the up stream side, to answer the purpose of plank, but I have never seen a dam that had been filled in that did not leak. C.

Germantown, N. Y. March 15, 1841.

Specimens of Indian Corn.

Messrs. Gaylord & Tucker—A few days since I enclosed in a small box to you, a few ears of Gourd Seed Yellow Corn, *originally* (as I was informed by an old acquaintance, since dead,) *from the Eastern Shore of Virginia;* and an ear or two of mixed blue, attempted to be raised by me the last season, to *be satisfied* from actual experiment, whether the blue is a distinct variety or not, because it seems to be the opinion of botanists, that blue seed is very uncommon. I stated that long since it has been understood and classed, (by some writers on the subject of *variety of corn,*) with other *colors* of corn, as original and distinct; and although believing so myself, I determined to try for myself; and say that I am satisfied, although the experiment has been only partial, that it is so. The early history of the maize speaks of blue, red, &c. as distinct; and although I believed this to be so, yet I believe that those who will try it, will soon find that the varieties of red and blue are worth nothing beyond experiment, and they will at last settle down upon the white or yellow, for manifold reasons, not here necessary to detail, or to trouble you with.

I enclosed in the box with the corn some *exquisite water-melon* seed, and stating my apprehension, that it was likely they may have by some means got impregnated by the Ice Rind, although I am not conscious that an injury would necessarily result from the mixture; because the Ice Rind is a most delightful melon.

You ask those who may send you specimens of corn, 1st, the name by which it is known? 2d, the latitude in which is it grown? 3d, the time of ripening? and 4th, such particulars as to its origin and history as they may be able to give? As to the 1st, it is answered above, as well also as to the 4th, so far as I am at present able; if I can learn more of its history, I will inform you. The latitude is that of Virginia, between 36 and 37 degrees of north latitude; the time of ripening depends much upon the time of planting; but if planted at any time in April or on the 1st of May, it will be ripe, according to season, from the 10th to the last of September; although I believe if the season is propitious, and the land in good condition, with corresponding tillage and planted early, it will be ripe in August. I am satisfied that it is a fortnight earlier than the large white, and very nearly as early as the Baden or Twin, which is the earliest we have to my knowledge, worth growing in Virginia.

J. C. ROBERTSON.

Springfield, E. C. county, Va., April 2, 1841.

Messrs. Gaylord & Tucker—I send you herewith five ears of my kind of corn, which I have been this eight years maturing, selecting, &c. to get an early variety. These are only medium sized ears; some grow four or five inches longer; but among all the corn that you will have presented to you this season, I don't believe ("although its myself that's saying it, that shouldent be saying it,") you will get any superior, if equal, to it, for early maturity, size, variety, &c. Four years ago I got a barrel of Dutton of Judge Buel, and I tried it two years, but found that it did not ripen as early as mine by two weeks, and the stalks of the Dutton were one-third larger than my variety. I hope it will be kept separate from any other that you may obtain. I will warrant you that you will like it. S. W. JEWETT.

Weybridge, Vt., May 15, 1841.

Farmers' Gardens.

Messrs. Editors—It must be pleasing to the friends of American agriculture to observe the Cultivator so well sustaining its early and merited reputation as a leading journal of American Husbandry. Experience here, as well as in Europe, has fully established this mode of disseminating correct principles and practice as the most efficient and successful of any. The Cultivator, as a register of practical facts, opinions and experiments, in all departments of agriculture, is extremely valuable. Horticulture being considered as a subordinate branch, has not received so much attention from your correspondents as, perhaps, it merits. Farmers have, indeed, been reproached with total neglect of the garden; but this is far from being of general application. Farmers, as in other professions, differ in their tastes as well as in their skill, abilities and degrees of industry. Many farmers know and properly appreciate the value of their gardens, as objects both of profit and pleasure. It is also to be considered, that the Cultivator, although intended for the benefit of farmers chiefly, has, if I mistake not, many other readers; professional men, merchants, and others residing in villages and cities, many or all of whom, probably, have gardens in which to raise useful and ornamental plants for convenience and pleasure, furnishing at the same time a healthy and delightful exercise and amusement to the owners. To all such, as well as to a large majority of the farmers, communications on useful and ornamental gardening cannot fail, I should suppose, to be acceptable; nor must it be forgotten, Messrs. Editors, that in this department, as well as in that of the domestic economy, the ladies take a deep interest. I sincerely wish it was possible to extend this taste and its influence to every mechanic and laborer in America, and regret that the migratory propensities of the people present a very powerful obstacle to it.

These remarks occurred on observing in the last number of the Cultivator, a communication on Ornamental Gardening, by your correspondent, Mr. Walsh, furnished in compliance with your request, and that of many others, with a very neat plan of an ornamental and vegetable garden; and this not a creation of mere imagination, but a substantial reality, being that of his own garden at Lansingburgh; it is, however, a very handsome specimen, and although plans of gardens admit of infinite variety of form and disposition of parts, according to situation and taste, this specimen and description contains much valuable information that may, as you observe, be made available in every case where ornament is an object; and I hope Mr. Walsh will soon furnish you with plans for summer-house, green-house, gates, &c. agreeable to his promise.

Horticultural structures are not as yet so common in America as in Britain, especially in the country; and their supposed expense may have a tendency to retard their extension. Simplicity and cheapness are, therefore, very desirable in plans of this kind; those in Mr. Walsh's garden possess this merit; they are easily understood, and cannot be very expensive. Some of us may, probably, smile at the idea of a farmer's green-house, considering such a thing as visionary or extravagant; and no doubt it would be unsuitable to those of us who cannot afford it, or have no time to attend to it; but there are a good many farmers who have ability and time at command. A farmer who has his land let on lease or shares, and continues to reside on the premises, or who has a son capable of superintending the operations of the farm, could manage any thing of this kind conveniently, and these are very common cases. Again, in the cities and villages, where many gardens are kept as much for amusement as profit, a green-house would be a suitable and very desirable appendage. I understand there are green-houses in Boston and neighborhood of large size, and also at the Albany Nursery, that cost but little over $100, so that the expense cannot be so much an object as, perhaps, is generally supposed. Under these views, occasional communications on ornamental, as well as common horticulture, may, I presume, be useful and acceptable.

Before concluding, I must observe, Messrs. Editors, that your correspondent is far too severe on us poor farmers; his remarks on our gardens are too sweeping; should he favor me or some of my neighbors with a visit in the proper season, I flatter myself he would find cause to alter his opinion a little, or at least to allow that there are exceptions; some of us (not to mention myself) have our gardens, as well as our farms, in pretty good order, as we think. He will find with us all sorts of culinary vegetables in perfection, together with abundance of high and low fruit, of every kind the climate can bring to maturity.

We have also our flower beds and borders, where our wives and fair daughters will exhibit to him tolerable specimens, I suppose, of dahlias, pæonies, roses and such like, aye, and some green-house plants too, all of which he will prize not the less, I guess, for being the work of their industrious hands.

So far as my observation extends, I feel warranted in stating, and do it with pleasure, that the taste for gardening is advancing gradually; and although some may think it a matter of but small importance, yet in some points of view it will be found eminently worthy of attention and encouragement. A taste for the pleasures and comforts of horticulture in a country has been justly considered as an indication of refinement in the people, and its excellent moral effect has been acknowledged in every instance where it has taken place. This is strikingly exemplified in the operatives of Paisley, as described by Sir John Sinclair in the General Report of Scotland. The superiority of these mechanics in moral habits and intellectual acquirements is ascertained to be owing entirely to the employment of their spare hours in the cultivation of flowers, in place of spending them as most mechanics are apt to do. The same remark applies to the cultivators of prize gooseberries in Lancashire; many other instances might be quoted.

In the southern and middle counties of England, all travelers have noticed the neat and pretty appearance of the cottages there, and the additional beauty and interest they impart to the rural scenery, never failing to remark at the same time the cheerful and happy appearance of the inmates compared with many other parts of England; these cottages have small gardens attached, and their fronts are decorated with vines, roses and honeysuckles, the training of which and cultivation of their gardens, occupy their spare hours, strikingly verifying your correspondent's remark, that where you see a good vegetable, flower, and fruit garden, attached even to a very humble cottage, that cottage is the abode of happiness. If effects so desirable can be produced by a taste for the pleasures of horticulture, who can deny its importance or withhold from it his approbation and patronage! With hearty good wishes for the success of the Cultivator, I am yours, &c. SENEX.

Saratoga county, February 27, 1841.

Raise More Ruta Bagas.

Respected Friends—I have often wondered that there was not more of this useful article of food for stock raised in this cold country of long winters. I think the farmers of this county have seen the want of them the past winter, owing to the light crops of hay the past season. For one, I am very sure that, had it not been for my ruta bagas and mangel wurtzels, I should have been able to have supplied the tanner with a few hides, as well as the factory with a quantity of pulled wool. I will admit, that the past season was a very unfavorable one for that crop, as well as hay, yet by sowing early and filling up vacant places with plants from the garden, I raised about half a crop, which has been of more value in wintering my stock than four times the amount of meadow. I have heard it said, that ruta bagas will not fatten cattle. This I believe to be incorrect, as I have tried them for several years. I fattened two oxen entirely upon them; commenced feeding them in the fall—one of them had worked through the summer, and was low in flesh; they eat about three bushels per day, with very little hay and without any drink—fed them in this way about three months, intending to feed them a few weeks with meal; but before commencing with the meal, had an opportunity of disposing of them. The butcher told me that they were the best beef that he had ever sold in the market; and as a proof of it, said that every one that used the meat called soon for more, saying they wanted more of that good beef; which will go to prove that ruta bagas will not spoil the flavor of beef. Much more might be said in their favor—the manner of keeping in winter, their value and expense compared with potatoes, &c.; but I will not trouble you with any more at this time. WILLETS KEESE.

Peru, N. Y., May 10, 1841.

The White Daisy.

Messrs. Gaylord & Tucker—Under the title of Dictionary of Terms, &c. in the last October No. of the Cultivator, you denounce the white daisy as one of the greatest pests of the farmer, when permitted to get possession of the soil. I was once of your opinion, and, therefore, spent many a weary hour in eradicating some scattering plants on my land. But experience, I think, has taught me better. I now consider the white daisy on my land a valuable grass. My mowing land, and most of my pastures, are a thin cold soil, not swampy; and the meadows, when well manured and in good condition, produce a good crop of excellent hay, principally timothy and clover. I give them a good top dressing of manure, if to be obtained, once in three years. When the meadows are in good condition, the daisies, where they have got strong hold, can hardly be perceived, but when the influence of the manure is much lessened, the daisies appear to be almost the only grass, and produce a middling crop in quantity, of the first quality of hay for cattle and sheep, if mowed while in the blow. I get no hay that I consider as valuable for cattle and sheep as daisy hay, cut in bloom. It is true, it does not yield a great crop, for the reason that other grasses take its place when the land is in a condition to produce a great burden. But on my mowing land, I consider the crop worth more than I could get of any other grass, with the land in a like condition. I have, therefore, no longer any war with white daisies, and the only weapon I ever use against them, is a good dressing of manure. I consider them equally good for pasture on the same kind of soil, but should be kept fed down, so as not to be too old.

Yellow daisies, or crow-foot, I have none on my land; but where I resided when young, they were plenty in low lands, and I thought farmers considered them, if cut in the blow, as good hay for cattle as sown clover the first year of mowing. I presume the same remedy, that is, a good manuring, will answer for them as well as the others. C. BUTLER.

Plymouth, Ct., April 22, 1841.

Sun Dials.

Messrs. Gaylord & Tucker—I perceive in two communications from A. Walsh, Esq. in late Nos. of the Cultivator, recommendations of a sun dial as one of the convenient and useful decorations of a garden, and inquiries made where a proper one is to be procured. The object of this is to inform your numerous readers, that when the communications met my eye, I was engaged in constructing one, partly for the very purpose for which Mr. Walsh recommends it. I expect to have a quantity finished and for sale in two or three weeks. They will be for sale in Hartford and in New-York city, and if convenient, a quantity will be sent to Albany. Due notice of the persons having them for sale will be given in the Cultivator, if permitted. Resp'y yours, S. MOORE.

Kensington, Ct., May 21, 1841.

Cure for the Mange in Swine.

Give them sulphur in their food, and wash them in soap suds.

B. C. Leavelll

Notices to Correspondents, &c.

Our correspondents will perceive, that by a more liberal use of nonpariel type, we are this month enabled to publish an unusual number of their favors; but, notwithstanding we have given in this and our last number, at length or in a more or less condensed form, about one hundred and forty communications, we have still to beg the indulgence of our friends for the omission of several, which we had intended to have given this month. During the past month, communications have been received from C. Allen, R. Jenkins, C. Broom, Garret Bergen, J. C. Robertson, C. G. Page, Thos. Tinley, N. Sutherland, S. Akerly, W. H. Sotham, S. Blydenburgh, Josiah Holbrook, C. B. Hite, W. M. Hall, John Lossing, B. A. Bidlack, J. J. Slatter, J B. Gray, Willetts Keese, John Johnston, Jos. Sanford, J. M. Weeks, S. W. Jewett, L. O. Lawrence, Calvin Butler, J. P. C., A Subscriber, C. M., A. B. A., One Subscriber, Richmond, E. H. K., A Wool Grower, Kit. Cornhill, and Holkham.

In consequence of the number of articles and communications we wished to insert this month, we have been compelled to condense and abridge several. We hope our correspondents, to whom we feel so deeply indebted for their kind favors, will remember that as much directness and conciseness as is possible, consistent with the nature of the subject treated, is desirable in all communications, as we have room for nothing which does not have a practical or necessary bearing on the great object for which the Cultivator was established,—the promotion of Agriculture.

Acknowledgments.—Our thanks are due to Rev. Henry Colman, for a copy of the "Essex Ag. Society's Transactions for 1840"—To the Author and to some unknown friend, for copies of "A Discourse on the Character, Properties, and Importance to Man, of the Natural Family of Plants called Gramineæ or True Grasses, by Wm. Darlington, M. D."—To some one unknown, for a copy of the "Revised Acts" of Virginia, "which prescribe the mode of ascertaining the taxable property," &c.—to J. C. Robertson of Va. for specimens of two varieties of Indian Corn, and for a paper of Water Melon seeds—to S. W. Jewett of Vermont, for a beautiful specimen of Indian Corn—and to Josiah Holbrook, for a "Geological Cabinet," such as noticed in his communication in this paper.

Errata.—Mr. Garnett's communication, page 79, in the 10th line from the bottom of the second column insert "have" before "varied." And in the 10th line of the second paragraph of the third column, insert before "their inquiry" the words "the answer to;" and in the next line read *inventus* instead of *inventur*.

In the list of officers of the Farmers' Agricultural Society, p. 37, for Wm. S. Bowne read Wm. *F.* Bowne; for Addison M. Snick read Addison M. *Smith;* for Wilson B. Pearsall read *Nelson* B. Pearsall.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Mr. Coleman's Address before the Am. Institute.

WE have received from the respected author a copy of the above named Address, delivered before the American Institute in New-York, April 14, 1841, and have read it with a pleasure which the information conveyed, the great truths advanced, and the eloquence with which they are enforced, are well calculated to excite. The subject assigned Mr. C. was American Agriculture, a broad field, and in passing over which, with all his skill in selection, he could only touch the most prominent points within the limits of an ordinary address. The introductory remarks are truly beautiful, as illustrating the manner in which the most trifling contributions constitute the most magnificent and durable structures, and by inference, the steps by which agriculture has reached its present elevated position. His comparison of the relative value of commerce and agriculture is most just, and he gives, from McQueen's Statistics of Britain, the fact that the manure annually used in that kingdom is of more value than the whole amount of its foreign trade. His argument that government *is* bound to protect and promote agriculture as the surest means of promoting and securing the happiness of a nation, the great object for which all governments are instituted, will not be easily answered. The remarks respecting the efforts made to improve our agriculture, in importing stock, writings on agriculture, agricultural periodicals, &c. contain much useful information respecting the men who have been foremost in some of these enterprises. But if we were called upon to name any part of the address distinguished above the rest for its truth, and fidelity, and justness of application, it would be that part in which he describes the effects of our inflated currency, our mad speculations, and the injurious effects such things must have on the industry and morals of a country; and we hope with him, that "when a few more of the light-fingered gentry of Europe, who have sped their way to our shores, and others of the same class among ourselves, who through greater modesty commit their robberies on the industrious classes under at least the cover of legal forms, not less robbery however for being thus protected, find their proper level, labor, honest useful labor, whether of body or mind, will come to be duly honored."

A. B. Allen in Europe.

IN the list of passengers on board the Packet Ship Mediator, Capt. Chadwick, that sailed on the 1st of June, for London, may be found the name of our friend A. B. ALLEN, Esq. of Buffalo, well known to our readers and the farmers of this country, as one of the most intelligent and enterprising of our agriculturists. Mr. Allen goes out to England for the purpose of making himself more particularly acquainted with its agriculture, and of procuring improved stock of different kinds, and from his great practical knowledge, correct taste, and unquestioned skill as a breeder, and his known determination to purchase *none but the best*, without regard to price, our farmers may expect something very choice upon his arrival, which he informs us will be early in September next.

We were much gratified in learning the intention of Mr. A. to visit England. Too many of those who go out from this country are indifferent to the interests of agriculture, incompetent observers, and some with the very best intentions, not having the desired practical knowledge on such matters, are very liable to err or be deceived. Mr. ALLEN in these respects, as a representative of American agriculturists, is one of which we may be certain he will do honor to our farmers, and ensure respect. The concluding number of his 'Letters from the West,' papers which have been read with much interest, will be found in the present no. of the Cultivator. It will be found most interesting to the cattle breeder, being an account of a visit to some of the largest and best herds of Short Horns in Ohio, and embracing also the Pork Statistics of Cincinnati.

We have been often asked the prices of animals abroad, and the expense of bringing them home, but could not reply as fully and satisfactorily as we could under the circumstances have wished; we shall beg to refer all such inquirers to Mr. Allen on his return, who will then be able to more definitely answer them. Mr. Allen has been so kind as to favor us with his address in England, and we shall take pleasure in forwarding to him such communications on these subjects, as our friends may please to send us, and that shall reach this city, *post paid*, by the 25th July inst. If Mr. Allen's time will permit, we shall expect communications from him while abroad, on matters interesting to the farmer.

Butter.

THE summer is the best time for the makers or the purchasers of butter to lay in their stock for the year. It is the best time, because it is usually the cheapest, because it is the sweetest and richest, and because, if put down sweet and in good condition, it will remain good through the season. It is useless to deny that there is a vast deal of wretched butter consumed in this country, when it would be quite as easy, and more for the profit of the makers, to produce a superior article. We have good pastures, good cows, and there can be no good reason given why good butter should not be the result. In the first place, every thing connected with the making of butter should be perfectly sweet and clean. No smoke, dust, or disagreeable smells should ever exist in the milk-house or dairy. Every thing of this kind has its effect on the cream, and leaves its taint on the butter. The milk should be skimmed, and the cream churned, at the proper time and the proper temperature. The buttermilk should be promptly separated; and in salting, none but salt of the finest, purest kind is admissible. Next to leaving milk in the butter to putrefy, the use of bad salt has the most influence in making this article worthless. Many recommend washing butter in clear cold water to free it from the milk, and this mode is practiced in some of the best butter districts of Europe or the United States. If the milk is thoroughly separated, however, the particular method is of very little consequence; and perhaps a machine for working the buttermilk out, such as has been figured in the Cultivator, or some similar contrivance, will be found as effectual as any thing. But butter, if made ever so perfectly, will not keep well unless it is also packed well. Total exclusion from the air seems necessary, and when this is combined with a low temperature, butter can be kept an indefinite period of time. It is the adventitious circumstances only that make poor butter, for as it is a pure animal oil, if freed from those things that have a tendency to spoil it, it would keep as long and with as little trouble as tallow or lard. It is the difficulty of freeing butter from the substances connected with it, that have a constant tendency to putrefaction, that renders the packing of butter of so much consequence to its preservation. Stone jars we have found superior to any thing else for packing butter. They are sweet, cool, impervious to air, and from their shape leave but a small surface to be exposed, or covered with brine. The butter, whether packed in jars or firkins, must be beat solid, and the vessel, whatever it may be, should be filled at once. The difficulty attending firkins, is, that all wood contains more or less acid, and this, decomposing the salt, imparts an unpleasant taste and flavor to the butter in the cask. This is partly remedied by filling the firkins with strong brine, and allowing them to stand a few days before using, but the cause is never entirely removed. Experiments made in Scotland proved that the wood of the linden or basswood contained the least acid, and this is supported by the fact that in the Tyrolese salt-works, where water is brought to the point of saturation by percolating through bundles of twigs, or faggots, those of the basswood are always preferred to any other. In this country, firkins of heart-ash are preferred. and perhaps are as good as any that can be used. We have known a firkin of butter properly headed, thrown into a well where the water was of the temperature of about 50° to 55°, and when taken out, after a submersion of a year, was as sweet as when put in. Perhaps, where circumstances admit, butter might be advantageously kept in this way in vats filled with running spring water of the proper temperature. Jars or firkins when filled with butter, should have some pure strong brine poured on the top of the butter, and kept there for the purpose of excluding the air until the article is wanted for use. Instead of the brine some use salt, and others prefer a linen cloth saturated in brine, for this purpose. But whatever is used, the top of the jar or firkin should be carefully covered with a board, or what is much better, a clean flat stone. They should stand on flat stones, in a cool place in the cellar, and may be occasionally looked to, to see that the surface is properly secured, and the air excluded.

Inoculation.

WHERE young plantations of fruit trees are cultivated, it is very desirable that there should be a certainty as to the fruit the trees will produce when planted in the fruit garden or orchard, a certainty rarely attainable, when trees are grown to maturity from the seed. The peach, apple, &c. do not often, from seeds, give the same fruit as the original tree; hence grafting or inoculation is resorted to, that no mistake may exist. The philosophy of budding or inoculation is very plain. While the layer of new wood for the season is forming, and after the descending juices have become thickened, the bark readily cleaves from the tree. If, at this time, a bud be carefully cut from the branch of another tree of the same species or family, and inserted in an incision made in the bark of the one it is wished to inoculate, it will adhere, become a part of the tree, and if that is headed down, the bud will, in its growth, become the main stem or the tree itself. In this way the orchardist is able to be certain that he is cultivating the fruit he wishes, and the nurseryman that he is vending such trees as are required by his customers.

Apples, peaches, pears, plums, quinces, and cherries, may be inoculated with success, if the operation is performed at the proper time, that is when the bark cleaves from the tree easily, and the juices have become of proper thickness. This time varies with the different varieties of fruit trees, and the best time can be ascertained most certainly by experiments on the trees themselves. The months of July and August are the best, and it will be found that nearly all fruit trees may be inoculated in the course of July. With budding, as with grafting, the nursery is the best place, and when pears are budded in quince, thorn, or apple stocks, they will be found to succeed better as fruit bearing trees, when put in as near the ground as possible. The bud to be inserted must be taken from the last year's growth of the tree, carefully separated from the wood so as not to injure the bud in the least, and inserted in a split of the bark in the stock in such a manner as to fit close in every part, and be well secured with strips of bass matting, woolen yarn, or other substances that will exclude the air, and confine the bark. Budding is so easy a process, and its results so certain, that while there is so much room for the improvement of our fruits, farmers should make themselves acquainted with the practice, and either by grafting or inoculation, do away the reproach so often well merited, of choosing rather to beg choice fruits of their neighbors, than to take the little pains necessary to provide such fruits for themselves.

Wool.

WE have received from our correspondent, L. A. MORRELL, Esq. of Tompkins co., samples of the wool grown by him the past season, and can say that the greater part of the specimens are equal in quality to any that has ever fallen under our notice. The sheep from which the samples were taken are full blood Saxony, and the beautiful appearance and silky fineness of the wool, warrants the commendation and prices he has received from those first rate judges of that staple of our country, the Messrs. Lawrence, of Boston. Mr. Morrell's skill in the management of his large flocks (nearly 2000 in number) is best shown by the small losses to which he is annually subjected, when compared with many others.

COLORED CHEESE.—Considerable complaint has been made in England as to the effect of colored cheese, and it is strenuously maintained by competent judges that the use of Annatto which is the principal coloring material, must have a pernicious effect. The matter is likely to be fully investigated.

The Grasses—Darlington's Discourse.

We have before us, "A Discourse on the Character, Properties, and Importance to Man, of the Natural Family of Plants called Gramineæ, or true Grasses, delivered as a lecture before the class of the Chester County Cabinet of Natural Science, Feb. 19, 1841, by William Darlington, M. D."

To those who are acquainted with the extent and value of Dr. Darlington's labors in the field of Natural Science, not a word in commendation of this Discourse will be necessary; for although written in a manner calculated to interest a popular audience, it abounds with valuable facts, and exhibits on every page, proof of his familiarity with, and mastery of his subject. We regret that we are unable to give more than a few extracts, where there is so much to instruct.

His definition of what constitutes a grass, and the marks by which this natural family may be distinguished from other plants, is one of the best we have seen; it is as follows :—

> "Whenever we meet with a plant, having a cylindrical, jointed *stem*, with the joints solid, and the intervening portions hollow—or, in a few instances, filled with a pith-like substance,—the *leaves* alternate, one originating at each joint, embracing the stem with its base, and forming a sheath which is slit on one side down to its origin,—and the *flowers* protected by those peculiar envelopes, known by the name of *chaff*,—we may take it for granted that we have before us a *true grass*. Brief and simple as is this definition, it will be found to contain the most obvious characteristics of the tribe; sufficient, it is believed, to distinguish it from all others."

After mentioning some of the common grasses, such as are universally known as such, he proceeds to mention some not generally recognized as such; among which are included Indian corn, broom corn, sugar cane and the bamboo, the last of which is a true grass, though sometimes growing 60 feet high. "The known grasses of Chester county, native, naturalized and cultivated, amount to about 100 species, or one-tenth of the whole number of flowering plants inhabiting the same district." In so numerous a family, resemblances must exist which the practiced botanist only can detect; and in the want of attention, or want of knowledge on this point, the strange doctrine of the transmutation of plants has its origin. On this subject, we extract the following note, containing an allusion to a man who used to write himself down 'United States Geologist,' an allusion in our opinion, not more pointed than just :—

> "It is a curious circumstance, in the history of this vulgar error, that, in former times, when the OCCULT SCIENCES flourished, the peasantry of Europe imagined all our cultivated small grains to be subject to this kind of transmutation :—that wheat was often changed, first into Rye, then into Barley, from Barley to Ray Grass, or Lolium, from Lolium to Bromus, or Cheat, and finally, from Bromus to Oats! They supposed, moreover, that by the agency of a fertile soil, the degenerate grass could be gradually restored to its original form; or at least, that it could be brought back as far as Rye!—"Veteres credebant frumentum per gradus degenerare in macriori terra, atque Triticum in Secale, Secale in Hordeum, Hordeum in Bromum, Bromum in Avenam et sic per gradus descendere, immo credebant etiam semina Bromi vel Hordei in fertiliori terra producere Secale."—Caroli a Linne, Amœnitates Academicæ, Tom. 5.—Even in our own enlightened age and country, as we are wont to phrase it—there are yet many persons strongly tinctured with the notion, that Wheat is frequently transmuted into Bromus, or Cheat;—though I have not met with any so full in the faith, as to believe they can bring the degenerate offspring back again to its pristine state. It is remarkable, also, that this obsolete notion—so entirely exploded among scientific Naturalists—has lately found an advocate in a gentleman of some pretensions as a Geologist,—and who has, more recently, acquired considerable notoriety, by his researches concerning TERRITORIAL LIMITS: I mean Mr. Featherstonhaugh. As that gentleman has been so astute in detecting the mutability of the Laws of Nature, we ought not, perhaps, to be surprised at his discovery of the extraordinary MUTATION in our North-Eastern Boundary, since it was established by the fathers of the Republic! It is quite as likely that landmarks should change their locality, as that objects of Natural History should lose the distinctive characters impressed on them by the hand of the Creator."

The following remarks on the value of grasses for hay, and the best time of cutting them for this purpose, will commend themselves to the attention of every farmer. We have, however, been accustomed to give the first place among the grasses to 'Timothy or Herd's grass,' rather than the Meadow or June grass. It may be well to mention here, that the clovers, lucerne, &c., though ranked by the farmer among the grasses, do not belong to them, but an entirely distinct family. Still, most farmers, and indeed from habit, many who are acquainted with this difference, speak of the clover as a grass, and rank its seeds among the grass seeds.

> "In an *Agricultural* point of view, the superior value of the grasses as materials for pasture and hay, is owing to the large quantity of saccharine matter with which they abound about the time of flowering; and which is the source of that rich, sweet odor, observable in well-preserved hay. This saccharine matter, which pervades the whole plant before flowering, and is most perfectly elaborated at that epoch, is designed to be ultimately concentrated and deposited in the seeds, chiefly in the form of *farina*; and hence we find the *herbage* of comparatively little value after the fruit is fully matured. The skilful Agriculturist, therefore, when he wishes to have good *hay*, cuts his grass at the moment when the nutritious juices are most perfect, and while they are diffused throughout the plant. But when his main object is the *seed*, as in our cultivated grains, he of course postpones his harvest until the career of vegetation is finished. It is needless to enlarge on the importance of the *herbage* of the Grasses, in supplying the food of our domestic animals and, indirectly, the animal portion of our own food. I will, however, mention those species which are deemed of chief value in our meadows and pastures, naming them in what I consider the order of their excellence. 1. The Meadow, or Green Grass, erroneously called "Blue Grass," in Kentucky [*Poa pratensis, L.*]—2. Timothy, or the "Herd's Grass," of the Northern States (*Phleum pratense, L.*)—3. Orchard Grass, (*Dactylis glomerata, L.*)—4. Meadow Fescue, (*Festuca pratensis, L.*)—5. Blue Grass, (*Poa compressa, L.*)—6. Ray Grass, (*Lolium perenne, L.*)—7. Herd's Grass, of Penna. often called "Red Top,"—the "Bent Grass," of the English, (*Agrostis vulgaris, L.*)—and 8. Sweet-scented Vernal Grass, (*Anthoxanthum odoratum, L.*) There are a few other Grasses—native, or partially naturalized—to be found on our farms,—and which are more or less eaten by cattle, when the better ones are wanting; but they are of comparatively little value, and good farmers are always desirous to supersede them, as soon as possible, by some of those above named. It is remarkable, that all the Grasses here enumerated, are believed to have been introduced into our country. They are all more or less extensively naturalized; but some of them require to be regularly sown, to insure a full crop; and are therefore known as *artificial* Grasses. Those generally cultivated here, are the Timothy and Orchard Grass,—and occasionally we see the Ray and Herd's Grass, or Red Top; though these last are not so much esteemed. The others are completely naturalized; and when the soil is either originally fertile, or adequately improved, the best of them, viz. the Meadow Grass and the Fescue, soon appear spontaneously in our pastures, and supersede the artificial ones. Now and then we hear of attempts to introduce *new* Grasses to the notice of our Agriculturists, accompanied by exaggerated statements of their value, such as the Taller Oat-Grass, (*Avena elatior, L.*) sometimes called "Grass of the Andes;" and a few years since, one of our coarse indigenous Grasses, called "Sesame" or "Gama Grass," (*Tripsacum dactyloides, L.*,) was so extravagantly lauded in the journals, that many lovers of novelties were induced to try the experiment of cultivating it, in place of the old approved plants; but, like some *other* "Experiments" that we wot of in our day, it resulted in a total failure. It is indeed exceedingly doubtful, whether any other Grasses are so well adapted to our climate and our wants, as those old and long-tried acquaintances of our farmers, which I have already enumerated."

There can be little question, that when we take into view the fact that from the plants technically called *Grasses*, man obtains his bread, and the domestic animals their food, the family must be considered the most important and valuable, of any that Providence has bestowed on man.

Woburn vs. Berkshire Pigs.

In the May number of the Tennessee Agriculturist, is a statement of an experiment made in feeding pigs of these two breeds, conducted on the part of the Berkshires by Mr. Fanning, one of the editors of that paper, and on that of the Woburns by Dr. Samuel Martin. The following is the result, condensed from the statements of those gentlemen :

		2 mo's.	3 mo's.	4 mo's	5 mo's.	6 mo's.
Berks.	Sally B.,	30 lbs.	50 lbs.	74 lbs.	100 lbs.	145 lbs.
	Black Rose,	"	"	"	"	136 lbs.
Woburns,	Berenice,			116 lbs.	185 lbs.	254 lbs.
	Bertha,			108½ lbs.	174 lbs.	232 lbs.

By this table, it will be seen that Dr. Martin's pigs far exceeded those of his competitor, although, under the circumstances, the trial cannot be considered a satisfactory one. Dr. Martin is an extensive breeder in Kentucky, and he considers his pigs, a cross of the Woburn with a large English hog which he calls the White Berkshire, superior to all others. We are glad to see the attention of practical men turned to the great point of actual feeding, as after all, the breed that will make the most meat with the least expenditure of food, and in the least time, must be the most profitable breed. But for this purpose, the pigs must not only be accurately weighed, but their food also, so far as regards quantity and quality, precisely ascertained. We know of no part of the world where these experiments can be more advantageously conducted than in the great West, and we believe the men are there who will enter upon and conduct such a series of experiments most satisfactorily. It is to be hoped the propositions of the spirited editor of the Agriculturist, will receive proper and prompt attention from the breeders of the west.

The weight of Dr. Martin's pigs at six months old, is certainly extraordinary, and probably hard to beat. If any of our friends have ascertained the weight of their pigs at that age, (live weight, it will be recollected,) and will furnish us with the names of the breed, mode of keeping, weight, &c., we should like it, and it might interest others. Although the average increase of weight in Dr. Martin's pigs was great, it was not equal to that of a Berkshire fed by Mr. Curd of the same State, or one of the same breed fed by Mr. Marks of Onondago Co., N. Y. Farmers should know no preference to breeds, any further than their true interest is concerned, and that prejudice is unfortunate which prevents their adopting the course which tends most directly to their prosperity. Careful experiments made by competent men, and the results communicated to the public, will do much to set agriculturists right in this important matter.

Report on the Silk Culture.

Among the reports made at the late meeting of the Cuyahoga County Agricultural Society, was one on the Culture of Silk from the pen of J. W. Allen, Esq., which places the practicability, utility, and necessity of the culture in a very lucid and forcible point of view. This is a subject which in our opinion should not be suffered to sleep until the culture of silk has taken as firm a hold as the culture of cotton has in our country. What has been done, is sufficient to show what may be done, if some of the spirit and energy for which Americans are famed, is directed to this point. We should be pleased to extract largely, but have room for only the following :—

> "If it requires a quarter of an acre of land to produce wheat sufficient for one barrel of flour, worth five dollars, the same extent of land appropriated to the culture of silk, might, and should produce ten pounds of silk worth sixty dollars. The transportation of a pound of silk worth six dollars, will cost no more than a pound of flour worth three cents. The cultivation of an acre of mulberry trees, need not exceed double the expense of a corn crop. But if our estimate be too large by one half, the product would still yield a much better return than any other crop."

WORK FOR THE MONTH.

The great business of July at the north, is hay making; and so much of the health and profit of the stock of the farmer is depending on the quantity and quality of the hay made, that it must be considered one of the most important labors of the farm. Much of the value of hay depends on the time at which the grass from which it is made, is cut. All plants intended for nutrition, are found to contain a quantity of saccharine matter, or substances convertible into sugar; and the period when this matter is most abundantly developed in the plant, is found to be the best time for cutting it for hay. In the grasses, however, there seems to be some little difference as to the period of their growth in which the most saccharine matter is found, some showing the most at the period of flowering, and some at a later stage.

Of the grasses most cultivated for hay in this country, we name the following, adding from the celebrated Woburn experiments, a few items in a tabular form that may interest the farmer, as indicating the best time for cutting and curing hay :

Grass and Name.		Weight per acre at Flowering				Do. at seed time.			
		Grass.	Hay.	Loss in dry'g.	Nut. Mat.	Grass.	Hay.	Loss in dry'g.	Nut. Mat.
Poa Prætensis.	June Grass, Kentucky blue Grass, Smooth stalked Grass.	10,209	2,871	7,337	279	8,507	3,403	5,104	199
Phleum Prætense.	Meadow Catstails, Timothy Grass.	40,857	17,355	23,481	1,595	40,837	19,397	21,459	3,688
Dactylus glomerata.	Cock's foot Grass, Orchard Grass.	27,905	11,859	16,015	1,089	26,544	13,272	15,272	1,451
Agrostis vulgaris.	Fine Bent Grass, Herd's Grass, Red Top.	15,654	6,655	9,000	733	14,973	8,235	6,738	1,169

The clovers, although generally ranked among the grasses, do not properly belong to them; yet they are extensively used for making hay; and the same rules for cutting, will apply to them, that are adapted to the true grasses.

From the experiments made at Woburn, it will be seen that the most favorable time for cutting grasses, is usually when the seeds are formed, but before the stem becomes dry, or the juices have been absorbed by the seeds or dried away. There is reason to believe that farmers err in both extremes in this matter; some cutting while too green, or when in flower, and others letting the grass remain till it becomes dry, or like straw. But if there is much depending on the time of cutting, there is still more in the method or perfection of curing, and it is here that the greatest skill of the farmer is requisite.

Unless there is urgent necessity for the measure, grass for hay should not be cut immediately after a heavy or prolonged rain. There should be time for the moisture with which the plant is at such times saturated, to be evaporated, and this will be done much sooner while the grass is standing, than if cut and thrown into masses. Good weather, and a dry clear air, but not too hot a sun, will be the best for making hay; and there is no climate in the world that affords ordinarily more such days, than that of the United States.

Hay making is one of the most laborious parts of a farmer's work, and he should economize the time as much as possible. Mowing should be done in the morning. The grass cuts easier, is made into hay more readily, and if the laborer needs rest, he can take it during the hottest part of the day. If the mower commences his work at sunrise, a half day's work will be done by ten o'clock, and he will find two hours rest more grateful then, when others are toiling in the sun, than it would have been if spent idly in the morning, or lost in bed. Shaking out the hay, or raking it, is light work compared with mowing; hence this should be done when it can be best borne, and when the frame is most invigorated.

There are two things which the man used to mowing never neglects; one is, to have his sythe sharp, and the other, to have it fast on the snath. If you have a poor sythe, and are intending to mow through the haymaking season, better throw it away, or convert it into any other use, than to think of mowing with it. If a man wishes to wear out quick, let him mow or cradle with a dull sythe, and he will be soon gratified. The man who has never tried it, can form but a faint idea of the difference there is in the severity of labor, between mowing with a good sythe, well hung and secured, and a poor tool and poorly hung. It is a common thing to set boys mowing with men, but the practice is not to be commended. A boy cannot keep up with an experienced mower without slighting his work, or injuring his health, and most frequently he will do both.

There is not one man in ten, perhaps, who pretends to mow, that understands his business, or can manage a sythe so as to cut all the grass, cut it close to the ground as it always should be, and leave the field after raking level, and the stubble without ridges to mark every swath. But by cutting grass close, the crop is greatly increased, as there is a great difference between the weight and bulk of the tops and bottoms, and the chance greater for a full growth of rowen or after-math.

In districts where wheat and clover constitute the crops grown, and form the only rotation, the curing of clover for hay is an important operation. If allowed to stand too long, the leaves fall off and nothing but the naked stem is left; and if the curing is carelessly or improperly performed, the same result ensues, thus materially lessening its value for hay. We have found the best time for cutting clover, to be when the *heads* have partially changed their color, but the leaves remain fresh and green. Cut at this time, and cured in the cock, with as little exposure to the sun and wind, or being shaken as little as possible, it makes an excellent hay, and particularly so, if when seeded down, there was a good quantity of timothy seed mixed with the clovers. In curing hay in cocks, the grass mown in the morning, after it is wilted in the sun and dried, is in the afternoon, and before any dew falls, put up into cocks as high in proportion to the base, as is consistent with safety, and the air will circulate more freely through such, than if spread over a great extent of ground. They may stand in this way untouched one or two days, be the weather what it may, but usually, if the weather is good, the cocks are opened on the third day and aired, when they are again put up and stand until the fifth day, when after being opened and dried, the hay is usually fit for the stack. Hay undergoes in curing, a slight heating or fermentation, and put up in this way, it cures as rapidly as if exposed to the sun, while the crumbling of the leaves consequent on exposure and frequent turning is wholly avoided. But in whatever way grass is cured, it should be done so effectually as not to heat and mold in the mow or stack, a change which renders it worthless for nutrition, and injurious to the health of such animals as are fed upon it.

Where meadows are made smooth, as they always should be, the revolving horse rake will be found a labor-saving implement of great value; and where this cannot well be used, the single horse rake should always be found. Hay making requires labor enough at the best, and every saving should be adopted by the farmer.

Canada Thistle.—Do not forget to wage an unceasing warfare with this pest of the farmer. If in your pastures, cut them down to the ground frequently; if in your hoed or root crops, be careful not to let one escape; and if after the usual culture is over, you find them springing up, go over the crop again, and let the extermination be thorough. Above all things, never allow a thistle to ripen its seeds on your farm. We have seen some farmers let their thistles alone to so late a period, that they would perfect their seeds after being mown, and thus the labor was in a great measure lost.

Corn.—This is usually "laid by" in this month, that is, the culture of it ceases, and it is left to ripen its grain undisturbed. There are too many fields however, in which, owing to the ground being improperly prepared, the lateness of planting, or the unfavorable spring weather, the corn maintains a doubtful struggle with the weeds, and where an extra hoeing would be of decided benefit. The corn crop cannot be kept too clean, nor can the earth be stirred about the plants too frequently. If therefore you have no time to hoe, take your cultivator and run it backwards and forwards once or twice between the rows, and you will find the weeds will be fewer, the ground finer, the danger from drouth less, and the corn itself to grow more rapidly. We must help our corn crop forward this year as much as possible, or the frosts of autumn may find it still soft and unripe.

Turneps.—July is the month for sowing the English turnep, and during the fore part of it, the Swedes or Ruta baga may be sown with a reasonable prospect of success, and we advise those whose corn prospect is doubtful, to try a piece of ground with these valuable roots. The English or common flat turnep, requires a clean soil, and one containing much vegetable mold will be better than any other. Newly cleared lands on this account, usually give great crops of turneps. Any land, however, that is sufficiently rich, will grow turneps, and every farmer should raise some for use in the family, or for his stock. It is a good plan to sow over the young plants as soon as they come out of the ground with soot, ashes, &c., in order to keep off the fly.

Beets and Carrots, for use late in autumn, may be sown, and will frequently make good roots for preservation in winter. Gardeners sometimes sow peas for a late crop, in the early part of this month; but if sown, they should be soaked in soft or slightly warm water, for six or eight hours previous. Cabbage plants will do well, if transplanted this month, but require to be examined frequently to guard against the grub. This depredator rarely does much mischief after the middle of July.

Saving Seeds and Herbs.—Every farmer should as far as he can, raise and save his own seeds; and to do this, they must be attended to in their season. There are many herbs too, which are required for domestic purposes, such as Burnet, Mint, Sage, Parsley, Sweet Marjoram, Savory, Fennel, &c.; and many which are useful for medicinal purposes among animals, such as Tanzy, Smartweed, Wormwood, &c., all of which should be saved when their peculiar properties are the most fully developed, and this is about the time when they are in full flower. Herbs should be dried in the shade, where the air is pure, and be kept free from all moisture after being cured

English Corn Laws.

Great Britain at the present moment is shaken to its center by a struggle more fierce than any that has occurred since the passage of the reform bill. The Ministry have announced their intention to fix the duties on grain at certain rates, which it is clear will admit of extensive importations, or in other words, to abolish the corn law system of the kingdom. This has brought out the whole of the landed and farming interest in violent opposition; as it is well understood the exorbitant prices which have prevailed for years, and on which the present system of English farming is mainly based, could not be maintained without the protection of such laws. On the other hand, the manufacturing and commercial interests are ranging themselves on the side of Ministers, and as the Queen is said to favor them, it is probable they will eventually succeed, although present appearances indicate a prolonged struggle.

The questions at issue are very important to this country. It is the monopoly of the home market that shuts out our wheat from England; and the abolition or modification of the corn laws would open an extensive market to us at once. It is the first time in the history of England that the aristocracy or the land holders, have found themselves fairly brought into opposition with the mass of laborers, manufacturers, and commercial men, and the result can hardly be doubtful. The necessities of the government have led to this course, as it is only two years since the present premier, Lord Melbourne, declared a repeal of the corn laws impossible. The discussion has opened the whole range of commercial restrictions and free trade policy, and promises, even should it lead to the overthrow of the present ministry, a thing by no means improbable, to lead to a better understanding and a more correct application of these important principles.

The American Institute, and Agriculture.

An important proposition has been submitted to the Agricultural Societies of the counties in the vicinity of New-York, by the managers of that Association, which is, that the county societies co-operate with the Institute, unite their funds, and make their displays, and award their premiums at the annual Institute Fair to be held in October.

There appears to be no serious obstacles to such a concentration of means; as an arrangement might be effected by an alteration in the by-laws of the Institute, making the officers of the county Societies members, and thus avoiding a non-compliance with the act granting to the societies, the sums proposed to be distributed. The only question of importance to be decided, is, whether the agriculture of the several counties that should so unite with the Institute, would be as much benefitted, as by a Fair, exhibition, and distribution of Premiums at home. Would the mass of the farmers in these counties be as likely to be interested in the results? Would they be as likely to attend at New-York, as at a meeting in their several counties? And would the distribution of premiums at a single point, excite as much emulation, and exert as wide an influence as if made at many? These are some of the queries which such a proposition naturally excites, and which appear to deserve a serious consideration before the idea of separate county societies in the southern district is abandoned.

Of the attractions of the Fair at the Institute, and of the the favorable influence it has exerted, there can be but one opinion; and there is as little doubt that with an increase of means, will be a corresponding increase of activity, attraction and usefulness. New-York too, is a central point, the facilities of communication in every quarter are great, and the farmers of the neighboring counties are in the habit of frequenting the city for the purpose of market and trade. It may be true that the greater part of those who would attend a county exhibition would attend the Institute Fair, but it is possible also, that many would be glad to compete for premiums at home, that would find it inconvenient or impossible to attend at New-York. So far as we have been able to observe, the *number*, and not the *magnitude* of the premiums, has called out the greatest number of competitors; and whether the means of the several southern counties are concentrated, or whether they are left to the disposal of the county societies, this is a point that should not be overlooked.

In making these remarks, we are influenced only by a desire that our farming friends in the southern counties should expend the bounty of the State in a manner that shall the most effectually promote the interests of agriculture. For this cause, the Institute has already done much; with the means placed at its disposal by the State, it will do more; and should the managers of the county Societies, after proper deliberation, conclude to accept the proposition of the Institute, the Fair of October we venture to predict will be an exhibition hitherto unrivalled in this country.

The Filbert.

In a late number of that excellent Journal, the Boston "Magazine of Horiticulture," &c., there is a paper by Mr. Downing of Newburgh, N. Y., on the cultivation of this nut. From the great quantities annually imported, there can be little doubt a ready market would be found for the product of a filbert garden or orchard, and the ease and certainty with which they may be grown, should recommend them to favor.

Mr. Downing recommends a soil naturally dry rather than moist, but a dry gravelly loam, or sandy loam is preferable. They will succeed however, in any good soil. The kinds preferred by Mr. D. for cultivation in this country, are the Cosford, Frizzled, and Northampton Prolific. There are other varieties, but these have been well tested, and will abundantly repay the grower. The cultivation of such nuts is a great object in some parts of England, and the average crop is considered about 800 lbs. per acre, though at times, when the soil and season is favorable, more than three times that quantity have been gathered.

Killing Canada Thistles.

Mr. Chapman, of this city, (Albany,) informs farmers,

> "That if they will cut up the Canada thistles one and a half inches below the surface of the ground, and pull them up with the left hand as they cut them, in the full and old of the moon in May, June, July, August, and September, they certainly will destroy them; they may miss some in going over the ground, even the first, second, or third time; but be sure to look your ground over every old and full moon, till you know you have destroyed them. I have destroyed more than fifty thousand the last two years, and now there is not one growing on the ground I have been cutting them from."

We have great faith in the course recommended by Mr. Chapman, as we have frequently destroyed small patches of the thistle ourselves by repeated cuttings or pullings in a single season. But we paid no attention to the moon, and have not a doubt the process would be just as effectual if performed in the new, as in the old of the moon. If plants are not allowed to form leaves, or in other words are not allowed to respire or breathe, they must die, and this prevention is not influenced by the old or the new moon. Farmers who find the thistle just taking possession of their lands, cannot do better than to cut them frequently by hand; where there are acres of them, repeated plowings or thorough summer fallows must be resorted to for their destruction.

The Dahlia.

We have received from the Messrs. Prince of Flushing, Long Island, a catalogue of their magnificent collection of Dahlias, amounting to some 450 varieties, embracing all the most celebrated and choice kinds cultivated. This beautiful flower, brought from Mexico, and of but recent introduction into the gardens of Europe, bids fair to rival, if not to eclipse the Rose and the Tulip, that have so long held possession of the throne of beauty among the flowers.

The dahlia is easily cultivated, and shows a profusion of flowers from June to October, making it in that respect, one of the most desirable of the flowering plants. As the plant in a rich soil grows to a large size, and requires to be supported, they should be planted at three or four feet from each other, that they may not be crowded at the time of blossoming. The dahlia would be more common than it is, were it not that considerable difficulty has been sometimes experienced in preserving the roots through our winters. The following directions of the Messrs. Prince, will perhaps obviate this evil. They say—

> "Our practice in wintering dahlias is exceedingly simple. As soon as the frost has killed the tops, we cut them off and take up the roots, and then dry them for two or three days in the sun, after which we place them on shelves in a cellar, perfectly dry and free from frost, where they remain until the period for spring planting. Moisture is destructive to them, and in a damp cellar or room they are liable to rot; but in a dry one, not a single one will be injured, if it is kept free from frost."

The culture of flowers is one of the most innocent and delightful of recreations, and we should esteem ourselves fortunate, could we aid in diffusing a taste for these beautiful productions of nature.

Henrico (Va.) Ag. and Hort. Society.

We perceive by the Richmond papers that this Society held its first Fair at Godden's Spring a few weeks since, and that the meeting went off in the best manner. The Society was formed only some three months since, and seems to have sprung up at once into a most vigorous and healthy existence. The place selected for the meeting, was a beautiful one; the day was fine; the concourse of spectators, particularly ladies, great; the competitors for the liberal premiums offered, numerous; the address of the right kind, practical and common sense; and the whole proceedings harmonious and gratifying. Premiums were awarded on the following articles:—Domestic Silk, Luxuriant Flowers, Fruit, Horses, Jacks, Domestic suit, Plows, Cutting Machines, Corn Shellers, Wheat Machine and Fan, Domestic Wine, Milch Cows, Bulls, Heifers, Boars Sows.

The amount of stock exhibited, was great, and some of the animals very fine. There were quite a number of competitors for the premium on domestic wines; and several superior samples were exhibited. If wine must be drank, we think it will be much better to make it ourselves, and use it pure and unadulterated, than to quaff the noxious compounds which are too frequently offered to the public as wine. The quantity of wine made in Ohio, according to the census, (about 6,000 barrels,) far exceeds what we had supposed possible; although aware that the Swiss and German emigrants had in many instances entered into the culture of the grape and the manufacture of wine.

Old Virginia is a noble State; her soil is excellent; her climate mild and salubrious; her facilities for trade, manufactures, and navigation, great; and if her sons will awake to the importance of her agriculture, if they will form such societies, and give them the life and spirit of the Henrico one, and some others now existing in that State, and above all, if they will inculcate in all classes the idea that honest industry and labor is always honorable, she will soon find her population rapidly increasing, and cease to feel the drain that by emigration removes the bone and sinew of the State, to fill up the new States and territories of the broad West.

Culture of Corn.

In a late number of the Hamilton Intelligencer, Ohio, is a valuable article on the cultivation of this great staple of the West, (and which is scarcely less essential to every part of the country where it can be grown, being, in the language of Mr. Taylor, meal, meat, and meadow,) from the pen of J. McMillikin, Esq. The substance of his experience and observations, he has summed up in the following rules, which, marked as they are by good sense, we feel a pleasure in transferring to the columns of the Cultivator :

> "1. If the ground intended to be cultivated in corn has a sod upon it, it should be broken up in the fall or winter preceding if the weather be suitable, if not it should be plowed in February, or at least in March. If not level, it should be rolled, and if not mellow it should be harrowed before planting.
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> 2. If stubble or corn ground, no stubble or stalks should be removed, unless taken to the manure pile—should be plowed six inches deep, and if not mellow should be harrowed.
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> 3. While small, the corn should be harrowed, and the ground should afterwards be kept loose and mellow by the repeated use of the cultivator.
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> 4. On sod ground a plow should never be used in the cultivation of corn.
>
> 5. On other ground, the plow should never be used after the roots have extended any distance from the hills, and at no time unless indispensably necessary to prevent the ground from baking.
>
> 6. The fibres or small roots of the corn should not be cut; the cutting off of every fibre deprives the stalk of some part of its nourishment.
>
> 7. The earth should not be thrown high upon the hills, as it induces the throwing out of additional spur roots. A very slight portion of mold may be placed around the hill.
>
> 8. The ground in the cultivation of corn should be kept as level as possible, to permit the roots to extend in every direction, and to retain moisture. Ridging cuts the roots—prevents the extension of the surface roots—drains the water from the hills—exposes more surface to the action of the sun, and is therefore injurious to a crop in a dry season."

We are glad to see the attention of farmers turned to the corn crop, and the best method of cultivating it: for its importance can hardly be overrated, and what we deem some very absurd and injurious practices are common in its treatment. As far as Mr. M.'s rules go, they have our hearty concurrence, and there is little doubt if generally adopted, the corn crop would be materially increased. The plan of plowing up land intended for corn in the fall, we know to be a good one, as frost is one of the most efficient of pulverizers, and the soil in the process receives a more perfect aeration than it would if turned over immediately before planting. But before the plowing, the ground should be covered with long manure, since it is a fact which should never be lost sight of by the corn grower, that corn is one of those crops that cannot be fed too high. There are some soils too, which being naturally moist, and having never been drained, would if planted on a level surface, or without being ridged, prove too wet for the young plants, although not perhaps so, when farther advanced ; but on a soil well drained, and in good condition, ridging or hilling is useless, or even worse than useless.

Perhaps there are few opinions more intrinsically erroneous than the one which supposes the corn plant to be benefited by mutilating the root, which have obtained a wider credence than that. It is directly at variance with every well established principle of vegetable physiology, and is opposed by the experience of multitudes of the most successful corn growers in the country. Liebig, in his invaluable work, asserts, and no one can controvert his position, "That the size of a plant is proportioned to the surface of the organs which are destined to convey food to it. A plant gains a new mouth and stomach with every new fibre of root, and every new leaf." But the notion in question, supposes that the best way to make a plant flourish is to destroy all its mouths, and compel it to form new ones, if nature is competent to the process. Corn is always benefited by frequently stirring the ground, and as plowing does this, the advantage conferred has by some strange process of ratiocination, been supposed to be the result of cutting the roots.

It has become a common practice with some of the most skillful farmers in the New England States to seed down their corn ground with clover and other grasses, the seeds being sown and covered at the last time of hoeing. In doing this, hilling would be impracticable, and the object with the farmer is to have the ground left as level and smooth as possible. Experiments carefully conducted, show a decided advantage in favor of level culture over hilling, and we have never heard an instance in which the soil was in a good condition in which the culture without hilling failed. The idea that hills are necessary to support the corn, is without any real foundation. Nature provides for this emergency herself, in causing sets of brace roots to shoot out, as soon as the plant requires them.

It is not probable, such has been the unfavorable state of the season in its early part, that a great crop of corn will be grown the present year ; still where the culture has been good, and proper seeds have been selected, a fair reward for labor may be expected. In the cultivation of plants, no glaring departures from nature can be tolerated ; we may improve, but we cannot control, and all attempts at such unwise interference, will be defeated. Manure highly, plow deep, make your land dry, use none but good seed, keep the surface frequently stirred, and you may safely leave it without any inequalities, and permit the roots to dispose of themselves as they think proper.

Blight or Mildew in Wheat.

There are very few years in which millions of dollars are not lost to the farmers of the United States by Mildew or Blight, and this fact is sufficient to justify the most anxious care to discover the cause of the disease, and a method of prevention. That the mildew or blight is a fungus or parasitic plant, is well known to all who have paid attention to the subject, but as it never fixes on a plant in a sound healthy condition, the cause of the disease which invites it, is the real question at issue. This subject, in consequence of the damage it has occasioned to the crops in Pennsylvania, within a few years, has of late attracted much attention among the practical and scientific farmers of that state, and several papers on blight have been read before the Philadelphia Society for the promotion of Agriculture. Two of these have fallen under our notice ; one by Kenderton Smith, Esq. and the other by James Gowan, Esq. Both are papers exhibiting much acquaintance with the subject, are written with ability, and a short notice of them, showing the opposite conclusions at which they arrive, may be useful.

Col. Smith's paper, which created no little sensation at the time it was published, attributes the great prevalence of mildew to the practice now so prevalent (and which, if not objectionable for the cause stated, so important to the farmer) of sowing grass seeds upon wheat, or in other words by an effort to secure two crops at once, putting the safety of the most valuable in great danger.

Col. Kenderton Smith says,

> "The matted coat of grass when thoroughly saturated in moist seasons, by impeding the sun's rays causes an excess of moisture in the soil, and preserves the earth at the root of the grain too cold and wet to maintain a healthy vegetation of the plant at its near approach to maturity. * * * This checks and renders languid the circulation of the sap at the very time when nature indicates that not only the *stalk* but the *soil* should be basking in the heat which prevails at that season of the year."

Mr. Gowan dissents from this opinion in toto, and insists that the grass has no influence in producing mildew, but that on the contrary to a certain extent it operates as a preventive. He says—

> "I hold that the prevailing cause of blight in this country is owing to the *sudden heat and cold* to which the wheat is often exposed in June and beginning of July—and this I will attempt to explain. The wheat plants at the period of filling, naturally send up or yield most generously the juice requisite to furnish the heads with seed or grain. This process will be more or less accelerated by the action of the sun, in proportion as he is mild or intense. If the heat be great and of two or three days continuance, the plants will be greatly excited. In this state, should the sun suddenly withdraw, the wheat exposed to a merciless N. W. or N. E. that sinks the temperature instanter some 20°, the chilling cold of which no instrument can fully represent, animal and vegetable life being only capable of realizing it—is it to be wondered that so sudden a check to the pulsation of the excited wheat plant should prove fatal to them? The cold winds blowing on the head and neck of the plant, chills it at the very point of exposure, the head becomes languid or torpid, while from the density of the plants and the heat of the earth, there is a genial heat and moisture below—the fountain that supplied the head keeps bubbling up and flowing on, but the functions of the head reservoir, or condenser, have ceased ; it can take no more ; in such a case the fountain or conduits must burst ; both or either do, and hence the rust that is observed on the plants, which is but the outward sign of the disease that is preying on the vitals within. After a lapse of a day or days the sun returns and blazes on the diseased head, which having neither health or moisture in it, cannot but wither and die under his influence. *This, then, is the prevailing cause of the blight of wheat in our climate.*"

Who shall decide when doctors disagree? May not these antagonist writers both be partly right, and both partly wrong? Both agree that there must be a great degree of heat, both that there must be an excess of moisture to produce blight, both that there is a forced and unnatural vegetation, and so far they are doubtless correct. Col. Smith maintains that the 'matted grass' keeps the soil cold and wet ; Mr. Gowan that this covering preserves a 'genial heat and moisture,' and here, of course they are as wide apart as the poles. If this covering of grass produce cold in the soil, it must be by evaporation ; but evaporation from a covered surface proceeds so slowly that such an effect is rarely if ever produced. On the contrary such a covering of grass preserves the temperature of the soil, by preventing both radiation and evaporation, and here, we think, Mr. Gowan is right. But if, as all appear willing to concede, the disease arises from too great an accumulation of vegetable juices in the vessels of the plant, caused by heat and moisture, the two grand agents of all vegetable growth, then a reduction of temperature at the root of the plant would be the most effectual means of checking this accumulation, and for this purpose a free circulation of air, and a clean surface, admitting of both radiation and evaporation, would be most efficient, and here, we think Col. Smith comes nearest the mark.

We have, in the course of our farming, experienced the bad effects of blight to a considerable extent, and have hence been induced to examine the subject with more attention. A few years since a field of sixteen acres of beautiful wheat was so injured, that it was not worth the labor of cutting : it was, in fact, totally destroyed. In this case, and in all others, where our wheat has felt the blight, the attack has been preceded by warm, close, sultry, weather, with frequent showers, and every circumstance favorable to a rapid vegetation. The vessels of the plant were evidently unnaturally excited and pressed, and at the same time the continued moisture softened the still tender cuticle or covering of the stem, and lessened its powers of resistance. The microscope shows that in this state the covering bursts or cracks longitudinally, the partially elaborated juices escape, and these, it seems to us, furnish a nidus or place of reception for the minute seeds of the fungi, which always accompanies blight, and the seeds or sporules of which constitute the red powder or rust always found on wheat that is blighted.

Atmospheric agencies have a great influence, doubtless, in causing this disease of wheat, but we have not been accustomed to attribute so much effect to changes of temperature as does Mr. Gowan ; and it struck us as not a little singular, that while the first half of his paper is devoted to proving that sudden changes of temperature are the cause of this evil, the last part should be an argument to prove the frequency of this disease in British wheat, a country where the climate is more equable, the range of the thermometer less, and the changes less sudden and extreme than in almost any other.

But we do not believe that sowing grass seeds with wheat, or the most sudden and extreme changes of temperature, will always produce blight, or that a perfect freedom from all plant will always exempt it. Experience negatives this position. The sixteen acres of wheat above alluded to was not sown with grass seeds, yet it was lost ; and the tens of thousands of acres annually sown with wheat and clover satisfactorily shows that something besides 'matted grass' is required to cause blight.

Wheat, early sown, on soils naturally dry, or made so by draining, we have found to escape blight more certainly than any other. It has usually passed the stage in which mildew commences, before the season arrives in which the causes of that disease are most active. On the contrary, late sown wheat does not come forward until the hot sultry heats of the summer have come on, and these when combined with moisture are most sure to produce mildew. Wheat that is winter killed badly, is frequently so much retarded as to be overtaken by mildew and rendered worthless. If one part of a field or neighborhood is lower than another, the lowest part usually suffers most. Wheat highly manured, especially if sown late, rarely escapes being more or less blighted ; and for this reason, fresh or unfermented manure should not be applied to the wheat crop.

In England, in districts subject to blight, it is customary to sweep the wheat fields, while the crop is in the stage most liable to its attack, with a rope carried by two men, and as long as the width of the lands, or the labor of carrying will permit. The rope drawn in this way agitates the grain, and causes the superfluous moisture to be dislodged from the stalk and head, thus preventing that softening which would ensue if the moisture was allowed to remain. This "roping of wheat" is sometimes repeated several times in the season, particularly if the weather is favorable to the development of the mildew, or symptoms of the disease exhibit themselves in the grain. It has been found by experiment, that if the grain is so far advanced as to be fully in the milk at the time of the attack, that if the grain is cut at once, and is cured in a proper manner, the grain will be far better, and make better flour, than if allowed to stand. When cut in this way, the stem contains as much elaborated sap nearly as the perfection of the grain will require, but if this is allowed to escape, as it will if the disease progresses, the berry will be deprived of all its proper nourishment, and the consequence will be a shriveled worthless grain.

The conclusions at which we have arrived respecting blight, are as follows :

1. That an excess of sap hurts the skin or epidermis of the plant, and by allowing the juice necessary to the perfection of the berry to escape, causes it to shrink.
2. That in this extravasated juice the sporules of the wheat fungi, fix themselves, their roots penetrating the stem and thus increasing the evil, while their speedily matured seeds, shed over the grain, give the red appearance so characteristic of mildew.
3. That blight rarely attacks wheat unless a degree of temperature above 70° has for several days been indicated, accompanied by a great quantity of moisture, and a stagnant condition of the atmosphere.
4. That late sown, or highly manured wheat, is more liable to the blight than that which matures early, or that grown on soils where the manure has been applied to some previous crop.
5. That while a thick coating of grass, by preventing a free circulation of air around the plant, equalizing the temperature, and freeing them from useless moisture, has a tendency to produce blight, it will not do so, unless the other predisposing causes we have enumerated, are also present.
6. That the sowing of clover and grass seeds with wheat is of so much consequence to the wheat grower, is such an essential means of fertilizing the soil, and such an important part in a well conducted rotation, that it ought not to be abandoned, except on the clearest evidence, such as we think has not yet been produced, that it is the primary cause of blight, and certainly not until other means of prevention have been tried and failed.

New-York State Agricultural Society.

THE regular meeting of the Executive Committee of the N. Y. S. Ag. Society for June, was held at the Troy House in Troy on the 16th,—the President in the chair. Present, Messrs. Walsh, Vail, Nott, Bement and Tucker, members of the Committee, together with a numerous attendance of the members of the Society in that vicinity.

Letters were read from Messrs. H. S. Randall, H. Munson, John H. Beach, Charles F. Johnson, A. Bergen and Jabez Burrows.

New members were admitted to the Society as folfollows:

ANNUAL MEMBERS—[*Paying $1 per year.*]

Adams, Myron, E. Bloomfield.
Beach, John H., Sar. Springs.
Beach, Wm. A., do.
Belden, Dennis, Troy.
Bergen, Adrian, New Utrecht.
Burrows, Jabez, Mayville.
Corey, John A., Sar. Springs.
Cowen, P. H., do.
Cummings, Franklin, Troy.
Dater, Jacob, do.
Dauchy, Charles, do.
Farrington, Thomas, Owego.
Fassett, John V., ($2,00) Troy.
Gifford, Henry, Harmony.
Gould, John, Essex.
Harris, Heman, Troy.
Hart, J. B., do.
Hart, W., do.
Johnson, Charles F., Oswego.
Kellogg, Day O., Troy.
Lawrence, Wm. T., ($5) Cayutaville.
Lyon, Charles, Ogdensburgh.
Merritt, I. J., do.
Miller, John, Harmony.
Osborn, J. F., Port Byron.
Parker, S., Troy.
Perry, A. S., ($2,00) Troy.
Pumpelly, George I., Owego.
Richards, Albert, Troy.
Richards, George B., Troy.
Sackrider, Norman, Norfolk.
Sage, Norton, do.
Sampson, John, ($2,00) Troy.
Slocum, Hiram, do.
Tuttle, N., do.
Warren, Jos. M., do.

GEO. VAIL, Esq. of Troy, one of the members of the Board, made a donation of $25,00 to the funds of the Society.

The following committees were appointed to solicit donations and new members to the Society:

For Troy and vicinity—Messrs. John Sampson, Geo. Vail, D. O. Kellogg, J. H. Willard, I. J. Merritt, and A. S. Perry.

For Lansingburgh—Messrs. A. Walsh, P. M. Corbin and J. Holme.

For Waterford—Messrs. John House, John Knickerbacker, W. B. Douglass and J. Strachan.

For Watervliet—Messrs. Thomas Hillhouse, E. Wiswall, Jr., and C. F. Crosby.

Mr. Tucker introduced the following resolutions, which were unanimously adopted:

1. *Resolved*, That the Corresponding Secretary be authorized and requested to open correspondences with such individuals as he may deem proper, in the several Counties of our State, for the purpose of eliciting information on the following points:

The present condition of agriculture in each County, with such changes as have already taken place since the period of their first settlement—Aspect of the county—Nature of the soil—What are the principal products?—Where are the products marketed?—What kinds of cultivation are in use?—What are the favorite breeds of horses, cattle, sheep, swine, &c.?—How are the stock generally fattened for market?—What plows, harrows, and other agricultural implements are in general use?—What is the general value of the land?—What kind of timber generally prevails?—What agricultural changes are requisite to advance the prosperity of the county?

2. *Resolved*, That the Corresponding Secretary be authorized and requested to open correspondences with such individuals as he may deem proper, for the purpose of eliciting information on

The most profitable breeds of cattle, sheep, horses, swine, &c., for our country—The best and most economical method of rearing them—Their diseases, and the method of treating them—The most profitable varieties and best method of cultivating the several varieties of grains and roots—The best and most profitable method of making butter and cheese—The most economical method of fattening domestic animals—The best and most economical method of wintering domestic animals—The cultivation of fruits—Horticulture—The most profitable grasses—Draining—Rotation in crops—Manures—Diseases of plants, and the remedies—Destruction of noxious weeds, &c.—Construction and management of farm out buildings, yards, &c.—Fences.

3. *Resolved*, That the Corresponding Secretary be authorized and requested to open correspondences with such individuals as he may deem proper, in the United States and Europe, for the purpose of eliciting information on such agricultural subjects as may be of value to the farmers of our State.

4. *Resolved*, That the Finance Committee be requested to address a Circular to the friends of Agriculture in this State, setting forth the importance of the objects for which the N. Y. State Ag. Society was formed—its inability to accomplish those objects, or any useful purpose, without the aid and co-operation of the farmers and the friends of agricultural improvement generally, and the consequent necessity of an appeal to them to extend their aid to the Society by connecting themselves with it, either as annual or life members, or by contributions in aid of its funds.

Mr. Bement laid before the Committee a communication from Solon Robinson, Esq., in relation to a convention to be held at Washington, to form a *National Agricultural Society*; whereupon,

Resolved, That the object is one of paramount importance, and the executive committee earnestly recommend it to the friendly consideration of the members of the New-York State Agricultural Society.

Mr. Bement also presented for the inspection of the committee, a *Probang*, on an improved principle, manufactured by Mr. ————, an ingenious mechanic residing in the vicinity of Albany. Every grazier or breeder of cattle, or at least every neighborhood should possess one of these useful instruments, whereby the lives of many valuable animals may be saved. Therefore

Resolved, That the thanks of this committee be presented to Mr. ————, for the introduction of this very valuable instrument, and that we recommend it to the notice of farmers.

On motion of the President,

Resolved, That the Executive Committee of the N. Y. S. Ag. Society will hold their next meeting at Niblo's, in the city of New-York, on Wednesday, the 21st of July, at 10 o'clock, A. M., and they cordially invite and earnestly entreat the friends of Agriculture in the river counties to meet with the Committee at that time and place.

Resolved, That JOHN MILLER, Esq. of Harmony, be appointed one of the General Committee for the County of Chatauque, in place of Mr. Crooker.

THE STATE FAIR.—The following is an extract of a letter from H. S. Randall, Esq. the Cor. Secretary:—"Please communicate to the Board that I have conferred with several influential citizens of Syracuse, on the subject of the State Fair being held at that place, and I have received their assurance that the citizens of the village will take it upon themselves to make all the requisite preparations, by the erection of pens and enclosures; providing rooms for the exhibition of products, &c. to make the accommodation of visitors ample and complete. The selection of this place, seems to give general satisfaction, and I have received the most gratifying assurances from *western* gentlemen, (and among others the conductors of the New Genessee Farmer,) that that important portion of our State will be properly represented. With proper exertion we shall have a Fair that will do credit to the Society and to the State. Every county organization should take the matter in hand, and be properly represented; and every man possessing unusually valuable animals, products, &c. should make up his mind to *present them.* These of course, will *all* be suitably mentioned, even where they fail to draw prizes, and it will afford an opportunity rarely presented, to dispose of them, in the concourse of judges, amateurs, &c. which the occasion will call together."

N. Y. County Agricultural Societies.

CAYUGA.—The meeting to organize a Society for Cayuga, is to be held at the Western Exchange, Auburn, July 22, at 11 o'clock, A. M.

GENESEE.—This Society hold its next Fair at Alexander, Oct. 13 and 14.

LIVINGSTON.—A meeting was called for 1st inst. to organize a Society for this county.

MONROE.—The annual exhibition of this Society is to be held at Rochester on the 15th and 16th days of October next. Its list of premiums we have not seen.

OSWEGO.—We have received the list of premiums to be awarded by this Society at their next Fair to be held at Oswego, Oct. 6, 1841. The prizes, though small, are numerous, amounting to over a hundred, and well calculated to draw out a general attendance at the Fair. The officers of this Society for 1841, are

ALVIN BRONSON, Esq., President.
Samuel Allen, Thomas Linley, } Vice Presidents.
R. L. Lawrence, Treasurer,
E. C. Clark, Oswego, Cor. Sec'y.
C. S. Phelps, Rec. Sec.
Joel Turrell, Wm. Ingell, Martin Wiltse, } Executive Committee.

RENSSELAER.—A meeting is to be held at the Court House in Troy, on Thursday the 8th of July inst., at 10 o'clock, A. M., for the purpose of organizing an Agricultural Society for this county.

English Turneps.

THE common turnep, usually called the English or flat turnep, to distinguish it from the Swedish or ruta baga, is a valuable root, and better adapted to the table than any other turnep, and is consequently deserving a place on every farm. There are many varieties, of which the Norfolk and Globe are as productive as any, while some of the smaller kinds, among which the long turnep holds a prominent place, are best for cooking. The soil best calculated for the turnep is a rich mold abounding in vegetable matter, and newly cleared lands are found to be admirably adapted to their growth, the soil being usually free from weeds, and the ashes made by burning being one of the best dressings that can be applied to turneps. Where such lands are not to be had, old grass land carefully turned over and rolled, and then the surface made fine by repeated harrowing, for the reception of the seed, are found to produce good turneps. If the soil is not rich, good compost manure should be spread on the surface and harrowed in, but as old grass lands in richness partake somewhat of the quality of new soils, manuring is rarely necessary, and in the decaying sward the vigorous tap root of the turnep finds ample nourishment.

Turneps may be sown broadcast or drilled, the latter being the preferable way, and if a little bone dust or poudrette is drilled in with the seed, the plants start more vigorously, and are sooner out of the way of their most formidable enemy, the fly. There is usually far more seed sown than is necessary, if equally distributed, and to facilitate this, mixing the seed with ashes or sand is practiced by many farmers. English writers state the quantity of seed required per acre at two pounds, but we know by experience that one-half this quantity of good seed on proper soils is better than the whole, and were the distribution perfect, one-fourth this quantity or half a pound would fully seed an acre. It is better, however, to err on the safe side, and sow too much, rather than too litle seed, as if too thick the young plants may be hoed or pulled out. The proper time of sowing will, of course, vary with the latitude. In New-York, the best time has been found to be from the 20th to the 27th of July; in the middle and southern part of Pennsylvania, from the last of July to the middle of August; and in Virginia, from the middle to the last of August is preferred. The turnep, when grown on land long cultivated, is apt to have the bulb attacked by the worm, but in virgin soils, or those rarely subjected to cultivation, this evil does not attend them. Dressings of soot and ashes have been found useful when they are attacked by the fly, and in any event such dressing operates favorably on the plant, and may therefore be beneficially employed where there is the least reason to apprehend danger.

There are but few varieties of the turnep, that can, in our country, be preserved for the winter food of animals. The Yellow Aberdeen is an exception, as like the ruta baga, it keeps well in pits or cellars through the winter. The common turnep, though sweet and nutritive, contains so much water, that when taken from the ground they soon become pithy, and are of little value, comparatively, for cooking. They should stand in the ground as long as they can be permitted to do so in safety, as frosts improve them, and when gathered, should be kept in cool cellars or pits, merely above the danger of freezing, which, after they are taken from the earth, spoils them at once.

Spots on the Sun.

SOME wiseacre, in Boston we believe, has discovered there are spots on the sun, and many are disposed to attribute the cold and wet season we have had, to this cause. Some have even gone so far as to predict that we shall have no corn, and that late sown grain can hardly be expected to ripen, or come to maturity. We hope our farming friends will suffer no anxiety on account of these spots on the sun. We have for years been in the habit of looking at the sun occasionally, and it is very rare indeed to find it free from spots. Some of our best seasons have been those in which spots were the most abundant; and the same has been observed to be the case in Europe. The probability is, that they produce no effect whatever on our seasons, but that the differences we experience, are entirely owing to other causes. The presence of so much ice in the Atlantic, is much more likely to produce N. E. storms and cold seasons, than spots on the sun. Every thing now indicates a prosperous year for the farmer; and if any had concluded to not hoe their corn for fear the spots were going to hinder a crop, they will do well to reconsider their decision, cultivate their crops carefully, and let the spots on the sun take care of themselves.

Effect of a wet Subsoil on Trees.

No man should undertake to plant ordinary forest or fruit trees on soils tenacious of water, until they have been fully drained. Trees may live on such soils, but they can never flourish, nor will fruit from trees so situated, ever be equal in size and flavor to that grown from trees where the ground is properly prepared. Some years since, a gentleman at Seneca Falls wished to plant his grounds with ornamental trees. The soil was a deep clay, very tenacious of water, and several of his first efforts entirely failed, nearly every tree perishing. The holes were dug large and the trees well set, but it was found that the holes acted as mere basins or reservoirs filled with stagnant water. To remedy this evil, he had drains dug in such a manner that the holes for the trees were kept free from all surplus water, and as a necessary consequence, the next planting of trees succeeded to admiration. We see in a late number of the Boston Cultivator that Mr. Phinney of Lexington, well known as one of the most skillful farmers in this country, who has about six hundred bearing apple trees of the finest grafted fruit, has been obliged in establishing his orchards, in some instances to have recourse to thorough draining the soil, and always with the best success. Mr. P. makes his drains from two to three feet deep, according to the nature of the soil, leaves a water course of about eight inches covered with flat stones, on these brush and briers are thrown, and the whole filled in with the earth thrown from the ditches.

There can be no doubt that a regard to this subject, wherever trees are to be planted, whether for use or for ornament, especially if the subsoil be a tenacious one, would prevent many failures and disappointments, and in fruit orchards add great value to the product. A sound, healthy soil, is necessary to the health of a tree, and particularly to transplanted ones. Every one acquainted with hard, tenacious subsoils, knows that where trees grow naturally upon them, the roots never penetrate this cold wet substance, but are spread near the surface, and when blown down by the wind, their roots exhibit a thin shield like form wholly unlike those of a tree in a deep and permeable soil. If trees must be planted on soils of this nature, let nature herself be imitated; and instead of forcing the roots into pits or pools of stagnant water, as all mere holes in such earth must be, let them be spread over the surface as much as may be, and the holes and covering be proportionably shallow. But the best way in this case, as in all others where such soils are to be cultivated, is to drain first, and then plant or till afterwards.

CANADA THISTLES.—J. B. DEAN of Tompkins Co., informs us that a friend of his killed a "patch" of Canada thistles at a single mowing, and on turning to his farm book, found that the mowing was done the 24th of July "while the moon was in the last quarter, and the sign of the zodiac was in the heart," and by repeating the experiment at the same time of the moon, &c., he had succeeded in eradicating the thistle from his farm. [Our opinion of the influence of the moon in killing thistles, may be seen in another part of this paper.]

Chemical, or Prepared Manures.

It is sometimes asked, and that too in a way indicating a belief that the question cannot be satisfactorily answered, what are the advantages that science has conferred on Agriculture? more than intimating that knowledge, so essential to all other pursuits, is of no value to the farmer. It is a sufficient reply to all this, to simply point to the articles named at the head of this paper; chemical, or prepared manures. For the present we shall confine ourselves to a single class, those derived from urine and night soil, or of which these furnish the most important part.

It may be said that the use of night soil has been known from the earliest ages as a manure. This is true, but its use has always been limited, owing to prejudices arising from its disagreeable nature, and its offensive odor. The celebrated Swedish chemist, Berzelius, was among the first to call the attention of moderns to these substances by his analysis of them, which gave the following results:

Night Soil, 100 *parts.*	
Water,	73.3
Vegetable matter and animal remains,	7.0
Bile,	0.9
Albumen,	0.9
Peculiar and extractive matter,	2.7
Salts,	1.2
Insoluble residue,	14.7

Urine, 1000 *parts.*	
Water,	933.00
Urea,	30.10
Sulphate of potash,	3.71
Sulphate of soda	3.16
Phosphate of soda,	2.94
Muriate of soda (com. salt,)	4.45
Posphate of ammonia,	1.65
Muriate of ammonia,	1.50
Acetate of ammonia, Animal matters,	17.14
Earthy phosphates and Fluate of lime,	1.00
Silica and mucus,	0.35

The intelligent farmer will see at a glance that the matters enumerated in these tables constitute most efficient fertilizers, and in spite of their repulsive nature, the Flemish farmers have long been in the habit of mixing these stercoraceous matters with water, which, applied with much labor to their fields, gave a fertility unknown to the rest of Europe. Some 28 years since, Davy suggested to his countrymen, the English, that night soil was a very powerful manure, liable to decompose, soluble in water, and in whatever state it is used, furnishes abundant food for plants. He found, by experiment, that quick lime destroyed the disagreeable smell, and ascertained that it might be dried, pulverized, and delivered by drills at the time of sowing the seed. The manufacture from night soil of the valuable manure, called *poudrette*, belongs to the French. Nearly 40 years since, a chemist, M. Bridet, obtained a patent for his *poudre vegetative*, manufactured from the cesspools of Paris; and such was his success that similar manufactories were erected all over the country, particularly in the vicinity of the large cities, so that what was once a nuisance, is now deemed of the greatest value.

In 1814, the French Royal Society of Agriculture granted a gold medal to Madame Vibert Duboul, who obtained a patent for 15 years for her "Alkaline Vegetative powder." Her plan consisted in fermenting the most liquid parts of these matters, and mixing them with slaked lime afterwards, so as to form a powder much superior and more durable in its effects to common poudrette.

In 1818, the first manufactory of 'Urate' properly so called, was commenced near Paris, by the chemists Douat & Co., and the product was submitted to the examination and test of a committee of chemists and agriculturists, in which were included some of the ablest men of France. This committee reported that they had found the preparation so powerful on the dullest soils, that they recommended it should only be employed by skillful and discriminating farmers. On good soils, or in large quantities, it gave such a growth of straw as to be fatal to the maturity of the grain. The whole matter collected from the cesspools of Paris, is now converted into poudrette and urate, and is used by the farmers and gardeners principally within a circuit of 30 miles around Paris.

A new preparation called '*engrais animalize*,' or disinfected night soil, has recently been entered upon at Paris, and a large manufactory has also been established at White Chapel, near London. It is made by mixing the night soil with a considerable quantity of finely pulverized charcoal, and then drying the mass at a very gentle heat. Thus prepared it resembles the friable mold, rich and dark, of an old hot bed, and is totally devoid of smell. The English farmers, if we may judge from their reports and journals, are highly pleased with this manure, particularly as a dressing for turneps, giving them a quick growth at the start, which is of great importance with this root. There is another preparation called "Owen's Animalized Carbon," principally brought into England from the Baltic, one ton of which is considered equal to 25 bushels of crushed bones, while the cost is but little more than half as much. It probably differs little from the engrais animalize, except that it contains more carbon, and, of course, is a less powerful manure.

There is a chemical preparation called 'Seed Manure,' prepared by Messrs. Hodgson and Simpson, of Wakefield, England, the composition of which is a secret, but the base of it is, doubtless, urate, mixed with a portion of saccharine matter, ammonia, salt, and nitre. Their directions are as follows, and by following them Mr. Millburn and others have experienced the best effects on their crops:

"Dissolve 28 lbs. of this manure in a pail by adding water in small quantities, stirring it at the same time, until the mixture is of the consistence of cream; it is then poured over the seed intended to be sown on an acre of land, and the whole repeatedly turned over, so that it appears one uniform mixture; the seed is then to be spread out thin, on the floor to dry, for ten or twelve hours, and mixed with a sufficient quantity of soot or any kind of ashes, to render it sufficiently friable or dry to be sown by the hand or by the drill."

Prof. Johnson in his valuable papers on manure, has the following remarks on these chemical preparations of night soil, particularly the carbonized class, which, when properly made, he seems to consider preferable to any other of its mixtures.

"The preparation of the Messrs. Pottevin of the *engrais animalize* at London, is the same as that of M. Payen at Paris. It combines, and succesfully too, the great object of driving off the water of nightsoil by a gentle heat, after all its gaseous matters have been absorbed, by mixing it with a portion of newly prepared carbon, in the finest possible state of division, than which, no known substance has such great powers of absorption of all gaseous matters like those which abound in, and impart the disagreeable odor of nightsoil. The presence of the carbon in the manure thus prepared, is valuable in two ways; it gradually combines with the oxygen of the atmosphere, forming in the state of carbonic gas, the food of plants; and at the same time, all the gaseous matters of putrefaction, with which it is saturated, are thus preserved, stored up, as it were, for the use of the roots of the cultivator's crops; nothing is lost, the emission of the gases from the slowly dissolving charcoal, being so gradual, as to be almost, if not entirely, imperceptible to the senses."

The justly famous preparation, called as above, 'Urate,' may be very successfully imitated by the common farmer who will take the pains to provide a reservoir or cistern for the preservation of urine, with which, when wanted for distribution with his seed, he must mix gypsum or plaster till the urine is absorbed, and the mass sufficiently dry to sow with the drill or by hand. This is one of the most powerful preparations on dry or sandy soils that can well be imagined, and is one of which every farmer may avail himself to a greater or less degree.

There are at the present time, two manufactories of *poudrette* and *urate* in the vicinity of New York; and there is most abundant proof that it constitutes here as elsewhere the most valuable class of manures. That such manufactories will become common in the neighborhood of our principal cities and towns, where alone the materials are to be found, as the value of such manures, both for their efficiency and portability are better understood, we have no doubt. Their use is rapidly converting the vicinity of the principal European cities into a garden, and the use of these materials which once constituted the greatest nuisances and were most productive of diseases, into manures, will not have a better effect on the soil, than on the health of those congregated masses of human beings.

Diarrhea in Colts.

In the Kentucky Farmer of May 22, is an article on the above disease, from the pen of Mr. Mentelle, from which we make the following extract. We do this, because the disease is not an uncommon one, and because a course of treatment is adopted, which proves injurious, if not fatal, to the animal. Harsh and active medicines in quantities which a horse would hardly bear, are employed, it being apparently forgotten that a colt bears the same relation to the horse, so far as the action of medicine is concerned, that the infant does to the man. We lost last year a very valuable colt from this disease, aggravated as we have reason to believe, by the treatment he received in attempting to cure him.

"As soon as the disease is evident, the mare and colt must be taken from the pasture if they were at grass, and their treatment must be different, according to the degree of appetite retained by the colt; if he eats or sucks heartily, give him cow's milk boiled with a little flour, and with warm injections of mullein, flax-seed tea, or slippery elm; if, on the contrary, the animal is without appetite. it is a sign that the evacuation is dangerous, and ought to be checked; give something more than a quarter of an ounce of assafoetida diluted in one of the above teas, which he must be made to swallow milk warm; besides which, he must have injections morning and evening until the disease seems to be checked, then suppress the evening remedies, and suppress them entirely, as soon as the colt is evidently better. It is more prudent to keep the mare out of pasture, and feed her on dry hay, &c. A careful attendant on the colt, will best know whether to continue the remedies or not. Mind that the mother's milk has a great influence on the colt."

Market for Cocoons.

"*State Prison, Auburn, N. Y., May* 15, 1841.

"The subscriber, as agent of said prison, having commenced the manufacture of Sowing Silk, by convict labor, will pay three dollars per bushel for all the cocoons of a good quality that may be offered at this prison, hereafter. Any communications upon this subject, addressed to the subscriber, (*post paid*,) from any part of the United States, will receive immediate attention. * * * Henry Polhemus, Agent."

This we consider an important announcement. If the project of manufacturing silk in the prison is successful, (and the experiment of last year warrants the most favorable anticipations,) it will be felt beneficially by the public in various ways; it will aid the mechanic of the country by giving a different direction to convict labor, it will benefit the small farmer by giving him a certain market for a product which his wife or children can raise with little time or labor, and it will benefit the country by lessening those importations which operate so injuriously against the trade and prosperity of the United States. Some beautiful sewing silk has been made at the prison, and any information in regard to any branch of the subject, from the rearing of the mulberry trees through the stages of hatching, feeding, spinning and killing the cocoons, may be obtained at the prison of Mr. Morrison, who has a thorough acquaintance with the subject, having long superintended an extensive silk mill in Europe. One of the greatest obstacles to the growing of silk, (a fixed and certain market for cocoons,) being now removed, we may hope that the culture will receive the attention which it seems to us to deserve, as a sure and profitable branch of domestic industry.

Farming without Rum.

Whoever commenced the Temperance Reformation, was, in truth, a benefactor to the human race. From the highways and byways, from the borders of the abyss of degradation, if not from the depths of the abyss itself, thousands will rise up to call that man blessed, who has saved them from themselves. Great as are the talents of O'Connell, there is an unpretending priest, who is at the present moment doing more to elevate, disenthral, and regenerate Ireland, than a thousand O'Connells, without his aid, could have done. Wherever Father Mathew goes, the distilleries become useless, the pig gets an extra quantity of corn, the wife a new dress, and the laborer sheds his rags for a new coat, saved from earnings that formerly went to brutalize and impoverish himself and family. Scarcely less striking has been the result of abstaining from the common use of ardent spirits in the United States, and in no department of industry, has this influence been more beneficially felt than in that of agriculture. Of this no one, we believe, doubts, who has made the experiment of *farming without rum*, or in other words, banishing ardent spirits from his farming operations.

We are well aware there were thousands, in fact nearly every farmer in the country, who, when the idea of farming without the use of ardent spirits was first proposed, deemed it wild and visionary, if not impossible. So intimate had the associations of work and rum become in the minds of most men, that to separate them —to undertake to break in upon long established usage —to get in a harvest, or erect a building, without such drinks, required no little exercise of reason and independence of feeling. Many who were convinced the practice was useless, hesitated about abolishing it, lest the withholding spirits should be charged to a penurious disposition. Good sense, however, and a feeling of right prevailed; rum was banished from the harvest field and the raising, in numerous instances, and it was found that none of the injurious effects anticipated by many, followed. There was no want of laborers; the coarse grains still commanded good prices; and four or five distilleries in every town ceased to produce and distribute misery and death.

In those neighborhoods, and on those farms from which intoxicating drinks have been banished, those revolting scenes unfortunately once too common, are now no longer seen. We remember when it was the custom to find each laborer in the harvest field with his pint of spirits daily, that there was frequently more waste from the effect of the drink, than their labor cost. We have seen in the harvest field by the middle of the afternoon the reaper so *blue* that he was as likely to cut off his own fingers as the grain, and compelled to resort to a corner of the fence and a nap, to restore a capacity for work. We have seen half a dozen cradlers racing it through a wheatfield like madmen, yelping and yelling like savages, throwing the grain behind them without care or thought, and causing a waste greater than as many swine would have done, even had they been of the most approved alligator breeds. We have seen a dozen men reeling home from a raising to sleep away the liquor that had stolen away their reason, or, as was most likely, to abuse their wives and children. Now, where temperance principles prevail, such scenes are never witnessed; and their influence can be traced in the mitigation of these evils, even where they are not yet fully triumphant.

The proper source of ability to labor is found in food; this alone nourishes and confers strength. Ardent spirits give no nourishment; they only stimulate; and all experience proves, that all expenditure of power, not based on the true source of supply, can only be temporary, and must produce results the most injurious to the individual. The correct course, then, is to substitute the nutritive for the stimulant; healthful for the injurious; habits that too frequently end in ruin for those that are certainly safe and honorable.

If there is a single reader of the Cultivator, who has never made a trial of farming without rum, we ask him as a friend to make it thoroughly the present season, and then to judge for himself. The experiment is not now an untried and hazardous one; it encounters no opposing public opinion, nor subjects the farmer to the charge of eccentricity or niggardliness; and it is not one which might once have been considered as tampering with the health of the workingman. The man who labors must have food in abundance, and of the best kind; he must have drink too, but this should not be ardent spirit. Good home-brewed malt beer, milk and water, sweetened water slightly acidulated, and a little ginger added, are all good drinks, all contain nourishment, and will allay thirst, at least as effectually as ardent spirits. Discontinue rum and whiskey, and try these; take a biscuit and some cheese, instead of a drink of grog, forenoon and afternoon; eat your meals regularly, and labor reasonably, and our word for it, you will find yourself in all respects as well, and your busines much more satisfactorily conducted, than when ardent spirits are used.

Weeds.

Every plant growing with a cultivated crop, and which has a tendency to lessen the product, or decrease its value, may with propriety be called a weed; even if one which possesses some importance in itself, and may under other circumstances be worthy of culture. The term weed, however, is usually applied to plants which are valueless, and which by growing with the cultivated crop, increase the labor, while they lessen its value.

Weeds are either annual and biennial, or perennial; or such as spring up from seed and come to maturity by ripening their seeds either the first or second year, or those that after once having been sown continue to propagate both by seeds and roots. Annual or biennial weeds, if the stem is cut before or at the time of flowering, are destroyed, since there are no remaining means of propagation; but in perennial weeds, or those propagated from the root, as well as the seed, the destruction of the stem does not ensure the death of the plant, as the power of propagation is still remaining. Of course the destruction of annual weeds is much more easy than that of perennials; although some of the former have such a multitude of seeds, and will remain so long without vegetating, unless the soil is cultivated, that the difference in labor is not so great as some have supposed. Perfect tillage is the best destroyer of all weeds, but various expedients, such as pulling out the annuals, and cutting off the perennials, are resorted to, in order to check or eradicate them. It cannot be expected that more than a few of each class can be named here, and such will be selected as are the most common and troublesome. It may be remarked that a reference to European agricultural works will show that some of their most injurious weeds are unknown here; that some we treat as weeds which they cultivate as valuable plants; and that some of the most troublesome weeds found in our fields, appear to be unknown there, at least are not found to infest their crops.

PERENNIAL WEEDS.

Johnswort—*Hypericum perforatum.*
Meadow Crowfoot—*Ranunculus acris.*
Daisy—*Bellis perennis.*
Canada Thistle—*Cnicus arvensis.*
Broad-leaved Dock—*Rumex obtusifolius.*
Couch or Wheat Grass—*Triticum repens.*
Ox-eye or White Daisy—*Chrysanthemum leucanthemum.*
Everlasting—*Gnaphalium.*

ANNUAL WEEDS.

Steen-crout, or Wheat Thief—*Lithospermum arvense*
Wild Mustard—*Sinapis arvensis.*
Common Chickweed—*Stellaria media.*
Wild or Climbing Buckwheat—*Polygonum convolvulus*
Burdock—*Arctium Lappa.*
Feverfew—*Pyrethrum inodorous.*

Johnswort, so well known to the farmer by its intrusion into meadows and pastures, and by its occupying almost the whole ground to the exclusion of all the valuable grasses, is one of the most common and pernicious weeds in this country. We know of no valuable use to which it can be put; all animals reject it, unless starved to feeding upon it, and it is a positive poison to such as are compelled to feed on it. It has frequently caused the death of young cattle and sheep. Johnswort may be killed by thorough tillage, seeding thick with grasses, and using plaster liberally.

Meadow Crowfoot, called also butter-cup and yellow daisy, grows in most parts of the country. The whole family to which it belongs, are poisonous, inflaming the skin and sometimes blistering it. If there is considerable grass with the plant, cattle eat it off without danger, and it seems to lose much of its acrid property when cut with grass and made into hay. It is easily destroyed by plowing and cropping, followed by again seeding

The ox-eye or white daisy is a pestiferous weed where it is allowed to establish itself on a farm, crowding most of the valuable grasses, and being in itself of little use. It is most frequent in pastures, although seen in meadows, and can only be eradicated by tillage conducted in a proper manner.

The Canada thistle is most unfortunately so well known as to require no description. Spreading both by its long, creeping, vigorous roots, and by its seeds, it has spread over a very large part of the northern states, and promises to eventually occupy no inconsiderable portion of the remainder. It is one of the most difficult plants to destroy, as the roots throw out stems from each joint, and if any part of the roots are left undisturbed in the soil, they will at once spring up, and produce a numerous body of plants. On the best cultivated farms it is with difficulty kept under, and on those where spring grains are generally grown, and hoed crops and summer fallows are unfrequent, they spread with great rapidity. It prefers a rich moist soil, and on such is with more difficulty eradicated than on dry or less fertile ones; yet the roots are so tenacious of life, that on all, it is one of the most formidable of weeds. No half-way or temporizing measures will succeed with the thistle. It must be attacked vigorously, either by plowing, hoeing, or repeated mowing, and there must be no rest till it is destroyed root and branch. If one year's tillage, or fallowing, does not answer the purpose, give two; but it must be remembered that a single root left living will in a short time undo all that you have done, and fill the soil as before.

Broad leaved Dock is a bad weed, as it spreads rapidly when allowed to perfect its seeds, and it throws out such a mass of leaves that it occupies the ground almost exclusively. Fortunately its destruction is comparatively easy, nothing more being required than with a single blow from a sharp hoe, to cut off the plant below the crown, or at some little distance in the ground, and as it throws out no suckers from the roots, it is killed at once.

Couch, quack, or wheat grass, is a serious pest to the farmer, as it is very tenacious of life, throws out roots from every joint of its stem that touches the earth. Its roots too are creeping, and any part of them left in the land is sure to vegetate. Low says the most effectual method of destroying this weed, "is by frequent plowing and harrowing, and collecting the roots by the hand." In England where it is the worst weed of tilled lands, implements are used called grubbers, which pass through the pulverized soil, and bring out such roots of weeds as are below the surface, and thus enables the farmer to gather and destroy them. Couch grass is more easily destroyed in this way than some other weeds, as its thick fibrous roots causes them to adhere strongly together, and they are thus more easily collected.

The common Daisy is a very troublesome plant in pastures or meadows, and if left unmolested soon becomes a great nuisance. Tillage is the proper remedy, but as it shows itself in meadows too moist for a course of culture, previous draining in such cases is necessary. There is then little difficulty in extirpating it, particularly if a dressing of lime be given to the soil at the time of plowing.

Everlasting, or cotton weed, so called by some from the white down on its stems and leaves, is a plant that is rapidly scattered by its seeds when they are allowed to ripen, and a root once established in the soil progresses slowly, but surely, to destroy, we believe, every other plant or grass with which it comes in contact. On cultivated lands it does little or no injury but spreads in pastures most injuriously, unless pains are taken to cut them up so as to prevent their seeding, or digging them by the root, which latter course is preferable, as the cure if thoroughly performed is effectual.

Of the annual weeds, the one which produces the greatest injury to the wheat grower is the steen-crout or red-root. We have seen in Western New-York thousands of acres of wheat which would hardly give half a crop from the prevalence of this weed. It springs up early, grows rapidly, and its spreading thick top smothers and exhausts the wheat plant. The remedy for this nuisance is first to clean the land of all the red-root in it by thorough tillage, and then to sow none but pure seed. If a few stalks any where appear in a field, pull them up at once, and by no means allow any to mature their seeds on the farm.

Charlock or wild mustard on many farms abounds in all plowed lands and springs up in grain of all kinds. As this plant ripens its seeds and sheds them from its pods before harvesting, it is one of the worst of the annual weeds to eradicate. Hoed crops are useful in exterminating charlock, and on some farms in England wheat is sown in rows to give the crop the benefit of this clearing process. Summer fallowing is also good, if the plowings are repeated so often as to give an opportunity for all the seeds in the soil to vegetate, and be destroyed in succession. Its yellow flowers render it conspicuous in wheat or other grain, and where but little exists it may be pulled by hand and the crops freed from its presence.

Chickweed, on cold sour grounds, is a bad weed, and the richer such grounds are made, the more troublesome will this plant become. The best method of eradicating this weed is to change the character of the soil, making it dry by draining, and curing their sourness by using lime or ashes. It rarely shows itself to any extent on sandy or lime rock dry lands, while it will cover a field like a mat where the soil is wet, tenacious and cold.

Climbing buckwheat, or bindweed, is rarely injurious on well tilled lands; but where the cultivation is imperfect, or the plant springs up in grain, it does much mischief by binding the growing plants together and preventing them perfecting their seeds. Weeding or tillage will destroy the climbing buckwheat.

Burdock, independent of the injury it does to crops, is one of the surest signs of a slovenly farmer that exists. When you see the tails of cows, the wool of sheep, or the mane and tails of colts, loaded and bound together with burdock burs, you may without further examination pronounce their owner a slovenly unthrifty farmer. The burdock is easily killed by cutting it below the crown of the plant, and where such is the case there can be no excuse for its presence.

Feverfew, or Mayweed, is common in some parts of our country and is injurious in grain. Thorough cultivation is fatal to it, and consequently it is not so much dreaded as some other plants. Wild or stinking chamomile is sometimes mistaken for Feverfew, but the management of both may be the same, and the extirpation of either is not difficult.

There are many other plants and shrubs that infest the fields of the farmer, and materially lessen his products and profits. It may be remarked, however, that all weeds are frequent or scarce on a farm, exactly in proportion as its management is bad or good. All will prosper where the culture is bad; all will be exterminated where the management is good.

Flowers.

We know of no association more constantly present to the mind, or one more fitting, than that which connects woman and flowers; and rarely, indeed, does the first appear more charming, or engaged in an occupation more suited to her taste, than when she is surrounded by the latter, by blossoms that have been trained and cherished by her own fair hand. We have always admired flowers as the most beautiful productions of nature. True they are fleeting, but what is there of the beautiful and lovely which is not? It may be sympathy, it may be mere imagination, but to us the thought has the force of truth, that we have never known a woman, truly pure hearted and angel minded, that did not love flowers. The things by which we are surrounded have their influence on our minds; they give the tone and coloring in a great measure to our character, and, perhaps, our destiny. The man who grows up among the rocks of New England or the mountains of Switzerland, will be a different being from the one who walks the sand plains of the south, or basks lazily in the maremna of Rome. There will be a firmness of nerve and unyieldingness of purpose in the first, unknown to the last, a something caught from the country and climate, and stamped by the surrounding objects, which leave an impression as indelible as mountains and rocks. So with woman; the hues and coloring of her mind; the graceful and the beautiful that make up so much of her existence; the soft and the flexible which, while they seem to leave her helpless, constitute her true strength, all these things are heightened and strengthened by the action of nature around her, and the fragility, and the beauty, and purity of flowers exercise no trifling influence on her heart. What is it that gives the home of the English cottager a degree of neatness and comfort so seldom seen here? It is because honeysuckles and jessamines are twining around the doors and windows; because flowers of many kinds and beautiful hues are mingled with shrubbery in the limited yard. Would that such a taste was more prevalent here. Where so much real pleasure can be purchased at so cheap a rate, so many senses be gratified at once, it is truly a pity so few are found to make the effort. Flowers around a door, or clustered in a window, give an air of happy quiet and peace, of conscious security, and are a more correct indication of good taste, gentle feelings, and an unsullied heart, than silver plate or marble walls. Our object, however, was not to write an essay, but to invite the attention of our fair friends to the subject of flowers, and introduce to their notice Horace Smith's beautiful Hymn to the Flowers, for which we are certain of the thanks of those to whom it is not already familiar.

HYMN TO THE FLOWERS

Day-stars! that ope your eyes with man to twinkle,
From rainbow galaxies of earth's creation,
And dew-drops on her lonely altars sprinkle,
As a libation—

Ye matin worshippers! who, bending lowly,
Before th' uprisen sun, God's lidless eye,
Throw from your chalices a sweet and holy
Incense on high!

Ye bright Mosaics! that with storied beauty,
The floor of Nature's temple tesselate,
What num'rous emblems of instructive duty,
Your forms create!

'Neath clustered boughs, each floral bell that swingeth,
And tolls its perfume on the passing air,
Makes Sabbath in the fields, and ever ringeth
A call to prayer!

Not to the domes, where crumbling arch and column
Attest the feebleness of mortal hand;
But to that fane, most catholic and solemn,
Which God hath plann'd—

To that cathedral, boundless as our wonder,
Whose quenchless lamps the sun and moon supply,
Its choir the winds and waves—its organ thunder—
Its dome the sky!

There, as in solitude and shade I wander
Through the green isles, or stretched upon the sod,
Awed by the silence, reverently ponder
The ways of God—

Your voiceless lips, O flowers, are living preachers,
Each cup a pulpit, each leaf a book,
Supplying to my fancy numerous teachers,
From loneliest nook.

Floral apostles! that in dewy splendor,
"Weep without wo, and blush without a crime,"
Oh! may I deeply learn and ne'er surrender
Your lore sublime!

"Thou wert not, Solomon, in all thy glory,
Arrayed," the lilies cry, "in robes like ours;
How vain your grandeur!—ah! how transitory
Are *human* flowers!"

In the sweet-scented pictures, Heavenly Artist!
With which thou paintest nature's wide-spread hall,
What a delightful lesson thou impartest
Of love to all!

Not useless are ye, flowers, though made for pleasure,
Blooming o'er field and wave, by day and night;
From every source your sanction bids me treasure
Harmless delight!

Ephemeral sages! what instructors hoary,
For such a world of thought could furnish scope?
Each fading calyx a *memento mori*,
Yet fount of hope!

Posthumous glories! angel-like collection,
Upraised from seed or bulb interred in earth,
Ye are to me a type of resurrection
And second birth!

Were I, O God! in churchless lands remaining,
Far from all voice of teachers and divines,
My soul would find, in flowers of thy ordaining,
Priests, sermons, shrines!

Original Communications.

"In Agriculture, EXPERIENCE is of great value—THEORIES of little, excepting as they are directly deducible from actual experiments and well attested facts."

Wheat Culture in Vermont.

MESSRS. GAYLORD & TUCKER—The communications of my agricultural brethren, their experience and experiments, compose to me an interesting department in the Cultivator. If some of my experiments should be thought worth communicating to the friends of agriculture, through the columns of the Cultivator, they are at your service. That my location may be distinctly understood by the distant readers of your widely extended publication, I will premise by saying that I write from the east shore of Lake Champlain, lat. 44° N. We have a small tract of country here that was once noted for growing fine winter wheat. For thirteen years past it has almost entirely been destroyed by the weevil, when an attempt has been made to grow it.

A partial description of the insect, may here perhaps be interesting to some of your readers. The nit is supposed to be deposited by a small fly at the time, or soon after, the wheat is in the blow. Before the kernel has attained half its growth, the insect, which is of a reddish color, and not larger than the point of a fine needle, may be discovered preying upon the berry of the wheat. I have often counted forty and upwards about one kernel. When but two or three only are about the kernel, it will sometimes mature with but a partial injury. The first season this insect made its appearance in our wheat, I had thirty acres completely ruined. Since that time I have made but slight attempts to cultivate it. Some of my neighbors continued to grow a sufficient quantity for their bread, on elevated limestone ridges; which induced me to make another trial. I accordingly procured some of the flint wheat, rolled it in lime, and sowed about two acres the last days of August, 1835. It got well rooted in the fall, which, I consider, insures an early growth in the spring; it came to maturity early for this latitude, was but slightly injured by the weevil, and yielded at harvesting 25 bushles per acre.

Sept. 8th, 1836, I sowed one acre well summer fallowed, and a promising piece for wheat; 12th Sept. following, I sowed one and a half acres of new land; the soil of both pieces was clay; the seed, as usual, rolled in lime; the weather was dry and unfavorable to its growth in the early part of fall: it came on late in the spring, and in the end was entirely ruined by the weevil. Aug. 28th, 1837, I sowed four acres to wheat. well fallowed and manured: the weather was favorable to its growth in the fall; soil mostly clay; in some parts a little gravel and slate; it got a fine growth in the fall, came forward rapidly in the spring, and that on the weakest and warmest soil composing about one-half of the field, produced a middling growth of straw; came to maturity very early, and yielded thirty bushels of beautiful wheat to the acre. The remaining half of the field, which was much stronger soil, grew heavy straw, lodged, and consequently did not ripen so early; the wheat shrunk, and was slightly injured by the weevil; yielded ten bushels per acre. Oct. 4th of the same year, I sowed one and a half acres of new land, soil clay, covered with a coat of rich black mold; the wheat came up soon, and grew finely in the fall, produced a beautiful growth of straw the following season, and came on just in time to be entirely destroyed by the insect. 20th Nov. following, I sowed one acre of new land adjoining the above, with the hope that it would freeze in, and not germinate until spring: the weather being unsteady, it proved unfavorable to the experiment; a part sprouted in the fall, some in the warm weather which occurred during the winter months, some was washed bare and picked up by the birds in the spring, and at last from 1½ bushels sown to the acre, there was left but here and there a stalk to grow; which came in late, and not injured in the least by the insect.

Sept. 14th, 1838, I sowed two acres of new land, soil clay; it obtained a fair growth in the fall, produced a middling growth of straw the following season, and was so far injured by the insect as to yield but 7 bushels to the acre. The summer of 1839, I had no ground that could seasonably be prepared for wheat, and being by this time fully convinced that late sown wheat would stand a greater chance to be destroyed by the weevil than early sown, I then decided to sow no more, unless it could be done early in the season. Aug. 18th, 1840, I sowed 2½ acres, well summer fallowed and manured, part of which is a stiff clay, and part lies upon a stony ridge. The season was dry, consequently the wheat did not vegetate as evenly as might be wished. It got a strong root in the fall, and spread so as to almost cover the ground. I suffered five calves and 100 sheep to run on it 3 or 4 days previous to the 22d Nov., after which it was covered with snow and ice until about the 27th of March: the borders on three sides being still covered with snow drifts to the depth of 2 or 3 feet. The part which is uncovered at this time presents a strong healthy appearance, with prospects of an early and heavy growth of straw. If desirable, its farther progress shall be carefully observed, and faithfully communicated.

The Egyptian, wild goose, or many-headed wheat, (known by these different names) is a spring variety, more subject to blast than any wheat I have ever had any acquaintance with, hard to thrash, but seldom injured by the weevil. The Italian, also a spring variety, so far as I am acquainted with it, appears to succeed better. The practice of sowing late, as adopted by Mr. Lofton, of Illinois, might do here if we were sure of a steady winter; still late sown is more subject to blast or rust here, than early sown. Also the practice of L. of Hamburgh, N. J., may answer the purpose in the case spoken of in the Feb. no., but ours is a different case, requiring different treatment. Here, also, on our clay land, early sown is less subject to heave out by the frost in the fall or spring.

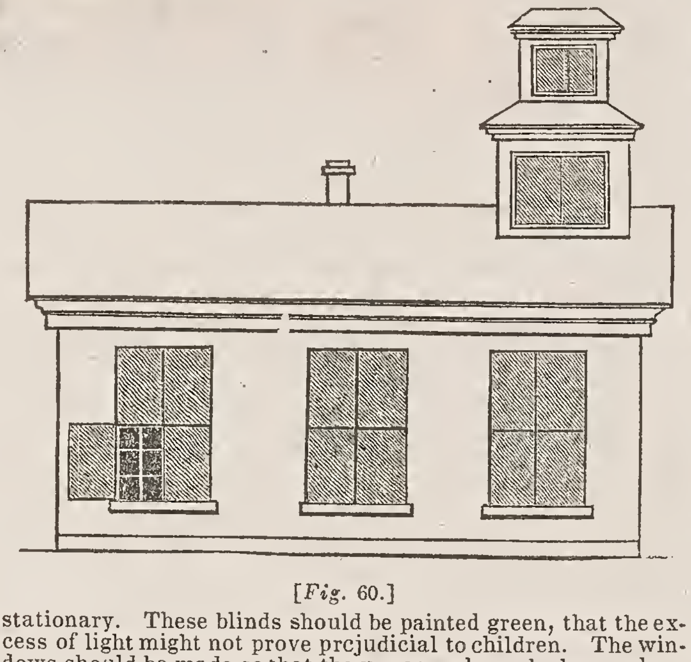
Should the ravages of the weevil extend to the great wheat growing districts of the west, which I know of no reason why it may not, this great staple of the nation may be cut off; the interests of the people in those sections in a measure ruined, and we of the North East, look to Europe as we now look to the west, for our bread; unless some remedy may be devised to avoid its depredations. To illustrate the increasing estimation of the Cultivator with us, permit me to state, that I commenced taking it with the volume in which closed the labors of the much lamented Judge Buel: The next year another number was taken by an agricultural friend; and the present year it affords me the highest satisfaction to witness 12 numbers sent to our office, and our agent informs me that several numbers more will soon be called for.

Your agricultural friend, J. N. SMITH.

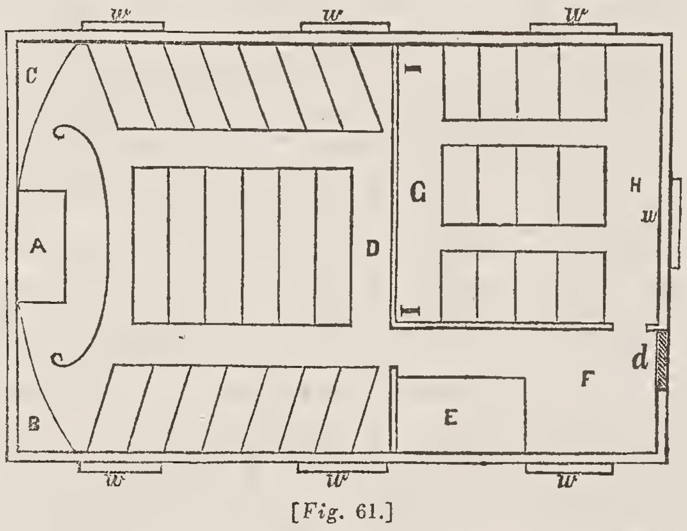
Chimney Point, Vermont, April 7, 1841.

Farmers' New Country Church & School Room.

THE following cuts represent the scheme of a church and school-house, measuring thirty-two feet front, and fifty feet flank, and eighteen feet from the floor to the eaves, which may be erected in the center of a thinly inhabited town, or that portion of a small society which is destitute of a house of worship and school-house; where the means are not sufficient to go along with a church, but uniting with a school district, the funds employed to erect a school-house, and if to be placed near the center of a town where a town-room is needed, still further aid might be had by raising a tax on the whole population for the benefit of the town; all the means thus raised, would be adequate to build a convenient and comfortable house on the preceding plan; or it would answer with few alteratious, to accommodate two schools on the ground floor. And on occasions when it was necessary to accommodate a large assembly, by removing a partition, described below, the two rooms would be thrown into one. It would be better to construct the outside walls of brick or stone. Each window should have shutters; the lower half might be open or closed, as seen in the elevation, fig. 60. But the upper blinds should be made fast and stationary. These blinds should be painted green, that the excess of light might not prove prejudicial to children. The windows should be made so that the upper sash can be lowered, or the lower sash raised.

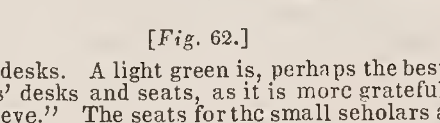


[*Fig.* 60.]



[*Fig.* 61.]

Fig. 61, represents the ground plan of church and school-room. A, pulpit; the ceiling back of this is gently curved forwards, intersecting the main wall near the windows, so as to form the vestry-room, B, and the library-room, C; this concave ceiling assists in producing sound, which makes it easier for the speaker. D, place for a stove. E, wood-room or closet, or this space may be used for a stairway leading to a gallery for singers, if necessary, which will extend over a part of the school-room, above the petition I, I. F, entry, which leads to the church-room and school-room. G, teacher's table, on a raised platform one foot in height, which extends the width of the school-room, twenty-two feet; here is the place to hang a movable black-board in front of the scholars' desks on the movable partition, I, I, which is made of folding or slide doors nine feet high. H, the place for a stove; the pipe from this to intersect the pipe in the church over the stove, D. *d*, outside door; *w, w, w, &c.* windows.



[*Fig.* 62.]

Fig. 62, "represents an end view of the pupil's desks and seats. J, pupils' seats. K, shape of the board or plank which forms the side and support of the desks. A light green is, perhaps the best color for the scholars' desks and seats, as it is more grateful than any other to the eye." The seats for the small scholars are not represented here, but they should have backs, and, if needed, be movable, and placed as the general arrangement of the school shall render convenient.

The height of the school-room sixteen feet, unless there should be constructed over the room a gallery for the church choir. If that be the case, then ten feet in height over the master's table G. The ceiling might be raised higher as it recedes to the wall over the stove, H. Light may be admitted into the school-room through a window in the partition wall front of the window, at F. Yours, S. W. JEWETT.

Experiments in the use of Lime.

MESSRS. GAYLORD & TUCKER—Having heard much said and seen much written upon the value of lime, I have been induced to make a trial of its supposed virtues. and have satisfied myself upon that subject. The first experiment that I made with lime was upon a field of potatoes, a part of which was limed, and at digging time I could perceive no difference in the field. The lime I used was newly burned and slaked upon the field at the time it was used. I put about a half a pint of lime to each hill, first dropping the lime and then the potatoes. The soil on which it was used approached to loam and was in a high state of cultivation. I next made an experiment upon the same crop and in the same manner, on an upland stony soil of a poor quality, and which was attended with the same result. I next made an experiment with lime by mixing it with swamp muck, having read of its value in forming a compost. I applied the compost to a part of the field last mentioned, but could perceive no more beneficial effects than where the muck was alone used.

By the way, I would recommend to those who have a deposit of muck near them, to make a free use of it upon their upland stony ground, as they will find it a most valuable manure. The course I pursue is to cart it out in the fall upon the field on which it is intended to be used, and drop it in small heaps so as to be subject more directly during winter to the pulverizing influence of the frost.

I next experimented with lime upon a field, a part of which was sown with wheat and a part with rye. The soil was low but well drained, and of a black color, and was thought to be of a good quality. The result of this experiment was that there was no perceptible difference between the limed and unlimed wheat and rye. The lime was spread from a cart with a shovel as evenly as possible, and in fair quantities. Such has been the result of my experiments; and now I wish to state an experiment of a neighbor. The soil on which he experimented was a stiff sour clay, and upon which nothing would grow but a kind of furze grass, the very picture of sterility. It has been limed and plowed, and a tolerable crop of potatoes have been raised on the limed, while on a small piece of the unlimed, although the same course was taken in the cultivation, there was not a return of the seed.

The result of these experiments appears to show that *lime may be beneficially used to correct the acidity of land, but that it is not a manure,* whatever fine spun theories may say to the contrary.—*Tivoli, N. Y. April* 9, 1840. G. C.

Artificial Watering Places.

Messrs. Editors of the Cultivator—Mr. WILLIAM ROBERTSON of Fishkill Landing, Dutchess county, one of our most successful farmers, has communicated to me the following mode, successfully practiced by himself, of supplying with water, fields destitute of springs, ponds or rivulets. The farm lately occupied by him is now in the hands of its proprietor, J. D. L. Verplanck, Esq., where the watering places constructed by Mr. R., may still be seen. The situation of the farm is upon the whole favorable for the purpose, and the plan may therefore seem to require further tests by experiment, before it can be considered invariably successful. He says it was entirely an accidental discovery: he one morning found one of his calves drowned in a barrel sunk in the usual way for the purpose of collecting water from a spring. The water had sunk to near the bottom of the barrel, and the animal in reaching down for it had lost its balance, and falling, was unable to extricate itself. Vexed at his loss, he immediately ordered the cavity to be filled up; this was accordingly done by throwing in a parcel of round pebble stones, which were lying near at hand. The next day in passing by, he saw to his surprise, that the water had risen over the tops of the stones although no rain had fallen, and the season had been very dry.

The idea then struck him (manifestly erroneous, as the barrel is not water tight in these cases) that it was similar to the raising of water in a pitcher by throwing in pebbles, and he determined to make the experiment more complete. Accordingly the barrel was taken out and the hole deepened with very little appearance of water, and he stuck his crow-bar down so as to make several deep holes; then replaced the barrel, packing it well around with earth, and afterwards filled in the barrel as before with the pebbles. In a short time he had the pleasure of finding the water oozing in and gradually raising over the stones until it stood *permanently* some inches over the surrounding level. He repeated the trial in several other fields, and *always* with success, even in places where, on first digging down, there was not the least appearance of moisture, much less of water; he considers that the appearance of springiness is of no consequence, but that water will at length show itself in the barrel in all cases, and will finally rise eighteen or twenty inches above the surface apparently increasing in quantity for a year or two.

Such is Mr. Robinson's statement, and he is fully entitled to our confidence, yet I do *not* believe that this is an *infallible* method of obtaining water *in every* situation, strata or soil; it nevertheless appears to me reasonable to suppose that it may prove of great service in many places at present destitute of water, without resorting to expensive boring, digging wells or making artificial ponds; the last especially from the severity of our seasons, requiring great labor and care in their construction to prevent their being affected by frost or drouth.

I do not know whether the following suggestions will throw any light on the rationale of this simple process, which at first sight appears scarcely entitled to notice. The driest soil (to appearance completely dessicated) nevertheless contains *some* moisture, quickly attracts more from the atmosphere, and, if collected, from a large body of earth, it would form a considerable rill. If we suppose *one* drop gradually to distil and roll over into the excavation, its fall and its attraction will put in motion the next particle and the next, and so on as long as there are particles to be affected, and this takes place not only in one right line, but extends in every direction; at first only those flow towards the aperture which are in a horrizontal plane with the upper level of the vessel, but by degrees the higher strata are affected, and their pressure from above in a tight vessel or tube (for the sides of the barrel become tight by the pressure and packing of the earth and swelling of the staves with moisture) is at length sufficient to force up and sustain a column of water something above the surface of the adjacent soil. I presume, were the communication to be cut off by any means with lands, though distant, higher than the surface of the ground around the barrel, it would not rise above the rim. Probably with a neater adjustment and a perfectly water tight apparatus, a still greater elevation might be obtained. The origin of natural springs is accounted for in precisely the same way; the only difference is that we here furnish an artificial reservoir for the almost imperceptible arteries of the earth which otherwise would steal away to some natural orifices issuing at the surface. The stones assist in enabling a small quantity of water to rise to a higher level; perhaps their natural coldness aid in condensing terrestrial vapour.

It may be considered analagous to the creating an issue in

our own flesh by inserting a pea, for instance, in a muscular part of the body and thus creating a dissemination of the natural lymph to one particular orifice. I should have made trial of this plan on my own place, but (fortunately in all other respects) mine is a piece of ground abounding with water and would add no corroboration therefore to the experiments of the inventor; requiring so little trouble, perhaps some of your contributors will put it into execution and communicate the result.
A SUBSCRIBER.

Fishkill Landing, Dutchess Co., N. Y.

Letters from the West—No. 7.

The Pork Business at Cincinnati.

THE business for which Cincinnati is most famous is pork packing, and to the details of this, during my brief stay there, I devoted considerable attention. As I walked through the immense slaughter houses, I could not but deplore the fate of the amiable grunters, that every season are made to walk off into the barrel, with such admirable scientific skill and celerity as are here displayed. Poor piggy! he is not allowed time for even a single imploring cry, ere he is remorselessly knocked down, his warm blood is quickly seen oozing off in a little rivulet to the great stream of Rio Sanguinetta, (bloody river,) his glossy bristles are ruthlessly scalded off his hide, and in a trice he hangs up by his hind legs, head down, at full length, from the sharp hooks in the cooling house, displaying his white, clean skin, broad ham, thick jowls, and interlarded sides, a watery mouthing piece to the dainty epicure that walks the premises, thinking what a juicy roast and capital smoke and fry he will make, and wondering what dreamy lands his wild spirit is now wandering o'er. Talk of poetry and romance, and all that sort of thing—I advise the sentimental and imaginative in the bright months of November and December, to come to Cincinnati for a lesson upon these subjects! Now to statistics.

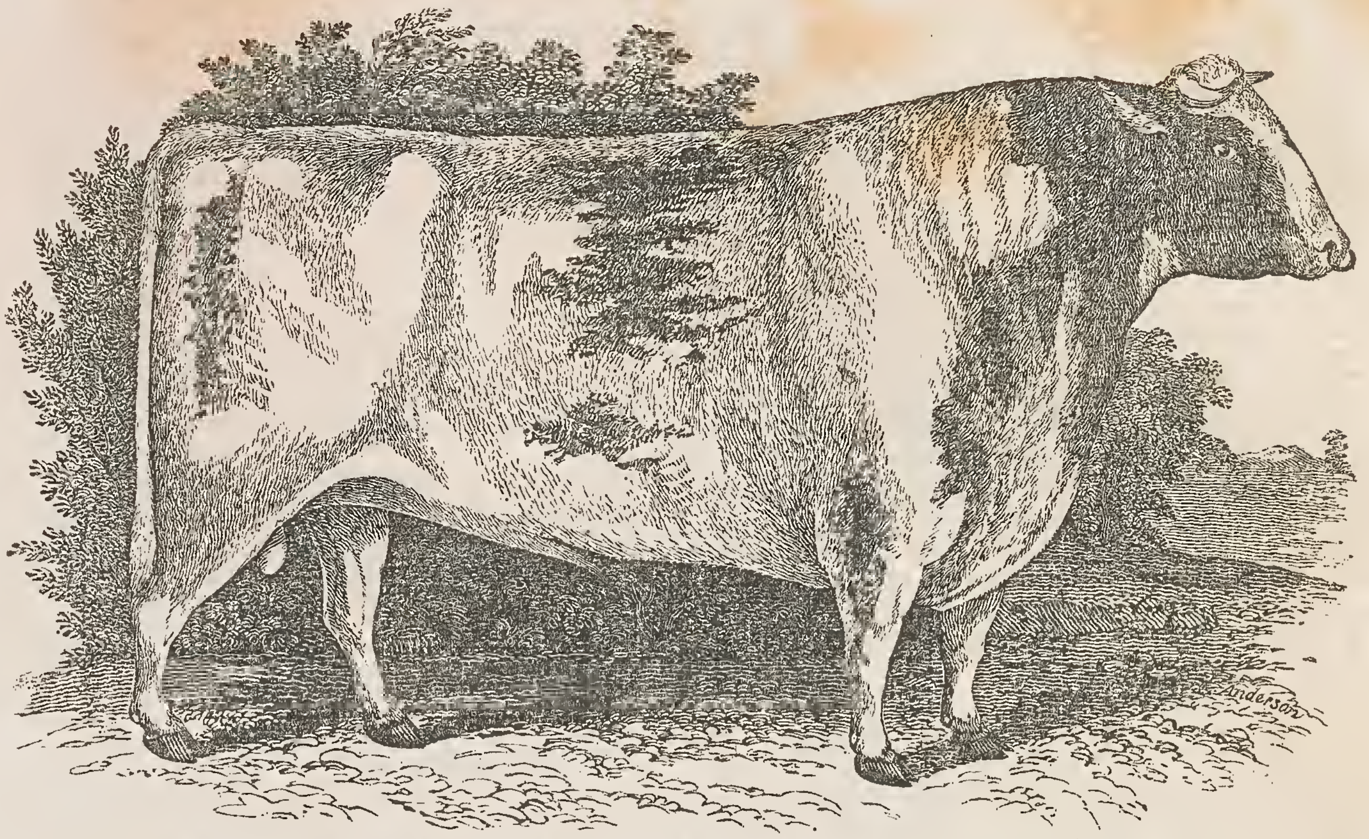
During the past season 150,000 hogs have been cut up here, averaging 210 lbs., making 31,500,000 lbs. pork; employing in this and the branches of packing, smoking, &c. 1220 hands, and a large capital. The season of '38 and '9 was still larger, 210,000 head were then cut up, averaging 175 lbs. Pork then bore a high price, and the farmers were more eager to get it to market than at present, when it sells so low. I will now state the capacity of one house for this business.—25,000 hogs have been cut up in a single season, 1500 of which can be done in one day, with fifty hands, averaging 200 lbs. wt.—800,000 lbs. can be smoked at one time, or 4,000,000 lbs. in a single season. The season for killing and packing is short, only about ten weeks.

As to the color of hogs, the packers are totally indifferent to it, a black or a spotted, a blue or white is all alike to them, nor does it make any difference with the purchaser or consumer. I hope, therefore, to hear no more objections to the color of Berkshires; it is never thought of here at the West.—Now to the weight, and upon this point I was very minute and particular. If the side pork is reasonably thick, say four or five inches, they do not wish the animal to weigh over 250 to 300 lbs., for with such hogs the shoulders and hams are *small and tender, easily* saturated with salt and smoked, and bring the highest market prices. Indeed, the best prices that they fetch is in the Virginia market, and then they only want a 200 lb. hog. Animals that weigh 450 to 500 lbs. are long and thin here, and do not cut any thicker side pieces than those of a proper conformation, that only weigh 250 lbs., then the hams and shoulders of the large animals are *coarse and thick, difficult to salt and smoke*, and do not bear so high a price in market by *half* a cent per pound as the smaller and more delicate hams and shoulders. I wish to call the particular attention of the pork raiser to these facts. It will be seen now that the very smallest sizes of the fine Berkshires can easily go in weight over the desideratum of the pork purchasers and packers of the West. The live weight of the least Berkshire sow I ever had in good breeding order, weighed on the scales alive 303 lbs., and could easily fat to dress nett 350 lbs., and cut at least 4 to 5 inches thick of side pork, which makes heavy mess pork enough for even the Boston market to supply to its fishermen, and give tender, lean, juicy hams and shoulders with very small bones, and a trifling per cent of offal. Now what more can the public want than this? But urged on by a spirit of pride, and for the sake of bragging about sizes, they seem determined to sacrifice to this folly the finest race of the swine kind that ever existed. My breeders now run from 350 to 600 lbs., in good store order, and would fat from 400 to 700 lbs., double the weight required by purchasers at the greatest pork mart in the Union, and still the cry is for size, size! Well, size they shall have now to their hearts content, for it is my intention to import some Berkshires this season, that will *fat, full grown, to one thousand pounds.* They can be had in England just as easily as a finer medium sized race, and I am determined, for one, that the cormorant appetite of the public shall be satisfied, in this particular, to the full, at the same time to please myself and the more judicious number of my purchasers, I shall still continue to breed good medium sizes of about 400 lbs. weight, and we shall see at last who is right.

Visit to the Farm of Mr. Mahard.

With these prefatory observations, I come to the farm of Mr. JOHN MAHARD, Jr., which to him is a sort of pleasurable hobby, his main business being that of a most extensive pork-packer in Cincinnati, having cut up at his establishment the past season about 22,000 hogs. Mr. M. has been many years engaged in this business, and has consequently large experience in the sort of animal upon the whole the most profitable to the producer and consumer. He early saw the deficiencies in the common hog of the country; they were either too large, coarse and thin in the sides, or too small, and for the last ten years he has endeavored by crosses of the grass, Leicester and various other breeds, to get him a broad, square, thick animal, and thought, about a year since, he had at last, after so much pains and expense, eminently succeeded, and felt great pride at the perfection at which he had arrived, when lo and behold he came across some Berkshires, and what was his astonishment to at once find that these were the very animals that he had sought to attain, and good as he before supposed was his own breed, that these cast them entirely in the shade. With his characteristic good sense and decision, he at once made a liberal purchase of all the best strains of the pure blood in the country, and commenced, by way of pastime, as a breeder, taking for his style as a general rule, those of a fine medium size. But in order to please the public and accommodate himself somewhat to its taste, he also got some of the larger classes, and is breeding about half of one size and half of the other, and in addition to the best strains already imported he is to have out this fall some fresh ones from Engand, part of which will be of the very largest sizes.

It was late in the afternoon that a jolly quartett of us, viz. Mr. MAHARD, Mr. AFFLECK, of the Farmer and Gardener, Mr. FOSTER, the animal painter and engraver, and myself, started for the farm. We climbed the hills overtoping the town with great glee, dashed round the tasteful buildings of the Lane Theological Seminary, where Dr. BEECHER so eminently presides, and after passing villa and farm house some three miles more, we found ourselves at the elegant mansion of Mr. M.—It was quite dusk when we arrived here, so leaving the discussion of the stock till the morrow, we soon set about that of a capital supper, and then early to bed. We were up betimes the next morning, and out in the clover fields, where we found most of the grown Berkshires that were not suckling their pigs, ruralizing on fresh grass, even at this early season, with little else to eat save a small quantity of wheat bran swill, and yet they were all in fine order; and some I thought almost too fat for good breeding. Still, as it was very different flesh from the corn fed, being light and loose, perhaps they were as near right upon the whole, as they well could be.



SHORT HORN BULL PRINCE FREDERICK—[Fig. 63.]

Owned by John Mahard, Jr. Esq., Cincinnati, Ohio.

Mr. Mahard is a judicious feeder. When a sow has pigs by its side it is high kept, and the offspring tempted to eat as soon as possible. The pigs do not scour then or fall away upon weaning, though done at an early age, and as soon as relieved of this burthen, the dam is put into good condition and then turned out for a run at grass, if in the summer, or a large roomy pen, with light food, if in winter. He tells me that thus managed, upon an accurate calculation that he has made, his food costs him but about a penny per day per head, and as cheap as grain is in this country, and as well acquainted as I am with Berkshires, I can readily believe it. I have frequently kept them at home at a cost of two cents per day, where food is double the price it is here.

The stock I think generally beautiful; Lollo, Oteco, Darkeye, and Daisy are probably the choicest of the grown breeders, while Nell, Dinah, and Millie are the largest; then there is a goodly number of yearlings coming on, got by Mr. Lossing's imported boars, out of my great Shaker sows. Of the boars, Sagamore, out of the beautiful Raven Hair, is very fine, with the best hams I ever saw on a male. Young Newbury is large and fine, and as for Long Canoe, if he don't make a show for size when full grown, I am greatly mistaken. Though but eighteen months old, he stands within a fraction of 2 ft. 7 in. high to the top of his shoulder, and is nearly 6 feet long, measured in the usual way. He bids fair to out-top a Mississippi alligator,—so look out for a roarer here in the West. Doctor Shaler, of Newport, Ky., refused $100 cash for a four months sow pig of his get out of Oteco, while the same gentleman who made this offer paid Mr. Mahard $50 for the choice from the litter of Daisey only two months old. The former is very large, the latter of a medium size, and both as near perfection now as it is possible for animals to be; and to conclude about Berkshires, I most heartily commend Mr. Mahard's breeding to the Western public.

We now pass on to the Durhams—Prince Frederick is my choice of the older bulls; he is 3 years past, and weighed on the scales last month 1760 lbs. in fair working condition; is a good handler, quiet temper, with fashionable and airy style, carrying a beautiful arched neck and fine head and form. A very accurate portrait* of him, by Foster, graces the April No. of the Western Farmer and Gardener. I thought Lady Ann and Juno the best of the imported cows, and they are famous good milkers. The former has given her 31 quarts per day, and the latter averaged 24 quarts for 4 months after calving, and gave 8 quarts within five weeks of calving again, and it was with considerable difficulty that she could be dried up at all. Mrs. Mahard told me that the quality of this milk was much superior to any she ever had from the native cow. Florida is a fine animal, and was bought at Major Clarkson's sale in '38, with a calf at her foot, for $1075. Empress is a good one, out of Lady Anne, imported in calf;—of the heifers bred here, I liked Miranda best.

Mr. Neff's Short Horns, &c.

The second day after this, Mr. W. NEFF called upon me for a ride out to his farm, where my eye was feasted by the sight of about fifty head, large and small, of pure improved Durhams, which I do not scruple to say compose for so large a number the choicest, finest and most *even* bred herd that I ever yet had the pleasure of looking at. Retiring from his mercantile pursuits, on an ample fortune, with a taste and spirit that does him honor, Mr. N. has devoted much of the past four years of his life to the raising of stock and agriculture. Having ample means, he commenced right by purchasing the best animals to be had, and has continued to breed from them with great care and skill.

The bulls he began with were Hector and Brutus, bought at Whitaker's imported sale at Philadelphia, in 1838. My brother, who was present then, pronounced them the choice of the lot. Hector is now sold into Kentucky; I therefore did not see him; but Brutus still stands here in all his glory, with a weight, I should judge, of at least 2500 lbs., and some think of 2,700 lbs., most too much flesh I should fear for good service, though they say he is active under it. With this great weight, he is fine in his points, well let down in the twist, and has the best brisket I ever saw, measuring 2 ft. 9 in. across it, and a back broad enough to make up a cot-bed upon. These have been followed up by Prince William, now three years old, selected by young Mr. Whitaker, from among the choicest animals in England, and imported in '39. Taking him all in all, I think, in his present form, he is one of the most perfect and beautiful of the improved short horns within my recollection. Of great substance, fashionable, airy and fine, a quick feeder, a quiet temper, and fair handler. With these general remarks, and to give my Northern friends a more accurate idea of the animal, I subjoin an exact admeasurement of him, taken by Mr. Affleck and myself. Length from the base of the horn to the root of the tail, or rather end of the quarter, 8 ft. 1 in.; girth, round the heart, 7 ft. 7½ in., do. round the loin, 8 ft. 2 in.; height over the shoulder, 5 ft. 2½ in.: spread of the hip, 2 ft. 3 in. This, of course, will be something more as he grows older, he will also attain a greater depth of carcase, wider brisket, &c. &c. His weight is now judged to be at least 2100 lbs. Mr. N. thinks Young Prince, yearling got by the above, as even more promising than his sire, but he may well be proud of his breeding if he even equals him.

Among the cows, Beauty, Blossom and Profitable pleased me the most. The former is quite as easily kept as a China pig, and the only difficulty is how to get her *poor* enough. Ruth is indifferent to look at, but as is often the case when the animal is itself well bred, has proved a very superior breeder. Victoria, her first calf, I think, is a perfect gem. Some might judge her as a trifle too short, but to my fine taste she seems as near perfection as one might hope to attain—she is of the medium size, and to her finished form adds those requisites that will give the most beef and milk for the food consumed.—Is not this then the desideratum?—and to what beyond this ought we to look for? Louisiana, another daughter of Ruth, a two year old, I found nearly as perfect as her fair sister, but much larger—then, of the same age, were Virginia, Clifford, and Georgia, all very fine, and as to their particular merits the public seem to be about equally divided. Sibella struck me as the jewel of the yearlings, yet all seemed good enough, and he must be particularly fastidious that should object to any one I saw in the herd. These finished, Mr. Neff took me to see a superb heifer calf got by Prince William, out of Victoria, the first produce from a cow of his own raising, and of which he seemed to be prouder than of all the rest he had shown me. Now I like this feeling; it is laudable, and I could only wish it were more extensively cultivated.

In the swine family, Mr. N. has but a moderate number; his feelings were rather against Berkshires till he tried them with his others, and I believe now he is convinced of their superiority, and as evidence of this has given me a liberal order out of my present expected importation. I here saw what he called the Liverpool hog, which I recognized at once as of the same family as the Leicesters, that abound in Western New-York. The Irish Grazier that he showed me, had a better barrel than I expected to see. He is rangy, and I should judge a good traveler, but long in the snout and neck, and somewhat disposed to a scurfy skin. Mr. Affleck told me that they were of immense size in Kentucky, but perfect *corn cribs,* which is to say, enormous consumers.

The stables here, I found well arranged, and each animal has a stall to itself. The corn is all boiled, and the straw cut, and a little wheat bran added to it. I was also shown a pile of the sugar beet still sound and sweet after their wintering, and was glad to hear Mr. N. acknowledge their good qualities in sustaining his stock. Now this is agricultural orthodoxy, shelter, cooking food, and maugre the anathemas of Doct. Guthrie, feeding sugar beet. I wish I had time at my disposal, I would give a plan for cooking corn and feeding it here in this country, that I know, notwithstanding its low price and the extra labor in doing so, would greatly result to the farmer's advantage. The general idea is this:—Get a strong powerful corn-cracking machine, then go into the field with wagons, and take the ears from the stalks in the husk, throw them into the hopper, and break up cob, grain, husk and all; throw the meal into large vats of water to thicken and ferment, or even boil it, and then draw it out into troughs for feeding. I hope Mr. Neff or Mr. Mahard, or any other of the Western gentlemen here, so fully competent to the task, will one day give you their plans and ideas on this important subject, for we had full and frequent talks upon the matter, and they seemed to think it could not but pay. To finish off with, we took a walk in a flourishing vineyard, and returned to town at night-fall, highly gratified with my day's excursion.

The pleasant week that I spent in Cincinnati seemed to me but a day, and it is my intention to come again, and float down the Mississippi to its mouth, and then up to the Falls of St. Anthony, and across from thence through the mineral region to the Lakes, and so down home; this will give one a very satisfactory idea of the great Southern and Western region. We travel amazingly cheap here now on the rivers; for instance you can go from this to New Orleans for $15 in the cabins of the crack steam-boats, and return for $17, which is about the same as living at a hotel. The boats are differently constructed from the rakish looking craft that plow the Lakes of the West and the waters of the East. Here they are of light draft and flat bottoms, with the lower deck almost even with the water, the machinery mostly on this, and the cabins on a hurricane deck above. They loom large, and command good views of the adjacent country, but in our big waters, of course, would be easily capsized in a gale. The Ohio here is rather a grand stream, being ⅞ths of a mile wide by measurement; its waters, however, are turbid, and present nothing of the clear trans-

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[*Fig. 63, engraved from the print in the Western Farmer, by Dr. Anderson, of New-York, for the Cultivator.—EDS.]

parent beauty of the Niagara. The hills are from 300 to 600 feet high, and generally picturesque, sometimes coming boldly down to the water's edge, but more generally rising from an alluvial bottom of a greater or less width. But let no one think of finding any where at the West the ever varied and matchless scenery of the Hudson. There is a great sameness in the hills along the Ohio, and after gazing on ten miles of them, you have seen all. Many beautiful villas crown the heights above Cincinnati, with extensive adorned grounds, and much taste is displayed in cultivating flowers and green-house plants. You will see them at many a humble window in rich profusion, on board the steam-boats, and even in the rough arks and broad-horns (a rough scow.) It was the 24th of April that I left, the earlier fruit trees were shedding their blossoms, and the apple, the lilac, the dog wood, and red bud, (*Cercis Canadensis*,) were in full bloom all the way up to Portsmouth. The winters here are milder and more broken than the same latitudes east of the mountains, as well as I can judge, but I doubt whether vegetation is much more advanced in the spring; it may be retained a little later in the fall, yet this can only be ascertained by accurate journals kept on each side of the mountains. I wish some gentlemen would undertake it, and in doing so the native trees, shrubs and flowers in the forests should be the guide. Exotics and garden productions are not so sure a test. In this the difference of a week may be made by protection, rich light soil, and superior cultivation.

From Mr. Affleck, of the Farmer and Gardener, I received much attention. He is a capital warm-hearted fellow, and after attending agricultural lectures, under Professor Low, of Edinburgh, came over here, and has perambulated much of the Union, and especially that part of the great South and West stretching from New Orleans up the waters of the Mississippi, Missouri, and their tributaries, making himself particularly acquainted with the cultivation of the various products of this extensive region. He is also an excellent judge of stock of all kinds, and any one seeking information on any of these points, may rely upon full, free and satisfactory information from him. Mr. Hooper, I believe, has devoted more attention to the nursery and garden. Mr. Foster, the animal painter and engraver, is rapidly acquiring skill in his art. It is but about six months since, that he has paid attention to this subject—what an improvement in the portraits of Prince Frederick and Fanny in the November No. of the Farmer and Gardener, and the same and Reading and Miskwa in that of April. Had the paper been as fine, they would show nearly equal to the beautiful engravings that adorn the London Farmer's Magazine. I heartily commend this spirited little work to the agricultural public.

Visit to Chillicothe, Circleville, &c.

Immediately upon my arrival at Chillicothe, I was met by my excellent friend, General Worthington, and who, though at present is perhaps more interested in politics than agriculture, took upon himself the *bore* of showing short horns, and was quite devoted to me while there. We first visited the fine farm of Mr. Geo. Renick, where I saw the magnificent imported cow Violet. She is the brag animal of the female gender in the Sciota Valley. Her size is enormous, yet she is fine;—she handles well, and is 2 ft. 6 in. across the hips. She is the greatest cow that I ever saw, and I much regret that they have been so unfortunate with her produce. Donna Maria, out of an excellent imported cow of the same name, a yearling, is very choice and fine, medium size, and greatly to my taste,—she handles like the softest velvet. Commodore Perry, got by Comet Halley, is a good one, though a trifle coarse; there were about 20 head here altogether, and the most of them deserving commendation. Mr. R. prides himself greatly in raising grade steers, of which he has a large herd. If I recollect right, he and his brother at Bloomfield, took all the prizes in this line at last October Fair. Had not the herd been so far off, and my time so limited, I should have been glad to have gone and taken a look at them; but in October I had a pretty accurate idea of the stock; they are a splendid improvement on the scrubs of the country.

From this we called upon Doct. Watts, a mile or so only below the town, on a farm of 1200 acres of the rich Sciota bottoms, every rood of which is arable and under a high state of cultivation, and in the large fields of which they were already planting corn. Here I saw Marshall, that took the first premium of bulls at the last fair. He was then 3 years and one month old, and weighed 1888 lbs. His barrel is long and good, handles well, and is of the quietest and best of dispositions, a matter to which they are paying great attention at present here,—a vicious bull, however perfect otherwise, is usually sacrificed. I was also gratified by a sight of Comet Halley, who maugre a little coarseness in the head, is as near right as can be. Prince Albert, a half brother to Marshall, is still nearer than the latter, and their dam Arabella is a good cow in herself, but a still better breeder. The Doctor, or rather his accomplished lady, has gone pretty deeply into Berkshires, and she exhibited, at the dinner table the silver cups she had won in their exhibitions, with commendable pride. It is thus that the agricultural interest stands foremost in the West, and a little attention to choice stock rather adds to, than detracts from the elegant refinements of the fair sex in this country. If I am ever so fortunate as to get a wife, I hope it will be one whose taste runs in this line, as well as the other accomplishments of life. Queen Victoria stands at the head of an agricultural society in Great Britain, and why should not our own fair daughters grace their exhibitions.

From thence we took a ride to the grand old place of the late Governor Worthington, which is more in English style than any thing I have yet seen at the West. It is quite a castle of a house, of thick massive stone, standing on a hill about a mile from the road, and over-looking the town, the winding Sciota and its rich fertile bottoms to a great extent, the hills beyond to the wild boundaries of the Hocking, and the elevated plain that stretches away off to the Lakes. A thick hedge of the native thorn surrounds the lawn leading to the house, and on the east side is an extensive terraced garden, abounding in fruits, and shrubs, and flowers. Had I room in my sheet I should like to give you a plan of the place, which would convey a much better idea of it than mere words. The General returned to his family in town, while I was hospitably entertained by Mrs. Worthington, the lady of the late Governor, for whose attentions on a stormy night, and in rather ill-health, I felt very grateful.

The next morning I called on Mr. Anderson, occupying the seat of the late Gen. McArthur, another noble old stone house on a hill, commanding a fine view of the adjacent country.—Here again I had the pleasure of examining some beautiful short horns. Hearts-Ease, out of the Dutchess of Liverpool, got by the Duke of York, is a fine choice cow, and of good size. A yearling heifer of hers, got by Marshall, is very promising, of much length, a great quarter and fine head. Another heifer, Gem, out of the same dam, struck me as being most appropriately named. She was got by Walter out of Teeswater,—these two last were sold at the company's sale here for $2,250. Mr. Anderson also showed me some fine horse stock, among which were two half sisters to Col. Johnson's celebrated Ironette. The grey filley, Anna Medoc, was got by Medoc, sire of Grey M. that lately made such a tremendous run, winning a 4 mile race in the quick time of 7m. 35s. Anna is a powerful stout built horse to my eye, and I should like to see her crossed with Bellfounder. Her shoulder is more upright than blood horses usually are, and I have no doubt, thus bred, would produce superb roadsters. I hope Mr. Anderson will send her to Lexington, Ky., where Bellfounder is now standing. I saw some very fine specimens of the old Patton stock here, which were different from any that have before fallen in my way. Those that I saw at the North were tall and of a deep red, with dark noses, making me judge them to be a cross of the Hereford and North Devon; these here show a strong cross of Hereford, with what I should think the old Long Horn, or perhaps the Durham, but in an opinion upon this subject I would refer to the more able pen of Doct. Martin, of Ky. Those I saw here were excellent animals, and take on flesh rapidly. I should think them good stock for the butcher; they are great favorites with Gen. Worthington, he cultivating them almost exclusively on his prairie farm. He says they do not mature so soon as the Durhams, but thinks they drive better over the mountains to the distant Eastern markets.

Mr. Felix Renick resides on a fine bottom farm with some hill lands, about 4 miles below Chillicothe; his stock of full breds is not large, but mostly very fine. Josephine, an imported cow, has taken the first premium at the cattle fair for 3 years. Out of her he has three excellent calves; one of which, Nonpariel, 2 years old, has already taken two premiums. His bull Rover was bred by Wm. F. Paley, Esq., and imported in '36. He is large, with a well set arched neck, full over the shoulders, long in the barrel, and the very best handler for a male that I ever touched.

At Circleville, I had not time to call upon any one but Mr. Thos. Huston. Here I found the celebrated bull Ackmon, that brought at the company's sale $2,500. He is a most superb animal, with extraordinary loin, and his reputation for getting beef stock is probably superior to that of any other in the Valley. The imported cow Lively is very large, and great in flesh. Mr. H. has a numerous herd of grades, and many of them quite fine; he also keeps a few good Berkshires, and is crossing up his stock as rapidly as possible.

It was my intention to have called upon Mr. Wm. Renick, at Bloomfield, 9 miles above Circleville, but the weather was so stormy that it prevented me. I made a visit there last fall, but did not at that time take any memorandum of the stock, expecting to see it again. It is numerous and generally good. His cow Victoria that took the first premium at the last October Fair, is one of the choicest animals I know. He has some famous great steers also. There are many other excellent short horns in this vicinity, which I would have gladly taken a look at, had time permitted; but one might devote a month to this business in the Sciotia Valley alone, and yet not see all. My remarks upon the West for the present are at an end.

Columbus, Ohio, April, 1841. A. B. A.

Preparation of Hams in Kentucky.

Messrs. Gaylord & Tucker—There have been published many modes of curing bacon; and in the cases in which these have been the result of experience, they may all be successful, and entitled to the confidence of the public. Some, perhaps, are more simple, less laborious, and more uniformly safe than others. The following mode has stood the test of thirty-five years' experience without a single failure—of twenty-seven years in Spottsylvania county, Virginia, and of eight in Kentucky, where I at present reside. I can, therefore, recommend it as a safe and certain mode of making sound, sweet bacon. The salt used in Virginia was Liverpool blown salt; in Kentucky the Kanhawa and Goose creek. The ashes from hickory or the sugar maple.

I will now begin at the beginning, and describe the whole process minutely, premising, however, that, to have good bacon, we must have good pork, neatly dressed or cleaned. It is important that the hogs should be killed in proper weather, by which I mean that the weather should be such that the hogs, hung up after they are cleaned, should be not only cold to the touch, but feel stiff, not frozen, after hanging up till the animal heat is out. I always kill on one day, and cut out and salt up the next. If the weather is quite cold *after they are stiff*, I put the hogs in the cellar that they may not freeze; if the weather is moderately cool, I let them hang up in the air all night. The cutting out is the next operation. This need not be described further than to say that the back-bone or chine should be taken out, as also the spare-ribs from the shoulders, and the mouse pieces and short-ribs or griskins from the middlings. No acute angles should be left to shoulders or hams. In salting up in Virginia, I put all the meat, except the heads, jowls, chines and smaller pieces, into *powdering tubs*, (water tight half hogsheads.) In Kentucky I have used large troughs, ten feet long and three or four feet wide at the top, made of the Liriodendron tulipfera or poplar tree. These are much the most convenient for packing the meat in, and are easily caulked if they should crack so as to leak. The salting tray or box in which the meat is to be salted, piece by piece, and from which each piece, as it is salted, is to be transferred to the powdering tub or trough, must be placed just so near the trough that the man standing between can transfer the pieces from one to the other easily, and without wasting the salt as they are lifted from the salting box into the trough. The salter stands on the off side of the salting box. Salt the hams first, the shoulders next, and the middlings last, which may be piled up two feet above the top of the trough or tub. The joints will thus in a short time be immersed in brine.

Measure into your salting tray, four measures of salt, (a peck measure I have found most convenient,) and one measure of clean dry sifted ashes; mix and incorporate them well. The salter takes a ham into the tray, rubs the skin side with this composition and the raw hock end, turns it over and packs the composition of salt and ashes on the fleshy side till it is at least three-quarters of an inch deep all over it, and as much on the interior lower part of the ham, which is covered with the skin, as will lay on it. The man who stands ready to transfer the pieces as they are salted, takes up the piece and deposits it carefully without displacing the composition, with the skin side down, in the bottom of the trough. Each succeeding ham is thus deposited side by side, so as to leave the least possible space unoccupied. When the bottom is all covered, see that every visible part of this layer of meat is covered with the composition of salt and ashes. Then begin another layer, every piece being covered on the upper or fleshy side three-quarters of an inch thick with the composition. When your trough is filled even full in this way with the joints, salt the middlings with salt only without the ashes, and pile them up on the joints so that the liquified salt may pass from them into the trough. Heads, jowls, back-bones, &c. receive salt only, and should not be put in the trough with the large pieces. Much slighter salting will preserve them if they are salted upon loose boards, so that the bloody brine from them can pass off. The joints and middlings are to remain in and above the trough without being rehandled, resalted or disturbed in any way till they are to be hung up to be smoked. If the hogs weighed not more than 150 pounds, the joints need not remain longer than five weeks in the pickle; if they weighed 200, or upwards, six or seven weeks is not too long. It is better that they should stay in too long rather than too short a time. In three weeks, jowls, &c. may be hung up. Taking out of pickle and preparation for hanging up to smoke is thus performed: Scrape off the undissolved salt, (and if you had put on as much as directed, there will be a considerable quantity on all the pieces not immersed in the brine. This salt and the brine is all saved; the brine boiled down and the dry composition given to stock, especially to hogs.) Wash every piece in lukewarm water, and with a rough towel clean off salt and ashes. Put the strings in to hang up. In Virginia I used for strings white oak splits, in Kentucky hempen strings. Set the pieces up edgewise that they may drain and dry. Every piece is then to be dipped into the *meat paint*, and hung up to smoke. The meat paint is made of warm, not hot, water and very fine ashes, stirred together till they are of the consistence of thick paint. When the pieces are dipped in this, they receive a coating which protects them from the fly, prevents dripping, and tends to lessen all external injurious influences. Hang up while the pieces are yet moist with the paint, and smoke them well. In this way I have cured from six to eight thousand pounds of bacon every year, for twenty-seven years in Virginia, and eight in Kentucky.

I use at least three bushels of salt to 1,200 pounds of meat. This may be thought extravagant, but it insures success, and none of it is lost. For what is left is all fed to the stock, and being mixed with ashes, I believe has a tendency to promote their health more than salt alone.

Should you desire it, I will, at some future time, give you our mode of trying up lard,* which is not exactly that in common use.

Very truly, your obedient ser't, JOHN LEWIS.

Llangollen, Ky., March 15, 1841.

Odds and Ends.

Refined *vs.* Common Sugar.—It is worthy of inquiry, whether it would not be more economical to use more refined sugar in our families. Common brown sugar is generally about two-thirds the price of refined. For many domestic purposes, I am satisfied that refined sugar is the cheapest. Will some one better acquainted with the subject, give us their opinions?

Maple *vs.* Cane Sugar.—What is the relative strength in saccharine, between common brown sugar and common maple sugar? It is the prevailing opinion that the cane sugar contains some 25 per cent the most saccharine matter. Is it so? Will some one who has the means of trying the experiment, do so, and report facts?

Sugar *vs.* Pork.—If sugar and pork are the same price, which is the cheapest food for a family? Many persons who buy their meat, are excessively penurious in their purchases of sugar, under the impression that they cannot afford it. I am confident that they are mistaking their own interest. Besides, sugar, particularly for children, is a much more healthy diet. That is, when not used to excess.

Change of Diet.—This is a subject upon which by far too little attention is paid. Human aliment is often productive of health or sickness, and consequently of human happiness or misery. Children in particular, require a constant change; but the change should be a judicious one. I wish that many of the able medical men who read your paper, would make communications to it upon the subject of human diet.

Washing Butter.—I venture to assert without fear of contradiction, that no family eat sweeter butter than mine, either new or old, and my wife always washes her butter thoroughly in cold water. The object of washing butter is to divest it of all the particles of buttermilk. If the cream or milk has made *bonny-clabber*, there will inevitably be small particles of it distributed throughout the whole mass of butter, and unless they are entirely removed in some way, that butter will most certainly become rancid. Working the butter in cold water will dissolve all these particles of congealed milk, and the water is easily worked out, or should a few drops remain, it will unite with the salt and form pure brine. If there is any other manner by which the butter can be freed from the milk more easily, I should like to know it.

My butter, although "spoil'd by washing it," when packed in a pot or keg, with a clean cloth pressed on the top, and a little brine on the top of that, say half an inch deep, will keep a year, as sweet as ever unwashed butter was, is, or can be kept in any manner whatever. These are facts. Now let us have the facts in opposition to the cold water system.

I do not wonder that so many object to washing butter, for it is a lamentable fact, that there is a great antipathy existing against the use of cold water, either as a beverage, or for ablution.

Tea and Coffee.—Will somebody tell me what is the value of these articles, as diet? Will somebody tell me whether the use of tea and coffee adds to our health or happiness, or length of life, or whether we enjoy our meals any better than we should do if we had always been accustomed to drink water?

Chess.—[See Dictionary signification.]—"A difficult and abstruse game." "Abstruse—hidden, obscure, difficult."

Now, if we did not know that the lexicographer intended to explain the meaning of the *game of chess*, the readers of the agricultural papers for a year or two past would suppose that he had intended it to allude to the abstruse game of disputation, that has been carried on about chess, and upon which, I presume, that a majority of the readers have come to the conclusion, that the subject is a very abstruse one.

Curing and Pressing Cheese.—A neighbor of mine has been in the habit for several years of stacking his cheese in a hay stack. He takes them as soon as they become firm, and making the stack some three or four feet from the ground, as smooth and level as it can be, puts on a course of cheeses, being careful that they do not touch each other, or come too near the edge, and then builds on the hay two or three feet, and then another course of cheeses. In this situation they finish curing, and are preserved from frost until spring. The plan is new to me, but perhaps not so to your readers. At all events, it is worth trying. I would recommend any person, however, to try it only on a small lot at first, until he satisfied himself personally that the plan is a good one.

Shearing Lambs.—I have satisfied myself by experience, that it is not profitable to shear lambs.

Oyster Plant, or Salsify.—It is surprising that so few persons cultivate this delicious vegetable. They are planted and cultivated similar to carrots or parsneps, and like the latter, may be suffered to remain in the ground through the winter, and dug in the spring as soon as the frost is out of the ground. They are cooked in different ways. One is to boil them in clean water, and mash them and mix with flour into batter and fry them. Another, to cut them up in small mouthfuls, and after boiling soft, make a gravy of flour, butter, &c. and add to them, and really they are a rich substitute for oysters.

School Books.—There is a criminal fault existing in community, not only in the quality of the matter of school books, but in the manner that they are printed. I have of late observed several school books, printed with a very small type, upon poor blue looking paper, and in every particular bore a near relationship to "Pindar's Razors." No good man would be guilty of publishing such books for the use of children. It is a down right robbing of their honest rights. It is sufficiently painful for a child to learn to read out of good round fair print. To illustrate, I beg you to put this article in such type as should only be used for children's reading books. It is of no consequence that it takes more paper. That article is cheap, and for school books, should always be of the best quality. And I hope every man who reads this article, will hereafter reflect when about to purchase, that in buying one of these made-to-sell cheats, he is about to do a positive wrong to his child. Buy none but the best. See that the type, paper, and binding are good. And finally, be assured that this good advice is given by one ardently devoted to the cause of education and human improvement, and your old Indiana friend,

SOLON ROBINSON.

Lake C. H., Ia., March 28, 1841.

[* It will be very acceptable.—Eds.]

Agricultural Papers.

Messrs. Editors—To adopt the language of the more refined sex, "I love an agricultural paper most dearly." It is so, for the reason that it treats of matters with which I am connected professionally—it informs me of the progress towards perfection, which is making not only through the length and breadth of our own beloved country, but throughout the civilized world, of that art, above all others, the most noble and useful, agriculture. This is quite natural. The lawyer, if he has a soul capable of expanding beyond a "good fee," will fondly and anxiously desire the amelioration of all laws which govern and bind the civil compact, and his bosom will swell with pleasurable emotions, at every advance which is made towards perfection in this important particular. This is true, also, of the physician of elevated mind. Does he not feel a pleasure, when reading in the periodical devoted to his profession, of the improvements and new discoveries which are daily made to heal the diseases and mitigate the pangs of his fellow mortals? And does not increase of skill depend very much on his acquirement of this progressive knowledge? This is surely so. How is it with the good divine and the philanthropist. Is it not the inmost desire of their hearts, that civilization and christianity may cover the whole earth? And were it not for the periodicals and papers devoted to these noble objects, how meagre would be the information, and how tardy would be their advance! The man of science thrills with unqualified pleasure, when reading in the paper devoted to his pursuits, of the progress being made in those matters to which inclination or necessity may have impelled him to devote himself. Now, why is all this so? The cause is to be found in that natural and deep-rooted desire of the human breast, that the moral and physical evils of the world may be lessened; that yearning after perfection in all that pertains to man's temporal condition; and the *means* by which these exalted ends may be attained, are regarded accordingly. This is precisely the reason, why I love an agricultural paper: because it is a means and the most efficient of all means, to elevate to dignity, and practically promote that noble calling, of which I am proud to acknowledge myself an humble member.

I see in the pages of the Cultivator, the surest evidence that that formidable obstacle, which, until recently, existed in our country, to retard the advance of agriculture, is broken down and destroyed. I refer to the ridiculous idea which prevailed, in the northern states more particularly, that the profession of a farmer was ignoble and vulgar. Also, of the downfall of another prejudice equally formidable and ridiculous, that '*book farming*' was injurious; that it was a sort of a 'will o' the wisp'—a false light, which led men through senseless experiments into bogs and swamps. Aye, true, indeed it is, that 'book farming' has led men into those miry regions, but not in the sense above conveyed. Instead of being an illusory light, it has proved itself a safe and substantial one: a light which has conducted men through the supposed irreclaimable swamp, where dwelt only the croaking frog, where grew nothing but the profitless brake, and from which was emitted exhalations destructive of health and life. 'Book farming' is the very light which has pierced these foul vapors, dispersed them, and in in their place is exhaled the breath of sweet flowers, and "tasted spicy and delicious fruits." Has not 'book farming' taught us to grow four blades, where was only one? Go to the fields of him who has kept pace with agricultural improvement, by reading and experiment, and then to those of the ignorant dolt, who fancies that perfection in farming was acquired by his grandfather, and that he has inherited it, and mark the contrast! and if it will not convince that agricultural papers are safe and substantial lights, then there is nought in demonstration.

But let us come at once to a plain and obvious point in this matter. What is book farming? Is it any thing more or less than a record of the experience of farmers in all that pertains to the cultivation of crops, management of their stock, and the result of investigations of scientific men in those laws which govern and influence the vegetable kingdom? This is all, and nothing more. Who and what are the three hundred men whose communications are seen in the last vol. of the Cultivator, but practical farmers; and what they have chosen to publish, is it less to be believed than if they had "talked it off?" Surely not. Well, then, the upshot of the whole matter is just what is above stated, that the *written and published experience of farmers is that which constitutes* '*book farming*;' and, therefore, how silly and unfounded is the prejudice against it.

But permit me to refer, briefly, to the unfounded prejudice, just alluded to, which is destroyed, and happily, among the things that were, namely, that the farmer's calling was *vulgar*, and beneath the educated and "well born."

It is very true that this prejudice did exist to that extent, that farmers themselves quailed under its influence; and their sons were *driven* into other occupations, seemingly for the purpose of saving the family from further degradation, and to elevate a part, at least, to the level of those pursuits, fancifully conceived to be so much more exalted and reputable. It was also thought that the profession of a farmer was too humble to be a lever to elevate to political and other distinctions: that it was too simple, because it apparently; required only physical drudgery to conduct it; that the natural sciences were too remotely connected with it, to bring into exercise any of the intellectual powers, or cause profound investigation. But what a mighty change has been effected in all these particulars throughout our country! Do farmers in general feel it any longer necessary, with a view to their elevation and respectability, that their sons should be sent *behind the counter*, carry the *pill bag*, or "*take to the law?*" No. Do not those slippery gentlemen, called politicians, now take off their hats to us, *after* election, with as much grace, cordiality and respect, as *before* it? Yes. Are not statesmen themselves tillers of the soil, proving that the occupation is not incompatible with the highest political distinction. But why proceed to adduce further testimony, when such abundant evidence is before me in the columns of the Cultivator, to prove that the profession of the farmer is no longer considered ignoble and beneath the attention of men of learning and talent. But think you, Messrs. Editors, that very many of the contributors to your invaluable periodical, or others equally endowed, twenty-five years ago, would have been *caught* with their names appended to agricultural essays? I think you will accord with me, in giving a negative answer. It is now appreciated as an honor by any man of whatever profession, to come before an assemblage of farmers; to extol agriculture as man's noblest pursuit; to dwell on the virtues it inculcates; to be able to grasp the keys of science, open the doors, and expound the sublime and mysterious operations of nature. Yes, it is at last ascertained that science has something to do with the successful cultivation of the soil; that the farmer's great book of instruction, is the *book* of *nature*, and how profound! and that in proportion as he acquires a knowledge of the laws and influences which govern the vegetable kingdom, so far does he become possessed of the true theory of agriculture; and that he who departs least from those laws, is best rewarded in its practice.

Since we cannot all dive and explore these mysteries, we are necessarily dependant on those who have; and hence, how vastly important is an agricultural paper, to spread before us, in the cheapest form, the result of their profound investigations. What is the true philosophy of all knowlege? Is it not to elevate to dignity and perfection, the moral and intellectual powers of mankind; to mitigate the physical evils incident to his temporal condition, and thereby promote his happiness? This is indeed a truism. Of the countless means to effect all this, I consider an agricultural journal one of the most important, for it is designed to lessen our physical toils, and to increase the rewards consequent of them. But I forbear, gentlemen, to encroach further on your valuable columns. I was prompted to say something on the subject, upon reading the "Hints to Correspondents," by Mr. Chrisman, of Virginia. The gentleman is very correct in saying that "in all experiments in agriculture, it is important that the character of the *climate*, and the character of the *soil* should be known." I have observed with considerable regard, from time to to time, an omission to state these and other important particulars, by correspondents of our agricultural journals. It seems to me doubly important that these matters should, hereafter, be more strictly attended to, for the reason that the Cultivator circulates the length and breadth of our vast country. Let every correspondent give the county and state of his residence; and, allow me to add, let all be extremely cautious in communicating the results of their experiments. They should, in all cases, be most thoroughly tested, lest they mislead. It was observed by the elder Pitt, in one of his famous orations, "that confidence with the aged, is a plant of slow growth." So it emphatically is with many farmers yet, in regard to agricultural papers; and peradventure they are only once led astray, by following some new, but ill tested experiment, the plant of confidence will be slow to revive, and in many cases wither entirely. Let us look well to these matters, my brother correspondents, and by so doing we shall preserve the deservedly high character which the Cultivator has attained. Let us endeavor to exalt it to a *text book*, that in case of controversy or doubt, a reference to it will be considered the last "court of appeal."

Your friend, L. A. MORRELL.

Lansing, Tompkins Co., N. Y., Feb. 13, 1841.

Culture of Tobacco.

Messrs. Gaylord & Tucker—In looking over your valuable paper, I observed you expressed a wish that some of your subscribers would give an account of the management of Tobacco. Having been a planter for many years, I will offer to you what information I have on the subject. In the first place, to raise the plants is of the utmost importance, for which purpose we select a warm exposure on a south hill side in the woods, (new ground being always preferred,) clean off all the wood and rubbish, rake off all the leaves, and then pile on pine brush, say about from two to three feet thick, all over the bed, and then set it on fire; (the brush should be got and put in place any time during the winter, and the beds seeded as soon as the frost is out of the ground;) after the brush is burnt out, rake off all the large coals, and dig up the bed with hoes, taking care not to go below the soil, and taking out all roots as you go; then rake off the bed with a garden rake, and sow the seed; then go over the bed with a light brush, (with the hand) and be careful not to put the seed too deep in the ground, after which tread the bed all over with the feet, so as to make the ground close and compact; and then cover the bed all over with a light covering of brush, to protect the plants as they come up, from late frosts; pine brush is the best for that purpose; after the plants get a good size and there is no further fear of frost, take off the covering of brush, and you will then find it necessary to take out the weeds from the plants, which must be done with the hand, (the hands must take off their shoes so that they will not bruise the plants.) After removing the weeds you will then put over the bed a top dressing of very fine manure, which you may continue from time to time as you think proper; the beds require constant picking, as we term it, to keep down the weeds; the plants will be ready to remove about the last of May or first of June, when they are to be drawn out after a rain and transplanted in the ground previously prepared, in the following manner.

The ground should be of the best quality, and a good clover fallow, plowed in the fall, manured and cross plowed in the spring, (just before planting) well harrowed, and then laid off with a plow at three feet each way; every square thus made to be scraped with the hoe to a hill, in which the plant is to be set; after which it is to be worked very much like corn, with the plow, cultivator and hoe; it will take three months to ripen, when it will be fit for housing.

I should have stated, that during the time it is growing it will put out suckers from every leaf, which must be broken off, taking care not to break the leaf from the main stem. It will also put out a blossom from the top, which we call in the first stage buttoning, and which must be broke off at about two or three feet from the ground, so as to make the plant spread and prevent its running up too spindling; when the plant is ripe, it will assume a spotted and yellowish appearance; it is then cut and suffered to lay in the sun for a short time to make the plant fall, and then can be picked up and carried in carefully to the house without breaking. It is then put on sticks and hung up in the house to dry; when dry and during a moist time in the spring, or late in the winter, it is taken down and the leaves stripped from the stalk, tied up in bundles, keeping the different qualities separate from each other, and then put down to condition, as we call it, that is, it is put in large bulks and weighted down, where it will go through a sweat; you must watch it, and as soon as you find it begin to heat, take it out, hang it up in the house to dry, and after it has thoroughly dried, the next damp spell take it down, just in order not to break, and put it again in bulk; it is then ready for packing, and I would advise any of your correspondents, or others that make tobacco, to use one of Mr. Murray's presses for packing tobacco; they can be had of Mr. Murray, on West River, A. A. County, Maryland, and are the best ever used; they are in common use in the tobacco growing parts of Maryland, and preferred to any other; they will pack from ten to twelve hogsheads a day, and by the old plan we could never pack one a day. If this information will be of any use to you, you can use it, and I shall be pleased to have contributed my mite to a good cause, and you may hear from me again. A Planter.

The Elms, March 10, 1841.

We shall be glad to receive the plans, &c. spoken of in the note, which accompanied the above.—*Eds.*

Cotswold Sheep.

Messrs. Gaylord & Tucker—Permit me to give you a short statement of a small flock of Cotswold Sheep, which I purchased last summer from those imported by Messrs. Corning & Sotham.

My purchase consisted of eleven ewes and a buck—eight of the ewes were yearlings, having lambs this season. They have been fed through the winter on hay and turneps, no grain whatever, being given to them until after lambing, when a few oats were fed to the ewes. Unfortunately for the rapid increase of my flock, 8 of 10 of my lambs were bucks.

About three weeks since I sheared them—their clip averaged 8¾lbs. per head. My buck sheared 12¼—and one ewe 11¾ lbs.

I had the misfortune to lose, early in April, what I considered my best ewe—a very large and handsomely shaped animal—whose pulled fleece weighed 11lbs. I have her lamb of last spring, which promises to be as good as herself. The remainder are all in excellent health, and in capital order—and the ewes good milkers. The ewe I lost was, at her death, as fat a sheep as I ever saw, even when thoroughly fed for the butcher—and I fear that was the chief cause of her death, which was sudden, being apparently well a few minutes previously, for, on examination, I could find nothing that would would indicate disease I am, very respectfully,

J. McDONALD McINTYRE.

Albany, June, 1841.

Letters from West Tennessee.—No. 2.

Messrs. Editors—Our latitude is, I believe, just 35°—some eight degrees nearer the equator than your city of Albany. There is, of course, all the difference in the world in the climate—very perceptibly so. We have seldom much winter before christmas, nor do the farmers make any calculation for frost before the latter days of October. Snow sometimes falls to the depth of one or two inches, though even this is rare.

A greater fall than this has been known, but it is exceedingly unfrequent. And of such power are the sun's rays at mid-day, that with a clear sky a few hours will dissipate it all. I have known it to lie upon the ground for several days, but the fact of its rapid dissipation is of most general occurrence. One or two inches, is for the most part, the depth of frost in our coldest months. Indeed, you can form your own estimate of this fact, when I state that it is very rare to pass the month of January, without some plowing done. During the past winter, which was unusually severe, the thermometer on some occasions was as low as 12 degrees of Fahrenheit's scale—but such extreme weather as this was of short continuance.

We have a great deal of rain, however, in the winter and spring, which retard farming operations very much. The summers are, of course, hot, but not so oppressively so as might be supposed. I have suffered more from heat in the northern states than here, owing to the fact of a more general prevalence of refreshing breezes in the south, and owing, too, to another cause, that here, we make it a matter of more attention to be shielded from the sun's rays. Any undue exertion in the heat of the day is overcoming.

April and May are lovely months—and nothing, I am sure, can surpass a Tennessee autumn. Indeed, and in truth, a lovelier climate than southern Tennessee and northern Mississippi, there can be none upon the broad surface of the American Union. North Mississippi is quite new and is now in rapid progress of settlement. 'Tis but some five or six years since its purchase from the Chickasaw Indians, and already large and flourishing towns have sprung up as if from a stroke of magic. Holly Springs, the county seat of Marshall county, is quite a large, wealthy and agreeable town—its growth has been rather too rapid, some think, but this is a fault of Mississippi generally, and is one cause of the present depression there.

I have heard gentlemen who have traveled considerably in the south and south-western country say, that this part of Tennessee and the northern counties of Mississippi is the very choicest country of all they had seen, either as regards fertility of soil, loveliness of climate, intelligence of people or convenience to market. The great "father of waters," the Mississippi river, affords a very rapid communication both north and south. Louisville, Cincinnati and St. Louis are but three or four days' journey distant, and New Orleans, which is some eight hundred miles below, seems as a neighboring market town.

The general appearance of the country here is rolling, and in some places rather broken. The soil is purely alluvial, and totally destitute of stone. The clay stratum is twenty or thirty feet deep and often deeper. But for the most part, at this depth a light sand and gravel is encountered. Stone lying upon the surface, is a very rare sight here. Various theories are afloat regarding this broad scope of alluvial country, known generally as the Mississippi Valley. Some suppose that the bed of the river has, in the lapse of ages, been changed: this doubtless is true, but a theory supported by many and apparently upon good ground, is that the Gulf of Mexico had once its bed between the Alleghany and the Rocky mountains, and that it has receded thence—these, however, are speculations for the curious.

Memphis is situated upon what is called the fourth Chickasaw bluff. This ridge terminates there abruptly at the river, and the highest point may be some 60 or 70 feet above the bed of the river. According to Bancroft's United States, it was near this place that De Soto, the Spanish adventurer, crossed the Mississippi in 1541. One of the counties in North Mississippi is called De Soto, and its seat of justice is called Hernando; an appropriate tribute to the discoverer of Mississippi. *Fayette Co., Tennessee, May*, 1841. E. H. K.

The Herefords and Short Horns.

Messrs. Editors of the Cultivator—I have been induced to take up my pen by the perusal of a controversy between Messrs. Randall, Hepburn and Sotham. I have been acquainted with the Hereford cattle for this last thirty years, as a grazier, dairyman and butcher. My father used to graze about fifty, and dairy about seventy cows, of different breeds, Long Horn, Short Horn and Herefords, in Oxfordshire, England. For feeding, the Herefords are not surpassed by any breed I have ever seen; for the dairy I do not say they are invariably good milkers, though there are many of them very good. I never kept an account of the produce of a single cow, but one of my neighbors says he knew a Hereford cow that made sixteen pounds of butter per week. As a butcher, which business I worked at in London, and afterwards followed in Berkshire for eight years, I say the Herefords cut the best stall of beef I ever put a knife in. Mr. Hepburn takes Youatt for his author; and by his description is led to believe the Herefords to have been a trifling breed as lately as six years ago. I know them to have been as good thirty years since as now; and whenever they have been shown against the Short Horns, have oftener gained the prize than their antagonists. Mr. Youatt must have been prejudiced in favor of the Short Horns, was ignorant of the qualities of the Herefords, or got his information from some one no better informed than himself. Mr. Hepburn very ingeniously endeavors to impose on his understanding by supposing the Herefords of Mr. Sotham to be the produce of a stolen cross with the Durhams. I have no doubt but Mr. H.'s experience, if he lives long, will convince him that his supposition was erroneous, and that he was misleading the judgment of the community and doing injustice to the breeder and importer, by supposing them guilty of imposition. I should say as a breeder, the Herefords need no such cross; but I should say as a breeder that many of the Durhams, some of even Herd Book pedigrees, would be materially improved by a cross with the Herefords, as having a tendency to lengthen the rump and widen the hip of those whose edge or round bones are wider than their hips, the rump short and low, the tail high, and the skin as tight over their rump as if stretched over it with a pair of pincers. Such animals have a thick heavy thigh, the thick coarse muscles running from the round bone to the hock, forming a thick coarse buttock, supported by a large boned, coarse leg; the sides, as Cully describes, being one laying of black flesh across another, the shoulder bones large, the points projecting. Such beasts are sure to be bad handlers; never get very thin, and never get fat; will get fleshy, but when it is on is no better than bull beef. With such animals, a cross from the Herefords would be a great improvement. I have handled many Durhams with high pedigrees, with all the above objections. I never yet put my hand on a Hereford that was not a good handler. My opinion of the Herefords is, that they are the nicest breed of cattle, taken for all purposes, that walks the earth, and would have had some in Ohio long ago, if my means had been equal to my wishes. I remain, gentlemen, yours respectfully,

WILLIAM KINGHAM.

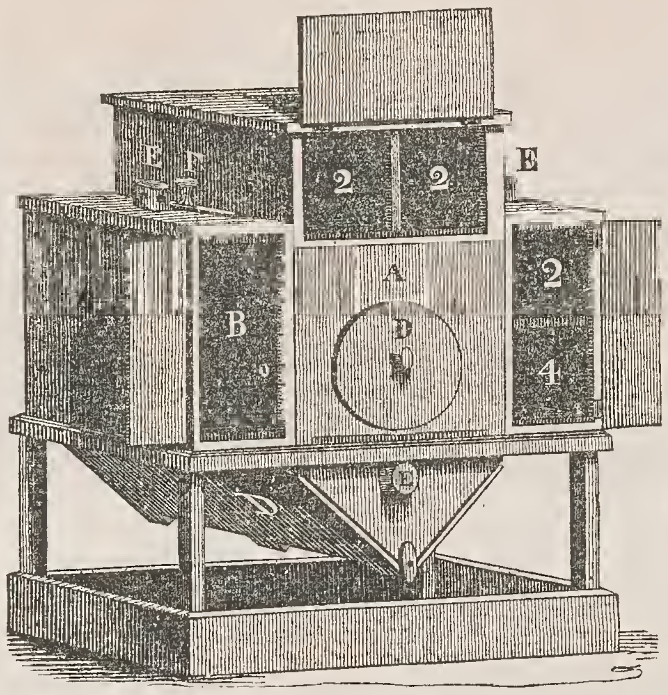
Springfield, Clark Co., Ohio, March 11, 1841.

Grafting the Peach with Success.

Messrs. Editors—I am not aware that any process has been devised for grafting upon the peach stock, with any certain prospect of success. Experimenters doubtless have often succeeded in rearing grafts upon peach stocks, but more often failed. A gardener in my neighborhood informed me that he once grafted upon one hundred peach stocks and all the grafts died, and most of the stocks. (He was always successful in grafting upon other kinds.) Last year I was induced to investigate the matter with a view to devise some means of obviating this failure, as it is desirable in many cases to graft in lieu of budding, persuaded that although the discovery might be of no great practical utility, yet it would be an interesting acquisition to the science of arboriculture. The peach tree is of more rapid growth than any of our orchard trees, and frequently with us, in congenial soils, the first year from the seed, attains the height of six feet, with stems from one inch to an inch and a half diameter. The circulation, of course, must be very active, and the sudden check from heading down such a tree, will, in many cases, destroy it. But should it live, the roots continuing in a state of activity, the cion is overflowed, as it were, by the sap; that is, the sap flows so fast from the wounds, as to prevent the process of granulation, by which the cion is united to the stock. To graduate, then, the supply of sap to the wants of the cion, is the primary object, and the measures necessary to secure this condition, are just those which tend to preserve the life of the stock after heading down. To carry my purpose into effect, I proceeded contrary to some of the ordinary rules for grafting. In the middle of July, I selected the cions from thrifty trees, with four or five eyes, taking care to choose those which contained leaf buds. The stocks chosen, were moderately growing instead of thrifty stocks, and were trees of the growth of that season from the seed. Before heading down, I passed a long sharp knife down entirely round the tree, and severed all the lateral roots at the distance of three or four inches from the trunk, according to its growth. This done, the trees were headed down at a point where the stem was just the size of the cion, or a little larger, as the cions were inserted a little on one side of the pith. The insertions were made in the ordinary way of cleft grafting. The cions were then secured by a narrow strip of sheet lead, wound spirally over the whole length of the cleft, and a small ball of grafting clay put over the whole. To my gratification every cion inserted in this way grew off finely, and the coming season will doubtless make handsome trees. I do not know that the lead binding or mode of insertion is essential, and although I have tried no other plan, yet I presume that other methods will answer equally well, provided the preliminary steps are properly attended to. On other stocks I have grafted with success, with no other binding or protection than the strip of lead, and have used lead ligatures with great expedition and success in budding. The introduction of lead ligatures was merely an experiment with a view to expedite grafting and budding in large nursery operations. Thus far I am inclined to give the preference to the old methods. When heading down the stocks, I took care in every case to leave either one or two small shoots, some leaves, or several nascent buds in order to continue all the functions of the tree until union had taken place between the cion and the stalk. As soon as the buds of the cion began to put forth, all below upon the stock was pruned off. When the scions were taken from the trees, the leaves were all removed as in budding, leaving only a small portion of the foot stalk. The clay and ligatures were removed in the fall when vegetation had ceased, and the wounds were all well closed. I am not sure that it is absolutely essential to leave any thing growing on the stalk, and regret that I did not try some without.

CH. G. PAGE, M. D.

Washington City, Feb., 1841.



Perfect Bee Hive and Non Swarmer.—[Fig. 64.]

This cut (fig. 64,) represents the hive placed in the Apiary, when the observer stands in the hall on its back side, where the bee manager performs most of his duties in managing his hives, out of the way of his bees at work. When the collateral B, on the left, and 2, 4, on the right, are both added, the hive is used as a Non Swarmer; when both are off it is used as a swarmer. The center box, including both apartments, upper and lower, holds one bushel and a half, not including the space within the angle subtending the square box, or lower apartment. When the collaterals are added, the hive holds about two bushels and three-fourths. The principles of this hive may be adapted to any hive of a square form as well as this, to wit, the box hive, cape hive, subtending or piling box hive, as well as the Vermont hive.

Specification of the uses of the Perfect Bee Hive.

The aperture through the center of the right angle bottom board marked D, readily discharges all filth that falls from among the combs, at the same time its outer projection endwise, opposite D, forms a most convenient alighting place for the bees, and secures them from driving winds in chilly weather.

The ventilators, six in all, marked E, are made of tin tubes three inches in diameter, covered on the inside of the hive with wire screen, and with wire gauze the inside of its outer projection, so that when the whole is covered with a cap on the outside with corresponding holes, ventilation may be graduated at pleasure.

The thermometrical chamber, seen at F in the cut, is used only as a deposit for that important instrument, which will show at all times the condition of the bees contained in the hive. This will determine the required quantity of air to cool the hive below swarming temperature, as well as the necessary heat to keep the young broods in a healthful condition, and also determine the most appropriate time for dividing off swarms, which can be done with perfect success and certainty only in the swarming season.

The collaterals seen on the right and left of the center hive are added or removed at pleasure by the use of slides made of sheet iron, one of which is cut with curves in such a manner as to correspond with the wood or cork stops which are inserted into apertures in the sides of the hive, (these materials being non conductors of heat and cold,) and when removed admit the bees, and animal heat to emanate into the collaterals, both of which may be boxes, or one may be a box as marked B in the cut, and the other a chamber containing drawers marked 2, 4, which may be removed by taking off the whole chamber at once.

As a full illustration of the uses and management of bees in all the classes of hives to which these principles may be adapted, would more properly come into a volume rather than in a single newspaper essay,—I only add that a swarm of bees weighing less than ten pounds when first hived, should be confined to the swarming hive until their increased numbers require more room, when the collateral box may be added. In all cases the box is added first; afterwards the chamber, but no apertures should ever be left open so as to compel the bees to warm by their animal heat any more space than they occupy.

JOHN M. WEEKS.

P. S. Any person who shall enclose $5 to the proprietor, will be entitled to one individual right, and will be furnished with cuts and drawings of all the hives, instructions, &c. will be forwarded. Territories will be offered on liberal terms. All letters of inquiry must be post-paid.

J. M. W.

West Farms, Salisbury, Vt., June, 1841.

Destruction of the Canada Thistle.

Messrs. Editors—I see in the March number of the present vol. of your valuable journal, an inquiry as to the best mode of destroying the pest of the farmer, the Canada thistle. Now, for the benefit of the inquirer, and all others that it may concern, I will state how I destroyed a large patch of them some years ago; perhaps others troubled with them may destroy them in the same manner. I had a bed of them on my land, (I then lived in the state of Vermont,) covering some six rods of ground, which grew very rank and thick; the lot was sowed to wheat, and when the wheat was being harvested, I directed the cradler to leave the thistles standing, as they grew so stout that he would be in danger of breaking his cradle. I let the thistles stand until about the middle of August. I then took a sythe and mowed them in the middle of the day, when the sun would be the hottest, raked them up and carted them to the barn, leaving the stumps exposed to the sun. I recollect that the blow, (so called) had just begun to escape from the bud. The thistle did not sprout at all that summer or fall; and the next spring I could have held all the thistles that grew on the whole patch in my two hands at one grasp, and they were puny sickly things. I have no doubt but that the exposing of the stumps to the burning rays of the sun, was the cause of their destruction.

Lockport, April 7, 1841. T. T. ROBERTS.

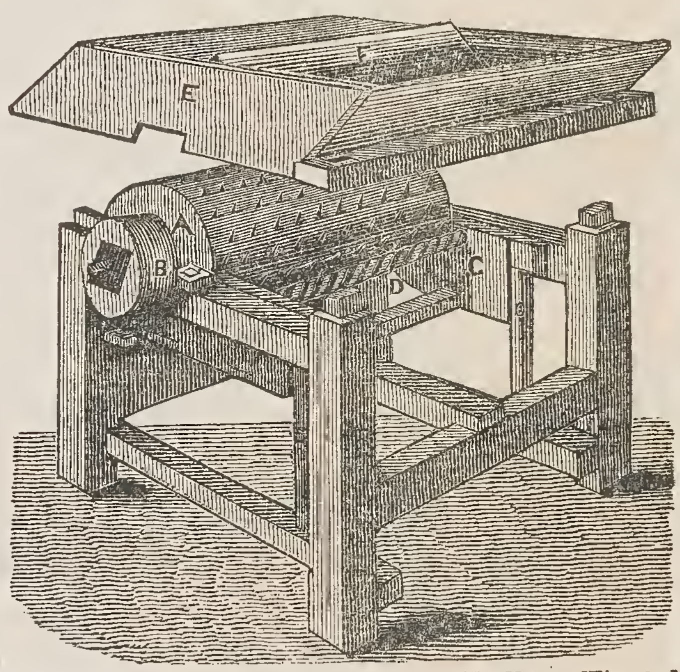
Culture of Indian Corn.

Messrs. Editors—Would it not be gratifying to many of your readers, if your correspondent, Z. Drummond, would favor you with another communication, giving in detail the mode in which his farm is cultivated, and the manner in which all the duties thereof are performed. First, are his lands laid off on the 3, 4 or 5 field system? How many acres in Indian corn, how many in wheat, how many in oats, &c.? How many in clover and other grasses? Is any portion of grass land fallowed for wheat? What is the average production of Indian corn to the acre? What the average quantity of wheat per acre after corn, and what on clover or other green fallow? What preparation is given to his corn land previous to planting, what amount of labor appropriated to its cultivation, and what the proportion of plow and hoe labor, &c.?

I think, Messrs. Editors, your subscribers in different sections of the country would afford valuable information to each other by communicating, through the Cultivator, their different methods of cultivating Indian corn, which would enable each reader to judge of the advantages to be derived from each method thus communicated, as well in labor saved, as extra profits to be derived thereby; and in order that I may not be misunderstood, I will give a brief statement of the most prevailing method practiced in this neighborhood. The field to be prepared for corn has the benefit of the previous year's crop of clover and all the manure that can be got on it; during the winter and early part of spring, the land is thrown together in 5 feet beds, with plow drawn by a pair of horses, mules, or a yoke of oxen; and when the time arrives for planting, two or three furrows are thrown together on the top of each bed, harrowed twice, and opened with the plow. Thus the land is fresh prepared, just ahead of the planters; the corn is dropped at distances according to the quality of soil, and covered with hoes or drags (harrows,) according to circumstances. When the corn is large enough to hoe, a stout furrow is thrown from the corn on each side, in such a manner that the furrows from each contiguous row will meet each other in the centre between; the corn is then hoed and thinned, and middles harrowed. By the time the field is got over, the corn is large enough to put the mold board to, and a furrow is thrown to the corn, from each side the row, and hoed a second time; the middles are again harrowed, loosened with the cultivator, or plowed, as occasion requires, which completes the second working. The third working is mostly performed after harvest by a light flush plowing and hilling with the hoe which finishes the crop. If this is bad practice, better would be willingly adopted by A Subscriber.

Warwick County, Va., 12th April, 1841.

☞ We join in the request made in the above communication, to Mr. Drummond, and hope he will answer the inquiries at his convenience—also in the request for information on the culture of Indian corn. "A Subscriber" would have added to the interest of his details, had he given us his method of harvesting, and the quantity raised per acre.—Eds.



Goldsborough's Corn Husker and Sheller.—[Fig. 65.]

Messrs. Gaylord & Tucker—I send you herewith a number of the American Farmer, in which you will find a description of the above, which I will thank you to copy, with the cut, into the Cultivator.

The difficulty of describing a machine, however simple it may be, without the aid of an engraving, has induced us to send you a cut of Goldsborough's Corn Husker and Sheller, which we will endeavor to explain satisfactorily to those of your subscribers who have written us on the subject, and others whose corn crops justify using a machine of so great power. As in all other agricultural machinery as well as the one now reverted to, we are determined to recommend only such as we have proved by practical experience to be truly excellent, thereby encouraging the confidence of planters and assisting the growing desire to introduce on their plantations labor saving machinery.

The above cut displays a machine substantially built. The operating parts are simple, plain and void of complication—requisites which are all-important to farmers who cannot conveniently resort to practical mechanics to instruct them how to arrange a complicated piece of machinery. Recent experiments have fully satisfied us that the machine now referred to is capable of standing unscathed under as great a body of corn as is possible to be fed into the hopper by three active men, and such is the rapidity by which the work is discharged, that 700 bushels of corn may be husked and shelled, or 1200 bushels shelled after the husk has previously been taken off, per day. The husks, (stripped and in fine order for mattress makers) cobs and corn all pass out together. A boy (with a common wooden rake) will separate the husks and cobs from the corn as fast as it is discharged from the machine. The cylinder, A, is studded with wrought iron knobs or short spikes, and partially rest on a spring concave bed, C, in which are placed round fluted iron rollers, D, which revolve as the corn passes through and greatly facilitates the work and reduces friction. B, a pulley six inches in diameter, which should be driven by a drum or band wheel (attached to mill or horse power gearing) of sufficient diameter to propel it about 700 revolutions per minute. E, and F, the cover and hopper thrown up to show the operating part of the machine.

We will furnish the above machine at $35. And to those who doubt the practical utility, strength of material, and great power of this wonderful machine, we will say, that we expressly guarantee them to be as perfect, and perform as effectually as represented.

Yours respectfully, ROBT. SINCLAIR, Jr. & Co.
Manufacturers and Seedsmen.

Baltimore, March 12, 1841.

Culture of the Strawberry, &c.

Messrs. Gaylord & Tucker—I have seen with much satisfaction several modes described to you, in relation to the culture of the strawberry, and although they are much to be approved of, yet I prefer my own mode, because I believe it to be the more certain way of success in obtaining a good crop. Probably our soil may be more congenial, but be this as it may, I have succeeded in the one presently to be recommended (as my neighbors all know, having often shared in my success,) whereas by the other, annual cultivation and not burning, there was frequently a failure upon the same spot or spots of ground. I have always succeeded best in rich shelly land, and hence I have concluded that calcareous earth is the best for strawberries; ours (Back River) is a deep rich soil, sometimes black, always more so near the woods, which may arise from the increased quantity of vegetable matter therein, whilst the land bordering on the river is of a reddish or chocolate cast, excepting always where there are deposits of shell, and there it is almost black, because I presume that the lime, although it really gives no nourishment to the soil, yet it forces, and prepares even, animal and other putrescent substances already there; and *thus the color*. We have also a greyish soil, and although good, I think the black or chocolate decidedly preferable. Now as to my mode: I first prepare the ground by deep spading or by the plow also deep; the land is then carefully hand raked, and every root of all sorts carefully removed; the land is again, if required, spaded or plowed, and then chopped with a hoe, and again raked to level it. I then in the spring, *summer*, or fall, as *it* may be *seasonable*, set out the plants a foot square, in rows, sometimes by laying the land in beds four feet wide with an alley or path way between each bed for the convenience of gathering the fruit, as well also as to prevent the bruising or mashing, which will always shorten the quantity by shortening the season of bearing, independent of the loss otherways. I have again left the whole surface of the ground after due preparation as above, flat, and merely set out the plants one foot square throughout the whole plantation. I then obtain from the wood yard the finest rotted earth from the chips, and spread this around each plant, and after they have well taken root they are hoed and kept clean for the season, and as the next season approaches, I generally, about the 20th February, cover the plantation with dry straw of any sort, and then set fire to it; this burns the whole, the object of which is to put the blossoming back until there is little risk of frost; for as sure as the strawberry in blossom is thus caught, a blast almost total and entire takes place. I have practiced this ever since 1817, and have not failed more than once or twice during the whole time; and I believe the failure in those instances proceeded from inattention to the time of burning. I never, after the first year, have any thing more done to the plantation besides the burning, except an occasional sprinkling of wood yard earth in the spring. This plantation is continued four years; although I think three better, because in consequence of the vast accumulation of new plants, and the degeneracy of the old, the strawberry deteriorates in size, if not in flavor, probably in both after three years. I set out every other year a new plantation, and by this means have a continued succession, and when the four elapses, that plantation is converted to other vegetables. After the first year, as above observed, I never have them worked; I prefer grass to grow with the strawberry, for the plain reason that they then are gathered clean, the grass supporting the fruit from the naked earth; they never have grit upon them in consequence of rain or heavy dews, and of course never require washing or cleansing; the washing or cleansing by water ruins the fruit; it takes from it all the flavor and color. Those who keep their strawberry beds clean are put to much trouble to guard against the heavy rains, and of course washing, by always keeping around the plants in their bearing state straw or something else to keep them from the ground; and this is not always successful, because the straw, or whatever they may have around the plant, is liable to be blown away, and their finest fruit becomes tasteless if washed to clean it of the grit; and without washing, those who eat of it would soon swallow their peck; and this is the true reason that has induced me to work the plant but for one season, and that the *first*. I think also it is saving useless labor. I cultivate two sorts; their names I am not acquainted with, further than that they are strawberries of different shapes; the one a clear deep red, and something in the shape of a small apple, and varying from the size of a musket ball to less; occasionally, when not too much crowded, considerably larger. The other a dark red of an oval form, something in the shape of an egg, bears later and generally a larger strawberry; but I do not think its productive capacity so great as the other; as to flavor I discover no difference; all are strawberries, and as to *quantity* I could successfully appeal to my neighbors. As to perpetuating the same bed or plantation for a series of years, I shall endeavor to follow out your correspondent, Mr. I. Dille, for if it will answer the purpose that he informs that it does, it will save much in the setting out new plantations, and I can see no good reason why his plan is not a good one; it certainly is if successful; and as he has for a long time tested it, I for one will not raise a doubt until I have tried it and discover error.

Permit me to give you a recipe handed me by my wife for the making of green sweetmeats, handed to her by one of her near neighbors, which she has a little altered from the original, and which she has tried, of which I have tasted and think them equal to any West Indian sweetmeat or preserve that I have ever tried. The watermelon rind preserved in this way is a beautiful green and most delicious in taste. Cut the rind in long thin slices, and scrape off the pulp of a ripe or green water melon, (the green is the best) let it be put in salt and water and remain seven days; then take it out, put it in fresh water to remain three days; then take out and boil it slowly in alum water not very strong, with grape leaves over it about two or three hours; then take out and squeeze it well out of the alum water; then make a syrup of white sugar, at the rate of $1\frac{1}{2}$ lbs. sugar to 1 lb. of rind, and $\frac{1}{4}$ lb. ginger (to every 3 lbs. rind) to be added in the syrup, and more or less according to quantity of rind; then stew all together with rind until it looks clear; then take it from the fire until it is cool, and then put in essence of lemon according to fancy. I am told that the green sweetmeat may be thus made from any good fruit; I can answer for the water melon rind (and the green water melon is better than the ripe.)

For yellow sweetmeats, cut the rind of a ripe muskmelon in thick slices and put it in salt and water and let it remain three days; then put them in cold water one night; after this boil them in clear water six hours, changing them three times during the six hours. Then put them in a rich syrup and let them boil slowly five hours, or until the syrup becomes quite thick; flavor them agreeable to your taste.

Irish Potatoe pudding—"One pound of potatoes well boiled with cream, three-fourths of a pound of butter, ten eggs, and one pound of sugar."

JNO. C. ROBERTSON.

Springfield, Va. April 2, 1841.

Protection of Garden Plants.

Messrs. Editors—Having tried to no purpose many methods of exterminating those little black insects which infest the young plants of the garden, I at length hit upon the following expedient, which I present to you with the hope that others may be benefited by it as well as myself. Take cotton batting, divide it as thin as will hold together, spread it over and around the young plants, and fasten the edges with small stones or small lumps of dirt. The insects, in their attempts to leap upon the plants, are entangled in the fibres of the cotton, and are prevented from doing mischief.

LEONARD LEWIS.

Warren, N. Y., May 31, 1841.

Inquiry.

Messrs. Editors—Can you or some one of your numerous correspondents give me some information relative to the most effectual method of putting a stop to the ravages of a certain *moth?* It is in the form of a *yellow worm*, about three quarters of an inch in length, of about one-twelfth of an inch in diameter, and has six short legs near the head. Its body appears to be formed of ten or twelve bands or rings. I am thus particular in the description, as I am unable to give you its entomological name. It proves very destructive to woolen goods of every description.

It is with pleasure that I assure your readers of the efficacy of Mr. J. M. Olin's remedy for bloated cattle, published in the May number of the Cultivator; having recently seen a cow that was badly bloated cured in a short time by giving her a single dose of the powder and lard.

With respect, L. C. LAWRENCE.

Inquiry about Woburn Hogs.

Messrs. Gaylord & Tucker—Will you or some of your valuable correspondents give us the origin and history of a very pretty, thin and fine haired fleshy hog, which has been recently introduced among us, called the Woburn; what relation they stand to the Berkshires in point of size and disposition to take on flesh; how they would cross with the Berkshires, or if they would be better without any cross, and how and where they can be procured? Also, the Belties have been introduced among us, and they are said by some to be a cross of the Berkshire and Irish Grazier. The origin and history of this hog would also be interesting to many of your readers. The Woburns which I have seen will certainly lose nothing in comparison with the Berkshires we have here at the south.

Your Cultivator is doing much good among us. Our cotton planters begin to believe that it is not a money making business to export all their labor, and buy so important an article of consumption as pork. A. C.

Gainsville, Alabama, 3d March, 1841.

☞ Will Dr. Martin of Kentucky, favor us with a reply to the inquiries of A. C.? We should also be gratified if he would accompany his reply with a correct portrait of one of his Woburn hogs.

Short Horn Durham Cows.

Messrs. Editors—The June number of the Cultivator contains a very interesting and valuable article from your worthy correspondent, Lewis F. Allen, which communication contains an extract from the Yankee Farmer, where the Rev. Mr. Colman speaks against Durham cows as milkers. Among others he states that he has had the pleasure of seeing the improved Durham stock of the Messrs. Lathrops of South Hadley; that he thought them eminently beautiful, &c. Now if as observing a man as the Agricultural Commissioner of the Commonwealth of old Massachusetts, has passed over such a stock of Durham Short Horn cows, without noticing their milking properties, I would request of the Messrs. Lathrops to give an accurate statement in the Cultivator, of what some of their cows have done; together with the name of the cows, pedigree, from whom purchased, and if they please the price paid for them; that your readers may know they are really Improved Durham Short Horn cows, and not of the race that have no pretensions to Herd Book pedigree, with which our country is flooded.

SAMUEL W. BARTLETT.

East Windsor, Ct. June 21, 1841.

Wintering Hogs on Sugar Beets.

Messrs. Editors—For more than two months we have given sugar beets to our hogs, and are well satisfied with the result; our only regret is that we have not more. Perhaps one reason why our experiment with sugar beets has resulted more favorably than the experiments of others, is because we have kept them warm, which I consider all important when kept upon vegetables of any kind. Experience has satisfied us of this. Formerly we wintered our hogs in a good pen, having a tight plank floor, giving them a plenty of litter, feeding uncooked potatoes and corn in the ear, much the larger portion of the latter; for two seasons we have given them an apartment in the basement of a sheep barn, with an out door yard for them to run into, feeding them sugar beets until they are gone, and then potatoes, with a small portion of corn the whole time. The result is that much less value of feed will carry them through the winter in equally good condition than by the old mode, and as a consequence, if the same value of feed is used as formerly the gain will be in proportion, instead of just carrying them through. M. Y. T.

New-Lebanon, N. Y. March, 1841.

Large Pigs Again.

Messrs. Editors—It had not entered my mind to make public the weight of my pigs (though I had just reason to feel proud of them,) until I observed in the Feb. No. of the Cultivator the statement of Jabe Pierce's pig, weighing, at 9 months and 10 days old, $372\frac{1}{2}$ lbs., and of Mr. W. L. Smith's pig, weighing, at 10 months and 8 days old, 266 lbs.

The last season I raised and fattened a couple of half breed Berkshires, and slaughtered them the latter part of December, at the age of 8 months. The heaviest weighed 260 lbs., and the lightest 242 lbs. They were doing finely at the time, and at the age of Mr. Pierce's I have no doubt the heaviest would have weighed 300 lbs. They were taken from the sow when 6 weeks old, and fed through the summer on sour milk with a little scalded meal, and during September and part of October sweet apples and potatoes cooked together, with same quantity of meal; and say from middle of October to the time of killing, on scalded meal with a very little salt, preparing enough over night for next day's use, by which process a slight fermentation would take place. And here I would state my preference to this mode of preparing Indian meal over that of making hasty pudding, as I believe the mass to be lessened in nutriment in nearly the same proportion that it is increased in bulk.

In regard to what is called the Berkshire hog, of which there has been so much "said and sung," I am prepared to "go the whole hog" in his favor. But I am not quite sure that *one* cross with sows of fair size and proportion of our common breeds, will not produce as valuable swine for the farmer as any other breed whatever.

Hence the propriety of keeping the blood pure, (and I believe this remark will apply to most other animals,) for I am a disbeliever in the certainty of breeding from grade animals.

I have the sire of the above mentioned pigs, who was bred by Mr. Corning, I believe from imported stock, and coming 2 years old. His pigs, which are numerous in this vicinity, are first rate, and to prevent breeding in and in, which may be regarded as the greatest evil, I offer to dispose of him.

Mexico, N. Y., March 5, 1841. B. E. BOWEN.

Useful Recipes.

For the sting of a Bee or other Insect.—Take a little mud from any puddle, and apply it wet to the wound, (renewing it if it gets dry,) for 15 or 20 minutes, or less time if the pain and swelling is gone. Amicus.

Cure for the Scratches in Horses.—With warm soap suds wash the part affected, and with a cob or other rough substance rub off all scabs, then apply oil or hog's lard just so as to moisten the skin, then take a fine powder of hemlock bark and cover the parts well with it; a few applications will effect a cure. D. E.

Cure for Murrain.—I have a Durham Bull that was taken about a year since, with what is called here, the Bloody Murrian.

Symptoms:—Eyes sunk in the head, nose dry, bowels costive, the discharge brownish, urine the darkest bloody color, appetite gone.

Treatment:—I gave 1 lb. of salts, 1 oz. of nitre, and 1 cream tartar, for one dose; the next day another dose of the same. No appetite; the third day gave 1 pint castor oil. 4th day, physic began to operate, appetite rather on the mend, water still the same; dissolved 4 oz. of alum in 2 quarts of sour buttermilk for an astringent. It turned the blood, but made him costive; gave one more dose of salts, and turned him off the sick list, perfectly cured. Wm. Kingham.

Springfield, Ohio, March, 1841.

Cure for Sore Teats.—Scarcely a dairy of cows can be found in which more or less are not subject to sore teats, and from the irritation thus caused, much trouble in milking, and loss of milk ensue. The following preparation, if kept on hand and applied occasionally to such udders and teats as require it, will prevent or cure the disease. Sometimes the flies will be troublesome, if so add one ounce of assafoetida or aloes in powder, and incorporate it thoroughly with the ointment. Some times the teats are tender only. When this is the case, washing with weak salt and water is beneficial, and usually sufficient.

Ointment made of sweet elder, four ounces.
Yellow basilicon ointment, four ounces.
Spirits of turpentine, one ounce.

Mix and well incorporate on a slab or in a mortar, and it is fit for use.

Hoven Cattle.—James Cooper, of New-Jersey, gives the following as a cure for this dangerous complaint in cattle:—"Make a twisted band of straw the size of the wrist, and place it in the mouth of the animal, drawing it tight, and making it fast over the top of the head, just behind the horns; this will cause the beast to endeavor to rid itself of the inconvenience by chewing the band, and the act of moving the tongue and jaws will open the gullet and permit the air to escape." A cow dangerously attacked was treated in this way, and as soon as the straw was applied, the air rushed violently from the stomach, and the cow was saved.

Staggers in Swine.—In reference to an inquiry which appeared in this paper, a correspondent of the N. E. Farmer gives the following as a cure for the above disease:—"When it is found that one of your hogs has the blind staggers, no time should be lost; but you should proceed to give your hog as soon as possible, something that is warming within. The first remedy I ever tried was a mixture of sulphur, hen manure, and Cayenne pepper, with milk enough to make it as thick as porridge, given to the hog as warm as he can bear it. Now I give nothing but new rum and pepper, giving as much as I could make them take with a spoon. Before you give them any thing, it would be well to take some soft oil and pour upon the issues of their legs, and give them a smart rubbing with a cob. With these medicines I have cured those that seemed nearly dead, and if I were near, I would agree to cure all entirely of the blind staggers for 25 cents a piece."

Cure for Bots in Horses.—I. L. Smith, Esq., who has been an extensive dealer in horses, informs the editor of the Southern Cultivator, that as a preventive or remedy for the bots, he feeds to his horses occasionally a quantity of the heads of *rye* which he keeps on hand for that purpose. He is convinced that the heads and chaff of the rye, cut out and effectually carry off the grub, and that if a horse be fed every few days in this way, he will never be annoyed by the bots. If preferred, the rye may be fed in the sheaf.

Experiments in the Culture of Potatoes.

Oakland Farm, Southfield, Staten Island, April 22, 1841.

Dear Sir—Your sister made a visit to this farm during the past winter, and on seeing some of my large Rohan Potatoes desired me to send you a sample, which I was about to do when the Hudson river should be clear of ice. In the mean time I saw your communication in the Cultivator, (March number, page 55,) wherein your experiment with Rohan and Merino potatoes turned out in favor of the latter. Thus finding you in possession of the article, I was disappointed in the pleasure of sending you some of my crop of Rohans, and I therefore concluded to relate to you my experiment with them and other potatoes.

In 1840, I planted three patches of different varieties, in separate fields, all in rows, and after gathering the crops, measured the ground, and calculated the proportion of yield.

The first patch of early potatoes were of three kinds, viz: *Scotch Greys, Mercers* and *Kidneys*, cut in pieces and planted about a foot apart in the rows.

Of these, were planted 11 bushels.
The produce was 132 bushels.
The proportion of yield 12 bushels for one planted.
The ground occupied contained 35,856 square feet.

The superficial area of the patch contained over three-quarters of an acre, (an acre being 43,560 square feet.) The manure was distributed in the rows, and was horse dung purchased in New York, and as it subsequently appeared, was full of foul seeds. From the consequent weeds which infested the patch, the potatoes suffered, at a time when the pressure of other work and the want of hands prevented weeding. The tubers were also injured by being nibbled by bugs or grubs under ground, rendering the surface of many of them rough and unsightly.

The second patch contained late kidneys, which were small and planted whole, the same distance apart in the rows as the first.

Of these were planted 14 bushels.
The produce was 197 bushels.
The proportion of yield, 14 bushels for one planted.
The ground occupied contained 58,820 square feet.

They were manured in the rows with coarse unfermented barn-yard manure. The tubers were handsome, fine and smooth. There were also planted and grew in the same patch, a quantity of pumpkins and squashes, valued at $11·25. If we estimate the potatoes to be worth 37 cents per bushel, the value of the pumpkins and squashes will be equal to 31 bushels. If these be added to the potatoes raised, they will make the total yield 228 bushels, or sixteen for one planted.

The third patch contained Rohan potatoes, cut in pieces, planted in June, in rows the same distance apart as the two others.

Of these, were planted 2½ bushels.
The produce was 64 bushels.
The proportion of yield, 25 bushels for one planted.
The ground occupied contained 11,160 square feet.

These were also manured in the rows with coarse unfermented barn-yard manure. The tubers were large, fine and smooth, and not the least injured by insects.

When these potatoes were planted, I had no idea of an experiment, but it occurred to me afterwards that I might as well keep memoranda, and compare the results, which you have as above. The potato crop here, being of secondary consideration, no particular attention was paid to either of the patches. It will be seen, however, by the foregoing statements that the Rohans produced the largest amount in proportion to the quantity planted, and also to the ground occupied. These facts will more clearly be seen by the following table, calculated by the rule of three. Thus:

As 11,160 : 64 : : 58,820 : 337 +	instead of 197	the actual produce.
" 11,160 : 64 : : 35,856 : 205 +	" 132	"
" 35,856 : 132 : : 58,820 : 217 +	" 197	"
" 35,856 : 132 : : 11,160 : 41 +	" 64	"
" 58,820 : 197 : : 11,160 : 35 +	" 64	"

That is to say, if 11,160 square feet of ground will produce 64 bushels Rohan potatoes; 58,820 square feet (which contained kidneys,) ought to have produced, under equal circumstances, 337 bushels and a fraction, instead of 197 bushels, the actual produce. And so of the others.

In the above calculations, I have thrown away the fractions, indicating them by the sign + plus. The measurement of the ground, including headlands in each patch, was reduced to square feet, being easier understood and calculated than in acres and fractional parts of an acre.

These experiments, I think, are a pretty good test, and yet perhaps they may not be considered so by others, as the circumstances were not all equal. They were not planted at the same time, were not manured alike; one portion of the ground was overrun with weeds, and another had pumpkins and squashes in it. In two of the patches, large potatoes were cut into pieces, and in the other small potatoes were planted whole.—But notwithstanding these differences, the results may be worth noticing, and lead to something useful. Hence I deem it advisable to give them to you.

Your experiment was certainly not a decisive one. The season with you was unpropitious, and part of the potatoes you received and planted were spoiled by salt, and the remainder were probably injured. And I should suppose too, a priori, that the slaty clay soil of your farm, on the banks of the Wallkill, were not well calculated for potatoes.

Some persons have considered the introduction of the Rohan potatoes as a humbug, but from the various accounts I have read in the Cultivator and elsewhere, together with my own experience, I believe them to be superior producers. Doubtless, however, they will not answer in all soils, in all climates, and under every variety of weather and treatment. Some of the experiments made have been on a small scale, under favorable circumstances, in a garden well manured, and particularly attended to. Thus Mr. A—— produced from a single potato cut into small pieces, and planted in his garden, one bushel and a quarter. Mr. B—— raised thirty-seven bushels from one.—These and other instances of a large yield, have induced others to calculate a pro rata result when cultivated in the large way, and hence disappointment, because it is impossible in field culture, to bestow the same attention as to a particular and small experiment.

There has, no doubt, been considerable speculation in the recommendation and cultivation of this variety of potato.—The price has been too high, even allowing it to be a great producer, to be cultivated usefully and profitably. For, after all, it is only a hog potato, as, upon trial, I agree with Mr. Bement (of Three-Hills farm, near Albany,) that it is a second rate edible one, and will not be eaten by human beings unless they cannot procure better. As long, however, as the price keeps up it may be profitable to raise this variety of the solanum to sell for seed, as it is too valuable to be consumed by man or beast, while superior edible potatoes can be purchased at a less price. This period cannot last long, as when Rohans find their level they will be raised on account of their productiveness only to feed swine.

This time is fast approaching, as I have observed a new variety lauded under the title of the Sommeilier potato, said to be more productive than the Rohan. This variety has been sold at from eight to ten dollars the bushel. Mr. C—— paid this large price for a bushel, planted them in his garden, and was grieviously disappointed; the produce being less than the Rohans which he had planted the year before. When such high prices are demanded for products of agriculture for seed, it borders too much on speculation for a prudent man to pay them.

The following circumstances induce me to believe that a new variety of the Rohan may be produced. I purchased a barrel of Rohans, and placed them in the barn until the beginning of June, 1840. On opening the barrel to cut the potatoes for planting, they were found matted together by long sprouts, and many of the eyes had growing from them small potatoes, from the size of a hazlenut to that of a hickory nut. They were closely attached to the parent potato by a single fibre, and had numerous fine fibrous roots an inch or more in length, diverging over its surface. From these, which were broken off and thrown among the sprouts, I selected a quart or two of the largest, gave some away, and planted the remainder in two rows by the side of the larger ones cut in pieces. These miniature potatoes came up more slowly than the parents, but as the season advanced they grew as well, and no difference could be seen between the large and small ones. When they were dug, the tubers were as large and productive as the others. The produce of the small ones filled two barrels, which I have preserved separate, and intend planting by themselves, to ascertain the result.

Remember me to your uncle, Dr. Green Miller, and to my former pupil, Dr. M. Wharry. Inform him that my health became so much impaired that I forsook my professional business in the city, with the hope of being benefitted by agricultural employment, and that so far it agrees with me admirably well, and I am much improved. Tell him I hear with pleasure of his increasing practice and reputation as a physician.

Yours, with respect and esteem,
SAMUEL AKERLY.

To P. V. C. Miller, *Shawangunk, Ulster co., N. Y.*

National Agricultural Society.

Messrs. Editors—As no subject treated of in your valuable journal is deserving of more importance, or will be attended with more beneficial results than the establishment of a National Agricultural Society, I beg leave, in aid of its former advocates to suggest to the American Farmers and Planters some additional advantages which will result from such an association. Besides the great benefits mentioned by your former correspondents, there is one which I believe equal to them all. You, Messrs. Editors, I have no doubt, have witnessed with pain and mortification the too frequent attempts of politicians, both at the South and the North, to arouse and enlist the prejudices of one portion of our hitherto blessed Union against the other. I believe that when our people come to meet together as farmers, as friends, actuated by the same feelings, having the same interests, and working together for the common good, that they will contribute more to remove those prejudices and to cause a more friendly feeling between different parts of our country than all the essays and speeches ever published. Our interests are common,—no sectional divisions should separate us. Another benefit to the agricultural community will be, that implicit reliance will be placed in whatever is published by such a society. You are aware with what doubt and scepticism many agricultural publications are now received. Agricultural, like political journals, too often have their prejudices and their favorites. Whatever issues from such a society will be always received as the *truth*.

If we can succeed enlisting in our cause the farmers and planters of every portion of the United States, it will not take a half a century, as now, for the improvements of one section to be known in another. Besides the National Journal, suggested by your very worthy, able and zealous correspondent, Solon Robinson, every paper in the Union would, no doubt, publish the most important information to be derived from this soicety, and it would thereby be conveyed to every portion of the country. The Smithsonian legacy can be constitutionally appropriated to the establishment of a National Agricultural School.

This fund was given to the whole people of the United States for their general good. It is different from our National revenue. I believe that Congress has no power to appropriate money from the National treasury for any other purpose than those specifically enumerated by the constitution; and this opinion being pretty general, we need expect no further aid from that source. Yet I believe the *Smithsonian* fund amply sufficient to carry into successful operation such an institution, and when once fairly on the way, it can be so managed as to yield a revenue, instead of being attended with additional expense. With a farm, work shops, &c. &c. attached, it must yield a handsome income; at least it cannot fail to sustain itself. The surplus, if any, which may arise, after paying the necessary expenses of the institution, I would appropriate to the payment of the expenses of the officers and members of the society. Should we fail in our attempts to establish an Agricultural School, I would still more earnestly insist upon the formation of the National Society; and I hope all such as Messrs. Robinson and Garnett will not cease their efforts until we carry our point; and, though but a young man and a young farmer, if my feeble aid can avail any thing, it shall be at all times cheerfully rendered.
F. R. G.

Mecklenburg, Va., May 15, 1841.

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Messrs. Editors—There have been several communications in the Cultivator on the subject of a National Agricultural Society and School, by men who seem to be very zealous in the cause. Mr. Robinson, in his address to the farmers of the United States, gives his views, and invites others to give theirs. I will therefore give mine. The friends of the Society think the greatest difficulty will be in getting a Society organized. I think the greatest difficulty will be in making it useful after it is organized.

The communications of your correspondents, who recommend a National Society, are calculated to elevate the character and standing of the American farmer, and I very much admire them, and really think that friends Robinson and Garnett are benefactors of the human race and an honor to the profession; but when they treat of this great National Society, they are, as I think, but letting off some of their visionary notions. As soon as a National Society is formed, Congress is to be asked for half a million of dollars to establish a National School, from which the greatest blessings are to flow. This school is to be established in the city of Washington, or in some other city or town, where some two or three hundred boys are to be taught at the expense of the government. And what are they to be taught? Farming? A very appropriate place for that indeed.

I, Messrs. Editors, am a farmer, and a very poor one at present, but am in hopes that I may some day be a good one, and if I ever am, friends Robinson, Garnett, and others, will be entitled to a great share of the credit of making me such; but I cannot help deprecating the idea of an honest, independent farmer supplicating any other power but the Great Power that sends him sunshine and rain. To see a farmer lobbying about the halls of Congress, or the legislature, asking aid, is mean and low-lived. It looks too much like the bankers who depend on government more than on their own honesty and credit. One objection to a National Society is the great extent of our country, the difference of soil, climate and productions, so that what is interesting to one section is uninteresting to another; and the expense of such a society ought to be taken into consideration. Farmers ought to calculate as well as others; now suppose there should assemble at the city of Washington four delegates from twenty-five of the States, which would make one hundred; could they meet at a less expense than one hundred dollars each on an average? I think not,—that would make a sum total of ten thousand dollars; and what would the community get for all this expense? Why, the delegates might get a big dinner, a few sups of good wine, tell and hear some large stories, build a few castles in the air, and return home again. Now, Messrs. Editors, I suppose you would, for ten thousand dollars, distribute twelve or fifteen thousand volumes of the Cultivator, which I will venture to say would be of more use to the farming community than the great National Society, should it be organized and exist for ever so long a period. I am a farmer that wishes to see the character of the farmer exalted, and the science of farming understood and practiced, as much as any one; but my plan is, in the first place, to try and make myself a good farmer, and if I can by any means advance faster in the art than my neighbors, I hope they will profit by my example; and if every farmer that feels ambitious, would do likewise, we as a nation would advance full as fast as if we had a great National Society. Perhaps agricultural societies on a small scale, may be useful, but that is a debatable question. The spirit of competition raised in the minds of the ignorant is not always beneficial. Real information in the art of farming is what we want; the farmer wants to know how to raise grain, pork, beef, &c., at a less expense than the real worth of it after it is raised, and I think the best way to gain this information is by a strict observation of all the methods practiced around him, and a diligent study of the agricultural journals and works of the day, and when he becomes a first rate farmer himself, he will be a first rate teacher for his sons.
Respectfully yours,
F. BURT.

Coshocton, Ohio, May 25, 1841.

Making of Pasture Lands.

Messrs. Gaylord & Tucker—He who indulges in reading a political newspaper soon finds increased delight in the investigation of political subjects. The reading of romance begets a fondness for fiction. The constitution of man is such that the mind soon finds delight in those subjects upon which it may chance to be fixed, even though disagreeable at first. It is with agriculture as with all other subjects; he who reads monthly or weekly an agricultural paper finds soon increased delight and interest in the subject of agriculture. The accounts of experiments and improvements by those engaged in similar pursuits are but the seeds of new experiments and increased efforts to promote the common interest. Wishing that your paper may have its circulation greatly increased, not so much for your individual interest as for the good of the country, permit me to introduce the subject which I wish more particularly to notice—*The making of Pasture Land.* There are few farmers in this State who have not large, or considerable amounts of timber land, that is of but little value to them; not yielding annually as much as would pay the tax thereon, while their farm stock is fed mainly, summer and winter, from the corn-crib,—themselves the servants of beasts. When this unprofitable wood-land, if put into grass, would keep a sufficient or perhaps an equal amount of horses, cows and sheep without the use of a corn field at all. But we are disposed to plead our inability to grass our lands, when at the same time half the labor spent in this way would make us full as much as if spent in raising grain for our stock. In this latitude the most of farm stock will live ten months in the year on good blue grass pasture alone. But some object, that to grass their lands they must destroy their timber. To this I answer, that nothing need be destroyed less but the useless timber; the rail timber and valuable timber trees of every kind may be left, and fire wood for all time to come. But as the expense is probably the most serious difficulty, I have made a very accurate calculation of the cost of putting wood-land in blue grass. The calculations are made from the prices at this place; and for a section of land, or 640 acres, and for any smaller amount, the calculation may easily be made by a division of the cost of this amount. The useless timber is to be "deadened" or chopped round one year previous to sowing the blue grass seed; the fall before sowing the seed, the leaves on the ground should be burned off, and seed sowed the following spring.

Deadening one section, 640 acres, at 12 cts. per acre,	$76 80
¼ bushel blue grass seed per acre, at $1,50 per bushel,	240 00
Sowing seed, 12 cts. per acre,	76 80
	$393 60

This ground should be fenced into four fields. The first field, of course, would have four strings of fence 160 rods long, the second and third which would be adjoining, would have but three strings of fence, and the fourth would have but two; fence nine rails high.

Fencing first field, 75 cents per hundred for making and laying up rails on fence,	$87 00	
Second field, do. do	65 25	
Third do. do. do.	65 25	
Fourth do. do. do.	43 50	
Fencing 640 acres into four fields,		261 00
To which add cost of deadening, seed and sowing,		$654 60

And you have the cost of making six hundred and forty acres of pasture, $654·60 cents, or about 102 cents per acre.

The first year after sowing, the grass will be worth but little for pasture; the second year the grass will seed, and will be ready for grazing, and will improve every year for several years. It is quite astonishing to see how tall the grass will grow upon land in this condition. By the first of June, I have seen the grass so tall that the logs would be quite hid by the grass, which seemed to be stretching itself upward as though it was vieing with the tallest of the spice bushes. But what is still more pleasing, is to see a herd of cattle wading through and feeding upon this luxuriant grass, almost to their sides.—It is a matter to be much regretted, to see large tracts of woodland in almost every neighborhood, lying out, and of no benefit to the owners, when it costs so little to put it into grass and render it profitable to the owner. To show the great importance of thus grassing our woodland, I submit the following calculation for the first five years, so reasonable that none will doubt it:

1st year, deadening timber, yield nothing,	$00 00
2nd do. sowing seed, do. do.	00 00
3rd do. grazing to commence first of June, when the seed has ripened, graze five months, ten cents a month for each acre,	320 00
4th year, same,	320 00
5th do. do.	320 00
	$960 00

Which is almost one hundred per cent. on the amount laid out in the first five years. The second term of five years, the amount of grass will be one hundred per cent. more than the first five. The bushes in this time will begin to be destroyed by the feeding of the stock, and the logs and brush will begin to rot and disappear. Much may thus be added to the beauty as well as the wealth of the country; much added to our individual ease and comfort,—while we will be gratified by looking at fat cattle instead of the lank-sided ones that we too frequently see half famished, hunting feed along the lane sides during the summer months. With much esteem, yours,
A. C. STEVENSON.

Green Castle, Ind., Feb. 22, 1841.

The Sugar Beet.

We make the following extracts from a communication by Mr. P. Diehl, New Oxford, Pa., in reply to Mr. Guthrie's remarks on the Sugar Beet. Mr. D. says:

"In this neighborhood, persons feeding the beet to their cows, readily procured two cents per pound more for their butter, than their neighbors, not using the beet, can for theirs. My hogs are wintered solely upon beets and kitchen slop, and I assure you, gentlemen, I have never yet heard them 'squealing for more after being filled with them;' nor do I know of any one who has better conditioned hogs than myself. I have also fattened solely upon sugar beets, beeves, which, when sold, were pronounced by the butchers to have been the best they had killed for five years preceding that time. I am at present feeding a lot of cattle with beets, which are absolutely in better condition than a lot purchased at the same time by a neighbor, and fed high upon corn.

"So much on feeding; let us now contrast the probable amount of profit to the farmer, per acre, from a crop of beets, with that from a crop of corn. Allowing, then, the average crop of beets to the acre to be 1,000 bushels, which is a moderate crop; it will be perceived that that quantity will fatten *eleven* head of steers in ninety days, at one bushel per day. And allowing the average crop of corn to be 50 bushels per acre, which, in all conscience, is high enough, it will be found to fatten only one and a half head in the same amount of time, feeding at the usual rate of one and a half pecks per day; leaving a balance in favor of beets, fractions aside, of about 800 per cent.

"Here, then, is a mass of *demonstrative* evidence, amply sufficient to convince any man not otherwise biased by prejudice or bigotry, that the sugar beet meritoriously, is entitled to hold a high place in the agriculturist's regard; and I appeal to every lover of science, nay, I appeal to Mr. G. himself, to say, whether it becomes any one to attack a science so prematurely, as he has done, in any of its departments or ramifications; a science, too, that so loudly calls for every feeling and every thought the philanthropist can bestow upon it. The following table and statement, taken from the "Farmer and Gardener," will show the amount of beets that can be raised from an acre of ground, and the number of cows that they will sustain for five months:

Average w'ght of beets.	Product of an acre in lbs.	Product in bus.	No. of cows which may be fed at a bu. a day, 5 months.
3 lbs.	65,380	1,039	7
4 "	87,120	1,452	9
5 "	108,900	1,845	12
6 "	130,680	2,178	14
7 "	152,460	2,541	16

"Now, we would respectfully ask, if these averages are not *low enough*; and if they be so, and we think they are, we would ask if an acre of ground could be put in any thing else that would yield so much solid and nutritious food as sugar beets? We unhesitatingly say so, and defy contradiction. And it is greatly in favor of beets, that horses as well as cattle feed upon them, not only with avidity, but with decided advantage to health and condition. Why, then, should farmers hesitate with respect to the propriety of this culture. Let them, if they choose, not go largely into the growth; begin on a small scale, say half an acre or a whole one, and we will risk the assertion, that they will never omit to raise them again, *provided they do the root justice in its culture*, for their is no food which can be given to a cow that constitutes so much towards increasing the quantity and quality, both of milk and butter."

Mulberry Hedges, Yellow Locust, &c.

[We think the following communication valuable, as it relates to a subject of much interest at the West, the formation of fences, and shows in a clear light what energy, directed by skill and intelligence, can do to remedy the want of fences, or of timber in a western prairie. There will be no difficulty in the management of the Mulberry hedges; as they will only require pruning and trimming as those made of thorn or other trees. It may be necessary, however, to be careful, until the fence is compact and close, to be cautious in stripping the foliage from the leading shoots, or such as are required for the closeness or stability of the hedge. In planting an orchard for feeding animals, nearly the same fruit is wanted that would be preferred for a family; that is, fruit rich and of fine quality, and in succession as long as wanted. The difference between sweet and sour apples *when ripe* as food for animals is not as great as some have supposed, but unripe sour apples are unfit for any animal. The Early Harvest, Sweet Bough, Strawberry, Fall Pippin, Baldwin, Roxbury Russet, and Tallman's Sweeting, are all good apples. We prefer the Sweet Bough to any apple we have tried for late summer and autumn feeding. The tree is a good bearer, the fruit rich, comes early, and will last until winter. For the winter feeding of animals, apples that will keep, will, of course, be selected. Our friend has chosen the proper course on the subject of chess, and while we invite the believers in transmutation to look at this case, we hope we shall hear further the result of his experiment.]

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Messrs. Editors—Five years ago, I emigrated to the Far West, and after spending the summer in Illinois, purchased a fractional quarter of 175 acres of government land in the county of Knox. The August following moved on it; the next spring enclosed it with a rail fence. My land is prairie, and situated two and a half miles from the nearest timber. I have drawn my building and fencing timber above three miles. I have now, however, nearly three hundred rods of the white mulberry in hedge rows, of one and two years growth, embracing probably above eight thousand trees, all of which have been produced in two years from a few hundred seedlings. My hedges have been cut off at or near the ground, some once, others twice. The mulberry grows very rapidly on our prairies. I have the second years' growth from cuttings grown from the ground, that measure seven feet in height.

I wish to inquire through the Cultivator, the best mode to cultivate them, having in view both the raising of silk and the making of live fence. Also some of the best varieties of the apple to cultivate for the feeding of swine and neat stock.

I am cultivating the yellow locust for timber. I plant the seed in a nursery near a dwelling, to prevent the destruction of the young plant by the prairie hen. In the summer of 1839, they entirely destroyed five acres for me, planted in the field. I transplant the seedlings of one year's growth in rows, four by six feet, and cultivate the first season with the plow, after the western manner of cultivating corn. They make a growth the first season after transplanting, from five to nine feet, and send out such a multitude of branches that it is with difficulty a man can ride through the widest rows in the the fall on horseback. They will bear transplanting from the time the frost is out of the ground until the buds have expanded; not one in two thousand will fail. They may be propagated by cuttings, and by cutting the roots into pieces of an inch or two in length, and planted the same as the seed, only cover deeper; the seed should never be covered more than half to three-fourths of an inch. I lost the seed and planting of two acres last season by covering a little over an inch. I replanted, and took particular pains to cover less than three-fourths—same seed and preparation, and scarcely a hill failed.

I have the whole work of the Genesee Farmer, and can truly say I would not part with it for more than its first cost. I find it a valuable book of reference, and many an evening I have spent pleasantly in its perusal. I have probably read all that has been written on the subject of the transmutation of wheat into chess, but I always disbelieved the doctrine, and as I had commenced on a farm new and clean, and none had ever grown within three miles, I resolved I would begin the raising of wheat on a small scale, and sow clean seed. I accordingly purchased one bushel, and it was called pretty clean seed wheat. I picked it over by hand, and found about three pints of chess, which I carefully burned. On harvesting my first crop, I found only one stool of chess, and I thought I had done my work pretty effectually that I found no more. The second crop, from the heading of the wheat to the cleaning it for market, with close and careful examination, I found none. I have the third crop on the ground, and if that, or the same wheat produces chess on my farm, I will inform you.

Last season I received from the East a few small Rohan potatoes, not to exceed one sixteenth of a bushel; planted them one eye in a hill; the potatoes were large and fine, and measured a little over twenty-five bushels. I have annually grown the carrot, wurtzel and ruta baga; the two former I have harvested at the rate of more than one thousand bushels per acre —ruta baga, from five to eight hundred. The carrot and wurtzel suffer the least from drouth, and I think are the most profitable crops. I think they are all superior to dry corn for milch cows and other stock. I have wintered hogs with them to good advantage. The common hogs of the country are of the Landpike and Alligator breeds, and their crosses; I think, they must soon give way for the noble Berkshire, as some fine specimens of that breed have been brought from Albany to this county. L. R., Jr.

Henderson, Knox co., Illinois, 3d mo. 10th, 1841.

Wheat and Plaster.

Messrs. Editors—In answer to the subscriber from Gorham, respecting plaster sown in spring causing more rust in wheat, I would say, I have raised a good quantity of wheat here for the last nineteen years; have sown clover and plaster plentifully; but the last few years have abandoned the use of plaster on the wheat, unless the spring was very dry and the wheat backward, which is seldom the case here. I am satisfied that plaster has a tendency to rust wheat; so will any thing else that gives a larger growth of straw. Wheat, with a large growth of straw, is always later in ripening than that with a shorter straw; and late wheat is always more or less rusted. I have no difficulty in getting plenty of clover by plastering the next spring after sowing; but the best of the wheat land here is getting too much clover, barn-yard manure, and plaster; it is getting too rich for wheat, at least a great many farms are so; we get more straw than profitable. It costs a great deal to harvest, draw in and thrash, &c. and not so much more wheat as when we had lighter crops of straw. On new land the growth of straw is less, the wheat plump, and no rust, when the old fields, with great burthens of straw, will not produce more wheat.

I am using my barn-yard manure for meadows now, and am going to reduce my wheat land for a time. Now for wheat turning chess. I am surprised that the question gets so many advocates; but I suppose they are as great simpletons as I was some fifteen years ago. My land was very foul when I first got it, and plenty of chess amongst other things; and although I sowed clean seed, I got sometimes seven or eight bushels of chess for every 100 bushels of wheat, and thought I was certain the wheat became chess; however, by always sowing clean seed, I saw the chess gradually diminish. I gave my fallows additional plowings and harrowings, and got my seed clean, without a kernel of chess, and the chess disappeared entirely. I have now nearly 2,000 bushels of wheat, and I am certain there is not a gill of chess in the whole; indeed, I don't know if there is a single seed. I have examined almost every threshing, and could find none. Now, I think this might satisfy any person, that wheat does not turn to chess.

Yours, &c. JOHN JOHNSTON.

The best way I have found to clean seed wheat of chess, is to take out the riddles and sieve, or screen, out of the fanning-mill, put in a board in place of the *screen*, a little shorter at the back end than the screen, say one inch; then take off the rod that shakes the riddles; let one man pour the wheat in the hopper slowly, another turning fast enough to blow away the chess; *every seed can be blown out in this way.* Small and light wheat will also blow out; but it can be cleaned over in the common way, and made fit for market. J. J.

Fayette, near Geneva, Ontario co., N. Y., May 13, 1841.

Objections to New Things.

It was noted, in the Cultivator of February or March last, that my statement of the cure of dysentery and diarrhoea, &c. by homoœpathic medicines, was received, but could not be published, lest it might lead to controversy; that nothing should be admitted into the Cultivator, not strictly agricultural. As farmers were pleased with every thing relating to the health of their farm stock, with new modes of cure for their lambs and pigs, I supposed they might be as readily pleased, and certainly as much interested in the cure of diseases in their children. My imagination was, that the novelty was the great objection. I made no attack on any profession, and could expect no angry reply from any source. More than one of the readers of the Cultivator have asked what it was that was rejected, and desired to be informed.

Members of the learned profession, I know, are apt to startle at every thing new, except flattery in their profession, as much as farmers are, to be advised to new improvements in their profession or calling.

But the subject was new, and for that cause opposed! To oppose any thing for that cause, does not appear to me to be wise; for all things are new to the human mind, when first presented to it.

The faculties of all animals in the scale of being below man, are given at birth, and they know their several wants and duties intuitively. Not so with man. The brain of man is not fully developed at birth, as it is of the inferior animals, but is progressive. All his wants and duties and improvements are to be learned, and to be acquired by tuition and experience. This, no doubt, is because the faculties bestowed on him are intellectual, and infinite in capacity. If this last expression appears too strong, I ask, who has discovered and marked the bounds of human knowledge, in moral or physical science? Who has learnt all that man is capable of learning, that no more can be learnt by him? Can any one say that he knows all things? The most learned and profound man can, with propriety, say that he is only at the threshold of human learning. Nor is his knowledge limited to this sphere. When he, his spirit, leaves this temporal body, it must become a citizen of a more celestial abode; and freed from cumbersome temporalities, possesses an enlarged capacity for improvement in spiritual knowledge. It will progress in improvements, as it moves from sphere to sphere, and must continue to improve, ad infinitum, before it can reach the heaven of heavens, to its God. The gift, his faculties, being wonderful and great, his duties and labors must be great also, for cultivation and improvement, to enjoy the blessings of the gift. It is founded also in wisdom and necessity; for, without exercise of both body and mind, man would become or remain a mere brute of the forest and of the plain. Let him not then neglect any thing because it is new to him, for his whole life is to be labor.

A profound and wise man will rather give most heed to things new. If objection had been applied to the internal improvements of our country, we should now be wallowing through the mud, and over the rough hills, at a slow pace, instead of making *the rough smooth*, and riding upon railways; and, we should also be loitering in bays, rivers, and oceans, waiting for winds, instead of flying on the water by steam, as if on the wings of the wind, with saving of time and with certainty in travel, and transporting the conveniences of life.

Are all these improvements in moral and physical science to be rejected because they are of recent discovery? On that principle, we should have rejected the evidences of Christianity.

In conversation with a Jew, not long since, I said to him, our religion and your's are from the same source. We believe in the same God, and in the same Moses, his prophet, as you do. We walk together, hear and believe all the prophets, till we arrive at the result of their prophesies, as foretold by Moses, who said, "The Lord thy God will raise up unto thee a prophet from the midst of thee, like unto me, unto him shall ye hearken." And is there not perfect accordance between the prophesy and the evidence in Jesus Christ? Why then should we *fall out by the way*, or why do you stop by the way, while we go ahead on evidence? He calmly replied, "We must respect the religion of our fathers." Objection to things because they are new! Is man thus endowed with this wonderful capacity for going ahead, to be limited by ignorance or obstinacy?

The history of the Eastern Continent furnishes evidence, that when some of the tribes of men plunder and enslave all whom they meet weaker than themselves; that when their martial music and movements are heard by their weaker neighboring tribes, they sling their bag of rice over their shoulders, lend their hands to the wife and children, and flee to the wilderness, to seek shelter and safety among hyenas and tigers, from the face of their fellow-men. Not so with brutes of the same species. What a shocking and hideous picture of the condition of him who was made in the image of God! What a boon was Christianity to man in such a state, teaching him to love God with all his heart, and his neighbor as himself. And this precept would be rejected on the principle of novelty. Christ was objected to, because his doctrine was new; and yet we see that all the improvements of man, in his present boasted and enlightened state, are indebted to the *new* doctrine of Christ.

Will the improvements in moral and physical science be rejected by the readers of the Cultivator, because they are new?

Does not the Cultivator advise the agriculturists to cultivate their farms, by adopting the *new* mode of those who have successfully practiced the new methods?

Most respectfully, DAVID TOMLINSON.

Schenectady, February 11, 1841.

Black Rust on Plum Trees.

UNSUCCESSFUL EXPERIMENT.

In a former volume of the Cultivator, I noticed a recommendation of sulphur as a remedy to drive caterpillars from trees. I concluded that if it would have this effect upon insects in the *larvæ* or caterpillar state, it might also act upon the insects in the same state in the black knots or excrescences on plum trees, called the *black rust.* This excrescence or fungus, is caused by an insect which lays its eggs on the limbs of the tree. The punctures made in the bark by the insect, poison the tree, and a warty excrescence follows, which becomes the nidus of numerous insects. The eggs hatch into little maggots, which are the insects in the form of *larvæ.* They feed upon the soft exudations of the tree, and having attained their growth, are transformed without leaving the black knots into the state of *chrysalis*, (or torpid state.) They remain therein until their transformation into the *imago*, or perfect insect, when, in May or June, they emerge from the knots, take wing and repeat the operation of depositing their eggs.

The insects, I have seen emerging from the rusty excrescences on my plum trees, are in shape like the wasp, but quite small, or a little larger than a musqueto. I believe it to be a species of Ichneumon, one of the destructive tribes which I have not succeeded in capturing.

The experiment on the plum trees, disordered by the black rust, was made with sulphur, in the following manner, and although unsuccessful, may lead to the application of other remedies.

In the spring of 1840, all the black knots or rust on a number of plum trees, were cut off, except where they were on large limbs or the body of the tree, and these were shaved off with a knife, and rubbed with sulphur. Holes were also bored in the trees about two inches deep, inclining downwards, and then filled with sulphur. In the autumn after the leaves had fallen, I found the trees nearly as full of these fungus knots as they were before. This spring (1841) the operation of taking them off, has been repeated as far as practicable, and the trees manured, in the hope of exterminating the insects and curing the disease. This has spread to my green gage trees, and I have noticed a wild cherry tree on my neighbor's land greatly disfigured by the black rust.

Richmond.

The Cut Worm.

Messrs. Editors—It was stated as a fact in the Genesee Farmer of 1838, that the army worm, in its destructive progress, committed no depredations on the clover; and the observance of this fact gave rise to the suggestion that farmers would do well to raise, each year, a crop of clover, as a resource, when other grasses should be destroyed by the worm.

I know not what relationship or resemblance may exist between the army worm and the cut worm, but a considerable acquaintance with the latter has resulted in the belief that the *cut worm* does not feed on clover; at least I have seen no evidence of its doing so.

Every person who has paid any attention to the natural history of the insect tribes, has been struck with the unerring instinct which enables and directs the parent insect to deposit its eggs precisely in the situation where the proper food will be found at hand, and in readiness for its young. The natural food of the cut worm appears to be the roots and tender shoots of the timothy, red top and June grass. I have never seen the cut worm except near where some one or more of these grasses were growing. In addition to *their* presence, it seems also requisite that the soil should be so loose that the parent insect can bore a sufficient depth to reach a suitable place of deposit for her eggs, and that the worm may move from place to place just beneath the surface, or else burrow in the soil, to escape the force of the sun's rays, when the ends are answered, which may have brought it to the surface. Neither of these purposes could be effected in firm and compact greensward.

I have seen considerable damage done, by the cut worm to cornfields planted on greensward which had been turned up soon after the frost was out of the ground in the spring, yet this was where the sward had not become firm and compact; but the greatest supply of the worm, and amount of damage has occurred in lands where a crop of winter rye has been raised on greensward, plowed after cutting of the grass for hay, and where the stubble has been plowed sometime in autumn, subsequent to taking off the rye crop. In this mode of cultivation, it is often the case that a considerable amount of the grass roots have retained their life, and their power of vegetation is even increased by the loosening of the earth around them. Here, then, is furnished a capital chance for the breeding of the cut worm, and the farmer may consider himself very fortunate, if his crop of vermin is not quite too great for the safety and success of his crop of corn. The corn, it is true, is not meddled with at first. The worm uses its natural food till the plow or the cultivator and the hoe have essentially diminished its quantity. Then the depredations commence. Anon comes the plow and hoe again, and if these do their duty well, the worm has no alternative, but to eat the young corn or starve. We know, by sad experience, what course the worm will take in this dilemma.

The foregoing remarks are made with the hope that they may lead to further investigation, and ultimately, as I hope, to some mode of avoiding or resisting this enemy to one of our most valuable crops. Could such a result be brought about, it would afford great satisfaction to your obedient servant,

J. S.

Hardwick, Mass., March 20, 1841.

Monthly Notices.

Importation of Stock.—L. E. Letton, Esq., of Kentucky, arrived at New-York from Liverpool, on the 20th of May, with "*two young thorough-bred Flanders Horses*—one 2 years old, black, 16 hands high, heavy and well built"—the other, a yearling of a dark grey color, which Mr. L. thinks will make the largest horse; his sire weighs upwards of 2100 lbs. Mr. L. also brought out with him a *Short-Horn Bull*, from the herd of Mr. Bates, of Kirklcavington, called *Locomotive*, 2 years old past, color light-roan, sired by the Duke of Northumberland, dam Oxford. Both dam and sire won the first prizes of 30 sovereigns each, as the best Short-Horn Bull and Cow, at the Fair of the Royal Ag. Society in 1839. Locomotive cost in England £275—[including difference of exchange $1,222·75.]

Sales of Hogs.—In a letter of June 16, Messrs. A. & G. Brentnall, of Canterbury, Orange co., N. Y., inform us that they have lately sold to Richard Allen, Esq., of Lexington, Ky., a Berkshire sow, 20 months old, for $150—also a boar and sow to T. B. Howard, Esq., of Columbus, Geo., for $150, and have now an offer of $75 each for two sows and a boar, besides $200 for their boar Ontario,—all Berkshires. Dr. S. D. Martin, of Ky., has recently sold "his Woburn sow Magnolia," to Mr. Johnston, of Missouri, for $150. She is estimated to weigh 1200 lbs.

Large Yearlings.—Mr. S. Hecox, of Lyons, Wayne county, N. Y., says that he "has two bull calves, raised from the improved short-horned Durhams, imported by Mr. Weddle, of Ontario county; the one, a three-quarter blood, which at one year old weighed 1015 lbs.—the other, a half-blood, weighed at the same age 915 lbs. Their feed during the winter has been hay and roots without grain. They are not fat, but in a good growing condition, and for symmetry and beauty can hardly be surpassed." Both are for sale.

Leicester Pigs.—Mr. Hecox also informs us that he has "some pigs of the Leicester breed, raised from the stock imported by the same gentleman, which he considers superior to the Berkshires; they are purely white, fine small boned, have small heads, thin ears, thin clean skin, with but little hair, well formed, keep easy and fatten readily." Some of them are for sale.

Prouty & Mear's Premium Plow.—A letter from the manufacturers, says:—"We make these plows of a great variety of sizes, and the retail prices are from $5 to $20. The size used at the trial at Worcester, was the smallest greensward—furrow 6 inches deep, 12 wide, and draft 292 lbs. We sell this size, with cutter and wheel, at $11·50." These plows are for sale by the manufacturers, D. Prouty & Co., Boston, and by D. O. Prouty, 176 Market st., Philadelphia. We hope the proprietors will send one of these plows for trial at the Fair of the N. Y. S. Ag. Society, to be holden at Syracuse on the 29th Sept. next.

New-Jersey Marl.—New-Jersey was formerly famous for its *barren sands*, but it is now, owing to the liberal use of marl, fast becoming one of the most productive States of the Union. The Cabinet says:—"My friend R. S. whose farm, a few years since, yielded nothing but blackberries, and was one uncultivated waste, produces the finest crops of wheat, and other grains and corn, and yielded more than 100 loads of hay the last year, at a cut of two and a half tons per acre; and all this is owing to the marl." The value of these marl beds may be inferred from the fact, that Mr. A. Cooper by selling the marl by the square rod, "is realizing $1500 per acre for the marl, the land afterwards being more valuable than before."

Great Ox.—The celebrated ox Pennsylvania, was slaughtered in Philadelphia on the 2d of Feb. 1841. This ox was of a cross between the Devon and Durham; was eight years old; had been fed five years; and his live weight was 3350 lbs., dead weight of the 4 quarters 2388; loose fat 334 lbs. On cutting up, the flesh was found "elegantly mottled," the flesh laid on the best parts, and the five years feed not gone to "make soap and candles," as Bakewell used to remark of such very fat animals. The Farmer's Cabinet for March, contains a figure of this ox, with a description.

Peruvian Barley.—A new kind of grain has lately been introduced into England from Peru, in which country, when one crop is reaped new shoots proceed from the stems, which give a second plentiful crop. The grain when standing has the appearance of barley, but much whiter, with a long beard or awn. On being gathered and rubbed in the hand, or threshed, the awn comes off with the husk, and leaves the grain bare like wheat, to which it bears a stronger resemblance than to barley.

Old Lime Plaster on Wheat.—A writer in the Farmer's Gazette says, he sowed two pieces of spring wheat after brining and rolling the seed in slaked lime. On one of these fields he sowed or spread a number of loads of old plaster from the walls of old houses, and harrowed it in with the seed. Both fields were entirely free from smut, which that year was generally ruinous to wheat; but that the wheat of the field where no lime was used (except for rolling the seed) was badly shrunk, while that which grew on the field well sprinkled with old plaster, was *good, sound, plump wheat.*

"**Great Calf.**"—An animal of the *Bos* genus, some five years old, has been lately exhibited at Fulton st., New-York. He is of the ordinary breed of cattle, has never eat a bushel of corn or meal in his life, sucks the same cow now that he did when three days old, and weighs 3240 pounds. This "calf" from the banks of the Connecticut, attracted much notice in "Gotham."

Swedish Stables.—In Sweden the horse stables are never littered at all. The floors of the stable are planked; the planks perforated with holes, so that no wet can remain on them; and these planks kept clean are the only bedding allowed. To this method of treating their horses, (strange as it appears to Englishmen, or those who litter their stables carefully,) the Swedes attribute the soundness of their horses' feet, as it is quite uncommon to meet with a lame or foundered horse in Sweden, that has been so stabled.

A Good Crop.—Mr. Samuel Palmer of Goshen, Ct., gives the following as the crop taken in 1840, from five acres of land: 600 bushels of corn in the ear, 118 cart loads of pumpkins, 300 bushels of turneps, and 240 bushels of potatoes. It was unnecessary for Mr. P. to state that the ground was early and well prepared, properly manured, and that the after culture was good. Such a crop can be produced under no other course of treatment, and the sooner farmers are convinced of this fact, the better it will be for them.

Prolific Hens.—In our younger days we "heard tell" of a hen that on week days laid two eggs, 'while on Sunday she laid three.' The Baltimoreans assert that they have some hens of the game cock breed, which rival the first part of the old story, they having laid two eggs a day for a considerable time. Let the race be multiplied.

Too much Truth.—The New Farmer's Journal, London, says:—"The monetary affairs of the States appear to be in a most desperate condition. The U. S. Bank is scarcely capable of paying a shilling in the pound, and many other banks throughout the Union are in a similar condition. From the reports recently published by the congressional committee on banking, it appears that in some of the banks no set of books had ever been kept; in others, trunks filled with "lead, tenpenny nails, and window glass broken into small pieces," passed for deposits of specie; in some no capital stock had ever been paid in, and in others counterfeit notes on other banks had been resorted to to sustain their credit."

Gullibility.—A paragraph, giving an account of a discovery made in Jamaica, we believe, of the substitution of mosquetoes for leeches in medical practice, is going the rounds of the newspapers, and has been copied into some of our agricultural contemporaries as a "wonderful" discovery. We cannot as yet advise our farmers to leave their harvests to enter into this musquetoe speculation.

Preservation of Meat.—The particulars of a discovery which appears to promise important results, are given in the Bulletin of the French Academy of Sciences for the sitting of March 22. By injecting the aorta or main arterial trunk of an animal with chlorure of aluminium, the flesh will be preserved fresh for an indefinite period without having any bad taste communicated. The table of the Academy of Science, at the time of reading the memoir of M. Gannal, the discoverer, was covered with legs of mutton, fowls, *et id genus omne*, which had been preserved many months by the new process.

Crushed Cob and Corn Meal.—We have constantly maintained that a great loss was sustained in feeding animals by those who rejected the cob of the corn, and every experiment that has yet been made goes to establish the correctness of these conclusions. In a late number of the Farmer's Register is a communication on the subject, by a writer who signs himself "Ploughboy," from which we make the following extracts:—"I find by repeated experiments that one gallon of crushed corn meal (corn and cob together,) *well boiled*, will, when cooled, make about five gallons of thick mush. This mush I mix in feeding with about an equal quantity of hot water, frequently throwing into the pail a double handful of bran, stirring it well, and giving it to my pigs warm. I put a handful of salt into my mush about three times a week, and occasionally a shovel full of ashes. With this allowance my hogs are in fine order, and in a much better condition than any of my neighbors, and some of them are fat enough for the knife. * * * * I know of no way except, perhaps, by feeding on roots, in which hogs can be kept through the winter at so little expense. My stock of thirteen, for instance, consume only a peck of crushed corn meal, equal to a single gallon of corn, a day. This, at the rate corn is selling in my neighborhood, 37½ cents per bushel, is only one-third of a cent a day for each hog. The manure will more than pay the extra trouble and expense of preparing the food." The same article furnishes proof that as food for working mules or horses, for fattening cattle, or for milch cows, crushed cob and corn meal is one of the very best and cheapest substances that can be used. We believe that every farmer who uses any considerable quantity of corn should prepare it by grinding with the cob.

Truth.—By placing what manure we have in the hill, and endeavoring to get the whole strength of it the first year, we keep our lands eternally poor—there is nothing left to nourish the succeeding crop. If a man has but little manure he should plant but little, and his manure should be so applied that he can stir it in, tilling and mix it with the soil.

An Act

TO ENCOURAGE THE GROWTH AND MANUFACTURE OF SILK.

[Passed May 26, 1841.]

The People of the State of New-York, represented in Senate and Assembly, do enact as follows:

§ 1. To any person or persons residing in this State, who shall present for examination, to any justice of the peace of the city or town where such person or persons reside, a pound or more of good dry silk cocoons, or a pound or more of good, well reeled silk, and shall by his, her or their oath or affirmation, or by the oath or affirmation of some other credible person, prove to the satisfaction of such justice that the cocoons presented were raised in the city or town where such justice resides, or that the silk was reeled in such city or town and from cocoons raised in this State, and that the same or any portion thereof has not been before presented to any justice of the peace for examination and certificate, the said justice having examined and caused the same to be weighed, shall give his official certificate specifying the number of pounds of cocoons or silk presented, the time when and the place where the same were raised or reeled, and the names of the person or persons by whom the same were raised or reeled, together with the name of the person by whose oath or affirmation the facts have been verified. And on the presentation of any such certificate to the board of supervisors of the same county, they having examined and found the same to be duly given, shall audit and allow said certificate and cause their allowance to be endorsed upon the same, requiring the treasurer of said county to pay to the bearer thereof, a premium of fifteen cents for every pound of cocoons and fifty cents for every pound of reeled silk specified in said certificate.

§ 2. It shall be the duty of each county treasurer, to whom such certificates thus audited and allowed shall be presented, to enter in a book, kept by him for that purpose, the date of said certificates, the number of pounds of cocoons or reeled silk named therein, and the name of the person or persons for whose benefit the same were given, and to endorse upon said certificates his acceptance thereof and the time when presented to him, and return the same to the bearer thereof, to be presented for payment as hereinafter directed.

§ 3. On or before the first day of May, in each and every year, the several county treasurers of this State, to whom shall have been presented for acceptance any such certificate or certificates as are specified in the preceding sections of this act, shall cause to be made an abstract or abstracts of all such certificates so presented and accepted, stating the number of pounds of cocoons or reeled silk and the amount of premium due therefor, and shall transmit the same to the comptroller of this State, who shall by his warrant authorize and direct the treasurer of the State to pay to the county treasurers the several amounts specified in the abstracts by them transmitted. And the said county treasurers shall thereupon proceed to pay the premiums due upon the certificates by them respectively accepted, as the same shall be presented for payment.

§ 4. False swearing or affirming under this act shall be deemed as perjury; and any fraud practised under the same shall be a misdemeanor, and be severally punished as such.

§ 5. A justice of the peace shall be entitled to receive, for every certificate given by him by virtue of this act, the sum of twenty-five cents, to be paid by the person receiving the certificate.

§ 6. This act shall continue in force until the first day of June, in the year eighteen hundred and forty-six, and no longer.

Notices to Correspondents, &c.

Communications have been received during the past month, from An old Subscriber, F. R. G., F. Burt, L. Lewis, A Subscriber, Corrector, Geo. Muntz, J. McD. McIntyre, S. Robinson, J. R. Moser, Long Island, O. G., Joseph Cope, J. H. Hepburn, Garrett Bergen, Horace Hawley, and S. W. Bartlett.

Mr. Stephen's communication on Draining, and Mr. Cain's plan of a Church, which have been a long time waiting for a place, shall appear next month.

We received in due time, Mr. Sandford's Address before the Onondaga Co. Ag. Society, at its Fair in 1840, and should have been glad to have laid the whole of it before our readers, as it abounds with valuable facts, sound and wholesome truths, and principles of great interest to every American farmer; but as we could not give it at length, we marked very liberal extracts from it, for which we had hoped to have made room before this time.

Acknowledgments.—We are indebted to the publishers for a copy of the American edition of "*Liebig's Organic Chemistry of Agriculture and Physiology*," with an Introduction, Notes, and Appendix, by Prof. Webster, of Harvard University. The speedy republication of this valuable work is a compliment to American farmers, which we trust they will not be slow to appreciate in such a manner as to induce our booksellers more frequently to engage in the publication of works on Agriculture and its kindred sciences. Published by John Owen, Cambridge. For sale, we presume, by the booksellers in most of our cities—price $1·50.

Our thanks are due to the Author and to the publishers, for copies of Mr. Colman's Address on the Agriculture of the United States, delivered before the American Institute in New-York, on the 14th April, 1841. This excellent address may be had of Chapin & Co., booksellers, 138 Fulton st., New-York, and of O. Steele, bookseller, in this city.—Also to Mr. Affleck, one of the editors of the Western Farmer and Gardener at Cincinnati, for a copy of his Treatise on "Bee-Breeding in the West," just published by E. Lucas of that city.—Also to Mr. Ellsworth, Commissioner of the Patent Office, for some parcels of Kentucky Pumpkin and Cushaw seed; and to W. B. Ogden, Esq., of Chicago, for samples of the Wild Rice from the Upper Mississippi.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Cattle Show and Fair

Of the State Agricultural Society, to be held at Syracuse on the 29th and 30th days of September, 1841.

WE are gratified at receiving assurances from all parts of the state, that the plan of the September Fair of the State Society is well received, and will doubtless be attended in such a manner as to make it one of the most interesting exhibitions of the kind that has yet taken place in this country. It will be seen by a reference to the list of premiums (see Cultivator for June, page 93,) that for cattle between thirty and forty premiums, varying from $5 to $20 in amount, are offered; on horses, eight premiums of from $8 to $20; on swine eight premiums of from $5 to $10; on sheep, eighteen premiums of from $5 to $10; on farm implements, twenty-five premiums of from $5 to $30; making altogether a very extensive list of premiums, besides which a large number of discretionary premiums will be awarded on such articles as shall appear worthy of such distinction, and which could not be conveniently arranged under the foregoing classes.

We think the conductors of the public press who are friendly to the cause of agriculture would confer an additional favor on their readers, if they would call the attention of their farming subscribers to this subject, and press upon them the necessity of encouraging and attending not only the meetings and fairs of the State Society, but of adequately supporting, and efficiently organizing such county societies, as are contemplated in the law making provision for the advancement of agriculture. We trust that no remissness on the part of any will prevent the realization of the full benefits expected from these movements in behalf of agriculture.

Agricultural Prospects--Improved Stock, &c.

SINCE the July number of the Cultivator was issued, we have had the pleasure of an excursion through some of the western counties of this State, and though our time was necessarily limited, we had the satisfaction of calling upon many of our farming friends, and observing generally the appearance of the crops and the condition of agriculture. That great improvements are making in our husbandry, no one can doubt, who sees what it now is, and remembers what it was some twenty years since. In the appearance and management of the crops; in the kinds and qualities of the agricultural implements; in the superiority of the work performed; but more particularly in the animals on the farms, cattle, sheep, swine, &c. it is clearly to be seen great advances have been made.

The early spring was most unfavorable to the operation of the farmer, cold and wet, and consequently backward; and this was followed from about the 20th of May with extremely dry and hot weather through the greater part of June. The sowing of the barley and spring wheat, had been much retarded, and when done, was not accomplished under the most favorable circumstances, and the spring grains generally received at the onset a shock, from the effects of which they will scarcely recover, even under the favorable weather and refreshing rains since experienced. In some few districts the wheat is quite inferior, and as a whole, will not, we think, come up to a medium crop. Never have we known a season, in which the effects of plaster on grass lands have been more manifest than this, and the thick bottom of white clover, and luxuriant red clover of the fields, where this substance has been used, demonstrates the advantage of its application. In the drier sections of the west, grass will be lighter than usual, and it will be necessary to give the more attention to raising and saving other materials for fodder. The growth of the root crops had evidently been checked by the dry weather, but are now coming on finely, and potatoes, &c. give a promise of good yields. Corn, we think, appears better than any other crop; the hot dry weather agreeing with this plant, and where the soil was in good condition, giving it an unwonted luxuriance. We have rarely, in any year, seen more beautiful fields of this truly valuable grain. Of fruit, we may say, without exaggeration, the country is literally full of it. Apples, pears, peaches, plums, (unless by the negligence of the owners, the trees have been destroyed by the blight,) cherries, and all the minor fruits, abound, and will contribute much to the prosperity and comfort of the farmer and others.

We were much gratified also, in witnessing the tone of public feeling, and the true spirit prevailing on the subject of agriculture. There is more self-reliance, more inquiry, more reflection on the principles of husbandry among farmers than there used to be; there is less dread of innovation; a thing proposed is not condemned untried or unheard because it is new, nor with many are agricultural heresies deemed sacred, because they are of venerable age. Scarcely a town, or even neighborhood, can be found, in which are not found some well informed, well read agriculturists, who, by the silent, yet powerful influence of example, are gradually dispelling the prejudices and errors that have so long retarded the progress of the farmer. Such men bring to the notice of their neighbors and friends the agricultural journals of the day, and wherever these go, inquiry, experiment, and eventually improvement follow in their train.

Few of the calls or visits made by us, gave more pleasure, than the one to the farm of Col. SHERWOOD, at Auburn; as here, owing to the accidental detention of half a day, we had an opportunity, for the first time, of seeing some of the beautiful Short Horns, from the herd of Mr. ROTCH, of Butternuts, Otsego county. Col. Sherwood, the well known stage proprietor, being, by the progressive extension of railroads, partially driven from the business he has so long followed with advantage to himself and the public interests, resolved, last year, to devote a portion of his time and capital to the pursuits of agriculture. For this purpose, he purchased the farm formerly owned and occupied by the late United States Marshal, N. Garrow, situated on the western border of the beautiful village of Auburn. Having selected a lot of the best cows to be found in his vicinity, he determined to procure a few of the *best* Improved Short Horns, and we had the pleasure of viewing his purchases, which were principally from the herds of Mr. VAN RENSSELAER, of this city, Mr. ROTCH, of Otsego, and Mr. ALEXANDER, of the same county. Those from Mr. Rotch's stock, including those purchased of Mr. Alexander, exhibit in a striking manner the perfection and skill of good breeding, and present points of excellence, which are only found in animals bred by the most careful and competent observers; and those from this city were the choice of Mr. Van Rensselaer's herd. Altogether we think Col. Sherwood has reason to be proud of his stock, both blood and native, and we trust his success will be equal to the intelligence and enterprise he has shown in the undertaking.

After the examination of his own stock, Col. Sherwood had the kindness to accompany us to the farm of Major DILL, in the same vicinity, where, although the Major was unfortunately absent, we had the pleasure of seeing two beautiful Short Horn heifers, from the herd of Col. RANDALL, animals worthy of high commendation. We saw also a native heifer, of which, and justly too, the Major thinks very highly. In general appearance, she much resembles the cattle exhibited by Mr. Hooker, of Brighton, at the Monroe Agricultural Fair of 1833, and described by that gentleman in the Genesee Farmer, vol. 4th, page 6. Mr. Hooker's cattle were black, with white spots, fine forms, and the prizes they received, showed the estimation in which they were held by the judges. According to Mr. Hooker's statement, they were "a cross of the Dutch Short Horn, with the Durham Short Horn." Major Dill's heifer is black, and from her form, color, and promising milking qualities, as well as her dam being black, it is probable she is from, or has partaken of the blood of that stock. Though but two years old, she has a calf by a Short Horn bull, and gives twelve quarts of milk per day.

It is surprising, when we reflect on the comparatively short time which has elapsed since public opinion has been directed to the subject, to witness the actual improvement in our domestic animals. Go where you will, you have pleasing evidence that the Berkshires, or their kindred improved breeds, are fast crowding out the omnivorous alligator races of swine from our land. Where the fineness of the wool grown is not so much of an object with the farmer, the fine South Downs are taking the place of the scraggy, coarse wooled sheep, that constituted the old flocks. And there is scarce a district in which traces of Short Horn blood are not to be seen more or less pure, in the herds that graze our rich pastures. In short, we find everywhere in the country, the most satisfactory evidences that farmers are fast assuming their true position in the State; that the cry of hard times is much less frequently felt than formerly; that honest industry is receiving a proper reward, and that in the spread of intelligence, knowledge and education, we have the surest guarantee that a state of things so properous will still be continued.

Kentucky Blue Grass.

MR. JOHN LEWIS has transmitted to us a memoir prepared by him on the subject of this grass, which, from the minute accuracy of the details, the botanical skill of the writer, and the perfect manner of the investigation, will, we hope, settle the proper place, name, and character of this grass among naturalists.

That it belongs to the *Poa* family or genus, was admitted by all; but there has been much dispute as to its species, and it has been by different writers called *P. viridis*, *P. pratensis*, and *P. trivialis*, and more recently Mr. Nuttall has described a species which he has called *P. pungens*, which appears in many respects to resemble this grass perfectly. According to Mr. Lewis, the celebrated Blue grass of Kentucky, and to the excellent qualities of which the great superiority of the beautiful pastures of that state is mainly owing, is called in Virginia *goose grass, yard grass, green sward;* in England great or *smooth stalked meadow grass*, and if so, it appears to be the same grass called in the northern states June grass, or the *P. pratensis* of botanists, which Mr. LEWIS, as well as Mr. STEVENSON, the able editor of the Kentucky Farmer, who assisted in verifying the details, is disposed to consider it.

We cannot imagine, when we reflect on the immense importance of the true grasses to the agriculture of the country, the trifling shades in appearance by which grasses wholly distinct in quality arese parated from each other, and the confusion in names which prevails even with regard to some of those the most common and best known, of a greater benefit that could be conferred on the agriculture of the United States, than a volume by some competent person on our grasses, indigenous and acclimated, with figures which shall make the distinctions apparent to all such as take an interest in such matters. Such a work we hope will ere long be undertaken, should not the volumes published as part of the survey of this state, render it unnecessary.

Florida Fruits.

COL. WYATT, of Florida, in answer to some inquiries of Judge Breckenridge, of Pittsburg, has furnished several papers for the National Intelligencer, containing much curious information respecting that country and its productions. Col. Wyatt thinks that eventually it will become one of the finest and most productive sections of the United States; that the famous everglades will be drained, and that the culture of sugar, Cuba tobacco, tropical fruits and plants, and indeed all kinds of valuable trees grown in any southern clime, will be successfully prosecuted.

In answer to an inquiry respecting the value of one acre of tropical fruit, Col. Wyatt says,—"I have no positive data to govern me in this estimate; but I would say that one acre cultivated in orange or lemon, allowing two hundred trees to the acre, (not an over number, I think,) and producing one thousand to the tree, valued at one cent each, would yield a crop worth $2,000. One acre planted in sugar cane, producing 2,000 lbs. at 4 cents per pound, would amount to $80; the same in cotton producing 200 pounds of cleaned cotton of the first quality, at 30 cents per pound, would come to $60. An acre planted to other tropical fruits, such as the pine-apple, fig, plantain, or banana, would no doubt far exceed the estimate for the orange and lime." Col. Wyatt deems the territory unfit for the culture of the coffee tree, that requiring a deep soil, and the whole of Florida being based on a limestone rock with a shallow soil, not suited to the long tap root of the coffee tree.

NEW PUBLICATIONS.

Prof. Silliman's Journal.

We have just received the July number of this always welcome and truly valuable journal. It contains as usual a great variety of papers, interesting to the scientific and general reader, and among others a report of the proceedings of the late meeting of the American Geological Association at Philadelphia. It contains, also, an able, but brief, "Preliminary account of the Hessian Fly and its Parasites," by E. C. Herrick, of the Yale College Natural History Society. Mr. H. has for a number of years been studying the history of the Hessian Fly, its habits, changes, &c. and we are pleased to learn that the present contribution is only preliminary to a more full and extended exposition of the subject. Of the first appearance of the insect in this country, the origin of its name, and the fact that it exists in Europe, and has been known for centuries, Mr. H. gives many interesting particulars. It has been doubted by some European writers whether the Hessian Fly was known in that part of the world, but Mr. Dana, who has been engaged with Mr. H. in these researches, having visited the Mediterranean, has proved that the insect is there, he having found it in the larvæ and pupa state in wheat plants on the island of Minorca, and from these the perfect insect, the *Cecydomyia destructor*, or true Hessian Fly, was evolved. There is no trace of the Hessian Fly in this country previous to the Revolution, which renders the common notion of its introduction by foreigners not improbable. An important part of Mr. Herrick's paper is that relating to the destruction of the fly, effected by *parasites*, Mr. H. estimating that at least *nine-tenths* of every generation of the fly is destroyed in this way. Mr. Herrick describes four species of parasites, one of which attacks the egg, and three of them the pupa of the fly. They are all minute *Hymenopterous* insects, and in some instances have been mistaken for the Hessian Fly itself.

There is little doubt that a number of other insects besides the fly, deposit their eggs upon wheat, and prey on the stem, and the importance of the wheat crop to the United States is such, that all attempts made by competent observers to elucidate their habits will be received by the farmer with thankfulness, since a discovery of their habits offers one of the best means of counteracting their ravages.

The Journal is published at New-Haven, Conn., by B. L. Hamblin, and conducted by Prof. Silliman and B. Silliman, Jr., at six dollars per annum. Agents in New-York, Wiley & Putnam, 161 Broadway—in Albany, W. C. Little.

North American Review—Liebig's Chemistry, &c.

The July No. of this ably sustained and leading Journal of American Literature, is before us, with its usual complement of well written and interesting articles. Among these are reviews of Robinson's Travels in Palestine, the Madison Papers, and, which is of particular interest to agriculturists, a very particular examination of Liebig's Chemistry applied to Agriculture. There are few works at the present day that have been so generally welcomed, and received with such universal favor as Liebig's volume, and Dr. Webster has conferred an important favor on American farmers by giving the public his edition with its valuable notes and appendix. Some of our contemporaries, who were disposed to imagine that we, in our notice of the London edition of this work, gave Dr. Liebig more credit than he was entitled to, will now, that the work is placed within *their* reach, be able to correct the errors into which they have fallen in regard to this subject. The Quarterly Journal of Agriculture has an able and discriminating paper on the volume, in which high praise is awarded to Dr. Liebig, although it dissents in some instances from his conclusions.

We have only room here to give the opinion of the American reviewer on the character of the volume:

> "We regard the work of Liebig, as a work of extraordinary philosophical acumen, and conferring upon him the highest honor. The more it is examined, the deeper will be the interest it will create, and the stronger the admiration of the ability with which it is written. It is a work not to be read, but studied; and if further inquiries and experiments should demonstrate, as seems to us from many facts within our knowledge in the highest degree probable, the soundness of his views, his work, not merely as a matter of the most interesting philosophical inquiry, but of the highest practical utility, will be invaluable."

Experiments made at the Boston Conservatory the present season, corroborate in nearly every particular, Prof. Liebig's views of the nature of carbon, ammonia, &c. in promoting the growth of plants; thus affording new proof of the value of the chemical sciences when applied to an elucidation of the laws that govern the nutrition of vegetables.

The N. A. R. has reached its 112th number; is published in quarterly numbers of about 275 pages each, at $5 per annum, and is sent by mail to any part of the United States. Munroe & Co. 134, Washington-street, Boston, are the publishers. Subscriptions received by Wiley & Putnam, 161 Broadway, and by W. C. Little, Albany.

New-England Farmer.

This sterling and always valuable agricultural periodical, has just entered upon its 20th year; being, with the exception of the Am. Farmer at Baltimore, the oldest of the American agricultural journals. Under the supervision of its present able editor, the Rev. Allen Putnam, the Farmer is sure to lose none of the high character it has long and deservedly sustained, as the leading agricultural journal of New-England. A complete copy of the New-England Farmer, is the best history of American agriculture, (particularly in the northern states,) for the last twenty years, any where extant. If any proof were needed of the deep hold which agricultural improvement has taken on the public mind, and the rapid advance which the demand for agricultural intelligence is making, we have only to look back for a few years and compare the American Farmer and New-England Farmer, struggling for a doubtful existence, with the liberal patronage and extensive circulation, which not only these, but a multitude of other papers devoted to the same great object, are now receiving in this country. Success, we say, to the agricultural press and the cause of agriculture.

District School Journal.

This excellent publication, one so much needed, and one so essential to the prosperity of our magnificent and extended common school system, has, we are pleased to perceive, been removed to this city, and the first number of the second volume has just been issued in an enlarged form, on fine paper, and from the same press with the Cultivator and Northern Light, a sufficient guarantee for the excellence of its execution. By a law passed at the last session of the Legislature, the Superintendent of Common Schools is authorized to subscribe, in behalf of the State, for a copy of this Journal for each school district in the State, or to the amount of $2,800, to be paid from the U. S. Deposite Fund; and it is to be hoped that the town clerks will immediately comply with their duties in this respect, that the Journal may be forwarded to the several districts as soon as practicable. The name of the clerk of the district, or where this is not known to the town clerk, the name of one of the trustees may be sent; and the name of the post-office to which the paper for each district is to be sent, should be particularly specified to prevent mistakes. The District School Journal will be the medium of communication between the Superintendent and the officers of Common Schools, will contain a record of his decisions on any questions that may arise, explanations of the several acts relating to schools, and important papers and suggestions relative to the best management, teaching, &c. of common schools. Under the more immediate supervision of the indefatigable Superintendent and its able editor, F. Dwight, Esq. the Journal cannot fail to be one of the most useful aids to the great cause of education, in the country. To the officers of our district schools, and in particular to every teacher, it is indispensable. The present number contains the new act relating to common schools, passed May, 1841; explanations by the Superintendent; an important decision on the duties and responsibilities of Commissioners of Common Schools and Trustees, in the receipt and payment of public money; appointment of a General Deputy; editorial papers; meeting of supervisors; teachers of summer schools; a most valuable paper on the "Modes of Instruction in Common Schools," by "A."; (this paper we should be happy to transfer to our columns, and will hereafter endeavor to make room for it if possible;) an article on "Drawing, for Schools, Lyceums, and Families," by Josiah Holbrook; and a well written story illustrating the government of children. We trust the Common School Journal will receive, as it deserves, an extensive circulation. Terms, 50 cents a year.

"The Orchard and Fruit Grower."

We get up some very beautiful books in this country, and the art is evidently making rapid progress among us; still in matters of taste the Londoners, from their long experience and ample means, must be considered altogether ahead of us. Here is this volume, of which the title is given above, with its fine paper, splendid binding, gilt edges, and beautiful illustrations, more resembling an 'annual,' than a book devoted to the culture of trees and fruits.

Mr. McIntosh has given the public a work, which will be acceptable to every fruit grower, containing as it does, full accounts of all the most valuable cultivated fruits, lists of their varieties, extensive and useful, and illustrations of quite a number of fruits, "colored to the life." The directions for grafting, budding, &c. are ample, and the various diseases of fruit trees, as they occur in England, are carefully noticed, and proper remedies pointed out. It is somewhat remarkable, that among the varieties of fruits, will be found some marked as first rate, and considered of undoubted value, which, in this country, are not ranked higher than second or third rate fruits. The apple, pear, and particularly the peach, furnish examples of this, a result, probably, owing to the difference of climate in the two countries. It is also singular, that in the list of diseases of the plum and cherry, there is nothing to be found resembling the black blight, or black excrescence which is proving fatal to so many of these valuable fruits in this country. Particular mention is made of the American blight or cottony aphis, (*Aphis lanigera*,) the origin of which has usually been attributed to this country, but which Salisbury thinks can be satisfactorily traced to France. It is one of the most injurious insects in the British fruit gardens or orchards, but it can scarcely be said to have an existence in our orchards, or in the country, it is so rarely met with.

We have never seen any fruit colored in imitation of nature so successfully performed as in the volume before us. The *colored* plates, embrace the apple, several varieties, apricots, nectarines, cherries, currants, figs, gooseberries, pears, peaches, plums, raspberry, strawberry, grape, &c. We hope the time is not distant when the public taste will authorise American publishers to undertake the production of volumes similarly illustrated, as correct drawings, faithfully colored, are to the fruit grower what maps are to the student in geography.

The English New Farmers' Journal.

An agricultural journal, with the foregoing title, has lately been commenced in London, in connection with the "Society for the Protection of Agriculture," and the numbers display considerable talent as well as much zeal in the cause to which it is devoted. The favorable auspices under which it has commenced, and the array of practical men engaged in its support, will doubtless give it permanency and extensive usefulness. The New Farmers' Journal is a warm, not to say violent, advocate of the present Corn Law system in Great Britain, and vehemently deprecates the changes contemplated by the ministry. We think, however, the advocates of existing abuses, and such to a certain extent the Corn Law system certainly is, will find it difficult for any considerable time, to stem the current of public opinion, and that, should the present ministry be overthrown in the struggle, their successors, to be secure of their seats, must make such concessions and alterations as the mass of the nation demand. Those in this country who take an interest in those topics, upon which one of the fiercest struggles for power which has ever occurred in Great Britain, is now turning, will find in the New Farmers' Journal the best record of the progress and the probable results so far as the question of bread or the Corn Laws is concerned. The Journal is a large sheet of eight pages, and gives a general synopsis of interesting European news, independent of its agricultural articles.

Growing Plants in Charcoal.

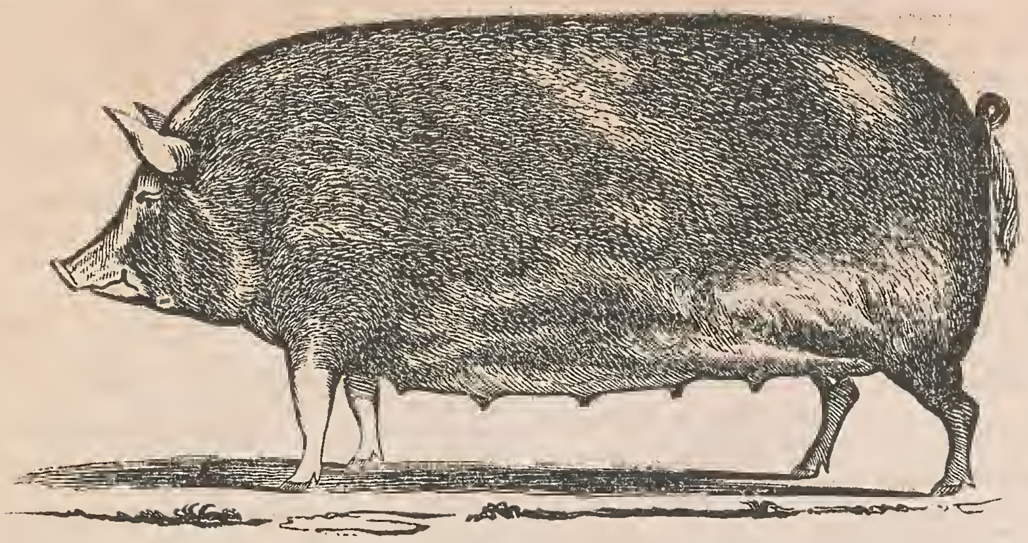
In the appendix to the first part of Prof. Liebig's Organic Chemistry, is an interesting paper on the action of charcoal on plants, from "Buckner's Repertorium," by E. Lucas. The experiments were performed at Munich. That plants would vegetate and grow in nearly pure charcoal, was discovered by accident, and this discovery was followed by experiments which placed the action of this substance in a curious and striking light.

The first experiment consisted in mixing a certain proportion of charcoal dust with the soil, increasing the quantity in the successive experiments until pure charcoal dust was alone used. When two-thirds of the coal was used with vegetable mold, several classes of plants, such as the *Gesneria* and *Aroideaœ*, were found to thrive admirably, and attracted much notice by the great beauty of their parts, and their general appearance. They quickly surpassed those cultivated in the common way, in their thick stems, rich color of their leaves, and their beautiful blossoms. "A *Cactus* placed in a mixture of equal parts of charcoal and earth throve progressively, and attained double its former size in the course of a few weeks." It was also found that in all those cases in which it was customary to mix sand with the mold in which plants were to be set, the substitution of charcoal dust for the sand, always rendered the vegetation stronger and more vigorous.

Experiments were now made with pure charcoal, and the best results were obtained. More than 40 species of plants, which are many of them named, were grown in this way; and cuts of plants from different genera took root and grew well and quickly. "Pure charcoal acts excellently as a means of curing unhealthy plants. A *Dorianthes excelsa*, for example, which had been drooping three years, was rendered completely healthy in a very short space of time by this means. An orange tree which had the very common disease in which the leaves become yellow, acquired within four weeks its healthy green color, when the upper surface of the earth was removed from the pot in which it was contained, and a ring of charcoal of an inch in thickness strewed in its place around the periphery of the pot."

The charcoal employed, was the dust-like powder from fir or pine coal, such as is used by blacksmiths, and produced the most effect when it had been exposed through the winter to the action of the air. Experiments with animal and other charcoals were made, but that from pine proved superior to the rest, on account of its fineness and the ease with which it is decomposed. Charcoal acts in two ways; first, by its tendency to preserve all plants and substances from decay; and secondly by the carbonic gas it furnishes during the slow decomposition it undergoes, and which in five or six years converts it into a coaly earth. It thus yields directly and constantly one of the most essential elements of plants, and gives a beautiful color, and a great luxuriance to plants cultivated in that manner. Where pure charcoal was used, large quantities of water were required, as the air having free access dries the roots rapidly, unless prevented by water plentifully applied.

That charcoal is of great value as an agent in promoting vegetation, has long been known to every one who has witnessed the crops successively grown on those places where coal pits have been burned; but a great loss is sustained annually by the waste of the immense quantities of dust at the forges, furnaces and smith shops of the country, where this substance is considered a nuisance rather than otherwise. We have seen the best effect produced by the mixture of coal dust with the soil of the garden, and hope more attention will be paid to this matter than has hitherto been done.



PORTRAIT OF DR. MARTIN'S BERNICE.—[Fig. 66.]

The above portrait was taken by Mr. Foster, for the Western Farmer and Gardener, from which paper we copy it. Bernice was from a Woburn sow by a *white* Berkshire boar, and weighed, when 8 months and 7 days old, 354 lbs. We shall in our next, give a portrait of Dr. Martin's Woburn sow, the dam of Bernice.

Feeding Pigs, &c.

In the June number of "The Agriculturist," is Dr. Martin's account of his method of feeding his pigs in the experiment of feeding Berkshires against Woburns, noticed in our last number, page 106. At first, every morning and evening four pints of meal were made into mush, and this, mixed with sufficient milk to enable them to swallow it with ease, was found to agree with them, and was never all eaten. Afterwards they had their meal made into bread, and fed to them in the middle of the day. Six pounds were allowed, but they were unable to eat it all. One pound of cracklings a day was allowed part of the time, but it disagreed with the pigs, and was discontinued. As the feeding progressed, the meals, morning and night, were mush and bread, and vegetables of some kind at noon. After they began to receive their vegetables, which were apples, potatoes, cabbage, carrots, beets, &c. they generally eat the whole of their food. Under this system of feeding, one of the pigs, Bernice, a portrait of which is given above, (fig. 66,) in 90 days gained 176½ pounds, and the other, Bertha, 187 pounds. On the 11th of April, Bertha, was bred to one of Mr. Martin's boars, and from the 13th to the 20th she gained thirty pounds, being at the rate of four and a half pounds per day. "But a part of this was filling up after living on half allowance for some days." Such experiments as have been made by Messrs. Fanning and Martin, are always interesting; but they may be made more accurate, by ascertaining the quantity and value of the food consumed, by feeding different pigs at the same time on different kinds of food, and thus ascertaining the nutritive powers of each, and a register of the results drawn up in a tabular form, which will give at a single view these several points, which are of the most consequence to the farmer. The great Valley of the West offers the most extensive field of agriculture in the world, and present appearances indicate that the men who inhabit it are happily not deficient in the energy and enterprise which will be required to develop its resources. Tennessee, in the amount of corn grown, has exceeded any other State in the Union, but if, as is asserted, she has paid out in the past year, more for flour than her cotton and tobacco crops have netted, it is clear a different system is demanded. There must be more roots, more grass, more cattle, more swine, and, as a natural consequence of the preceding, more wheat grown, if the farmers of that fertile State will make the most of their position. Fortunately there are examples before them of the best kind, and with these, and the promptings of the "Agriculturist," it is scarcely possible a better state of things should not soon prevail.

Signs of Better Times.

1. All agricultural produce commands a fair, steady, compensating price, alike removed from the depressed state which sometimes has existed, or the unnatural inflation through which we have just passed.

2. Speculation has had its day, and the thousands who have been ruined, have had time to repent at their leisure. The mass of the nation are convinced that honest industry, and slow and sure profits, are far preferable to the haphazard and demoralizing influence of such haste to be rich.

3. Agriculture, it is evident, is assuming its proper place in the estimation of the public. This may be attributed in part to the knowledge respecting it, which has been distributed by agricultural journals, and in part to the results of the agricultural census, the results of which have demonstrated the paramount importance of this interest.

4. We find evidence that the mass of reading men begin to think and demand information on the subject of agriculture, in the fact that all our leading newspapers and most influential journals, are in the habit of devoting a part of their publications to the dissemination of papers interesting to the farmer.

5. In the processes of farming, yearly advances are making. We have this year seen crops of the heaviest growth, where, only a few years since, a quaking bog existed; better and more productive kinds of corn and other grain have been brought to notice; the culture of roots has been introduced, and found a most important auxiliary to the farmer; and more attention is paid to the cleaning of land, and the destruction of weeds, than formerly.

6. Superior breeds of cattle, sheep and swine have been introduced, and are rapidly spreading over the country; in short, the elements of individual and national prosperity were never more fully developing themselves than now. Let the farmer be thankful.

Planting Trees.

We hope those who, during this sultry weather, are enjoying the coolness and beauty of foliage from trees planted by the hands of others, will reflect, whether they are not under some obligation to do something in the same way for the benefit of others. Grounds planted with trees do not add more to the beauty of the landscape, than they do to the comfort and health of the inhabitants. That wise provision of Providence, by which the leaves of trees are the great purifiers of the air, absorbing the carbon and liberating the oxygen, has rendered it necessary that plants should exist, and there are few that so well unite beauty and utility as do trees. How certainly, when traveling through a country, if we find a farmer, the roads through whose grounds are planted with trees, his farm buildings embowered in fruit or ornamental trees, and a few clumps or single trees scattered about his fields for the comfort of his animals, do we set down such a man as one of intelligence, taste, and usually of thrift. There is nothing more detrimental to the proper arrangement of farms, and their adaptation to the comfort and convenience of the owner, than the continual shifting and migration so common among our farmers. That man rarely has patriotism or love for his fellow-men strong enough in his breast, to pay much attention to beauty, or even comfort in what he does, who is expecting or intending to change his residence the first opportunity that offers. Men may, and doubtless do, sometimes better themselves by selling and removing, or by exchanging farms, but the reasons for removal should be well weighed, and the prospects of advantage or disadvantage fully considered, before any such movement is made. We would particularly advise the young man, about to commence life, to be very cautious in purchasing his farm, but when once bought, unless imperative reasons forbid, to consider it his home for life, and to set himself in earnest to make such arrangements as shall, at a future day, or as soon as possible, make his farm a residence so desirable, that change shall be regarded as a positive evil, a thing not to be thought of. Let him construct his buildings with regard to permanence; arrange and plant his grounds so as best to unite taste and comfort; and let him remember that every one is under obligation to contribute his share to that elevation of mind and enlarged intelligence that should characterize the American farmer.

But we are here met with the common objection:—"It takes trees so long to grow, that if I plant them I shall never derive any benefit from them, so I will leave that matter to those that want them." This course of reasoning is most objectionable; if carried out it would nearly annihilate progress or improvement of any kind. But it is rarely true with respect to the individual, and never so with regard to the results. It does not take as long for our forest trees to become both useful and ornamental, as some seem to suppose. Those who contributed to plant Washington Square at Philadelphia with the Linden, have for years, many of them at least, enjoyed their beauty and their fragrance. Many of the majestic elms of New-Haven and Boston, contribute to the comfort of those who planted them, and parents look on with pleasure at the graceful collonades and deep shades, a little forethought has provided for the happiness and health of their children. Some sixteen years since, we bordered our avenue with the maple, going into the forest and taking up small trees, two or three inches in diameter, and transplanting them into holes previously dug for their reception. Some few of them died, as was to be expected, but of the forty or fifty that remain, some are more than a foot in diameter, and more beautiful trees are rarely seen. Two acres planted out with the maple in the same way, would now have furnished a family with all their sugar, and given one of the most beautiful woodland pastures that can well be imagined.

What is there to hinder the planting of trees by the road side becoming part of the common system of highway management? In Germany, the roads for hundreds of miles are bordered with trees, and contribute as much to the beauty of the country as to the comfort of the traveler. A little time spent every year in each district, in transplanting trees, would, in a short time, wholly change the character of large sections of our country, so far as appearance is concerned. Our forests will furnish abundance of suitable trees, particularly in those places where the large timber has been cut out, and young trees from such places are more likely to succeed than if taken from the depths of the woods. Let the experiment be tried; let the maple, elm, ash, linden, or, indeed, almost any other forest tree be planted out, and the most of those who assist in the labor, will participate in the pleasure and the benefit they will assuredly confer. But if those do not, others will; the present generation is not the last, and if taste and intelligence increases, as we hope they may, there are few claims on the gratitude of posterity that will be more cheerfully honored, than the one arising from the improvement of the country by the planting of trees.

Currant Worm.

We have noticed that in many parts of the country the currant has this year been extensively attacked by a new enemy, or, if an old one, in far greater numbers than ever before known, in the shape of a small green worm, which multiplies so rapidly, and is so voracious, that bushes attacked by them are stripped of every leaf in a very short time, and the fruit, if it does not fall off, is consequently poor and worthless. It feeds on the gooseberry also, but prefers the currant, and is a different worm from the gooseberry depredator, the *Abraxus grossularia*. The following description of this currant worm, we copy from McIntosh's Orchard and Fruit Garden, as it is very accurate and divested of technicalities:

"Early in March, if the weather be favorable, the first flies of this insect, the *Nematus ribesi*, issue from the chrysalis, a few inches below the soil, at the foot of the bushes. Soon after the females deposit, on the under surface of many of the leaves, along the ribs of each leaf, a series of eggs, which appear like strings of small, pellucid, delicate, oblong beads. A single fly will fill up the ribs of many leaves; and as many generations are produced in one season, the destruction of a single fly at an early period, is the prevention of some thousands of voracious successors. The following times of hatching, &c., may be relied upon as accurate. On the 9th of April the eggs are laid; on the 19th they are hatched; and, if the temperature be mild, the caterpillars grow rapidly, and from their numbers, soon destroy the foliage on the chosen bush. They usually continue in the caterpillar state about 10 days, when dropping to the earth, they penetrate below the surface, and change into a small brown chrysalis; in which dormant state they remain from 14 to 17 days, and then come forth as flies, which in a day or two lay their respective quantities of eggs." The writer adds, "I am not aware that any limits of season act as a check, unless attended with a decrease of temperature, which of course puts a period to their progress. The grub or worm is of a green color, (from three to five-eighths of an inch long,) covered with many very minute black tubercles, which it loses at its last moult. Its ravages are worse than that of the gooseberry worm." "The most effectual remedy," says the same work, "yet discovered, is syringing the bushes over, on the first appearance of the enemy, with clear lime water, making use of the bent or inverted syringe for the purpose of throwing the water on the under side of the leaves."

The currant is a valuable fruit, and as yet in the States has been remarkably free from insects. It may, however, become as infested here as abroad, and a few such strippings of the foliage as some gardens have received this year, would destroy the bushes entirely. It would be well, therefore, for gardeners and others who have such bushes to be on their guard, and by timely attacking the worm, prevent the certain spread of the evil.

Strawberries.

"'The strawberry should have a place in every garden'—says the Albany Cultivator. Perhaps it should around Albany, where few or no strawberries grow spontaneously in the fields; but here, in Maine, we believe strawberries should have a place in *no* garden; we have so many millions of them in our fields, that there is no necessity for cultivating them." So says our friend Drew, of the Maine Cultivator, and sorry we are he has said it; since fertility, and "millions" of strawberries, are never, we believe, associated in the mind of the farmer. We have never known a pasture with a close sward of white clover, timothy and blue grass, a pasture that produces fat kine, or fills the dairy woman's pail; or a meadow that would cut three or four tons of hay per acre, that had millions of strawberries growing in them. And further, we have found that when we were so unfortunate as to have strawberries in our meadows, the damage done to the grass, and the increased difficulties of mowing, greatly outweighed all the profits of the berries. The farmer does not always have strawberries brought to his door at three pence a quart, nor can his wife or daughters always leave their work to ramble over the fields to gather them. We still say, therefore, to every farmer, have a strawberry bed in your garden. They are easily cultivated, will produce bountifully, may be gathered readily, and every one knows strawberries and cream make a dish not to be sneezed at.

Correction.—A correspondent wishes to correct the statement made by Mr. Edgerton of Mt. Moriah, in the April No. of the Cultivator, respecting the quantity of carrots raised per acre, it being stated too high by 140 bushels; and he wishes to ask whether, when it is stated that some of the roots were 18 inches in "*diameter*," it ought not to read "*circumference?*"

AGRICULTURAL SOCIETIES.

New-York State Agricultural Society.

THE July meeting of the Executive Committee of this society was held at Niblo's, in New-York, on the 21st—the President in the chair. Gentlemen were present from the counties of New-York, Dutchess, Westchester, Kings and Queens. Of the Executive Committee, Messrs. Johnson, Walsh, Nott and Tucker, were present.

On motion of the Hon. Jeremiah Johnson, a committee was appointed for the county of Kings, to solicit members and contributions to the society. A similar committee was appointed for New-York; and on motion of A. G. Carll, Esq. of Jericho, for the county of Queens; for Dutchess, on motion of J. W. Kneevels, Esq. of Fishkill; and for Westchester, on motion of T. Fountain, Esq. of Peekskill.

The following members were admitted:

Carll, A. G. p. m. Jericho.
Gere, Luther, Ithaca.
Ingell, Wm., Volney.
Johnson, Jere'h, Brooklyn, $10.
Kneevels, J. W., Fishkill.
Kowwenhoven, G., Flatlands.
Mott, Jordan L., New-York, $5.
Pond, S. P., Brooklyn.
Ransom, Joel L., Millport.
Underhill, R. S. do.
Whipple, J. E., Lansingburgh.
Willoughby, S. A., Brooklyn.

On motion of the President, it was resolved that the next meeting of the Executive Committee be held at Rust's Hotel in Syracuse, on Wednesday, August 18, at 10 o'clock A. M. for the purpose of appointing committees, and making the necessary arrangements for the Fair to be held at that place on the 29th and 30th days of September, 1841.

Onondaga Co. Ag. Society Fair.

THE Annual Meeting and Fair of this Society is to be held at Syracuse, on the same days (the 29th and 30th days of September,) with those of the State Society, which meets at the same place. Liberal and numerous premiums have been offered, and arrangements made which it is believed will be satisfactory to all. It is cheering to receive from every part of the state, and particularly from the old and substantial agricultural counties such proofs of a revived interest in the cultivation of the soil. The autumn of 1841, will be but a succession of these farmer's holidays in the state of New-York, and an impulse to the good cause may be expected, the influence of which will long and beneficially be felt.

County Ag. Societies in New-York.

JEFFERSON—A Society was organized in this county on the 19th of June. The following are its officers:

ORVILLE HUNGERFORD, President.

VICE PRESIDENTS.

W. C. Pierpont,
Elisha Camp,
Robert Doxtater,
George White,
C. E. Clarke,
Wm. McAllister,
Wm. Carlisle,
Geo. Brown,
Abiathar Joy, jr.
Geo. Woodruff.

EXECUTIVE COMMITTEE.

Edmund Kirby,
John L. Goldsmid,
N. M. Woodruff,
Abner Baker, Jr.
John A. Sherman.

MICAH STERLING, Watertown, Corresponding Secretary.
A. B. BRAYTON, Treasurer.
ADRIEL ELY, Recording Secretary.

NIAGARA—A meeting was held at Lockport on the 23d of June, at which an Agricultural Society was formed, and the following officers chosen:

WILLIAM PARSONS, President.
JOHN GOULD, Jr. & C. H. SHIELDS, Vice Presidents.
JOEL MCCOLLUM, Lockport, Corresponding Secretary.
W. O. BROWN, Treasurer.
D. S. CRANDALL, Recording Secretary.

RENSSELAER—A meeting was held at Troy on the 8th of July, at which an Agricultural Society for this county was organized, a constitution adopted, and the following officers elected for the current year:

JOSEPH HASTINGS, Esq., of Brunswick, President.

VICE PRESIDENTS.

Daniel Simmons, Brunswick.
Geo. P. Dennison, Berlin.
Z. P. Burdick, Grafton.
Martinus Lansing, Greenbush.
I. A. Fonda, Hoosick.
Jacob Heermance, Nassau.
Henry Hull, Petersburgh.
Nathan Brownell, Pittstown.
W. Van Vechten, Schaghticoke.
James Jones, Lansingburgh.
William Masten, Schodack.
Henry Conklin, Sandlake.
Claudius Moffitt, Stephentown.
Jonas C. Heart, Troy.

GILES B. KELLOGG, Troy, Recording Secretary,
L. CHANDLER BALL, Hoosick, Corresponding Secretary.
JAMES M. STEVENSON, Troy, Treasurer.

EXECUTIVE COMMITTEE.

W.P.VanRensselaer, Greenbush
George Vail, Troy.
A. D. Spoor, Brunswick.
Alex. Walsh, Lansingburgh.
John Wheeler, Troy.
Wm. A. McCulloch, Greenbush.
John Sampson, Troy.
Samuel S. Fowler, Greenbush.

SARATOGA—The organization of an Agricultural Society took place on the 24th June. Its Fair is to be held at Ballston on the 1st Tuesday of October. Officers as follows:

HOWELL GARDNER, President.
CALVIN WHEELER and JACOB DENTON, Vice Presidents.
ARCHIBALD SMITH, Ballston Spa, Corresponding Secretary.
HIRAM E. HOWARD, Treasurer.
JOHN A. COREY, Recording Secretary.

Meetings are to be held for the formation of Agricultaral Societies under the late law as follows:

COLUMBIA—At the court-house in Hudson, August 13, at 1 o'clock, P. M.

SCHENECTADY—At the court-house in Schenectady, August 16, at 2 o'clock, P. M.

WASHINGTON—At the house of L. Cottrell in Argyle, August 4, at 11 o'clock, A. M.

WESTCHESTER—At the house of S. M. Tompkins in Sing-Sing, August 19, at 10 o'clock, A. M.

Elizabeth City Co. (Va.) Ag. Society.

Extract of a letter from Hampton, (Va.) dated July 17, 1841:—"On the 29th June, an Agricultural Society was organized in this County, styled 'The Agricultural Society of Elizabeth City County, Virginia.' The following gentlemen were elected officers thereof:

ROBERT ARCHER, President.
GEORGE BOOKER & JAMES M. VAUGHAN, Vice Presidents.
WM. MASSENBURG, Treasurer.
M. FITZ GIBBON, Recording Secretary.
A. B. MCLEAN, Hampton, Corresponding Secretary.
George Booker, Robert Archer, John Jones, *Ex. Committee.*

An appropriate address was delivered at the meeting by the President, a copy of which I will obtain and forward you hereafter."

La Porte (Ia.) Ag. Soc.—Mr. Niles' Address.

WE have read with pleasure the excellent address of Mr. J. B. Niles, before the Agricultural Society of La Porte, Indiana. It is full of correct feeling, sound sentiments and encouragement to the agriculture of the west. The immense resources of the Ohio and Upper Mississippi Valleys have hardly begun to be developed. Every thing indicates that the climate, the soil, and the seasons have combined to make it the greatest grain and meat growing country on the globe. The obstacles to a market are now fast being overcome, and the continuous stream of flour and pork that is finding its way to New-York, through the Erie Canal, from these very states, which, but a few years since, were a vast wilderness, is the best proof that can be offered of what we may expect when the broad prairies and beautiful uplands of that vast region, shall teem with an industrious agricultural population. We learn from the Michigan City Gazette, that La Porte county, which lies at the S. E. angle of Lake Michigan, contains about 400 square miles, that in 1840, twenty-five thousand acres were in wheat, (the greater part of which was destroyed by an unprecedented blight;) that there is about the same quantity the present season; that many farmers have from 100 to 500 hogs intended for slaughter next fall, and that 20,000 pork barrels have already been engaged; and that in all probability from 30 to 40 thousand barrels of pork will be packed from that county alone.

La Porte, it must be remembered, is but one of the many equally fertile counties of Northern Indiana, and from this fact we may form some estimate of their *present* agricultural wealth and resources.

We should be gratified to extract liberally from Mr. Niles' address, but the following on the circulation of agricultural intelligence, is all we can find room for, and is so just we cannot omit it:

> "Every farmer—every man who cultivates even a garden—and who among us does not? should be supplied with an agricultural periodical. Who will not find in such a paper, some single suggestion doubly worth its cost? New discoveries are generally the result of accident, or only of long continued scientific research. When we remember that the human family existed for thousands of years, in utter ignorance of such a fact as the circulation of the blood, is it surprising that men should be inclined to continue in one routine of farming operations, without deviating from the beaten track, for no better reason than that their fathers and neighbors have set them the example. Take a well conducted agricultural paper, and you are no longer limited to your own experience and observation, but you may draw upon the experience of all the world. By the agency of the press, space is annihilated—minds are brought in contact—and whatever discovery, practice or science, may suggest, on either side of the Atlantic, it can immediately be made as useful to you as to the discoverer himself."

ROADS.

IN traveling about the country, one cannot avoid having the conclusion forced upon him, that farmers are inattentive to the state of their roads, and from having used bad ones so long, have ceased to be aware of the immense difference there is between transporting a load to market over a good, smooth road, and one which is muddy, sideling, and full of ruts, holes, and gullies. Could their horses, however, be allowed to give an opinion we think they would estimate the difference in their favor between a good road and a bad one, at least one half.

In making roads, the common practice of scraping up the muck or surface earth into a narrow ridge only wide enough for a single wagon, is of necessity a bad one. The track is soon cut down into the soft materials, water is retained, and deep mud and hard roads are the result. If a part of the labor spent in laying up the roads, was employed in covering the track with gravel, there would be better roads and far less labor in repairing.

It is the custom too, in making or repairing roads, to expend all the labor assessed in the several road districts at once, and generally in the early part of the season. June is perhaps the best month for repairing roads, but some labor should be reserved to make any repairs that accident may render necessary. Often after the tax is worked out, a bridge, or some part of a road fails or is damaged, and it too frequently happens it remains so, perhaps for the season: dangerous to every traveler, and a nuisance to the public.

Every district, or nearly every one, is provided with a common earth scraper, but there is another scraper equally if not more essential to good roads, with which few road districts are as yet provided. This scraper is for leveling the surface of the road, cleaning it of all stones, and filling all the ruts made by the wagon wheels. It is made with a stick of timber twelve inches wide, six inches thick, and six feet long; on the front side is secured a bar of iron, falling half an inch below the wood, or, as is frequently the case, a worn out saw-mill saw is substituted for the bar. The tongue or neap is put into this scraper in such a manner that it passes in a quartering way over the road, filling the ruts, and throwing out whatever obstructions may exist. The change in ease of travel from a district in which one of these scrapers is owned and used, to one where they are unknown, is as great as from the rough and muddy roads too common in the country to the paved streets of the city.

Ag. Books and Periodicals as Premiums.

WE are much gratified to perceive that the suggestion made by us as to the propriety and usefulness of substituting agricultural periodicals and books for the smaller premiums offered at our agricultural fairs, instead of the cash, has been so favorably received and promptly acted upon. We cannot doubt that the best effects will result from the practice. For years, the State Agricultural Society of Rhode-Island, (and perhaps it does at present,) ordered annually several hundred copies of the New-England Farmer, for distribution in the several towns of that state, and experience has proved that the money so employed was most usefully expended. From almost every quarter, in the spirited organizations and preparations making for the fall fairs, we perceive this principle has been engrafted, and with the most auspicious promise. From 10 to 50 volumes of the Cultivator have been offered by many societies; and the La Porte Agricultural Society, which is setting a noble example to the west, has considerably exceeded the latter number. Other valuable journals, and agricultural books, are, we are pleased to perceive, not forgotten.

Butter Dairies.

IN a large part of our country, the business of the dairy is now, and must be so hereafter, an important part of the occupation of the farmer, and the best methods of conducting it, are consequently highly deserving attention. Holland has long been famous for its butter, immense quantities of which are made for exportation, and the advanced price it commands in every market, as well as its fine flavor and consistence, shows that its character is deserved, and not the result of accident. In the Journal of the English Agricultural Society, is an article on the Rural Economy of some of the districts of Holland, particularly that of Holstein, in which an instructive account of the Holstein mode of making butter is embodied. From it we shall select a few facts, illustrating their methods of producing such superior butter.

The dairies, which are usually large, varying from 100 to 400 cows, are provided with buildings and accommodations on the same scale, and with particular reference to the intended results. Of these, the milk cellar is the most important, and in the size and site of this the greatest care and skill is shown. Where practicable, it always fronts the north, and in addition, is shaded with rows of trees, and furnished with a projecting roof, in order more effectually to protect the building from the sun. It must always be sufficiently large to contain the produce of four milkings. The floor on which the milk is set is sometimes flagged, but more usually of brick, nicely fitted, and the whole slightly inclined, that no water may lodge on them. This floor is washed and kept with the neatness of a parlor table. In some instances this floor is divided into compartments, with brick or stone ledges three or four inches high, and these compartments, filled with water from a pump, receive the dishes or pans, and preserve them at a temperature that secures the best and greatest amount of cream. The milk cellar is sunk about four feet in the ground, and the height is sixteen or eighteen feet. The windows are numerous, to give a good circulation of air, furnished with shutters and glass sashes, on the inner side of which gauze frames are fixed, to exclude insects when it is necessary for the purpose of air or coolness to remove the sashes.

When cheese as well as butter is made at the dairy, (which is sometimes the case,) the cheese department is never permitted near the butter dairy, "from the vicinity of which every thing is kept removed, which, by any possibility, could exercise a sinister influence on the very susceptible substances of milk and butter, which suffer to a degree, those unaccustomed to observe it, little suspect, from an impure atmosphere." The dairy is managed by women, of whom there is the superintendent, or head dairy woman; and one dairy maid to every eighteen cows. There is beside, the owner, or overseer, and one or more men who attend to the feeding of the swine. There are others, whose business is to attend to the cows, see that they are properly fed, and every thing in its proper place and keeping. The overseer sees that the cows are fully milked, as on this the quantity and excellence of the cream is greatly depending. It has been ascertained by carefully repeated experiments, that the first drawn milk contains five, the second eight, and the fifth seventeen per cent of cream.

The business of the head dairy woman is arduous, and demands a full acquaintance with the various processes. "She must not only thoroughly understand, but accurately observe the precise time when the milk should be creamed; the degree of acidity it must attain in the cream barrels; its temperature, whether requiring the addition of warm water, or cold, to the churn; as well as the all important operations of kneading, beating, salting and packing the butter." The milking commences at four in the morning, (the milkers rising at three,) in the field, and the milk is conveyed to the dairy by a one horse wagon from hooks, in which large vessels are suspended. To prevent the milk from flying over the brim of these vessels in moving the wagon, thin pieces of wood, of nearly the size of the vessel, float on the milk, and this practice is adopted when pails are carried by the hand.

The effect which vessels made of different materials has on the promoting or retarding the acidity of milk, has received much attention in Holland; and the connection which this process has with electricity has been more fully investigated than elsewhere. The liability of tin to rust renders it objectionable; zinc has scarcely been tried, but fears are entertained that injurious properties will be communicated to the milk; great care is required to keep copper tinned; and the vessels most generally preferred on all accounts, are shallow wooden *keelers*, holding about eight quarts. In some few instances glass vessels are used, and some of the reports speak of them highly. As glass is a nonconductor, it is to be expected the influence of electric causes will be less on glass than most other substances. It has been found that cream, to make first rate butter, must be removed from the milk before the latter gets at all sour, and that the cream will not fully rise under thirty-six hours; to prevent souring before that time, especially in sultry weather, or during thunder storms, requires particular attention to temperature.

A cellar temperature of from 60 to 62 degrees, gives the best and the most cream, the rising being completed in 36 hours; a greater degree of warmth hastens the process, but lessens the quantity of the butter; a lower temperature preserves the milk 48 or 60 hours, but imparts an unpleasant flavor to the cream and butter. The commencement of souring in milk is marked by a slight wrinkling of the cream, and a slightly acid taste. When this appears, whether the milk has stood a longer or shorter time, skimming commences. As fast as it is collected, it is poured through a hair seive kept for this purpose alone, into large barrels of 240 quarts each, in which it remains till the necessary sourness is attained, which in summer usually takes 24 hours, and in winter 36 or 48 hours. During this advance to acidity, the cream is frequently stirred to prevent its coagulating, or becoming cheesy, and when fit for churning, the skill of the dairy woman is required to determine the proper temperature to make good butter. In warm weather the churn is rinsed with the coldest water, and if necessary cold spring water is added to the cream, but if the cellar is properly made, this is rarely necessary. In cold weather the churn is washed in warm water, and is sometimes applied to the cream itself. The churning being completed, the butter is immediately carried to the butter cellar, where in a large tray or trough made of beech or oak highly polished, and provided with a plug at the lower extremity to let off the milk, the butter is slightly worked and salted with the purest salt, molded with a ladle into a mass at the upper end of the trough, and left for some hours to drain. In the evening it is thoroughly kneaded and beat, the dairy maid lifting a piece of 3 or 4 pounds, and slapping it against the trough with great force, to beat out the milky particles. After the whole mass has thus, piece by piece, been freed from the buttermilk, it is again spread out, and receives its full salting, (in all about 1⅓ ounce of salt to a pound of butter,) which is worked with the utmost care equally through the whole, and is then molded into a compact mass. Butter in Holstein is seldom washed, though in some other parts of Holland it is practiced with the greatest success. When enough is made to fill a cask, the several churnings are once more kneaded and beat thoroughly together, a very little fresh salt is added, and it is then packed in the barrel, which is made of red beech wood, water tight, and previously well washed with water and salt. The cask must be filled at a single packing, each layer pounded down, and care being taken that no interstice is left between the butter and the sides of the cask. This packing of a cask at a time gives the butter of large dairies the advantage over small ones, as it must be left longer exposed to air before the quantity requisite to fill the barrel is obtained.

"The qualities of first rate butter are considered to be 1st, a fine yellow color, neither pale nor orange tinted; 2d, a close, waxy texture, in which extremely minute and *perfectly transparent* beads of brine are perceptible: but if these drops be either large, or in the slightest degree tinged with color, it indicates an imperfect working of the butter; while an entirely dry, tallowy appearance, is equally disapproved; 3d, a fresh, fragrant perfume, and a sweet kernelly taste; 4th, good butter will above all be distinguished by keeping for a considerable time, without acquiring an old, or rancid flavor.

"The quantity of food which can be afforded to the cows during winter, is determined at the beginning of the season, when the harvest returns are known; and in plentiful years the calculation is, that each cow should be allowed three sacks of grain. (generally oats, at 140 pounds the sack,) 3,000 pounds of straw, including bedding or litter for the stable, and 1,800 pounds of hay of good quality; while for every hundred pounds of hay deducted, she must receive twenty-five pounds of grain more, and vice versa."

During the winter the requisite color is given to the butter by some coloring material; and the best for this purpose is found to be a mixture of annatto and turmeric, in the proportion of 5 oz. of the latter to one pound of the former.

The average quantity of milk from the Holstein cows, is about 2,500 quarts per annum; much depending on the food and care; and it is calculated that every 100 pounds of milk will give 3¼ pounds of butter, 6 pounds of fresh cheese, 14 pounds of buttermilk, and 76¾ pounds whey, where cheese is made. Fifteen quarts of milk are considered a fair average for a pound of butter, though sometimes a cow gives milk so rich that 12 quarts make a pound. "On the whole, it is considered a fair return from the Holstein dairies when the produce amounts to 100 pounds of butter and 150 pounds of cheese per annum to each cow."

Letter from an English Correspondent.

BELOW will be found an extract of a letter from JOHN HANNAM, Esq., North Dighton, Yorkshire, which may not be uninteresting to some of our readers. Mr. Hannam, is one of the ablest writers as well as farmers in England, and his contributions to the Quarterly Journal of Agriculture, are always valuable. Of his last communication, (on the proper period of harvesting wheat,) a condensed view is given in the "Work for the Month." In common with the liberal and enlightened of every country, Mr. H. takes a deep interest in the cause of agriculture every where, and his kind expression of good will conveyed to us, will meet with a hearty response from every American farmer.

North Deighton, Wetherby, Yorkshire, April 17, 1841.

GENTLEMEN—Your polite favor came to hand yesterday, for which I beg you will accept my best thanks. That any effort of mine for the spread of agricultural science, should *entitle* me to the notice of those who are devoting their energies to its cultivation in a country so far distant as America, I do not for a moment imagine, and for this reason it is that I feel it *as a compliment*. But it is not as a personal compliment that your communication gives me *greatest* pleasure, nor is it for the sake of bandying unmeaning verbiage (for such is reciprocal "*cawing*" to use the Scotchman's term,) that I lose no time in acknowledging it; but because I regard it as one more evidence of the diffusion of a spirit of citizenship (if I may use the term,) in the cultivation of agricultural science. And, indeed, it is only by an encouragement of this spirit, which regards not the boundaries of nationality, and confines not its exertions to either '*New*' or '*Old*' World, that knowledge can ever be surely promoted, or that agriculture can ever be what it ought, an *universal science*, as perfect in its principles as it is *profitable* in its practice. That it is entitled to consideration as a profitable science, none I think, can deny; for of all sciences it is the only one which can be fairly said to *produce* or *create* wealth. Such, however, it does; and the nation encouraging it is encouraging the very means which will best increase its wealth. That it ever will become as perfect in its principles as it deserves cannot be asserted—we *may* hope it; that it will, however, become much more so than it is, is certain,—and the most conclusive evidence of this is the spirit of intercommunication and of reciprocal assistance between the agriculturists of different countries, who, *having different soils, climates, and manners, have different opportunities of observing phenomena and recording truths*. But I am speaking enthusiastically. In this cause, however, you will excuse it.

I am glad to observe that you have established a "New-York State Agricultural Society." Of the advantages to flow from it, it is unneccseary for me to dilate to you. Nevertheless, I may say, that in my opinion they will be neither few nor unimportant. In England, these societies are doing much, and they will yet do more:—in what way I have endeavored to show in the "Quarterly Journal of Agriculture" for last month, which you have perhaps seen.

But I augur success to your societies on another ground. The great obstacle to agricultural improvement in England has been an apathetic affection to old plans, and an aversion to modern improvements as "*new fangled notions*." This feeling you have not to contend with. A great proportion of American farmers, especially those who have emigrated from Europe, have no hereditary prejudices:—they are men who have some Quixotic spirit in them—they have broken from the beaten path of their fathers—have risked their all in a country, to the climate, customs and soil of which they were strangers, and they are, therefore, ready to seize upon every information and to test every system which will increase their knowledge or improve their farms. Or, to speak plainly, they come *as strangers*, feel that they *are ignorant*, and are not above receiving instruction from any source. In England, very often, men inherit the farms upon which they were born, and with the property of the parent inherit, too, his prejudices. To them these prejudices are proverbs, and they practice them in spite of all the opposition that modern science can make. Education, however, is fast dispelling this cloud which has so long darkened the horizon. Even now, in Scotland, and the North of England, it is no bigger than a man's hand.

I cannot conclude without saying a word on the 'Cultivator.' Till its arrival, I had no idea that the American farmers could boast of such a journal—for, with all our advantages, I must say that we cannot show a journal likely to be so PRACTICALLY useful. Our journals may be, and are highly useful, but then their price, and the high tone in which they are written, confine them amongst the educated farmers who least require their aid. Was there a journal established here, and conducted in the *practical manner* that the Cultivator is, *and at the same moderate charge*, I have no more doubt of its complete success than I have of its usefulness amongst that class of farmers who require enticing to "adopt" improvements.

I have written at length, (and probably not intelligibly,) for I must say (and I am not ashamed that it is so,) my zeal in the cause of agriculture is greater than my ability. As brother laborers, however, in the same field, I know you will excuse my prolixity, and believe me to be, gentlemen,

Your obliged servant,
JOHN HANNAM.

Eds. Cultivator.

Watering Plants.

"Watering out-door crops is frequently recommended during dry weather; but it should be avoided as long as is possible, as the benefit of artificial watering is but temporary, and it has the effect of exciting the roots, thereby rendering them more liable to suffer when the water has evaporated."—*English Farmer's Journal.*

Every gardener or others who have watered plants, will, it is believed, assent to the justness of the above remarks. As plants are usually watered, there can be little doubt the application does as much hurt as good. In a shower of rain the whole atmosphere is saturated with vapor, the sky is clouded, and the water on the plants is not immediately carried off by evaporation. When plants are watered, it should be done on the approach of evening, that evaporation may be less active, and the water used should be either rain water or water which has stood for some time in the sun, until the temperature is that of summer showers. Frequently moving the earth around plants, will prevent for a considerable time the necessity of watering, as is seen in the case of corn that is hoed resisting the effects of drouth much longer than that which has not been so treated.

The Wheat Crop.

THE following is an extract of a letter from Gen. R. HARMON, Jr., of Wheatland, one of the best wheat towns, as Gen. H. is one of the best farmers, of Western New-York. As some of our readers may wish to obtain seed wheat from that section of the state, we would inform them that they may obtain a superior article by applying to Gen. H.

"*Wheatland, N. Y., July* 17, 1841.

"As there is much anxiety on the coming harvest of the great staple of Western New-York, I will venture to give my views. In March, when the snows went off, wheat looked as well as common, if not better; the month of April, and the first half of May, was wet and cold, so much so that wheat grew but very little; from the middle of May till the last of June, we had no rain; the weather was uncommonly warm and dry; but for the last three weeks we have had frequent showers. When the hot and dry weather commenced, wheat started rapidly and began to shoot up the stalk before it had spread but little, which has reduced the number of heads from each stool from one-fourth to one-third less than the common number, and the drouth was so severe that some of the stalks seemed to dwindle and nearly perish; but when the rain came on, they revived, and have put forth heads, so that it is ripening more uneven than I have ever known it. If the rust does not affect it, it will ripen more rapidly and give a smaller berry than usual. It is feared, however, it will not escape the rust. Wheat ripening after the 20th of July, is very subject to be affected by the rust, and there will be but little that will be fit to cut by that time. Some of the most forward is now out of danger from rust. To take the most favorable side, we cannot have more than three-fourths of a crop.

"The wheat worm has not made its appearance this season. The fly or insect, has done more injury this season than common. I have some white May Virginia wheat that I commenced cutting on the 15th; it has been injured more by the drouth than the white Flint. The Tuscan with me has not sustained itself through the winter as well as the Flint or the white Virginia. I have several kinds of foreign wheat under cultivation; all of them have been injured by the winter except the white Florence from France. It is doubtful whether we can succeed in this latitude with the celebrated varieties of foreign wheat; they may, however, become acclimated and prove valuable. I shall continue to test several of the most approved kinds."

The Toad.

"WHAT is the use of toads?" is a question we heard asked the other day, with an air of triumph which indicated they were animals of which nothing good could be said. We do not think so, for though not to be classed among the most beautiful of animals, the toad has certainly many redeeming qualities, and which should save him from wholesale condemnation. In the first place he has the most beautiful eyes in the world, (were it not that the charge of partiality might be preferred we would except those of some half a dozen of our lady friends;) and in the second place he has a wonderful facility of stowing away, in that carbuncled body of his, all ants, flies, worms, bugs, &c. that may come in his way, during feeding hours. He does not eat the less because people rarely see him eat, and he clearly prefers flesh to saw-dust or bran bread. The tongue of the toad is a curious contrivance. It is long, attached to the fore part of the lower jaw, and folds back upon the opening of the throat. When the toad approaches a worm or other insect, there is a slight motion or nod of the head and the insect disappears. The tongue has been thrown forward, and the insect adhering to its surface is swallowed instanter. That he "sucks poison out of the earth," is a fable to be classed with the influence of the moon, or the doctrine of transmutation; yet as he certainly does good service as a destroyer of insects, he deserves all reasonable protection.

Old Lime Plaster on Wheat.

A writer in the Farmer's Gazette says he sowed two pieces of spring wheat after brining and rolling the seed in slaked lime. On one of these fields he sowed or spread a number of loads of old plaster from the walls of old houses, and harrowed it in with the seed. Both fields were entirely free from smut, which that year was generally ruinous to wheat; but the wheat of the field where no lime was used, (except for rolling the seed,) was badly shrunk; while that which grew on the field, well sprinkled with old plaster, was *good, sound, plump* wheat.

CULTURE OF POTATOES.—In earthing up potatoes, the soil should encroach as little as possible on the foliage when the latter is in a young state; but as the young stems advance in growth, and more foliage is produced, the loss of the few lower leaves that may be smothered by a full earthing up, will not prove injurious; they are, in fact, the first that suffer natural decay. Earthing up is in all cases advantageous; but more especially as regards the larger varieties. The sides of the hills or ridges should be convex, rather than concave or straight, because the latter forms afford but little earth at top in which tubers can form.—*Lon. Farm. Jour.*

BROKEN WIND IN HORSES.—A great number of dissections have proved that the cause of this disease is a rupture of the air vessels in the lungs. The difficulty of breathing which some persons experience after unusual or prolonged effort, would seem to arise from the same cause, and there is some reason to think that the disease may be hereditary. This is an important suggestion, so far as the human race is concerned.

"Dr. Jackson found that of 28 persons affected with this rupture of the air cells, 18 were the offspring of parents (father or mother,) affected with the same disease, and that several of them had died from this cause. In some instances the brothers and sisters of these persons were similarly affected. On the other hand of 50 persons unaffected with the disease, three only were the offspring of parents who had suffered from it; whence it follows that rupture of the air cells of the lungs is frequently a hereditary disease; a fact important to man and horse, at all events to the breeder of the latter.—*Medico-Chirurgical Rev*

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

GARDEN. Gardens are of several kinds, as the vegetable, fruit and flower garden, and to all who have them are an object of interest and generally of utility. The soil of the garden, if not naturally deep, must be made so by digging or deep plowing, that the roots of all the plants cultivated may have ample room to seek their required sustenance; and it must be kept rich by frequent manurings with clean manures, such as are free from the seeds of all weeds, or what is perhaps still better, with compost manures. It is a common practice to have the fruit and vegetable garden united, or to have fruit trees planted in the garden; but where there is no necessity for this, arising from a limited supply of land, the gardens will both do much better to be kept separate. The vegetable garden is an important appendage to every farm, and if well managed, is a farm in miniature, showing what a whole farm might be, and should be made, and the enormous profits that would arise from a farm so cultivated.

Flower gardens are delightful, and when well arranged are the source of much innocent pleasure, as well as valuable instruction. Art has done much in the flower garden to overcome the obstacles presented by climate to the production of the beautiful tropical plants, and sometimes at an expense to which the utility would seem disproportionate. An idea of the expenses of some of the European royal gardens (and many private ones are not much inferior) may be inferred from the fact that in the garden of Schonnbruen at Vienna, there are several ranges of glass houses, one 270 feet long and 30 feet high, another 300 feet long and of the same height, and three ranges of less height, each 240 feet long. In the garden founded by the Emperor Alexander, on an island in the Neva at St. Petersburg, there are 3624 feet of such buildings, forming a double parallelogram, the principal sides of which are 700 feet long, and from 20 to 30 feet wide, and the middle range is 40 feet high. In these gardens are to be found plants from all climates and countries, arctic and tropic, flourishing and full of fruits and flowers as in their native climes.

The products of a single acre of garden in the vicinity of London, are thus stated by Mr. Middleton from the gardener himself. "Radishes 10*l.*; cauliflower, 60*l.*; cabbages, 30*l.*; celery, (first crop,) 50*l.*; (second crop) 40*l.*; endive, 30*l.*; making a total of 220*l.*, for the produce of an acre in a twelve month." Market gardening is found very profitable in this country, and has of late received considerable attention, though perhaps less than it deserves.

GARGET. A disorder that attacks the udders of cows, particularly young ones after their first calving, or when they are in a high condition, and in full milk. The internal substance of the udder becomes inflamed, usually in one quarter at first, but it often extends to the whole; the bag becomes hot and tender, feels knotty and hard; the milk coagulates and is drawn off in thick masses, or strings; and there is always more or less fever. The disease if not checked, frequently becomes serious, suppuration of the glandular swellings takes place, and the animal is either wholly or partially lost for the purpose of milking. The natural remedy appears to be, to put the calf to the cow, that it may suck and butt the udder about at pleasure; if the calf should not be able to draw the milk fully, it must be done by hand, and two or three times a day, which will usually effect a cure. The cure most generally resorted to by farmers, (and it is very effectual,) is to take the roots of poke weed, *Phytolacca decandra*, cut it into thin slices or pieces, and give it to the cow in a pail of bran, or other mash. One or two repetitions generally effects a cure, operating by dispersing the glandular enlargements. If the disease does not yield at once to ordinary treatment, recourse should be had to more powerful remedies, such as the camphorated mercurial ointment, (rub down an ounce of camphor, having poured a tea spoonful of spirits of wine upon it, and an ounce of mercurial ointment, and half a pound of elder ointment, and incorporate them well together,) which is to be applied after milking, and the bag well washed in warm water before the next milking: or in case the knotty masses do not yield to this, iodine may be used, which often has an excellent effect in glandular enlargements. Iodine should be applied externally in the shape of an ointment, made by incorporating one part of the hydriodate of potash with seven parts of lard, one or two drams of which may be rubbed into the diseased portions of the bag, morning and evening. Hydriodate may be given at the same time, internally, in doses of from six to twelve grains, daily. Too large doses of iodine are apt to reduce the size of the udder itself, and thus reduce the capacity for milk; otherwise no bad effect has been known to ensue from its use in such cases, and it has proved to be a very valuable medicine.

GAS. This name is applied by chemists to those fluids that partly resemble common air, yet differ from it in their qualities, and have never been made solid. There are a great variety of these; but those which, after oxygen, are of the most use, and in agriculture have the greatest effect, are those of Carbon and Ammonia. Carbonic gas is composed of 27.36 parts carbon, and 72.64 parts oxygen. Ammonical gas, of 75 parts of hydrogen and 25 parts of azote or nitrogen. Carbonic gas furnishes to plants the carbon which constitutes their stems or trunks, and is constantly absorbed and decomposed by the leaves of plants; the carbon is retained for the use of the plant, while the oxygen is thrown off to restore to the air that which is lost by the respiration of the millions of vitally organized beings that breathe on the surface of the earth. Ammonia is an alkali, volatile, and commonly known in some of its combinations as salts of ammonia, or when combined with a fluid, as spirits of hartshorn. This gas or its salts have a highly exciting power on plants, and constitute one of the most essential ingredients in animal manures. When stable manures ferment too highly, this gas is volatilized and driven off, as the pungent odor arising from the manure proves, and is thus mainly lost to plants where the dung is applied. This may be remedied by making the compost heap of layers of manure, earth, swamp muck, or any substance that will absorb and retain the gases that may be developed during fermentation, as well as the fluids that drain from the manure while undergoing the process of conversion into compost.

GATE. One of the greatest aids to good husbandry is found in fields well fenced, with easy and safe means of communication between them. These are usually Gates, or Bars, and if not in every case, certainly in every one where a frequent ingress or egress is desired, the gate is far preferable to bars. It is much easier and quicker to open a gate, than to take down and put up a pair of bars; and where a gate is daily used, the saving in time, will, in the course of a year, amount to nearly the cost of the gate. When well made, and properly provided with hooks, or latches, they are much less liable to be opened by restless or unruly animals. The posts of gates should be large and firm; made of durable timber and set deep in the ground, so that frost shall have no action upon them. Iron hinges are better than wood for hanging gates; and as all gates are apt to settle more or less, which prevents their shutting easily, or at all, precaution at the time of hanging should be made against this evil. There are two ways of doing this: one to have the iron hinge or strap at the top of the gate made notched and secured with screw bolts, so that if the gate settles, by unscrewing the bolts the gate may be lifted as much as required, and then secured, by tightening the bolt in another notch of the hinge strap. In the other, the bolt on which the hook of the upper hinge is made, may pass through the top part of the post to which the gate is hung, and a screw nut turning on this bolt will fix the gate at any place desired. White oak timber is the best material for farm gates, as they can be made strong, without being clumsy and unwieldly. Generally speaking, the larger a post is, whether for gates or bars, the firmer it will stand and the longer it will last. We have a white cedar post on the farm which has stood thirty-six years, and promises to endure many years longer; it is about twelve inches in diameter.

GELATINE. When any part of an animal, (with the exception of pure fat) is boiled in water, two products result: one, quivering when cold, soluble in water, and called jelly; the other insoluble, and made harder by boiling; the first is Gelatine, the last Albumen. The skin, horn, &c. is nearly pure gelatine, the white of an egg albumen. Gelatine is one of the most powerful and valuable of manures, being supposed by Chaptal to act both as a stimulant and a nutritive substance. It is principally used in the shape of bone dust, though in many parts of the world it is used extensively in the form of flesh, as where fish are used for manuring. Bones are better than flesh, as they contain phosphate of lime, a substance that greatly aids the action of the gelatine. Bones usually contain about equal quantities of phosphate and gelatine; the bones of the ox have from 50 to 55 per cent of gelatine; those of the horse from 36 to 40; and those of the hog from 48 to 50 per cent. The bones that are the hardest, have the least gelatine, and those of young animals more than those from older ones. Bones intended for grinding, should not be boiled as they sometimes are in cities, to extract the fat and gelatine for soap, as it lessens their value for agricultural purposes. Bones should be ground fine, and if allowed to ferment so as to have the pungent ammoniacal odor appear, their action will be more prompt than otherwise. Bone dust is best applied to roots sown in furrows, and deposited at the same time with the seeds.

GEMMIPAROUS. The imperceptible atoms from which organic beings take their origin, are called *germs*. The multiplication of the species by buds, is called *gemmiparous reproduction*, and is shown on a large scale in vegetables. Vegetable germs are of two kinds, those which produce stems and those which produce roots. Both may be evolved from almost every part of a plant, and whether the germ shall give out a stem or a root seems to be depending on the position in which it is placed. Thus if a willow be reversed in planting, the top put in the earth and the root in the air, the germs which, in the common mode of planting would have become stems, will now be roots, and the root germs will throw out branches. Some plants form their germs on the margin of their leaves, and these buds as they are developed, gradually detach themselves from the parent, and become distinct and perfect plants.

The minute round leaf which sometimes renders the stagnant pool green, is a curious instance of this gemmiparous production. This plant (*Lemna*) has no attaching roots, but floats a green speck on the surface. From the margin of the leaf it casts off its progeny of buds, and in their rapidity of multiplication, this plant is only equalled by the Aphis among insects. A striking analogy to this mode of production is found among insects in the *Hydra*, one of the lowest of the Zoophytes. When the young of this animal is first visible, it appears like a bud rising from the surface of the parent Hydra. It remains for some time attached, and derives its nutritive and mechanical support from its mother, but gradually puts forth its tentacula or feelers, and is able to catch and swallow its prey. The tube which attaches it to the parent, and through which it has received its food, now closes, becomes smaller, and finally breaks, and as in the case of the young *lemna*, the hydra floats away a perfect animal.

GEOLOGY. Geology, as applied to agriculture, is a very important, though a comparatively new science. Reason would tell us that by a knowledge of the materials from which the soils we cultivate are composed, we should learn much information of their texture and qualities, and their suitableness for the various plants to which the different kinds of earth or their combinations have been found most suitable; yet such knowledge has never until lately been made available. The character of any country for the purposes of agriculture is mainly determined by that of the rocks on which it is based, or the course of the currents which have flowed over it. Where the necessary constituents of a soil are so proportioned by their geological position that none are in excess, or none wanting, we may be sure, other things being favorable, that the soil will be suitable for cultivation, and fertile. If, however, owing to geological position, one of the earths greatly predominate, be it lime, or alumina, or silica, we cannot expect the soil to be as good as when better proportioned in its elements. Land rarely suffers from excess of lime, even on purely limestone strata; but such is not the case where alumine or silex, clay or sand, prevail. In the one case the soil will be heavy, retentive of moisture, and hard to cultivate; in the other the soil will be porous, manures will infiltrate or sink beyond the reach of the plant, and be very liable to suffer from drouth, but easy to cultivate. Proportion then is necessary, and a knowledge of the geological structure will aid us materially in determining this point. Perhaps there is no part of the world more favorably situated for the investigation of agricultural geology than Western New-York, as the whole series from the primitive or crystalized rocks, up to the coal series, through all the gradations of granite, gneiss, limestone, shales, sandstones, and their various repetitions, is there fully shown, as well as the course and effects of the currents which have acted on the earth's surface, and so essentially modified the masses which now cover the rocky base of our soils. Fossil geology is one of the most interesting sciences of the age, as doing much to illustrate the previous conditions of our planet, and determine the changes so vitally affecting plants and animals. It is hardly possible to conceive a subject or sight better calculated to interest, than a collection of these remains of animal and vegetable life, called up from ages long anterior to the time when the earth had become fit for the residence of man, and exhibiting forms and structures to which the present races of organized beings afford no parallel.

GERMINATION. "The first growth of a seed, the act by which it exchanges the condition of an embryo, for that of a young plant." In germination, the embryo unfolds, breaks through the integument of the seed, and acquires a vascular, tubular, and cellular organization. To accomplish this, heat, moisture, and a supply of oxygen are required. Heat and moisture are necessary to dissolve the substances contained in the cells of the embryo, and oxygen furnishes the means of respiration. Sugar forms in the seed, and carbonic gas is formed so long as the young plant is in darkness, but on reaching the light, this gas is decomposed, oxygen is liberated, and the plant becomes green. Germination is now accomplished. Temperature has a great effect upon germination. Thus, Dr. Plumer found that the Lima bean, at the temperature of 88° (in the shade,) appeared above ground in seven days, while at a temperature of 62° it did not appear under twenty days. The marrowfat pea at 51° required nineteen days to germinate; while at 74° it took only eleven days. Radishes varied with the temperature, from six to twelve days. Exposing seeds, placed in a moist earth and proper temperature, to an electric current, accelerates their germination wonderfully; and crops of cress for the table, have in this way been grown in a few hours. A low temperature, and too much moisture is as unfavorable to germination, as too great heat and continued dryness; in the one case the seed rots; in the other it is dried or burned up. Farmers frequently err, by putting their seeds in the earth under unfavorable circumstances for germination; if too wet or cold, and the seed finally germinates, a feeble, sickly plant is produced; if too dry it does not germinate at all. In 1838, large quantities of land in Western New-York had to be re-sown, from the latter cause, the first sowing being destroyed by the extreme heat and drouth.

GESTATION. The time that animals go with young is called their period of gestation; and this, as is well known, differs materially among the several kinds domesticated by man. Thus, the period of gestation in the mare is about 330 days; that of the cow 280 days; that of the sheep 154 days; and that of the hog 114 days. A most extensive series of experiments on the period of gestation has been made at the governmental farms of France, and on the farm of Lord Spencer in England. From these it appears that in the case of the mare and the cow, very great deviations from the average time occurred, amounting in the extreme to nearly two months. In the case of sheep and swine, the deviation was less, but still considerable. The times stated above are the averages of the whole; and will probably be found as nearly correct a guide for the breeder of these animals as the circumstances will admit.

WORK FOR THE MONTH.

Stacks and Barns.

A large proportion of our farmers make their hay in July, but still much hay is made in August, and it is a good plan for those who have already completed their hay harvest, to examine their stacks and barns, and see that all is right with them. There is always more or less warm air generated in a barn filled with new hay, and unless this air, which rises to the highest part of the building, is permitted to escape freely, it accumulates and adds to the danger of the hay suffering from heating improperly. Small windows in the gables of barns, to be removed while the barns are filling, and replaced when the heating process of the hay or grain is over, are to be preferred to holes cut in the boarding, as these admit the entrance of birds and vermin, both of which should be excluded from such buildings. The making a good stack, one which shall retain its place perfectly, one which shall turn all moisture, and preserve the great body of the contents as safely as in a barn, is a task which few farmers understand, or are able to perform successfully. It does not look workmanlike to see a stack of hay or grain with as many rails placed around it for braces as there are points to the compass, each lifting, as the stack settles, a part of the outside, and turning the water as it falls, into the stack, instead of conducting it down the outside. A little more care would remedy this evil, and make the hay or grain in the stack as safe from the weather as that in the barn.

Harvesting Wheat.

In our latitude, as haying is the great business of July, harvesting is the most important labor of August, and one which requires the utmost attention of the farmer. Such an extent of latitude does our country embrace, that harvesting of wheat lasts from June till September, commencing in Georgia in the first named month, and ending in the Northern States in the last named one. Four-fifths of the wheat grown in the United States is, however, cut in the months of July and August, and much the greatest proportion is harvested in August. The period of harvesting grain of all kinds, is much influenced by the time of sowing; other things being equal, early sown grain always coming to maturity soonest, and being also generally much less liable to the attacks of insects, disease, &c. The heat of the climate and the impossibility of preserving wheat from the attack of the weevil when stored in granaries, obliges the southern farmer to harvest his wheat, and thrash and dispose of it as soon as possible. Hence southern wheat and flour is always found in the northern markets, long before the harvest here is closed, or, perhaps, even commenced.

Proper Time of Cutting Wheat.

The period of maturity most proper in every respect for the cutting of wheat has long been a subject of discussion. So long as wheat was thrashed by hand, it was found necessary to let it ripen fully, or the loss in thrashing would exceed the gain from any other source; but since machines have been generally introduced, this difficulty has passed away, and the question placed on other grounds. It is now, how does early cutting affect the weight and quantity of grain and the quality of flour, as compared with that harvested at a later period? Many experiments have been made to test and settle this matter, but the best and most satisfactory we have seen, are those detailed in the last No. of the Q. J. of Agriculture, made by Mr. HANNAM, of Yorkshire, an intelligent and able farmer. Mr. Hannam selected for his experiment a field of the *old square headed red wheat*, and on the 4th of August, 1840, cut a sheaf. Both straw and ears were green and full of sap. The grain was perfectly formed, but the chaff adhered firmly to it, and it was so soft and full of milk, that the slighest pressure reduced the whole to a pulp. This sheaf stood in the field a fortnight, when it was housed, and the same day, August 18th, another cut. In this the wheat was not ripe, but what is called '*raw.*' The straw for a foot from the ground was yellow, and above that, though to appearance green, still was turning yellow. The grain, though still soft and mashed easily, was not near so full of fluid or milk as before. At the end of a fortnight this sheaf was housed, and September 1, or the same day, another was cut. This last sheaf was ripe, the straw uniformly yellow, but not so ripe as to have the heads break, or grain fall out, and at the end of a fortnight this was also housed. Each sheaf was carefully preserved, and finally thrashed and the chaff separated, by itself. The gross weight was ascertained by an accurate balance, as was that of a fixed measure, and an equal number of the grains. The result was as follows, the experiment of weighing being several times repeated to prevent error:

Time of cutting.	Gross produce.	Equal measure.	Equal No. of grains.
Aug. 4th, (very green,)	576	568	19¾
Aug. 18th, (raw,)	736	580	23¼
Sept. 1, (ripe,)	650	570	22¼

100 straws of an equal length were then selected from each of the bundles, and weighed as follows:

Green,	550
Raw,	476
Ripe,	450

To ascertain the actual value of each quality, samples of each were exhibited to an extensive wheat grower, and then put into the hands of a factor and miller, to know what they would give. The opinion of the grower and the miller was as below:

	Value per quarter by the wheat grower.	Value per quarter by the miller.
Green,	61*s.*	61*s.*
Raw,	64*s.*	63*s.*
Ripe,	62*s.*	62*s.*

It appears from these experiments that the "raw" wheat had the advantage over the "ripe" in every respect—

1st, weight of gross produce,	13 1-5	per	cent.
2d, do. equal measure,	½	"	"
3d, do. equal number of grains,	2 1-5	"	"
4th, in quality and value,	3¼	"	"
5th, in weight of straw,	5	"	"

The "ripe" had the advantage over the "green" in every respect but that of the straw, in which the green had an advantage of 22 per cent.

Mr. Hannam estimates the comparative value of the wheat crop on an acre of each kind as follows:

Green,	£11	11	10
Raw,	13	7	3
Ripe,	12	17	3

Our readers will judge of these experiments for themselves; but we must add, there are other considerations of great weight in favor of cutting wheat before it is "dead ripe." These are, more time for securing the crop; less waste in harvesting from the shelling of the grain; and a better quality of straw, a thing of no small consequence where it is as extensively used for feeding stock, as in our wheat growing districts. It is also the opinion of millers, we believe universally, that early cut grain makes far better flour than that which becomes fully ripe before cutting. It is probable the same facts would hold good of barley, rye, oats, &c., and it would seem desirable that farmers should ascertain these points, as small profits, or small losses, in the aggregate, are the things that make, or ruin, the cultivator of the soil.

There is a great waste by many in harvesting grain from using bad implements, not paying attention to putting it up properly in the field when cut, and performing all parts of the work in a slovenly and unfarmerlike manner. There is a vast deal of wheat and other grain, put into the barn or stack after rains, or before the straw or green matters the sheaves may contain are cured, in such a state that the central parts of the sheaf heat, mold, and become nearly rotten. The result is bad wheat, musty and poor flour, all which might be avoided by care in the several processes through which the crop passes.

Preparation of Seed Wheat.

The time to procure pure seed for fall sowing, is to make your calculations as to kind, quantity, &c., before your wheat is ripe, and then from your field select a part that will yield what you wish, and by repeated careful examination, free it from every thing that is not wheat. Wheat may be made pure in this way much more certainly than in any other, and we know many farmers who find their account in this method, not only from the almost perfect immunity it gives them from weeds, but in their sales of seed wheat at higher rates, owing to the superiority of the article. No seed is fit to sow that has been injured by heat in the stack or mow. The injury may be but partial, still the young plant will feel the effect, or it may prevent the growing of the grain altogether. We believe that it may be considered a settled point, that all seeds should be thoroughly matured to give perfect vigorous plants, and that a neglect of this, will always produce loss to the farmer. We have known two ways which have been adopted successfully to procure the best of the wheat for seed, and as the trouble is not great, farmers who use but small quantities of seed may find their account in trying one or the other. The first is what is called *casting the seed.* In this method, the farmer casts his wheat, a handful at a time, some thirty feet, or the length of his barn flour, and that which goes the farthest, being of course the plumpest and heaviest, is to be reserved for seed. In the second method, the sheaves of ripe wheat are struck across a barrel or log, something in the manner of threshing flax, rather lightly, and as none but the ripest and best wheat will in this way be shelled, it gives a good seed. There is too little attention paid to seed wheat generally, the best not being selected, or its tendency in the hands of the ordinary farmer to degenerate, not being counteracted by change of seed.

Weeds in Pastures.

Some farmers seem to suppose that if they keep the weeds subdued in the growing crops, they have performed wonders, (and too many have reason to congratulate themselves if they do this,) while all kinds of nuisances in the shape of weeds disfigure and overrun their pastures. But thistles, milkweed, everlasting, john's-wort, sweet elder, &c. flourish undisturbed, and fill the earth with seeds or roots in readiness to spread and grow whenever the earth is moved for their reception. No plant not wanted on a farm, or not required in a course of cultivation, should ever be allowed to perfect its seeds on any part of it; if they are, the farmer will find to his sorrow, that he has suffered an enemy to steal a march upon him, one which it may require much time and labor to subdue. Allow, then, nothing to go to seed on your farm you do not mean to cultivate; dig them up root and branch, or if this is not practicable, take your sythe and cut them at once. Don't wait for the moon or for signs; but what it is necessary to do, do it without delay.

Saving of Seeds.

As far as possible, every farmer should save his own seeds. If he is careful and selects none but the best, if he gathers them at the proper time, he is more sure of their kind and quality than if he purchases, or, as is too frequently the case, begs them, and is, of course, less liable to failures and disappointment in his crops. There are many small seeds, such as are wanted for the garden, herbs, roots, vegetables, flowers, &c. which should be saved as they ripen, and are nearly always wanted and welcome when the seasons come round. No vegetable or plant should be selected, or planted out for seed, that is not of the best quality, as it costs no more to raise seed from a good plant than an inferior one.

Inoculation.

Cherries, plums and pears may be inoculated or budded with success in this month, unless, as in some instances may be the case, the trees are too far advanced. This may easily be ascertained by examination, and it must be remembered, that the later in the season this operation is performed, if the bark will but peel, the more certain will be the growth of the inserted bud. Inoculation is one of the easiest and best methods of improving fruits, particularly some that will not readily bear grafting, and should be practiced by every farmer and orchardist whose fruit is not of the best varieties.

Early Sowing of Wheat.

We do not approve, as a general rule, of sowing wheat in August. There is usually too great a heat in the ground for it to vegetate freely and *quickly*, which is essential to the perfection of any plant, and if the sowing is followed by a drouth, a large part of the seed will never grow at all. The wheat plant is one which at no period of its growth requires or can endure a high temperature, and should the seed sown in August even sprout, the extreme heat and dryness frequently experienced in the month, will be unfavorable to its vigorous growth. Where much land is, however, to be sown, it may be advisable, or even necessary, to begin earlier than would be justifiable under other circumstances. We consider seed put in by the middle of September, more certain of succeeding than if sown by the middle of August; later than the middle of September, the probability of a good crop grows constantly weaker. Exceptions to this rule, arising from the peculiarities of the soil, weather, &c. may occur, but the experience of the best wheat growers will confirm its general corretness.

Weeds in Corn.

Farmers generally hoe their corn some two or three times in July, and then it is left for the season. Now, as corn and some other hoed crops are frequently cultivated for the purpose of cleansing the land and fitting it for other crops, it is well where weeds exist to look over the corn during this month, and either pull by hand or cut with the hoe, such weeds as may have escaped previous hoeings, or sprung up afterwards. If allowed to grow and go to seed now, much of the advantage expected from the cultivation of the hoed crop will be lost, and the succeeding crop of spring grain materially diminished in value. As cleansing crops, hoed ones are excellent; but to experience their full value, the soil throughout the season must be kept clean. Better not plant and hoe as much, than to not more than half perform what is undertaken.

Selling Stock.

The drover and butcher will now make frequent calls upon you, and if you have any extra nice animals, any sleek and smooth cattle, any lots of fat wethers or ewes, or good lambs, they will, with your permission, be sure to select these, and leave the raw-boned and hard to keep, the small, poor, and inferior on your hands. They are not to blame for this, for in doing this, they doubtless consult their own interest; but the farmer who allows it, much mistakes *his* interest, as no extra price will compensate the loss that is sure to ensue where this course is followed. Unless you have animals that will be no better for keeping, and some that you wish to sell, you had better make your own selections, and sell at moderate prices. You can in this way be constantly improving, instead of running your stock down, and it would be well for the farmer to remember that choice animals are always sure of a sale at fair prices.

INFLUENCE OF THE STOCK ON THE CION.—It has been a disputed point among orchardists and fruit growers, whether the stock produced any sensible effect on the fruit in grafting. The Perth Courier gives the result of an experiment in preventing the attack of the aphis or bug on the apple. Mr. M'Hardy having observed that this insect never infested the Jargonelle pear conceived that the apple might be saved by grafting on that stock. Four years since he grafted the Ribstone Pippin on this pear, and the experiment has been completely successful; the fruit being improved in size and flavor, and perfectly secure from the bug.

ORIGINAL COMMUNICATIONS.

"In Agriculture, EXPERIENCE is of great value—THEORIES of little, excepting as they are directly deducible from actual experiments and well attested facts."

INTERESTING LETTERS.

We are indebted to the REV. DR. SPRAGUE of this city, for copies of two letters, one on the origin and history of Indian corn, written by T. PICKERING, Esq. to S. M. HOPKINS, Esq., and the other on the prevention of the caterpillar and canker worm, by H. MARCHANT, Esq. They will no doubt be interesting to our readers. We must beg leave to dissent from the opinion advanced by Mr. PICKERING, that corn was indigenous in China, for the following reasons:—1st. There is not a particle of evidence that *Zea mays*, Indian corn, was known in any European country till after its introduction from America; this fact is admitted by all. 2d. There is no reason to suppose, had corn been indigenous and of general cultivation in China, that it would not have, long before the discovery of America, found its way to the west of Europe, as other plants and fabrics, clearly of Asiatic origin, certainly did; for instance, silk and rice. As soon as it was introduced into Europe, after the discovery of America, it made the circuit of the Eastern continents with astonishing rapidity, and, wherever it can be cultivated, across the continents of Europe and Asia, from France to China, has become a general favorite. 3d. The universal and rapid spread of Indian corn through Europe and Asia has a parallel in the introduction and spread of the cereal grains in this country from the old world. We gave Europe and Asia corn and potatoes; they furnished America with wheat, barley, and oats. And after a lapse of 200 years, it is no more strange to find corn in China, than wheat in Wiskonsan or at Bogota.

Origin and History of Indian Corn.

Salem, September 3d, 1824.

DEAR SIR—I have just received your letter of the 28th ult. requesting information concerning *maize*, or Indian corn, its history, culture, properties, &c. As your call is expressive of *urgency*, I lose no time in communicating what little I know, corresponding with your inquiries, and just as my recollection serves me.

Formerly, I supposed that maize was not only indigenous, but exclusively an American plant; and that from the new, it was carried to the old world—at least to Europe. I retained this opinion until, in reading Sir George Staunton's account of Lord Macartney's embassy to China, I found it was extensively cultivated in the northern parts of that vast empire. As they ascendend the Yellow River, and approached the region of Pekin, Sir George says they saw immense fields of Indian corn. But I do not recollect that he specifies any variety. The first thought which then occurred was, that on the supposition that America was peopled by emigrants from the eastern coasts of Asia, they carried the grains of maize with them. But why may we not suppose this plant to be indigenous in both worlds? especially when we consider its numerous varieties. Had maize been found in the vicinity of the only Chinese port frequented by European and American ships, (*Canton*) we might imagine it was carried thither in those ships. You ask,

"Was it known to the ancients!" This is a question for an antiquarian, or a learned naturalist, to answer. I can only say that, a few years ago, in turning over the leaves of two octavo volumes, written, perhaps fifty or more years ago, by a Reverend Mr. Dixon, of Scotland, (I forget his christian name) in which he professes to transcribe from all the Roman rustic writers, every thing valuable or curious in the husbandry of that nation (his extracts are accompanied with a translation) and in which are described all the species of farinaceous plants which they cultivated, I found nothing that bore any similitude to maize.

Now that I am in the country of the Romans, I will stop to mention, (what, however, you may know better than I,) that maize is extensively cultivated in Italy. From one statement which fell in my way within two or three years past, it appeared that in Tuscany, they raised more bushels of maize than of wheat, and in the travels of M. Chateauvieux, (a Genevan) written in the form (I think) of letters, some fifteen or more years ago, it appeared, that in the minute farms (five or six acres) of the peasantry in the region of mount Vesuvius, maize was the grain cultivated, as the article which afforded the chief subsistence of their families. Barlow found hasty pudding, of Indian meal, in Savoy, if I rightly remember, and celebrated its good qualities in a poem.

The "properties" of maize. Barlow, I believe, ascribes the athletic size of his parents' numerous sons, to the nutritive qualities of this grain. Count Rumford, in one of his essays, mentions the opinion expressed to him by some of the South Carolina planters, (he was in that state at one time in the revolutionary war,) that the negroes preferred the same measure of Indian corn, to that of rice; giving this reason—"it made strong to work."

You wished "to trace the length of the small fibrous roots." This I have never attempted. But I recollect, that, in conversation with Peter Oliver, when he was a Judge of the Massachusetts Superior Court, (of which he was finally the *mandamus* chief justice,) anterior to our revolution,—a gentleman of amiable manners, affable, and fond of agriculture,—he informed me, that in passing on a road where some men were digging a well, in a hollow of rich ground planted with Indian corn, he alighted, and traced some of the roots to the depth of *nine* or *eleven* feet below the surface.

Jethro Tull, the father of the English horse-hoeing husbandry, who wrote his book ninety years ago, considers the cutting off the small lateral roots of wheat, as important to the most vigorous growth of the plants; on the principle, if I mistake not, that their excision caused a multiplication of fibrous roots, and so increased the number of mouths by which the plants received their food: as numerous shoots will spring from the limb of a tree cut off in pruning. Such excisions must be extremely beneficial, if what Dr. James Anderson (I do not recollect in which of his works) states, as ascertained by the experiments of a French naturalist (I think Bonet by name) be true—that plants do not derive nourishment through the pores of the *bark* of the roots, but solely through their *ends*. I confess that I doubted the correctness of those experiments; and the more, because the present Thomas Andrews Knight, now president of the London Horticultural Society, and who, Sir Humphrey Davy says, has thrown more light on the vegetation of plants, than all preceding naturalists, speaks expressly of plants deriving their nutriment, in part at least, through the bark.

"How far north does the culture of maize extend?" It is raised in Maine—I believe, in every part of the state. But in the more northern parts, I presume they plant only the yellow, small eared kind, called Canada corn. It is mostly eight rowed, the rows and grains closely set. The Connecticut settlers at Wyoming would plant it in June, and obtain full-ripe crops. I have raised it in the neighborhood of Salem. It is valuable for late planting, and for a northern region: but neither in product nor flavor, is it equal to our larger yellow corn. I first heard the word "Tucket" corn, among the people at Wyoming; and I made then the same conjecture that you have done—that it was corn originally from Nantucket. That sandy island would naturally hasten the ripening of corn, and give it the *habit* of early ripening: just as a variety of Barley (called "rath ripe") in England, produced on their warm "chiltern" grounds, acquires a habit of ripening earlier than barley sown on richer and colder soils.

Thus far you have what my hasty recollections furnish on the subject of your inquiries. I will now add an extract from a book published in 1795, by the English Board of Agriculture, being the Report of a committee on the culture of potatoes, in which I remembered that some of the properties of maize were incidentally mentioned. It is from an analysis of the potatoe root, by George Pearson, M. D. and F. R. S. The experiments were made by him at the request of the Board of Agriculture.

The Extract. "The composition, or more properly the mixture of the potatoe-root, is, in many respects, similar to that of the seed of wheat and of maize. We are indebted to James Bartholomew Beccari, professor of chemistry at Bologna, about 70 years ago, for the important discovery, that the meal of wheat and maize contained not only starch, but a soluble mucilage or extract, and a glue of the same nature as animal matter. These three substances are only mechanically mixed with one another. The glue is not capable of the saccharine, vinous, or acid fermentation; but like animal matter, putrefies." Dr. Pearson says the meal of potatoes contains no animal matter. "The proportion of the animal glue of wheat," says the Doctor, "is stated variously, in different experiments; but the general mean result appears to be, that it is about one twelfth of the meal. To this glue is imputed the superior quality of wheat-meal for bread."

We have no varieties of Indian corn, other than are commonly known in the same latitude in your state. A yellow corn (of 8, 10, or 12 rows—chiefly of 8 rows), is most generally raised; and the ears appear to me to be the same that the people at Wyoming called Tucket corn. Here and there a farmer raises a white flint corn, very like, color excepted, to the former. We have some sweet corn for boiling in the ear, while in the milk. I never saw any grains of a crimson color, except on some parts of the ears of Mandane corn, brought to Washington by Lewis and Clark, and of which Mr. Jefferson gave me a few grains: it was not worthy cultivating. Last year I saw some large eared and large grained corn, brought from up the Missouri. It ripened in this county; but better when *crossed* with our yellow corn.

TIMOTHY PICKERING.

SAMUEL M. HOPKINS, ESQ.

The Cankerworm.

Newport, Feb. 28, 1793.

HON. JUSTIN ELY, Esq.—I was the last evening favored with yours of the 14th inst. "It is with real pleasure I communicate to you, sir, the information I have had of the efficacy of quicksilver in destroying the canker worm, so destructive to our apple trees. Having been informed of an instance in which the trial had a complete effect, I was induced to examine into the facts personally. I waited upon the gentleman who had declared the success of his experiment:—A Mr. McCurrie, a gentleman who owns and improves a good farm on this island,—a man of good observation, an excellent farmer, and on whose credit the utmost reliance may be had. He had several orchards, but the one the experiment was made in was an old orchard of very large trees. Nine trees, the most central in the orchard, he bored with a spike gimlet about four or five feet from the ground, an inch and an half or two inches into the tree, rather slanting the boring downwards. He procured an ounce of quicksilver from an apothecary—half an ounce he inserted into one of the trees, a quarter of an ounce he inserted into three trees in equal quantities, and the other quarter of an ounce as equally as he could, he divided into five other trees. He then plugged up the holes tight. This was done, I think, in December. Some weeks after, he took out the plugs, and found the quicksilver in the same state he had put it in. He again plugged up the holes, and sometime after the sap of the trees had begun to ascend, he again took out the plugs and found the quicksilver was gone, leaving behind something like the slime of a snail. The worms came as they had done the year before, and totally destroyed all the verdure, &c. of all the trees except those nine, which were in as good order as ever they had been, and yielded their common plenty of apples, about one hundred bushels. The boughs of some of the nine trees interlayed, and were interwoven with the branches of the other trees; and he said the fruit upon them was equally good, while the branches of the other trees so interwoven amongst them, appeared as though they had been fired. The trees with the least quantity of quicksilver were equally protected or preserved, as the one which had half an ounce. He inserted the quicksilver with a quill open at one end and the side of it cut in the manner we make a pen, the more readily to let the quicksilver into the quill.

As to the Palmer Worms, I know nothing of them; he made no complaints of them. If they are a worm which always follow the other, they might have been equally affected. It seems the quicksilver might have been diffused by the sap to the very extremes of all the ramifications of the trees.

I should think it may not yet be too late to try the experiment, though I should prefer the latter end of January or beginning of February, for inserting the quicksilver." Perhaps credit might be given to the effect of such an experiment, by reasoning from the effect which mercury has upon the human body. But I leave that province to others, whose professions and abilities are more adequate to the undertaking;—ever preferring facts to theory, and that humble track to the labyrinths of fancy and imagination. At any rate, facts and successful experiments are most encouraging to the farmer, who ought to be lead by a certainty of success or gain, as too many can illy bear unsuccessful labor or expense. I have heard of an attempt of the like kind as the foregoing, made without success; but this was attributed to an improper time of inserting the quicksilver, viz. in June.

I have the honor to be, most respectfully, your obedient humble servant,

HENRY MARCHANT.

The Peach—Important Experiment.

MESSRS. GAYLORD & TUCKER—In the spring of 1837, I wrote to Judge Buel, asking him to join me in experiments on the Peach Tree with Salt Petre, and proposed to give the result through the medium of the Cultivator to the public. I gave as my reason for that request, that as far as my observations extended, I had always observed that on soils containing nitre and muriate of soda, the Peach tree lives luxuriantly to an advanced age, while upon soils immediately adjoining, immature decay takes place, and the tree seldom attains the age of seven years. As instances in vindication of this occur so frequently, I have been astonished to see them passed over without notice, and now advert to some of them to establish the truth of this position. Peach trees growing in the site where once stood a dwelling, generally live to an old age, the soil of which, by analysis, will give a proportion of nitre. The same thing occurs in many districts of the West and South West; upon one farm the occupant has no difficulty in having good peaches, while his neighbor finds it a laborious task to prolong the life of the tree to a few years, and on well cultivated farms near the seaboard, I have been informed, they have but little difficulty in growing this tree. Having these and other instances for my guidance, I commenced experiments with salt and salt petre, in the year 1836, upon an orchard six years old; clover was sowed upon it that spring, and it remained in grass till last fall, when it was plowed and sown in wheat, and clover this spring. The trees in '36 were full of worms; some of the trees were dead, others apparently dying, and but very few put on the appearance of health; such was its distempered condition that some of my friends advised me to cut down about one-half of those that yet showed life, saying that such was the practice of Peach growers. I thought it would be a bad practice for a physician to destroy one or more of a family to prevent disease from spreading, and after cutting down those that were dead, I commenced operations on the balance with equal quantities of salt and salt petre combined, applying about a half a pound upon the surface and in contact with the trunk of the tree; then sowed it broadcast over part of the orchard, at the rate of about two bushels per acre. The result of this application, to the surprise of my friends, was the appearance of perfect health, with new and vigorous shoots, the trees full of fruit, which matured with increased size and improved flavor. Towards the last of March, and again in May and September, 1837, I applied the same ingredients in different proportions without observing much difference in the effect; though I have since thought that where I applied the salt petre alone, and where the largest portion of the mixture was nitre, the effect was best; but in consequence of the price of salt petre, I have endeavored to ascertain the smallest quantity that should be used, and I would not advise less than one-eighth, though I should prefer one-fourth or more. My trees this fall (1837,) were free from worms, all doing well, and I have found no further use for the axe in the orchard. In the year 1838, I applied the mixture to a part of my orchard in March, the other part received the application in June and September; upon that part done in March, I had an abundance of fruit, while those done in the 6th and 8th months were comparatively destitute of fruit, it having been killed by a late frost. It occurred to me that I was indebted to the salt, &c., for the abundance of fruit on the trees done in March, by its retarding vegetation; and from an experiment made in '39, it appeared to be the case, though I have never considered it of sufficient importance to repeat it, for the purpose of testing it further.

In regard to the best time to make this application, I would say about the first of April, and to those trees having worms in them again in June or September, as the appearance of the worm may indicate its necessity, using about two-thirds of the usual quantity for the June or September dressing, and to be used only in contact with the trunk of the tree. I have not discovered any great benefit from sowing it broadcast over the orchard every year; I prefer to do this every second or third year. If the tree is injured very much by the worm, to wash the bark of the trunk with a solution of this mixture and water might be of service, being careful not to apply too much; this should not prevent its application in a powdered state. To my trees planted in the fall and spring, I apply as soon as done planting in the spring about one ounce upon the surface, in contact with the trunk of the tree, and repeat this quantity again early in June or September, the Peach worm at these two last periods, being in their infancy, are destroyed.

In August, after one application of this mixture to my young trees in the spring, I have taken several worms from off the outer bark of a tree, bedded in gum, they having punctured it in a number of places, but did not penetrate to do any injury to the inner bark, while the next tree left without the above mixture was nearly destroyed, the inner bark being eaten for more than two-thirds around the tree. It might be supposed that the salt and salt petre would produce instantaneous death, but this is not the case; I have kept them half covered in a solution of salt and water, and salt petre and water, and in these two articles combined for several hours without causing death; they will avoid its approach, and will not remain in it unless compelled by necessity.

In compliance with the promise heretofore made, I have endeavored to give in a brief manner my practice on the Peach tree for five years, from which I have no reason to make a change, but many inducements for a continuance of the practice. If you consider it sufficiently important for publication, it is at your disposal, and if any benefit should arise therefrom, be assured it would be the highest reward for any services of mine that could be tendered to, dear sirs, your obedient servant,

LYTTLETON PHYSICK.

Ararát Farm, Cecil county, Maryland, July 6, 1841.

Manufacture of Silk at Auburn.

Messrs. Editors—I forward you some memoranda on Agriculture and other kindred subjects, made during a recent visit to Auburn.

First, of the manufacture of silk in the State's Prison. I am one of those who have long entertained the opinion that notwithstanding the revenue accruing to the State from the carrying on of the common mechanical trades in the Prison, the principal is radically wrong. The common objection urged against it, viz. the injurious competition which it raises against our mechanics, though valid as far as it goes, weighs little in my mind, compared with its *moral* and *social* influences. Its moral effect is to scatter pollution into every work-shop in the state, by means of these discharged convict mechanics, who we lament to say, (though the fact is perfectly notorious,) in a vast majority of instances, go out *unreformed* men. Every *parent* will judge whether such are fit and safe associates for their sons who are apprenticed to mechanical trades. Its social effect is to sink down the mechanic in the scale of society—and form a line of demarcation between his occupation and that of others, who would deem themselves sullied and disgraced by the admission of a convict into their ranks. What would our professional gentlemen say to a class on law or physic, educated by the State, from prison convicts! Now, is it to be supposed that reputable and respectable men will continue to send their sons into occupations where they will be brought into constant association with felons—vicious and degraded men—sent there too by the State? And when *such* men cease to send their sons into the work-shops of the mechanic, will not mechanical trades sink into disrepute—become an occupation only for those not possessing the pride or the aspirations of republicans? But a truce to controversy. I have been hurried into this digression by feelings which are the growth neither of a day or a year, but have been entertained from the first day I was old enough to form an opinton on the subject.

It was to obviate such objections, principally the first, that the experiment of attempting to manufacture silk was introduced into the Prison. We have no class of mechanics engaged in this occupation. The State is made to act as a most useful pioneer in introducing a valuable department of manufacturing, and directly encouraging a valuable branch of industry, by furnishing a home market for the raw material. In these points of view, I deem the experiment every way a proper and a worthy one, and it was therefore with much pleasure I accepted the invitation of the Agent of the Prison, to inspect their operations in this department. It is under the supervision of Mr. John Morrison, a Scotch gentleman, who was educated to the business in the silk manufactories of Paisley, and who subsequently worked in several of the first establishments in England and Scotland. The State has not engaged in the production of cocoons, though the thing is somewhat contemplated, unless the supply should rapidly increase. They are purchased at $3.50 flossed, or $3 with the floss on. Convicts are taught to reel the silk, and put it into skeins after being colored, and I hesitate not to say that a most beautiful article, possessing fully the evenness and strength, as well as the softness and brilliancy of the best foreign sewing silk, is already manufactured. Mr. Morrison states the gratifying fact, in which he says he cannot be mistaken, that the cocoons fed in this country produce *a better quality of silk* than any of the French, Egyptian, Chinese or East India staples, which he was accustomed to see in the first British manufactories. In proof of this he presented me a large hank of his own reeling, which he was about to forward as a *challenge* to his friends in Europe,—and which he requested me to compare with any foreign article which "could be scared up." Having been always rather sceptical as to the success of the silk culture in this country, especially since the great morus multicaulis speculation, I determined to sift the matter to the bottom. The following are the facts which I arrived at, and unless I am greatly mistaken, Mr. Morrison's constant aim was to fall below rather than exceed a just and *average* estimate. To begin at the beginning. Every man knows what an acre of good land will cost. This is to be planted with multicaulis in rows three feet apart one way, to admit a cultivator, and the roots a little more than half that distance apart the other way. The slips (for it grows from the slip,) can now be obtained for a mere trifle. They are not suffered to grow into trees, but are cut down to the ground every fall. This makes the leaves better, more abundant, and more easily obtained for feeding. It will also allow the multicaulis to be *cultivated in almost all parts of our country*—in many where the trunk of even the hardier varieties of the mulberry will not survive the winters. One acre of multicaulis properly cultivated, (that is worked with a cultivator, and hoed three or four times in the season, like Indian corn,) will produce, after the first season, at least 20,000 lbs. of foilage. 25 lbs. of silk has been obtained by many persons year after year, from a ton of leaves—but to make every allowance for bad seasons, accidents, &c., suppose the product of one acre to be but 100 lbs. of silk, or 100 bushels of cocoons. These at the Prison price are worth $350! An experienced reeler will reel 1 lb. of silk per day. It now requires the labor of two convicts to reel that amount. The silk when reeled is readily sold at $5.50 per lb. The actual cost of coloring does not exceed one dollar to the pound, to which add 30 cents for skeining, and you have sewing silk worth $10 per lb!! Let us recapitulate the cost of a pound:

Cost of cocoons,	$3 50
*Reeling,	60
Coloring,	1 00
Skeining,	30
	$5 40
Market price for sewing silk say,	$10 00

Here we have a profit of about 100 per cent to the State, and *equally within the reach of any man or body of men who will embark in the same business.*

Now a word on the subject of rearing and feeding the worm. I profess no skill in these matters. But Mr. Morrison, the Agent and Clerk of the Prison, and other gentlemen with whom I conversed, all of whom spoke from much careful observation, and some of them (including Mr. M.) from *experience*, agreed on the point that there is no difficulty in any person's managing the silk worm; that it was surrounded by no mystery, and required no particular skill; and that it required but a trifling outlay of capital. Mr. Morrison has fitted up a small cocoonery in the chamber of his house, where he is feeding 100,000 worms. The worms are entirely fed and managed by two little girls from 12 to 14 years of age. A boy of about the same age collects and brings the leaves. This is *all* the labor employed in the cocoonery, and Mr. M. thinks the children could take care of as many more. 100,000 worms, *well fed*, will produce 30 bushels of cocoons, or 30 lbs. of silk, worth, in its raw state, $105. A smart girl, after three or four weeks of experience, will reel 1 lb. a day—which would swell the produce of 100,000 worms from $105 to $165!!

The expense of Mr. Morrison's cocoonery consists in a few shelves of planed boards set up on frames, all of which one carpenter could do in one day. The outlay for eggs amounted to $10, and this need not, of course, be again incurred. Mr. M. thinks any comfortable barn or other outbuilding would answer the purpose, and that a crop of worms might be easily got along with before haying. What say our farmers to this? I confess my scepticism is "wearing off *fast*." I may as well here remark that any person who is desirous of obtaining further information, as to the manufacture of silk in the Prison, can obtain it by addressing the Agent, Henry Polhemus, Esq., post paid.

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[*] Done principally in silk establishments by females. We estimate it by the price of convict's labor, calling it two days to the pound.

Fine Cattle in Auburn and its Vicinity.

I cannot close, even at the expense of being a little tedious, without mentioning some of the herds of fine cattle owned in and about Auburn. That collected by Col. John M. Sherwood during the past season, comprises some exceedingly choice animals. Of the cows I noticed, four were from the herd of the late Patroon, Van Rensselaer of Albany. "Pansey 2d," is a nice, but rather a low-headed cow, and "Laura," a heifer of two, is a beautiful animal, though not handling to perfection. Four of the cows were from the yard of Mr. Rotch, of Otsego, though two of them were purchased of, and one of them bred by another gentleman, Mr. John Alexander, of the same county. All of them with perhaps the exception of "Diantha," a yearling, are animals well "known to fame" amongst breeders. The old cow "Daisy," which thousands have seen and admired in the yard of Mr. Rotch —a cow that has made her 16½ lbs. of butter in a week, and who has been the mother of a family of short horns, possessing as great an union of milking properties and hardiness of constitution, as any ever imported, has now a fine bull calf at her side, by Nigel. It is an extremely promising animal. "Stella," a four year old cow, has all the *dash* and *finish* of Mr. Whittaker's yard, from which she is immediately descended. "Sylvia," a two year old heifer out of the preceding, is a study for a breeder! She is *about* as near perfect as flesh and blood can be molded! There is a heifer calf too, "Nora," of which I should have something to say "in the same category," were it not for the fact that she was from my own herd. Of the three bulls, "Archer" is from the yard of Mr. Rotch, "Bolivar" from Mr. Van Rensselaer's, and "Newark" from my own. The two latter are yearlings. "Archer" is a magnificent animal. A portrait of him *would* grace, and I presume *will* grace the columns of the Cultivator.

J. B. Dill, Esq., has a couple of short horn heifers, of which, had they not been purchased out of my own herd, I should have much to say. And I *will* take the liberty of saying that whoever attempts to beat "Rose" as a *milker*, with an animal of the same age will "find his hands *full*." Had Mr. Sotham seen fit to accept my challenge, and named a heifer, I would have named this one against him.

A pair of Col. S.'s bays soon carried us over to Skaneatcles to see the herds of Messrs. William Fuller, Silas Gaylord, etc. Mr. Fuller owns the celebrated bull President, and the cow Gipsey, bred by the late Patroon, Van Rensselaer,—some younger animals, also full blooded, and a large number of grades. Several of these are choice animals. "President" more resembles "Washington," the bull originally imported by Gen. Van Rensselaer, than any other I have seen from his herd. Deep, low and massive, his weight, exceeding 2000 lbs. is supported on limbs of extreme delicacy. The foreleg can be clasped below the knee by the fingers of a long hand, while at its junction with the body it is nearly two feet in circumference.

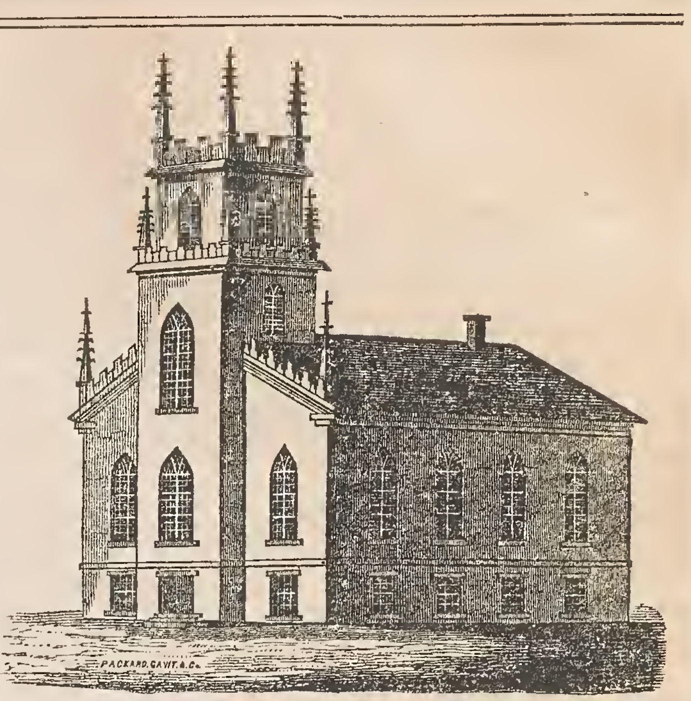
Mr. Gaylord's bull "Splendid," now 3 years old, was sired by "President." We estimated him to weigh fully 2000 lbs. He is better in the crops than his sire, and longer from the hips to the point of the rump. In the bosom and twist he is rarely equalled, but in handling properties he does not, nor in fact does hardly any other bull in the State, equal "President." Mr. G.'s "Drusilla" has some bad points, but in others she would be difficult to excel. I think I never, except in pictures, saw so deep and projecting a brisket. Mr. G. has some other full bloods, and many valuable grade animals. At Mr. Russel Frost's, Mr. Horton's, &c. we saw beautifull grade cows and calves.

On my return, I inspected Hussey's grain-cutting machine, many of which are now constructed and on hand for sale, by a brother of the inventor, in Auburn. They are *warranted* to cut fifteen acres of standing grain per day, and do it well.—and it is said they will go much beyond this. They are said to give perfect satisfaction, where they had been tried. All I can say is, they *look* as if they would "answer the recommendation."

In the vicinity of Auburn and Skaneatelee, I noticed in the meadows of timothy a large quantity of dead heads, bleached out perfectly white. In some fields there were enough of them to occasion a serious diminution of the hay. I was told it was general throughout that country. The disease, or whatever it is, seems advancing from a southerly direction. It had increased for two or three years. On examination, the grass appeared to be dead down to the first, and sometimes to the second joint. For the space of half an inch immediately above the joint, the straw is shrivelled up within its sheath, as if the juice had been sucked out or suffered to escape by the puncture of an insect. The disease is usually attributed to such a cause. Yours truly, H. S. R.

Cortlandville, July, 1841.

Good Medicine for Hogs.—The American Farmer furnishes the following:—When your hogs get sick, you know not of what, give them ears of corn, first dipped in tar, and then rolled in sulphur. 'Tis ten to one that it arrests the disease, and restores the pig to health.


PACKARD, CAVIT & Co.

Plan of a Meeting House—(Fig. 67.)

Messrs. Editors—Would it be extraneous to the cause which your most valuable paper is engaged in, should I contribute to its columns the enclosed plan; a side and front elevation view of a Meeting House? Many useful drawings have appeared in your paper, among which are some good designs of dwelling-houses. If those plans are of importance to the farming community, as I think they are, not only in contributing to comfort and convenience, but also in appearance, is it not essential that the farmer, after the laborious duties of the week are performed, should have a comfortable and convenient place, where he may meet with his fellow-men, and with them unite in religious devotions? And should not the temple of the Most High be something more than a log cabin, where pecuniary circumstances will admit of a better? Even in this enlightened age, appearance has a vast influence on the mind of the spectator. Nature and art have been busy in decorating what is pleasing to the eye. Behold the sun, the moon, and the stars; the architecture of the firmament, the brook the rock, the tree, Nature's richest gifts; the more frequently we view them, the more beautiful they appear. Art has done much, very much, to relieve the eye from Nature's landscapes. The ship on the ocean attracts notice by her symmetry of form and elegance of dress; the splendid palace, the costly carriage, and the gay saloon, they too have admirers; but what is more pleasing to the eye of the traveler, than a well proportioned and handsomely finished Meeting House, of which I flatter myself, the attached plan is a fair representation? Yours respectfully, JOHN CAIN.

Rutland Vt., August 20, 1840.

Qualities of Cattle, and Management.

A part of the stock of a farmer must consist of cattle, and the maintainance of these, and their management, must ever be an object of great consequence; and in proportion to the numbers which he keeps for sale, in addition to those which he employs on account of their immediate service and labor, the importance of the subject is increased to him. Whether oxen or horses for labor are the most advantageous, is an unsettled question. On some farms the situation is such as not to admit of a doubt but the ox may be the most beneficial. Bulls are on some accounts to be preferred to oxen, being procured at a cheaper rate, and more hardy and persevering in labor. In some cases the question would be decided differently; the activity of the horse is extremely superior to that of oxen, and it is more applicable to different species of employment; when dispatch is more required, than moderate absolute strength, as in loose soils in the operation of plowing, the quickness with which the horse completes the business, in comparison to the ox, will give the preference of the one to the other. When the team is kept to grass in summer, there is a gain in stocking with cattle over horses. The great injury done by feeding pastures with horses instead of oxen and other cattle, is an injury very material and obvious.

In the selection of the best breeds of cattle, many good points will not vary materially from those which should be noticed in the selection of the horse, sheep and swine. Short legged cattle are generally of a good quality, and are almost uniformly connected with a good make. Straightness of back is another important recommendation; when straight and broad, and flat on the loins, an experienced judge will more readily decide on their worth. If the carcase be of a barrel form both in the fore and hind quarters, it is good point of excellence. A curled and loose hide, handling mellow, is an indication of a thriving beast. Great notice should be taken of the breadth of the bosom, and between the fore legs, standing quite wide; much in buying is lost or gained by attention to this point; it implies not only good symmetry, but strength and speed; a good proportion of breadth of breast gives the wind, which is very essential to the working ox. At eight, nine and ten, they are going back in all their points, and in their value after seven; and no ox should be kept after eight years.

Steers should be yoked at two or three years old, and lightly worked, gradually increasing until four, when they may be full worked; they will attain a larger size than if they were unworked; their growth generally finished at six.

Heifers are generally allowed to come in with calf at two years old. The arguments in favor of bringing heifers in at two years old are, that they come sooner to profit, and are more apt to make good milkers. On the other hand the argument in favor of bringing them in at three years old is, that not being stunted in their growth, they make larger, finer cows than those that are suffered to bear calves at a more early age. A middle sized cow may afford as much neat profit as one of larger stature; much depends, however, upon keep; and the propriety of bringing heifers to milk at two years old, depends upon soil and situation. As regards the best season of putting cows to the bull for the object of milk and rearing of the calves, it is a point of importance to have them dropped as early as the month of April, as the season begins to be warmer. As the young grass begins to come forward the calves can be reared with the least trouble and expense, and the cow is in season for the profit of the dairy. Young cows should be milked to near the time of calving, that they may the better hold out for milk as they advance in years; if allowed to dry up their milk early the first season, it will be quite unavoidable after,—but some regard should be had to the keep; those that have good keep may be milked to a much later period without injury, than those under the contrary circumstances. In twin calves, one being a bull and the other a heifer, the latter frequently has not the organs of generation, and I have known of cases where they both broke to the yoke together; the heifer being equal to the steer for strength and labor. They seem to partake more of the nature and form of the ox than of the cow.

In regard to the cattle of our own State, more particularly the western part, they are not less numerous in their varieties than those of foreign kinds. We have excellent native breeds, but that regard for the improvement of neat cattle has not been bestowed on them that has been in some of the other States, and not as much as would have been profitable to the grazier. But more attention has been of late bestowed on the breeding, rearing, and providing such sorts as are best suited to the nature of the farm or land on which they are to be supported. Those fine cattle which are found at the Brighton Market, called the "Lake Cattle," are reared in this section of the State. SOLOMON W. JEWETT.

Weybridge, Vt., Feb., 1841.

Draining.

Messrs. Gaylord & Tucker—I submit to your consideration, some of my views upon a subject which has been extensively examined in England and on the continent of Europe. Their views, however, have been adopted with reference to a state of things with them,—such as the price of land, labor, redundancy of capital, and many other considerations, differing so essentially from ours, that their adoption, to their full extent, in this country, may be considered of doubtful utility.

I have desired to see this subject thoroughly investigated, with particular reference to our own condition; but if it has been done, it has not fallen under my observation. With these views, therefore, if my suggestions shall be found to vary somewhat from standard English authority, I beg that it may be considered as emanating from a desire, rather to suggest inquiries for those better able than myself, to examine the subject in this light, than from any spirit of controversy with systems which are probably well adapted to the state of things in Europe.

Two questions are necessarily involved in the subject:—First, its utility—secondly, the mode of effecting it. To do justice to either, it will be necessary to understand the different conditions in which water is found, and the manner in which it affects the soil. So far as my observation has extended, it may, with sufficient accuracy, be classed under the four following heads:

First—What is usually termed "surface water." Under this term I include both standing water and running streams, when their source is beyond the premises affected, as the mode of removing either is nearly the same, although they may and generally do affect vegetation very differently in many respects.

Secondly—Subterraneous ponds. These differ but little from those above the surface, except that they are filled with porous earth or a sufficient quantity of it to allow of a circulation of the water to every part of the bason. These subterraneous collections of water are evidently held in their position, by the same means as surface ones; an impervious under strata; and like them, rise and fall with the wet and dry seasons.

Thirdly—Springs. This term has commonly been used to indicate the point where a subterraneous stream breaks out upon the surface; but I use it in a more extended sense, as including all well defined subterraneous streams. There are some respects in which these differ from surface ones, having a serious bearing on the vegetable kingdom. They have their immediate source at a considerable depth in the earth, from whence the water arrives, uninfluenced by the air, the sun, or any of the causes which fertilize the surface.

Fourthly—For the want of any more definite term to indicate the remaining condition in which water appears to the farmer, I shall call it a *leach*. Water is frequently found sluggishly leaching out upon sloping lands without any defined channel. These leaches are frequently of great extent and depth. This is the worst condition in which water is found, whether we consider the extent of its injury, or the draft which it makes upon the intelligence and patience of the ditcher. Like springs, they have their immediate source below the influence of the air or surface heat.

This classification will enable us to look more accurately at some of the operations of water upon soil; how it affects its vegetating powers; what influence it exercises upon the atmosphere, and through that upon vegetable life; and what *direct* influence it exercises upon vegetation, and thus enable us to decide upon the utility of draining.

I am aware that I cannot go into any extended analysis of these propositions, without intruding upon the rights of others, equally entitled to your hearing. I will confine myself, therefore, to a single case, and that by way of illustration, of frequent occurrence among good farmers,—a piece of land, which is too wet for early plowing, but from the surface of which the water will retire so that the crop may be sown in "pretty good season," to use a common expression. Now suppose this field to be affected by a leach, as is frequently the case with such lands. It will be seen that this soil up to the time of putting in the crop, or about that time, has received little or no benefit from the influence of spring. The water coming from a source below its influence, and mixing freely with the soil, retains it at its own temperature, and at a point below that at which the elaboratory of nature commences its process of preparing the manure, or fertilizing qualities of the soil, to produce vegetation, and after all it must be noted, that the water receding more slowly as it disappears from the surface, and the more active means of evaporation, probably remains but a short distance below the surface at seed time, and continues its influence upon it. But be this as it may, the soil is wet, and at a low temperature, a number of days later than on a dry soil, other things being equal. On these few days, in a climate like ours, frequently depends the crop, or at least a good share of its value. It must be borne in mind, that the water which has only ebbed during the dry season, rises again as this season terminates, chilling the surface, and reducing its temperature, some days before the eye detects its presence; thus preparing it for an early frost, which the dry and warmer soil escapes. Here we find a solution to the inquiry, why some pieces of land are more subject to frost, in spring and fall, than others. We frequently find a valley or low piece of ground covered with a deep, rich mold, but no crop can be raised on it, because it is so inert, or it is so frosty. Is not the above solution of the difficulty satisfactory? Can any other be given? The inquiry may be made, why these frosty pieces have such a depth of vegetable mold, while warmer ones equally low are destitute of it? The late and early cold water has always affected it; and the leaves and grass falling on it, or which have been blown on to it, have been retained there by its moisture. This moisture and low temperature consequent thereon, has retained them in an inert and imperfectly decomposed condition, until the present quantity has accumulated. But the man who waits for the water to dry off from his land, to put in his late crop, may object to my view of the subject, that after all, his crops are as good, or nearly so, as those grown on dry and earlier ground. This may be, and frequently is the case; but it will be seen, that it fortifies one of my points, and does not militate against my theory. These moist lands, from the cause above assigned, have frequently a much greater amount of unexpended vegetable matter, than any others; indeed, a fertility sufficient to overcome, to a considerable extent, the difficulties which I have enumerated, and if properly drained, would be ranked with our most fertile and certain lands. Look at this subject in connection with the application of manure. If the soil is wet and leachy, it is certain to carry off a portion of its strength, with the superabundant water, and what is left, the coarser part from its low temperature, is comparatively inert and useless, at least in the early part of spring.

As I intend to confine myself rather to the theory of this subject, with barely sufficient illustration to be understood, I will restrict my remaining remarks, to the mode of draining. This depends on so many local circumstances; for instance, under which of the above heads is the water to be classed? What is the character of the soil? What is the slope of the land? What is its elevation above the lowest point at which it can be discharged? that I shall content myself with a few rules applicable to most cases. My first general rule is, *do all you can by a single ditch.* One properly located, and of sufficient width and depth, will generally supersede the necessity of many smaller ones, will be more economical, and will generally be decidedly more efficient and durable. My second general rule is, make an open ditch. So far as my experience has extended, it costs more to cover a ditch, so that it shall be permanent, than it does to dig it. Here is a saving of one-half of the expense, supposing them both to be dug by hand, which should be done, where they are to be covered. The ditch which I recommend, can be done almost entirely with the plow and scraper, and at an expense not exceeding one-half of what it would cost, to do the same with a shovel; and if the earth is soft and wet, it will make more difference. If the plow and scraper are used, the common farm help can generally do it; these men are seldom willing to do much with a shovel and pick axe, in a ditch. The ditch will not look quite as smooth when first finished with the scrapre, but in the end it will look better, as you will have a better slope, the earth will be removed to a more secure distance from the edge, and if there are any holes, or inequalities near, they can be filled up, or smoothed down. Where these ditches can be so located as to form the boundaries of fields, it should be done, even at the expense of a small crook in the fence. This commonly furnishes the best of water on both sides. Its banks furnish a dry and advantageous location for a fence; cattle are not as apt to press on it, as when approachable on both sides, and it is usually located where different soils divide, fitted for the different purposes of tillage or grass. There are other considerations of still greater weight, in my mind, in favor of this course. All subterraneous water, except what falls under my definition of a leach, has a well defined strata of porous earth, such as sand, or gravel, through which it percolates, resting on a hard strata, impervious to water. This porous strata is at different depths, and is covered with every variety of earth. In swamps, its immediate covering is usually clay, or a hard cement of clay and sand, or gravel, and sometimes both. This is generally covered with a vegetable deposit, and sometimes to the depth of a number of feet. The porous strata never extends beyond the lower edge of the swamp; if it did, it would drain it. The head, or source of this strata is more elevated than the highest water in the swamp; the clay, or hard pan, which covers this strata under the swamp, is full of holes; the result of the action of water, roots of trees, or other causes, through which the water is forced up by its more elevated head, and presents itself upon the surface in the numerous springs with which such lands abound; to maintain an obstinate and successful defence against all the efforts of the farmer, with his innumerable small drains and ditches covered with turf, straw, or something else, which, in four cases out of five, in the end, go over to the enemy, and render his last state worse than the first; whilst the courage of the farmer lies buried with his outlay, until he is again reminded of his defeat, by a proposition to under-drain his swamp. I grant that cases may occur where this mode of doing business is the only resort. The situation of the land may be such, possibly, that this is the only remedy; but I would remark that, except in the case of small pieces, to improve the looks of otherwise valuable tracts; if land cannot be otherwise reclaimed, I doubt much whether the advantage to be gained will justify the expense, in this country, although it may be different in England. If a piece of ground is to be drained by a single ditch, the location and depth of the porous strata must be ascertained; the ditch should then be commenced, at a point low enough to cut through this strata, as it progresses. If the porous strata is thoroughly perforated, the result must be both effectual and permanent. After this is done, the water can no more be forced up to the higher outlet, the old spring holes, upon the surface, than it could be to the discharge, in a pent stock, after the pump log, or other aqueduct was broken off, and for the same reasons. It is not necessary that the ditch should be dug as low as the bottom of the porous strata, but I would usually prefer it, if not too deep, as a precautionary measure. The fine earth which, in the process of time, has washed down these subterraneous streams, is frequently deposited more in one place than another, and as this is continued, a point is shot up the stream and widens; and has frequently a small stream under it. This may have projected itself above where the ditch crosses, and must be so, if any spring continues to discharge. The remedy is plain. The vein must be tapped, and this would be easier and perhaps the necessity for it would have been obviated, if the ditch had been dug to the bottom of the strata. If the porous strata should be found at such a depth that no outlet can be adopted, low enough to drain it, or if the depth should be such that the expense would prevent setting the ditch to its level, the water may be reached by sinking wells from the bottom of the ditch, to the region of it. The uncertainty, however, of opening all of the veins by this process, is such, that it should not be adopted, except in extreme cases. The ditch should usually be carried along the upper side of the land to be drained, or the side on which the water approaches it. One main reason is, that the porous strata will be found easier, and better defined here; but there may be cases, where, from the want of fall, the depth of the porous strata, or the depth of intermediate excavation, the width of the swamp, or other causes, an intermediate course may be adopted. If the porous strata is effectually perforated, the water will discharge itself through the lower artificial orifice, before it would force itself to the higher level, to supply the old discharge. I have known a ditch thus situated, to draw off water that stood upon the surface some distance above it. There is danger, however, in adopting these lower locations, that a branch of the porous strata may not extend as low as the ditch, and thus not be perforated.

Where what I have termed a leach occurs, a resort to a number of parallel under-drains may be proper, if the situation of the land will justify the outlay. If, however, the slope is moderate, I would still adhere to the other system. It is true, that it might not be convenient to cut a ditch to the bottom of the leach, yet it would probably cut off the water from all the land above a level extending out from the bottom of the ditch to the surface, where, if necessary, a second may be cut. If the quantity that could in this way be reclaimed would not justify the expense, I doubt whether any other course could be adopted, with hope of better success.

I would make the additional remark, that unless the earth above the porous strata is cut through, the ditch of whatever depth, will only operate as a surface drain. I have seen frequent instances, where an individual having determined to make thorough work, has cut a deep and expensive ditch across a field of clay, or other impervious under strata, which only operated as a surface drain, and when one of a few inches in depth, would have been equally beneficial. Had he dug through into the porous strata, perhaps but a few inches lower, or what is more than probable, had his ditch been properly located, with much less depth and expense of excavation, his field would have been drained.

HENRY STEPHENS.

Cortland Village, Jan. 14th, 1841.

The Commentator--No. 1.

Messrs. Gaylord & Tucker—I have often thought that it might be beneficial to the cause of Agriculture, if some of your most experienced correspondents would undertake to offer a brief, but free and impartial commentary on each number of your paper, by which the attention of your numerous readers should be particularly invited to such communications as appeared most deserving of notice, either for the useful information they contained, or for such statements as might seem rather calculated to produce erroneous opinions and practices in husbandry. These comments,—if they answered no other purpose, would probably elicit a further discussion of all doubtful matters, than would otherwise be made in the Cultivator; and would tend also, to settle many agricultural controversies that appear to be endless.

Under these impressions I now send you a specimen of such a commentary as I have suggested; not, by any means as a model, but by way of temptation, or inducement to others to undertake it, who are better qualified for the office than myself. It will be made on various articles in your June number, and will be continued on each succeeding paper,—provided you and your readers should appear to approve of the attempt, and no other person will make it.

The first article on which I will offer a remark, is the late patriotic act of the New-York legislature, appropriating $8,000 annually, for five years, towards promoting the husbandry of that great and prosperous state. This measure highly merits the praise of all true friends to the agriculture of the United States; and affords an example of such wise and beneficent legislation as is well worthy of imitation by every other state in the Union. Husbandry, which is the all-bounteous nursing mother of every trade, profession, and calling in our whole country; in fact, the *sine qua non* of all national prosperity, has heretofore been most shamefully neglected by the guardians of our public interests, both state and federal. It is therefore high time that such neglect should be punished by the people themselves discarding from their service all who have made no better use of the high trusts confided to them.

If J. R. of Sing Sing, will take the trouble to refer to the first volume of Count Rumford's Essays, (American edition,) he will find the subject of "fire-places and chimneys," most amply discussed and explained "on philosophical principles."

I beg leave to dissent, although most respectfully, from a part of your answer to Hugh Gaston's inquiries relative to cedar hedges, as I live in a part of the United States where more attempts probably have been made to raise them, than in any other equal portion of our Union. You are wrong in saying that "*the center or leading shoot should not be disturbed,*" for in that case, the cedars would attain their natural height of some forty or fifty feet, before they would stop growing upwards. But it is true of the cedar, and I presume of other hedge plants which have a center stem, that it should not be cut until the hedge reaches near or quite to the height at which it is intended to keep it; otherwise these stems will not have sufficient strength. There is, however, an insuperable objection to the cedar for live hedges,—at least, in all those parts of our country wherein I have seen it tried. It is subject to more diseases, which have heretofore been found to be incurable, than any other plant yet tried among us. But is it not well worth inquiry, whether any kind of live hedges are adapted to our country, as a general system of enclosure, so long as the laws of descent remain as they are? These cause continual changes in the size and form of farms almost every time that any of the proprietors die. And of course a corresponding change in the fences becomes necessary.

The inquiry of P. E. P. of Charlotte, Vt. relative to rotation of crops, suggests the following. Has any of your correspondents ever tried Indian corn with clover sown among it immediately after its last working? This to be cut and fed, or made into hay the next summer, and fallowed in the fall for wheat. The rotation would then be corn, clover, wheat, with only three fields and a standing pasture.

The inquiry of D. G. M. of Springport, relative to the opinion that "land may be made too fine for profitable cultivation," has at least one strong fact to support it, although I do not consider it conclusive. Every cultivator of a stiff soil must have observed, that it will have a very hard crust formed over it, after a hard rain, much sooner, if it be finely pulverized, than when it is in a rougher state, and will require an earlier working.

In speaking of millet, neither your subscriber at Killingly, Ct., nor yourselves have specified the kind of which you speak, although there are at least four varieties which I have seen tried in one of the middle states. But I presume you mean the white, or rather pale straw color, as it is the only kind usually sown broadcast. Of this I can say, that it requires very rich land, and is a great exhauster.

The article headed "Kentucky corn crops," will elicit, we hope, a more particular statement relative to the crop of Messrs. Bryan and Young; for to say the least of it, we cannot apply to it, as at present informed, any other than the favorite epithet of Dominie Sampson,—"Prodigious!"

Suffer me to make two remarks on your article headed "Work for the month." More than two plants left "in melon or cucumber hills," will not do so well in latitude about 38. And as for strawberries, some of our best gardeners have found that nothing is better between the rows, than a thick coat of chips nearly rotten. Cabbages in our climate, (say 38,) are apt to rot in the head, if planted out sooner than about the middle of July.

Among your things "*Not to be done*," I wish you could have added the following:—Not to borrow plantation tools or implements, and keep them until the owner himself is obliged to send for them, instead of having them returned to him by the borrower.

Not to spend our time in riding about and criticising our neighbors' farms, to the neglect of our own.

On the subject of "calcined gypsum," it will probably be gratifying to your correspondent L. B. of Hartford, Ct. and others, to know that it has been very successfully tried, both in Virginia and South Carolina: on clover in the first state, and on orchard grass in the second. See the third volume of the Farmers' Register, by Edmund Ruffin, of Petersburg, Va. Calcination saves the expense of grinding the gypsum, as pestles will pulverize it.

One of your articles is headed "Hawthorn hedges of England," and the writer who signs himself R. M. seems to recommend the hawthorn for this country. To him and others I respectfully offer the following information:—Some 30 odd years ago, a Scotchman by the name of Main, (as well as I recollect,) established a nursery above Georgetown, in the district of Columbia, where, among other things, he cultivated thorn-sets for hedges, and tried every kind, both foreign and domestic, but gave a decided preference to that variety which he called the American maple-leaved thorn. None, however, have I ever known to succeed south of the District, nor very well even there.

Mr. Solon Robinson's contemplated journey will be most joyfully hailed, as I verily believe, by all the true friends of American husbandry, who read his letter in your June number. And should he succeed in the object of it, as I most sincerely and anxiously hope he will, he will better deserve the thanks of his country, than any man in the whole circle of my acquaintance.

Mr. R. Jenkins, who recommends the soaking of peas before sowing them, 24 hours in urine, to make them "*come forward early,*" should have added—"provided always, that the ground be very moist at the time of sowing." For all who dislike to be disappointed in making experiments, may take my word for it, that no kind of soaking, for any kind of garden seed, will be beneficial, if they be sown in very dry earth. The greater part of them will never vegetate, as I have several times proved to my cost.

The hint about "*the importance of associated effort,*" I suspect to come from our friend Mr. Solon Robinson, and there are very few of us who may not justly condemn ourselves for not paying more regard to it, than we ever yet have done. Nay, some who are really very zealous and active friends to our cause, will highly commend "associated effort," *in general*, but unite and speak against it *in particular* cases, even although they profess to wish success to those who are engaged in them, and so far these really zealous, active friends counteract their own desires.

It would gratify me, and I presume many others, if Mr. C. Butler,of Plymouth, Ct. would give us an intelligible description of what he calls the "white daisy," of which he affirms that "he gets no hay which he considers as valuable for cattle and sheep as daisy hay, cut in bloom." Now the only thing known in my part of the country, by the name of daisy, is a most pestiferous weed, which we call the *chamomile daisy*, from the great resemblance of the flower to that of the chamomile, from which it differs in nothing but size. Neither horse, mule, cow, sheep, nor hog will touch it in its green state, and of course none of us have ever suspected that any of them would eat it, if made into hay. But we live to learn, and if our stock really would consume it in this form, we should deem it a great discovery, for many of our farms are so infested with it, that it has become a very great annoyance. It is perennial,—bears an immense number of small seed, and spreads with great rapidity, as it is a noli me tangere among all our domestic quadrupeds.

In your notice to correspondents, you very properly request them to "remember that as much directness and conciseness as is possible, consistently with the nature of the subject treated, is desirable in all communications. as you have room for nothing which has not a practical and necessary bearing on the great object for which the Cultivator was established,—the promotion of Agriculture."

Being somewhat long winded, and incontinently given to prosing on any subject that deeply engages my attention, I greatly fear that I may not have complied with your request to the extent of your wishes. Should this be the case, I beg you will not hesitate a moment to throw aside the foregoing cogitations as so much waste paper. This, I assure you, would break no squares with your friend and constant reader,

June 30th, 1841. Commentator.

Freezing of Potatoes.

Editors of the Cultivator—In your February No. in a paper from J. M. Garnett, on the "Preservation of roots," I noticed the following: "Why those roots should always be destroyed when they freeze *above ground*, and not suffer equally when frozen *under ground*, is a matter of which I have never yet seen any explanation; it is among the numerous mysteries in vegetable physiology, for the cause of which we have yet to search."

Now vegetables exposed to atmospheric transitions, necessarily are affected more suddenly in their temperature than those which are buried in the earth, yet subject to frost. It is a well known fact, that in the freezing of water, caloric or heat is given out, consequently in the freezing of the earth around the root, which is kept above the surrounding temperature by its own vitality, caloric is liberated, and, therefore, the root freezes more slowly. So in thawing, the temperature is increased more gradually, requiring several days to raise it above the freezing point, if the root be five or six inches below the surface, when, if exposed to the atmosphere above ground, as many hours, would produce the same result.

The extent of injury done to vegetables by freezing, does not depend so much upon the lowness of temperature, nor upon the length of time they are frozen, as upon their quick transition from one temperature to another. These facts apply particularly to the tuberous roots, and in a greater or less degree to the whole animal and vegetable kingdom.

Every root will be liable to injury by frost in proportion to its vitality; and the potato, of which Mr. Garnett was speaking, possesses this principle in an eminent degree.

In the native state, the tubers were very small; but then, as now, were intended as reservoirs of moisture, nourishment, and vital energy, which enables them to resist the injurious effects of cold to almost any extent, when not so suddenly applied, or, what is of much more importance, when the temperature in thawing, is not too quickly raised above the freezing point. Some of the spindle roots possess this property of vitality in a much greater extent than the potato; such as the parsnep, horse-radish, artichoke, and some others.

If the experiment be tried, it will be found that the potato will not freeze below 27° or 28° of Fahrenheit; and unless it is proven that they freeze at 32°, the reasons here assigned must be considered good as far as they go. If I have erred in my statement, I desire to be corrected; if not, the subject is not a "mystery."

E. S. B.

Rockingham, Iowa Territory, 1841.

Smut in Wheat.

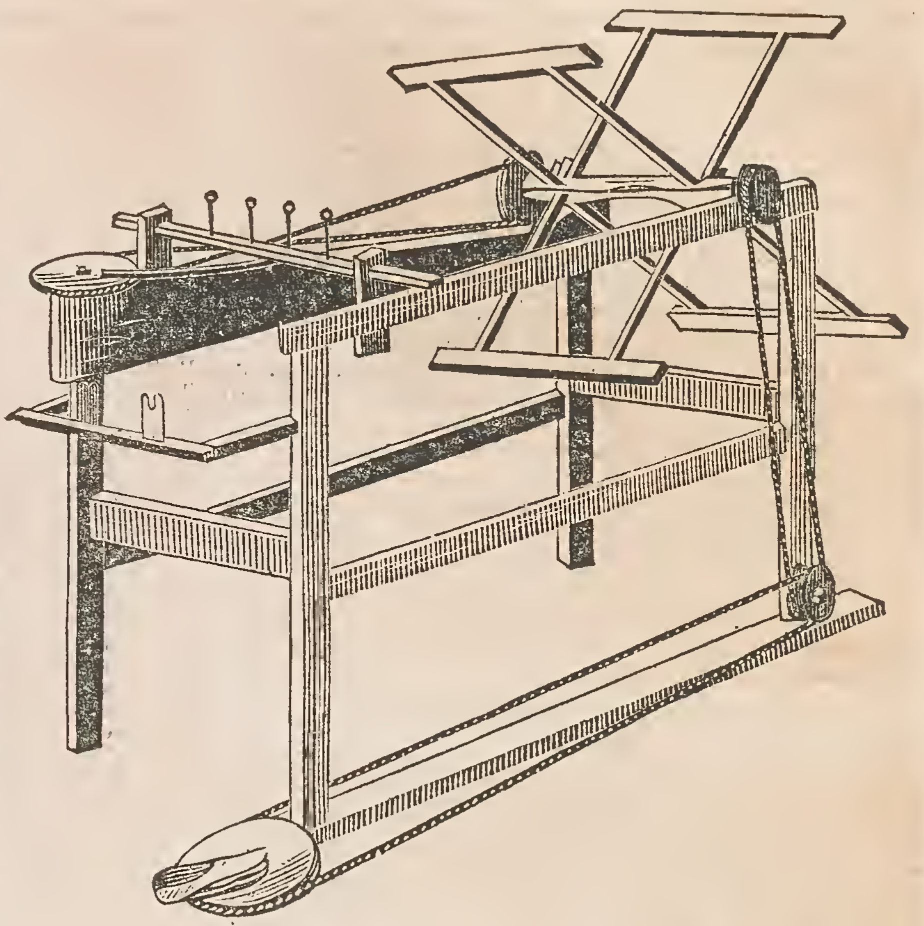
Messrs. Editors—As your valuable paper is devoted to the benefit of the farming community, I avail myself of the means, by making an inquiry concerning smut in wheat, which appears to be different from the common smut. It generally grows from about six to sixteen inches in height; and the whole bunch that grows from a seed, is invariably smut; and on examination, I found that it blows similar to the sound wheat; but I also found by trial, that it will not germinate, but like noxious weeds, it is always restricted to the same spots in each crop of wheat, where it mostly stands as thick as the wheat itself; and it is also to be found diffused all over among the wheat. Last fall, I followed the recommendation in preparing my seed wheat, published in the Cultivator, vol. 7, page 130, and also sowed a different variety of wheat, but I find the result is the same as in previous years; the heads of the smut look like those of the variety that was sown.

If you, or any of your numerous correspondents, would give any information through the Cultivator, concerning the cause or preventive of it, it would confer a favor on the wheat growing farmers.

D. L.

Williamsville, Erie Co. N. Y., July 7, 1841.

Clarke's Silk Reel—[Fig. 68.]



Messrs. Gaylord & Tucker—I wish to inform the public, particularly those interested in raising silk, through the Cultivator, that I have constructed and obtained a patent for a silk reel, which I now offer for sale, and which I believefor simplicity, for making superior silk and for saving labor, exceeds any other now in use, in this or in any other country. This reel was used by several persons in Connecticut the last season, and by some in the State of New York, and met with their entire approbation, as the certificates below will show. Many more, fully confirming them, might be obtained.

AARON CLARKE.

Greenwich, Ct. July, 1841.

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This may certify that I raised and had reeled the last season, nearly sixty pounds of silk of a superior quality. This silk was reeled principally by two young ladies, on a reel constructed by Mr. Aaron Clarke, of this town. The main principle of this reel, is the same as that of the Piedmontese. It spreads and crosses the thread on the reel in the same manner, and makes a skein of the same circumference, and has all the advantages of the Piedmontese reel, but is much more simple, less expensive, and is turned by the foot of the reeler; thereby saving the expense of a boy to turn. This, the young ladies who reeled for me, and who were experienced reelers, considered a great improvement. They said they could turn the reel for themselves with perfect ease, could make better silk, and more in quantity from a given number of cocoons, and reel more in a day than on any other reel they had ever used; and they had reeled on several different kinds of reels, and one of them on the genuine Piedmontese reel, but they both preferred Mr. Clarke's. The reason is, that they having the reel under their own immediate control, could reel with less perplexity than by having a boy to turn, and could make in an instant any necessary changes in the motion of the reel, which could not be done when the reel was turned by any extraneous power, but which was a great advantage, as it enabled them to reel with less waste, to make a thread more even and freer from burs.

The aforesaid silk was reeled under my own observation on Mr. Clarke's reel, which I believe to be superior to any other now in use. By it, the tedious labor and expense of a boy to turn is saved, which, together with the advantages above named, equals, in my opinion, a saving of at least 50 cents on every pound of silk reeled.

DARIUS MEAD Jr.

Greenwich, Ct July 20, 1841.

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I have examined the above certificate of Dr. D. Mead, and being fully acquainted with the facts set forth in favor of Mr. A. Clarke's silk reel, do fully agree with him in believing it to be the very best silk reel extant: and further, that if the silk growing business shall ever become established in this country, Mr. Clarke's reel will probably supersede all other silk reels on account of its simplicity and other excellent properties.

White Plains, N. Y., July 20, 1841. D. PALMER.

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The price of the reel is $12. Any orders directed to the subsubscriber, the patentee, at Greenwich, Fairfield Co. Ct., will be immediately attended to, and reels sent on the receipt of the money to any part of the United States. The subscriber will also sell rights for States or Counties on reasonable terms. Reels may also be had on a short notice at the following places, viz: Joseph Leeds, No. 2, Franklin place, Philadelphia. At the American Institute in the city of New-York, near the City Hall; at the United States Society of Science and Mechanism, No. 21, Courtland-st.; at Dr. Porter's at the silk field, formerly Botanic Garden, near the Deaf and Dumb Asylum, where they are to be seen in operation. They can also be seen in operation at the following places, viz: Thomas Blackwood's, Princeton, N. J., at Baltimore, by applying to G. B. Smith, Esq. Secretary of the American Silk Society, at Rhoda Collin's, Bethlem, Ct., and at a number of places in Greenwich, Ct.

A. CLARKE.

Hessian Fly.

Messrs. Gaylord & Tucker—During the summer of 1839, the Hessian fly made its first appearance in this part of the west. The crop of wheat was a large one, and although the fly did us some injury, we still had wheat in abundance. The quantity of ground sown with wheat in the fall of that year was very great, and considerable anxiety,was felt in regard to the appearance of the fly, but we used no means to escape their ravages. As soon as the wheat was handsomely up that fall, we found that we had raised as many insects as spears of wheat; almost every spear containing from one to eight or ten insects within its leaves. They were found by pulling up the wheat and stripping off the leaf, where they would be seen attached closely to the stem near the ground. When first discovered, they were very small, like the point of a pin, and of a transparent white; they grew rapidly until they acquired about the size, form, and color of a "flax seed," and were attached so closely that a dent of nearly their size would be made in the stem of the grain. They did not appear to injure the growth of the wheat during that fall or early in the spring. It looked so fine, that until the middle of May, we felt in hopes of having abundant crops, but our hopes were soon gone. It appeared as if a new crop of insects had been brought forth about that time, and almost every stalk of wheat was literally filled; the consequence, you may easily imagine; our crop was almost totally lost. It became at once evident to all, that we must find some way to escape the fly, or give up raising wheat. The quantity sown last fall, was much smaller than for some years previous; and many plans have been used to escape the fly. The one most generally relied on is very late sowing. I have read all the articles I could find in the books on the subject, and watched the changes of the fly for the two seasons they have been here, and came to the conclusion that the fly laid the egg in the berry of the wheat while soft; and that in sowing wheat we at the same time, sowed the eggs of the fly, and must expect the one to cause the destruction of the other. Having convinced myself that the egg was in the wheat, it was easy for me to believe that by keeping the wheat long enough, the egg would spoil; and as I had wheat on hand which had been in a stack for a year, I thrashed it out and used that alone for seed. I sowed at different times from the 1st of October until the day the ground was closed by frost. There has as yet been no appearance of the fly in my wheat, while most fields that I examined, sown with new wheat previous to the 15th of October, were well filled with them. Another circumstance gives me great confidence; one of my neighbors had sown part of a field with new wheat, but fell short of seed, and came to me for a few bushels; he took my old wheat and sowed it on the balance of the field, very late in the fall. I, with him, examined the wheat; nearly every spear of the new wheat that we examined, contained the insect, while the old wheat was entirely free. I shall give you the result of my different experiments immediately after harvest, if any of them are successful. I give my theory now, only because I think it confirms in some degree, the observations made by a lady as published in your March number. She will, it is to be hoped, continue her investigations until she succeeds in ascertaining where the egg of the fly is deposited, as I think we can soon avoid the fly, if the egg is as I believe in the grain. The great importance of this subject to us at the west, must be my excuse for offering you so long a paper. The fly is evidently a great traveler, and although it last year did not reach but a few miles west of this county in our State, we fear that this season it will be found to have reached the lake, and I even fear that it may reach the residence of your old correspondent, that good friend to the farmer, Solon Robinson, and he will I hope be prepared for them.

Yours with respect, THOMAS W. WELLS.

Marshall, Calhoun Co. Mich., March 24, 1841.

The Peach Tree Grub.

Messrs. Gaylord & Tucker—In the June No. of the Cultivator, a correspondent inquires of the best mode to destroy or prevent the worms from injuring the peach tree. For many years I have preserved the few trees in my garden from the worms, by taking away some of the earth from the body of the tree, and putting fresh wood ashes in the place, and a little higher against the tree. When I performed this in the spring, May or June, and again in early autumn, September, the worms have not injured the trees; and the ashes have been a useful manure. The *yellows* is complained of at Poughkeepsie, New-York, and in New-England. It has not appeared here. The severe cold winters and the peach worm are the injuries suffered here. Respectfully yours,

Schenectady, June 28, 1841. D. TOMLINSON.

Improvement in Shingling.

Messrs. Gaylord & Tucker—It is known to every person of observation, that shingles composing the roof of a building, first give way around the nail, owing doubtless to the water penetrating by the nail hole. In the erection of a barn this summer on my farm near this place, it was a matter of some consideration with me to remedy this effect. I adopted the following simple, cheap, and I believe *efficacious* plan. I have mentioned it to a number of experienced workmen and gentlemen of judgment, and they coincide in one opinion of its advantages. I have therefore thought it a duty to communicate through the medium of your paper, that others may be benefited by its adoption. The plan is this. The workmen, when shingling, have a small tin cup suspended at their breast, by a string passing around the neck—into the cup is put a portion of white lead ground in oil, of the consistence as taken from the keg of the manufacturer; as the workman handles the nail, he dips the point into the white lead, to which a portion adheres; when driven, the white lead is forced up as the nail passes in, and completely fills up the hole, and the head of the nail is imbedded in the paint, thus preventing the penetration of the water by the nail hole, and the corrosion of the nail head. The progress of the workmen is very little retarded by the operation. A keg of 25 lbs. will do for about ten thousand shingles. The same process will do for sideing or weather-boarding, and indeed in every instance where the nail is exposed to the weather.

JAMES L. BOWMAN.

Brownsville, Pa., June 25, 1841.

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Simple Cure for Cough in Horses.

Two years ago one of my carriage horses had an extremely bad cough, which had continued for six or eight months; different applications were made without effect. I applied to a man who I knew dealt in horses, and had paid some attention to their diseases for a remedy. He at once told me that he had never found any thing so effectual for a bad cough as human urine, given a few times, by discharging into a bucket of water and letting them drink it, or on their food and eat it. I directed my driver to do so, and in one week the horse was completely relieved. I have frequently had it tried with the same good effect.

J. L. B.

Analysis of Grain, Roots, &c.

We invite the attention of the reader, and of our scientific ones in particular, to the remarks of Mr. Garnett, in the annexed letter, on the subject of a chemical analysis of the principal roots, grains, grasses, &c., grown in this country, with a view of testing their comparative value for the purposes of nutrition. There can be no doubt that climate and soils have a very great influence in determining the value of plants for the purposes of food, and it has long appeared to us that a competent chemist could hardly perform a more acceptable service for the country, or one that would reflect more credit on himself, than by making an analysis of the principal *American* plants and vegetables cultivated for food. As Mr. Garnett has well remarked, the analysis of Sir H. Davy entirely omits some that are of the greatest importance to us; and though no analysis can be considered infallible, yet the science of chemical analysis, and particularly that relating to vegetable physiology, has made such advances since Davy's time, and so many new matters have been introduced as subjects of culture, that a re-examination of his positions, and the analysis of the important plants omitted by him, seems very necessary and desirable. We hope some of our scientific friends will take this matter into consideration, and, if possible, add to the favors they have already conferred on the agriculturists, such an examination and analysis as the value of plants demand.

Messrs. Gaylord & Tucker—It is well known to all farmers and gardeners that a great number of the plants which they cultivate, will so mix together, if sown or planted near each other, as soon to lose their distinctive qualities, and materially to injure one another. Some of the species of each genus and all the varieties of the same species will thus mix, and it requires much labor and trouble to prevent it. Hence it is an inquiry well worth making, whether it would not be best for every farmer and gardener to dispense entirely, in his own case, with the culture of several of the varieties of each species,—if not with some of the species themselves, since the former at least, differ so very slightly in taste and other qualities, that such differences can hardly be considered equivalent to the extra trouble and labor of keeping them all separate and distinct. This is true of garden peas, beans, water and musk melons, cucumbers, cymlins, pumpkins, cabbages, turneps, and many others which it is needless to enumerate. It is likewise true of the different varieties of grains, and other plants generally cultivated in the large way for revenue, as well as food for ourselves and our farming stock.

There may possibly be situations in which some one species or variety might suit much better than others, but surely there can be none where all will suit equally well; nor can these differences of situation probably be so numerous, under the same parallels of latitude, as to constitute a majority of cases, and thereby make it necessary to continue every where to cultivate all the varieties of garden and crop plants now known to us. Seedsmen are interested in encouraging this notion, but no other persons. I will endeavor to make my meaning plainer by taking the single instance of the garden pea. Having tried almost every variety, both of the early and late kinds which, for many years past, have been sold in our seed stores, and some of which, although very good, are no longer mentioned in their catalogues,* I believe I may safely affirm that the nicest palate cannot distinguish any difference in the taste between the different varieties either of the late, or of the early kinds. And if a regular succession is all we seek by sowing so many sorts, we might easily attain it, simply by sowing only one kind at different times. The only quality, therefore, which seems to be worth seeking in any of the varieties is, *superior productiveness* of nutritive food. A few comparative trials, if accurately made, might suffice for this, and then much trouble and labor might be saved in the almost impracticable attempt to prevent injurious mixtures. The same may be said of all the other plants I have enumerated, both for the garden and our staple crops.

The foregoing considerations induce me, most respectfully, to make a proposal to your numerous correspondents, by a compliance with which, I am very sure (if I may judge by myself,) they will greatly oblige a large portion, if not the whole of your readers. It is, annually to make small and accurate comparative trials between all the most popular vegetables in field and garden culture, with a view to report the results to you, together with a statement of the climate and soils in which the experiments were made, as well as of all other essential particulars. These communications would induce many others to make similar trials, by which means we should all be soon able to ascertain what varieties each of us could most advantageously cultivate, instead of having to depend, as most of us now do, upon the recommendation of persons who have a pecuniary interest of their own to promote by it. Hence the numerous humbugs of which we read such frequent complaints in our agricultural papers. Hence also the fears of deception, which often attend the introduction of new, but highly useful plants,—new at least, in many extensive districts of our country. All this would probably soon be prevented by such reports as I have here taken the liberty to recommend, for they would be made, in almost all cases, by persons having no other interest in them, but that which was common to all.

And now, gentlemen, if you will not deem me too officious, I will make another proposal to yourselves, which would greatly enhance the value of such communications as I have ventured to recommend, if you would comply with it. This proposal is, to procure for publication, from some of your scientific friends in Albany, or elsewhere, an accurate analysis of the different roots and other plants which are food to our stock. The only thing of the kind which we now have, is, Sir Humphrey Davy's "*Table of the qualities of soluble or nutritive matters afforded by* 1000 *parts of different vegetable substances.*" And to this, all who write on the subject are obliged to refer, although, for aught they know to the contrary, the same substances may yield very different proportions of nutritive matters in our soils and climates from what they do in England. Add to this, the table itself is defective in several particulars, at least for our use. Thus, many grains, grasses and roots are altogether omitted; for instance, Indian corn, broom-corn, and rice, the burnet, the Guinea, the Gama and striped grasses, and the sweet potato and Jerusalem artichoke; neither is any notice taken of pumpkins, squashes, cymlins and apples, all which are much used in some of our States, for feeding stock. Again, the table gives the various proportions of nutritive matters contained in the different varieties of wheat only, although Sir Humphrey himself shows, in another part of his work, that the varieties of the potato differ nearly or quite as much, in that respect, as the varieties of wheat; and so, probably, do the varieties of all the other plants which he has enumerated. Lastly, in the column headed "Mucilage or starch," he gives only the aggregate of the two substances contained in each of the vegetables noticed in the table, although mucilage and starch are very different things, and differ much in their nutritive elements, as may easily be seen by reference to almost any of the standard works on chemistry.

The foregoing remarks are offered, not with any design to detract from the great and well-merited reputation of Sir Humphrey Davy's excellent work; for it is of far higher value to the agriculturist, than any thing of the kind that has ever yet been published in this country; but simply in the hope that they may induce you to favor my proposal. If one or more competent chemists could be persuaded to prepare such a table as I have suggested, we should at once have a standard by which we might soon settle most of the numerous controversies relative to the comparative value of different vegetables for feeding stock, with which our agricultural papers are too often filled, and with very little profit either to the authors or readers of them. Some, without doubt, would still appear, for nothing probably will ever materially diminish that numerous class of persons who are much too wise in their own conceits, to pay any regard to the opinions and experience of others. But the great majority of our brethren being sincerely desirous to improve in the science as well as the practice of their profession, would gladly, I am confident, possess themselves of such a table of reference, for it would save them much time in making those comparative trials in which many of them are frequently engaged, to ascertain the most nutritive of all the different grains, grasses, roots and other plants with which they feed their stock. Another advantage in possessing and using such a table would probably be at least to diminish, if it did not entirely extirpate that senseless prejudice against books on husbandry, which too many of them still entertain; for when they found the statements of the table verified by such trials as an examination of it might induce them to make, they would readily perceive that it contained much more than what they had been accustomed to consider as mere fanciful theory; and they would thus gradually be tempted to read and study something else in relation to their profession. In a word, they would soon be convinced that the work of the head, aided by books, is quite as necessary as the labor of the hands to make an accomplished agriculturist. Without a regular, persevering resort to both we can no more expect to reach the first rank in our profession, than to live without food or drink. But if we will thus occupy ourselves, and with a degree of zeal proportioned to the importance of the objects at which we aim, although we may not reach the highest rank, we may confidently hope not to be far short of it. Could all of us be only actuated by this highly laudable ambition, how immeasurably different would be the estimation in which our class would be then held by the other classes of society, and how much more worthy should we be of being called, as we sometimes vainly call ourselves, "the bone and sinew of our country!" There would soon be scarcely a man left in our whole brotherhood who would not feel in his inmost heart the truth of the following admirable sentiments expressed by Sir Humphrey Davy in the conclusion of his Agricultural Chemistry. "Nothing," says he, "is impossible to labor, aided by ingenuity. The true objects of the agriculturist are likewise those of the patriot. Men value most what they have gained with effort; a just confidence in their own powers results from success;—they love their country better, because they have seen it improved by their own talents and industry; and they identify with their interests the existence of those institutions which have afforded them security, independence, and the multiplied enjoyments of civilized life."

And now, gentlemen, heartily wishing you all the success that your laudable efforts in the cause of American husbandry justly deserve, I remain, yours, with regard,

JAMES M. GARNETT.

P. S.—Perhaps some of the vegetables most in use for our stock, have already been carefully analyzed by competent chemists. If so, you yourselves could soon prepare a highly useful table, provided those gentlemen would be kind enough to send you the results of their experiments.

June 26th, 1841.

Cotswold Sheep and Hereford Cattle.

Messrs. Gaylord & Tucker—I regret that I did not receive this communication before; it has been in the Watertown post office with many other letters until now. I have one also in answer to the attack made on our breeders by Messrs Hepburn and Randall, which I will send you at some future period. *Time will prove what facts will do, even when disputed by influential men.* I have written an article on sheep breeding, but have not sent it you, as I began to lack in spirit, finding that *good things* were not appreciated as they ought to be by men who say they value their country, and make its welfare their study as *breeders* and *farmers* should do. Mr. Cother's name may be found in the Farmer's Magazine, as winning prizes for cross bred animals, at the Royal Agricultural Shows, and at other societies; and a man well known in England by all breeders of stock. Yours sincerely,

WM. H'Y. SOTHAM.

Middle Aston, Oxfordshire, Feb. 1*st*, 1841.

Mr. W. H. Sotham—I am happy to inform you that our Ram season closed very satisfactory for the breeders of Cotswolds; their superiority is acknowledged by the extraordinary demand and the high prices given for them, which is easily accounted for by their being much better sucklers, maturing earlier, producing more lean and heavier fleeces, than the Leicesters. Their fame is now spread far and wide, and I expect in a very few years, that nearly every long wooled flock in England will be "alloyed" by Cotswold blood.

The heifer you call Eliza, is not by Young Sovereign, but by Favorite, jr., a son of Fitz Favorite. Fitz Favorite was by Favorite, the sire of Old Sovereign, and the latter was the sire of more prize beasts than any other bull of his day, and was a remarkable instance of successful in-and-in breeding, being the produce of a mother and son, the pedigrees of which can be given if required, for a period of more than forty years; and I would add that the dams of each of the bulls I have named, were pure Herefords, the pedigrees of which can be given with equal accuracy. The dam of Favorite, jr., I knew well, and it is my firm opinion that I never saw ten so good.

This, I should hope, would be sufficient to satisfy the most sceptical as to the purity of her pedigree on the male side. Her dam was bought of Messrs. Brown and Lion, the great north-country cattle dealers, and was purchased by them at Darlington, in the county of Durham. It was fortunate you did not have her sister, as she has cast her calf.

The whole of my 3 years and 9 months old steers by Favorite, jr., grazed on my inferior land, and finished with £3 worth of oil cake each, have made this Christmas £41 a piece, a price which I am of opinion very few pure Short-Horns or Herefords have arrived at, in the same time, and under similar treatment. These were the second cross from Short Horns, with a pure Hereford bull each time; a cross I do not by any means recommend you to adopt. You are in possession of some of the very best Hereford blood this country can produce, (a few of the heifers are perhaps a little too much in-and-in breed,) and all you now require is a couple of first-rate bulls, with the addition of a few heifers of *different blood to make proper crosses with*, to start you as a first class Hereford bull breeder;—and depend upon it, that your neighbors will ultimately discern that they can live harder, work better, feed equally quick, if not more so, and produce a stall of meat superior in quality, with a less quantity, of course, than the Short Horns, and milk as well as the highest bred animals of other kinds. In short, I believe, they will pay more money for the food they consume than any other breed, in which opinion many of the most eminent graziers agree, some of whom reside *in short horn districts*, and travel nearly 160 miles to the Hereford fairs to buy oxen,—a distance unparalleled by graziers in search of cattle of *any other kind* in this country.

I advise you to breed pure bulls, and let others cross for the shambles, and in so doing I think each will benefit his country as well as himself.

Hard things, indeed, may justly be said of some cattle wearing white faces, and with equal truth it may be observed, that there are many very bad ones of beautiful roan, and spotted color, with short horns; such are frequently good milkers, and so are the Herefords, which are low bred, and of bad form. I imagine that Mr. Youatt and others who have designated the Herford cow "an inferior animal," could not have done so from actual observation, for it so happens that in symmetry of form, with substance and quality combined, a more beautiful animal (of her species) cannot be found in Britain. Nor can it be very pleasing to owners of such superb animals as are very many of the Hereford cows, to have them so denominated in what is called "a standard work on British Cattle;" nor do I think such an opinion (*libel*) ought to go uncontradicted, given as it must have been (one would suppose) from information, and not from occular demonstration.

However "*astonishing*" it may appear to Mr. Randall, that the Herefords on the Gloucester Hills "should have escaped the *notice* of Mr. Youatt six years since," they were located there long before that period, and in many instances cows and heifers have been known to weigh from 15 to 19 scores per quarter, (when dead,) [exclusive of hide and tallow,] and the oxen from 20 to 28 scores per quarter.

A Hereford steer and heifer, both bred in the parish of Northleach, Gloucestershire, fed in the county of Wilts, and slaughtered at Oxford this Christmas, the former under 4 years old, weighed nearly 18 scores per quarter, and the latter 3 years and 6 months old, more than 17 scores per quarter.

I now take my leave of the "lady-like" females, for the purpose of pursuing their 'lordly' sons to the Smithfield Club Cattle Show, where the tug of war is annually kept up between the two contending breeds. Of their extraordinary fame there, let the annals of the Club testify; but I would observe by the way that they are by no means well represented there, in proof of which, a great number of graziers of high reputation, viz. Messrs. Rowland, Lidbrook, Terry, Hewett, Manning, the three Pains, Bull, and many others equally noted, who are purchasers of a large quantity of the very best steers Herefordshire produces, seldom, if ever, exhibit an animal; the reason of which as some of them have stated to me, is, "that winning a prize entails a certain loss," while the breeding and feeding of them is almost neglected by wealthy owners of the soil.

Not so with the Short Horns; they are reared, fed, and shown under the fostering care of the Marquis of Exeter, Lords Spencer and Brownlow, Sir Charles Knightly, and other opulent men to whom expense is not an object. In making these observations, do not suppose that I wish to detract any thing from their merits; on the contrary I consider them a credit to their noble owners. But I cannot pursue this subject further without transcribing the opinion of an eminent breeder, Mr. Bates, of Kirkleavington, Yarm, Yorkshire, whose cattle bore away nearly all the short horn prizes from Oxford. He says, at page 426, Farmer's Magazine, for Dec. 1840:—"I visited Hereford about 50 years ago, and was then, and continue still, an admirer of the best variety of cattle (Herefords.) But I consider now, and have for above 40 years, been convinced that *the very best Short-Horns* (*which are only a few*,) are capable of improving all other breeds of cattle in the United Kingdom, as well as the ordinary Short Horns, which are far from a good breed, *and inferior to the Herefords, Devons, and others.*" And so would any *moderate judge* of stock conclude from taking a survey of Smithfield market at Christmas, (where and when some of the best of nearly every kind are pitched,) the Herefords reigning paramount to any other breed, in numbers and quality combined, making *more money per head*, than a like number of any other variety.

Should the position I have taken be doubted by any of your American opponents, I would say to such, come and see, and do not be satisfied with a view of a few *inferior* of their kind, but go home to the *best* breeder's houses, where they will meet a hospitable reception and a hearty welcome, and will find such animals as are worthy of a place in a herd-book; but in the absence of their names and pedigrees in print, their own good qualities will be found a sufficient passport.

It may be asked what reason can a man find for resorting to a cross breed who so extols the Herefords? The question is solved in a few words; I was resolved to breed rather a large size, and it being difficult to procure large, well-bred Hereford cows, except at very high prices, (and not having a long purse) I preferred as good Short Horns without pedigree, as I could procure, rather than Herefords, under the like disadvantage, considering (with the "Alloy" in my mind's eye,) that by so doing I should procure a rent-paying, though not a bull-breeding stock, and I have much reason to be satisfied with the steps I took at that time, since which I have added some well bred Herefords to it, and am now in possession of one bull by Cotmore (the Oxford pet,) and two others embracing the blood of Old Trojan and Old Sovereign in a high degree, which I think would be as likely to do good in America, as a very near relative of the two latter has done in Scotland, a son of which won a prize in London this Christmas.

I should deem it impossible to get up a Hereford herd-book here; the breeders are so satisfied of the *superiority* of their *own* breed that they are at *perfect ease* on the subject; but I advise you to have a well authenticated pedigree with every beast you import, and commence a herd-book of your own.

Mr. Wm. Hewer's Major, the sire of most of your heifers, won a prize at Farringdon, beating a number of Short Horns, and at Cirencester he did the same. Major, and a daughter of Sir George, and his (Major's) son, won the prize for bull, cow, and offspring; a daughter of Old Sovereign, winning another prize as the best breeding cow. And a bull calf, 10 months old, by Major, won another prize as the best under 2 years old, and here also they came in competition with Short Horns. *Will it be asserted again* that "on the bleak highlands of Gloucester, no breed has been cultivated with any very marked success?"

I say it has been for 20 years, and can *prove* it, and I say more; *no man has a right to injure another by an assertion he cannot prove.* These may be considered hard words, but they are just ones; used only for the purpose of correction, and not intended to give offence.

My three fat ewes which you saw, were killed at Oxford last month by Messrs. Greening, Aldew and Barr, and weighed respectively 228 lbs., 185 lbs. and 184 lbs.

Your friends and acquaintances are all well, many of whom speak anxiously of your success, which I sincerely hope may exceed your most sanguine expectations, nor do I doubt it, for I consider you have fixed on the breeds of cattle and sheep well suited to the rigor of your climate; recollect Devons are natives of a much warmer country than are the Herefords.

Yours truly, WM. COTHER.

Orchard Grass in Tennessee.—A gentleman residing 30 or 40 miles below Memphis on the Mississippi river, has made experiments on blue grass, clover, timothy, and orchard grass. The first three did not succeed, but the orchard grass, he says, was as fine as his eyes ever saw any where. It is very luxuriant, and though but three-fourths of a bushel of seed was sown to the acre, completely sodded.—*Louisville Journal.*

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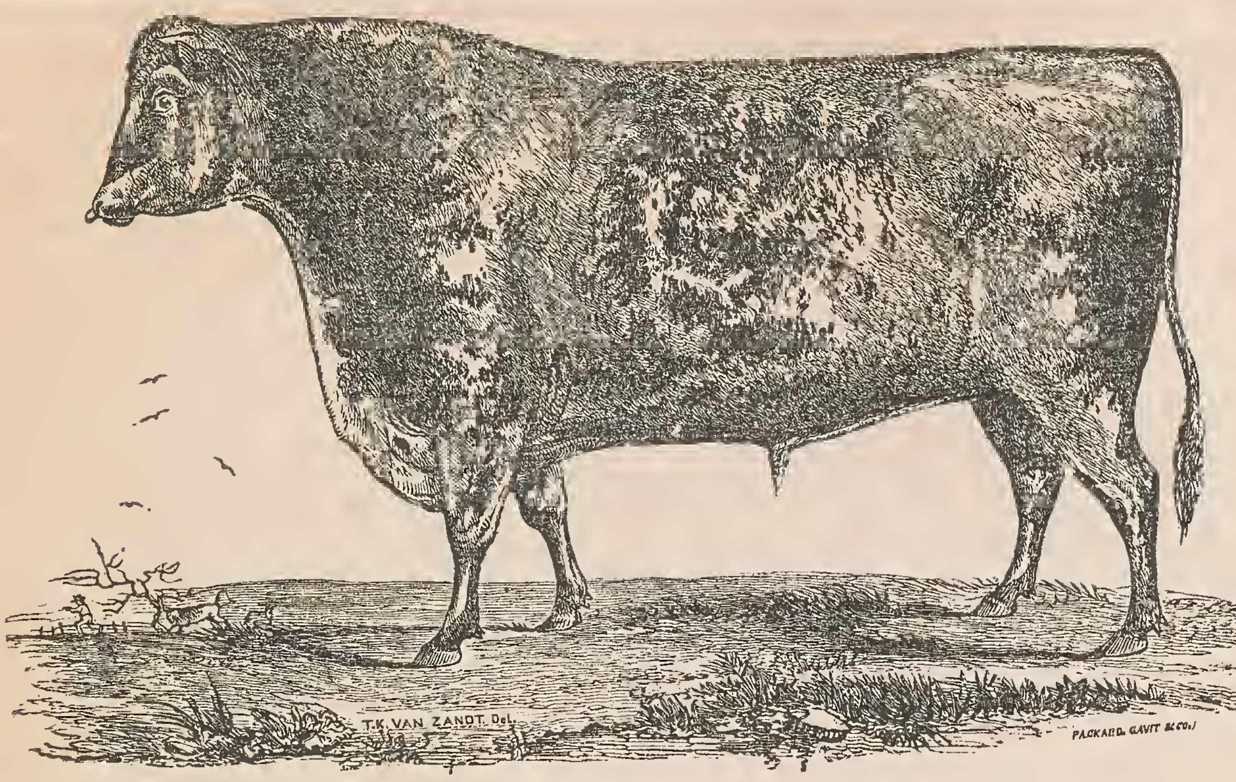
* The Spanish Marollo or Maratta is one of them, being the most productive and lasting that I have ever tried of all late varieties.


T.K. VAN ZANDT. Del.
PACKARD, GAVIT & CO.

IMPROVED DURHAM BULL, NERO.—[Fig. 69.]
Three years old, owned by E. P. Prentice, Esq. Mount-Hope Farm, near Albany.

Feeding Cows, &c.

Messrs. Editors—I observed in your May number, a reply to some inquiries as to the "best and cheapest manner of feeding milch cows." I would direct the attention of your inquirer to the use of oil cake, either by itself or mixed with other feed. I have used it myself to great advantage in both ways; and am persuaded it is one of the best (and taking results into account) one of the cheapest kinds of feed for cows at least; and perhaps also for hogs and sheep. On this point, however, I cannot speak from my own experience, but my neighbors who have tried it, speak well of it.

My own practice is to grind equal quantities of Indian corn on the cob, oats, and oil cake together, and give my cows a mess at night and morning while at pasture, and three times a day when not at pasture. I think it the best plan to grind the oil cake and break the corn and cob first, and then mix them all together and grind them. In this way they are more intimately incorporated together, and are better than if ground separately and mixed afterward. I have found that cows fed in this way will give from one quarter to one third more milk and of a much better quality, than if fed in the common way. I have made from one cow kept in this way, 25 lbs. of butter of very superior quality in the last month. One of my neighbors has used the oil cake meal with chopped roots (turneps, beets, &c.,) or corn stalks, and found it to answer a good purpose.

Much prejudice against it exists in the minds of some, from a supposition that it makes the milk oily or of bad flavor; but this is a mere notion. I have known persons so prejudiced, so completely deceived with milk of cows fed upon it, as to assert that such milk could only have come from the best of pasture, and could not be from cows fed on oil cake. If fed *wholly* upon it, as is sometimes done to fatten cattle rapidly, I have no doubt that the milk would taste of it; as is the case with turneps and some other feed when used solely; but that it may be used very liberally not only without detriment, but with decided advantage, both as respects the quantity and quality of the milk, I am satisfied.

Again, the cost is objected to by some, as it is generally rather higher than other feed; but this is only true as regards its first cost; taking its effects into the account, it will be found considerably cheaper than other feed. Of this, I am further convinced by the fact that the demand for it in England is such, that the greater part made in this country is exported there, where it sells at a much higher price than it does here.

I should say for the benefit of those of your readers who choose to try it, (and I hope a number of them will, and give us the result of their experience,) that cows when first fed with it, should be so more sparingly than those that have been accustomed to it, particularly if near calving; as it is sometimes injurious to them in large quantities at such a time.

I am glad to see that farm houses, barns, &c., continue to interest your readers so much. I hope you will be able to furnish us many more plans. Of those already given, there is much to approve; but the ne plus ultra of a farm house has not yet appeared. It would indeed require an amount of practical knowledge of farming and of architecture which few possess, to produce it; but as it is not an impossibility, the difficulty instead of discouraging us, should only stimulate to further efforts. Although I do not feel competent to furnish a plan, I would furnish a suggestion or two which may be useful to other projectors. A farmery, to be *complete*, would necessarily be so extensive and comprise so many out buildings and offices, as to deter men of small capital from attempting it. It would therefore be of great benefit to devise a plan consisting only of such parts as were indispensable in commencing a farm upon a small scale; yet so contrived that the various out buildings might be afterward added as the means of the proprietor increased, in such a manner that they would all appear to have formed a part of the original design; and not have grown up by accident, as most farm buildings seem to have done. For this purpose, the plan should contain what is absolutely essential, fairly laid down; and the additions to be made afterward as taste or necessity required, designated by light lines, so as to show how the original would look by itself, and how the additions would harmonise with it. A little more attention also might be paid to picturesque effect, than most of the designs already furnished, evince, without increasing the cost materially, or lessening their utility. A little study of the English cottage or rural gothic style, would assist an architect in this department. Some good hints on this, may be found in Downing's Landscape Gardening and Rural Architecture, just published; and various English works which have appeared within a few years.
Long Island.

Landscape Gardening.

A desire to indulge in a passion with which I am strongly impressed, for practical improvement in Agriculture, and its handmaid, Horticulture, and a desire to impress others with a like passion, induces the following remarks on a late publication, eminently calculated to confer great public utility.

Without puff, or any previous intimation that I can learn, there has just come forth from the press a desideratum—"A treatise on the theory of Landscape Gardening, with remarks on Rural Architecture, adapted to North America, by A. J. Downing."

I presume the author of this beautifully written and beautifully executed volume, was much influenced by the laudable enthusiasm of doing good, for he leaves the book to make its own way to public favor and patronage. If merit can win favor, the publisher will have no occasion to call on his employer to make up deficiencies.

If to do the work on a garden, to erect a building, to lay out a plantation, it be essential to taste or profit, that it be done well, it is clearly essential that the operator be skillful, be master of the business he would undertake. Mr. Downing's work is the true key to this knowledge, and the man who has but one acre of ground will find his advantage in a careful perusal of this work. How much more valuable must it be to the owner of one hundred acres? This book is ornamented by a beautiful steel engraving as a frontispiece, and is interspersed with a large number of well executed wood cuts of buildings, decorative trees, as fit accompaniments to the dwelling-house, beautifully laid out grounds, the formation of artificial waters, and the flower garden, &c.

> "In the sweet scented pictures, Heavenly artist,
> With which thou paintest Nature's wide spread hall,
> What a delightful lesson thou impartest
> Of love to all!"

Throughout the work are given plain, pleasing, and occasionally fascinating descriptions and directions for executing the presented views.

It is an error in laying out and managing lands, as in almost all pursuits, to adhere rigidly to antiquated practice, as if every system was born in perfection and was incapable of improvement.

It is a gross and lamentable error, to suppose that a few shillings or a few dollars expended in the purchase of books, is so much thrown away by those who already know *all that is needful.*

There is much to be gained by a correct and tasteful method in building and ornamenting grounds, and much to be lost for the want of it, and so of human pursuits generally, extravagant expenditure is not necessary, extreme niggardness is not economy; be "profuse of genius, not profuse of gold."

If the land owner when about to build, whether on a large or small scale, would avail himself of the instructions contained in this fascinating book, he would find convenience and graceful strength in his buildings, the greatest pleasure from his garden and ornamented grounds, and lasting and growing satisfaction from the well-designed connected beauties of the whole, in a greater degree and at little more expense, than can be procured from unskillful design and uncalculating economy.

Lansingburgh, July, 1841. A. WALSH.

Upper Canada.

Messrs. Editors—As your valuable paper has a fair circulation in this Province, and as that circulation is rapidly increasing in this Township, you will perhaps devote a small space in its columns to make known to the friends of agriculture and the breeding of stock, that in this District the farmers have taken advantage of the liberality of our government, (who furnish double the amount of any private subscriptions) and have formed an Agricultural Society, having for its object the importation and improvement of farm stock and produce, the improvement of tillage, agricultural implements, &c., the encouragement of domestic manufactures, of useful inventions, and generally of every branch of rural and domestic economy.

A meeting of the Society will take place at this town on the second Wednesday in next October, when will be exhibited a perhaps somewhat small, but very choice stock of Durham and Devon cattle, Leicester and South Down Sheep, Berkshire, Hampshire, Shropshere, Montgomeryshire, Improved Yorkshire and other pigs. There will doubtless be many horses shown, but I very much doubt there being any really good ones. I have heard of some of your high spirited countrymen visiting such exhibitions in this Province; if any of them will favor us with their presence, they may rely upon courteous treatment. It may be proper for me to add that Guelph is situated about 30 miles from Port Hamilton, at the head of Lake Ontario. I am, gentlemen, your obedient servant,

JOHN HARLAND,
Guelph, U. C., July 9, 1841. *Secretary to the Society.*

The Hessian Fly.

Messrs. Editors—I observed in your last (June number,) a communication relative to the Hessian Fly, the writer of which endeavors to confirm the opinion adopted by Miss Morris of Germantown, that the ovum is deposited in the grain before it is harvested.

The article in question contains many judicious and valuable remarks, evidently evincing that Mr. Mines has closely observed much that is essential in the culture of wheat. But however plausible the theory that the egg is deposited in the grain, it is not borne out by my own experience, and facts that have come under my observation.

It is now about 60 years since the Fly made its appearance in this country, being first discovered, (in its "flax seed" state,) on the farm on which I now reside, and on one about a mile and a quarter distant, then owned by Rem Adriance. The Hessians had previously been quartered in the neighborhood. The introduction of the Fly was ascribed to them, and it was asserted, from what was then considered good authority, that the insects then existed in Hanover, or in the north of Germany. Hence the name.

I am aware this has been denied; it having been said, inquiries instituted resulted in the conviction that the Fly was not known in Hanover.

At the time of their discovery here, each of the farms in question contained a piece of wheat damaged by this insect. It is probable they had been introduced a few years previous, and that their number was augmenting rapidly, though unobserved. This, however, was the first miss crop which they were known to produce.

More than 40 years ago, I had a small piece of winter barley, sown, however, in the spring, in which not a single stalk headed, on account of the bug. I counted over 140 of the insects in a single stalk, some of which, in consequence, grew at the joints as thick as a man's finger.

From 60 years' observation, I am led to the conclusion that the *seed* is deposited in the *plant* soon after it comes up. I will relate a single experiment as proof that the egg is not deposited in the grain. About 40 years ago, I procured two bushels of wheat from the Genesee country, then an "uninfected district," which I sowed adjoining seed of my own gathering. Both pieces were severely damaged by the Hessian Fly. This, to my mind, was conclusive proof that the *seed* was deposited in the plant during the progress of growth, and not in the grain of the preceding year.

A few years since I soaked my seed wheat in strong pickle, and it grew comparatively free from the bug. In 1839, I again tried the experiment, but not with similar success. Last year I sowed without soaking, and my crop is uninjured.

I believe with Mr. Mines, that in order best to avoid the insect, much depends upon the time of sowing. This will vary with the season. The best time for sowing in this latitude, is commonly from the 25th Sept. to the 10th Oct. The Fly is usually by this time either killed by a sharp frost, or driven from clean fields by heavy north and west winds. They make their appearance again in the spring, and in late sowings, where the plant is quite small, deposit their eggs. Hence the necessity of avoiding either very early or late sowings.

It was formerly my practice to sow both winter and summer barley, besides rye and winter wheat. The winter barley and wheat were always most affected with the Fly. The reason is obvious. They grow somewhat differently from the others; their leaves when small, concentrating more, thus affording the insect a better opportunity to deposit its seed.

One more fact as proof that the ovum is not deposited in the grain. I have uniformly found my grain most affected in spots, —usually near the edges of the field, where long grass and weeds grew, which afforded shelter and protection to the Fly.

Brooklyn, N. Y. June 21, 1841. GARRET BERGEN.

Weight of Hogs—The Byfields.

Messrs. Gaylord & Tucker—I observed in the last number of your paper, the weight of Berkshire and Woburn pigs. Some few years ago, a friend of mine from the County of Orange in this State, sent me two small pigs, male and female, of the Byfield breed. The male I have yet; the female was run over by a train of cars when she was two years old, giving suck to 6 pigs; she then weighed 300 lbs. nett, and I suppose if she had been fattened, would have weighed at least 400 to 500 lbs. I gave, the 6th of July, to two of my servants, two pigs of the half breed. One of them was my miller, and I suppose he gave him as much as he would eat of corn meal, &c.; the other was given to my blacksmith, which was fed upon bread crust, parsley, squashes, cabbages, and sometimes a little corn. They were killed at six months old—the miller's weighed 163 lbs. nett, and the blacksmith's 173 lbs. nett. They were one month old when I gave them to them. I gave my brother and a nephew, two of the genuine breed, a male a piece; they killed them last year; my nephew's weighed 373 lbs. nett, and my brother's 343 lbs. nett. My brother has the Berkshire and the Surry, and he says he is sorry he killed the Byfield. My nephew who is the most successful farmer in my neighborhood, and who you see the Editor of the Southern Planter mentions in one of his numbers (Mr. Edward Winsted,) is so pleased with them that he says he prefers them to any breed he ever had. I had about 30 years ago, two Spanish hogs, which my brother brought from Cadiz, which I liked very much. Yours respectfully,

Taylorsville, Hanover Co. Va., 1841. W. D. TAYLOR.

Inquiry.

Messrs. Editors—I should be pleased to see in the Cultivator an explanation of the causes which produce a premature decay of the head of our common June grass, *Poa pratensis.* I have observed it in many meadows and fields the present season, and in some cases, these dead heads were so frequent as to change the color of the whole field. The head of the grass does not, however, look ripe, but dead white, and has evidently been killed before maturity. Last year, it was said a worm like the Hessian fly worm was the cause, and was to be found in the grass. I have examined many this spring, but can see none. The grass generally dies at the first or second joint from the top. A. B."

Cure for Murrain.—This terrible epidemic, which has caused so much loss in Britain and on the Continent, has at last reached Ireland, and according to the Durham Advertiser, a priest near Muff, in Westmeath, is converting the calamity into a profitable speculation. "He sells 'blessed salts' as a preventive and cure at 2s. 6d. to comfortable farmers, 1s. to the poorer class; but the priest says they are of no use to any cattle but those whose owners purchase direct from him. The deluded people are sending sixty or one hundred miles for this miraculous sulphate of soda."

Sheep with Foul Noses.—The Am. Farmer says:—Make a small mop or swab, by wrapping a rag about the end of a stick —dip this in tar, taking up as much as will adhere to it—roll this in salt, and then thrusting it into the sheep's mouth, hold it there till he is forced to withdraw and swallow the tar and the salt, and your sheep will soon get good health and clean noses.

On Bees—No. 4.

A swarm of bees weighing seven pounds when hived, should not be compelled to warm more than one bushel of space by their animal, or rather insect heat. As "the condition and perfection of the brood combs, and young broods in a hive of bees determines its success and profit to its owner," the attention of the Apiarian must be most scrupulously directed to this point. When bees are compelled to warm more space than is necessary for their convenience at work, the young are liable to a chill; and if they escape death, are feeble in their best state, under such circumstances, and the family of bees frequently dwindle away, and leave their feeble young, dead larvæ and chrysalis to the merciless depredations of the moths, while the meager and scattered remnants of their reduced colony join in, and unite with the bees of other hives. If a swarm of bees weigh over seven pounds at hiving, the drawers in the upper apartment furnish a ready means to enlarge their tenement by admitting the bees into such portions of space as their number require; and this depends very much on the state of the weather; if very hot, more room is required: the bees show this by leaving the boxes of honey as the weather grows cool. Ten pounds of bees should be allowed all the space contained in boxes which fill the upper apartment or chamber of the hive which should hold a half bushel. All families of bees weighing less than seven pounds at swarming, should be doubled in with each other, until a good swarm is collected, and their numbers increased to correspond with the space allotted them. The perfect bee hive in all the classes is admirably calculated for these purposes. When the bees increase in number beyond the capacity of the swarming hives, the collaterals are added as the increased population of the bees demand; and here it should be remarked, that if a non-swarmer is extended, the collateral box should be added first, even before the bees are admitted into the chamber drawers. When the collateral box is filled with bees, the thermometer will determine the time when more space is necessary for their accommodation, or the manager may determine the appropriate time to admit the bees into drawers, or boxes, by glass windows covered by doors or slides. If swarming, non-swarming, or dividing off swarms is designed, the thermometer only will govern the Apiarian so that the bees will raise the heat of the hive to swarming temperature, or the manager can ventilate his hive in such a manner as to reduce the heat of the bees below 100°, and prevent swarming. If the thermometer falls below 50° at any time during the breeding season, the cause should be eagerly sought and the remedy quickly applied, to save the young broods from a chill; want of honey may be the cause, or too much ventilation, or too much space allowed. Half starved animals or insects are incapable of engendering a healthful animal heat; and this is the only most healthful heat for bees. One of the most prolific causes of death among the bees, is want of healthful animal heat, emanating from their too thinly populated body, occasioned by too much space allowed, which compels the bees to keep warm rooms, other than those they occupy, or a too thinly populated community. Who among us is there, that would think of keeping our children and infant *babes* warm in a cold day, by kindling a fire on the hearth and set the doors and windows open? As the successful culture of these little insects so much depends on this point, it is hoped my agricultural and philosophical readers will not be impatient while the subject is considered a little more in detail. Animal heat in cold winter weather, is as necessary to preserve the health and lives of the old bees, as it is in summer to preserve the young; the only difference is, old bees will endure a lower, or cooler temperature than young ones; but after all, the most prosperous and healthful stocks will keep up a constant buzzing noise in the hive, as in summer, in the coldest weather in the winter; moreover, no moldy combs are found in such hives, nor moths to injure the stock, nor dead young bees, nor feeble ones, nor *stingless bees,* which is a sure indication that they were chilled while in the chrysalis state. In short, the whole stock exhibits the strongest marks of strength, health, vigor and wealth. They swarm early in the season, and are able to take the best possible advantage of the early as well as later yield of honey; but while we pass the rooms in garrets, small out-houses, bee palaces, and a variety of hives, houses, &c. designed to keep bees in, without remark, it will not be improper to prescribe remedies for some of the evils complained of. 1st. It is of the highest importance that the apartment occupied by the bees in the winter, should be well and abundantly stored with honey. 2d. That all communication to any apartment not occupied by the bees be stopped, so as to prevent the escape of animal heat. 3d. That the bees are so numerous that their animal heat will consume a great proportion of their vapor, and keep the honey warm, and combs dry. 4th. A good supply of pure air, unadulterated by fire heat, or any other impurity.

As it is proved beyond controversy, that two feeble swarms united in the fall, will consume no more honey during the winter than one when kept in separate hives, the practice of doubling and even trebbling the weak and thinly populated hives in the fall, cannot be too highly recommended, not only as a matter of economy in preserving the lives of all the bees, but also nearly half the honey they would have consumed. M. D. E. Gelieu, a modern French Apiarian, who has cultivated bees 64 years with the finest success, says, "he should regret leaving the world without making this discovery known to the public." The same Apiarian says that when he first tried the experiment by doubling his swarms in the fall, he supposed a double quantity of provision must be provided to prevent starvation. "The more mouths the more meat;" but on weighing all his hives in the spring following, found that his double hives had consumed no more honey than his single ones. The writer says, "I could not believe my eyes, but that there must be some mistake; nor could I be convinced, until I had repeated the experiment a hundred times over, always producing the same result." This interesting and intelligible Apiarian went on, year after year, following these experiments, until he wintered five families in a hive, which did not consume three pounds more honey than his ordinary hives. M. D. E. Gelieu closes up the account by experimenting on 36 hives, the result of which is, that the double swarms consumed 10 ounces more honey each hive on an average than his single ones. "All the facts in the case are inexplicable." "It is a question for philosophers!" "Does the animal heat make the honey more nutritive?" I think there cannot be a doubt that the heat kept up in the hive by a more populous community, renders the honey more nourishing to the bees; moreover the animal heat is raised to that degree, that the bees are kept comfortably warm in the coldest weather, and less food is required. It is a subject of the highest interest to the Apiarian, as it unfolds new principles, and commences a new era in the life-preserving system which is so fast and so justly gaining ground in this age of improvement. Well might the Reverend and illustrious M. D. E. Gelieu express his surprise, "that in more than a thousand writers on bees, that a single one had never thought of uniting their weak swarms in the fall with stronger ones, and save the bees alive, and honey from waste." The advantages of this system of management are incalculable. To accomplish the objects set forth in the foregoing essay, together with all other facilities of managing bees in the best possible manner, my mind has been directed to the construction of a variety of hives, among which is the subtending hive, made as it should be. The method of doubling swarms in the fall for wintering, will be illustrated in my next number, objections removed, &c.

All letters must be post paid. JOHN M. WEEKS.

Salisbury, Vt. July 11, 1841.

"Protection against Drouth."

Messrs. Editors—Under the above head, I have seen in some of the journals, an article copied from the Yankee Farmer, the first paragraph of which reads as follows:—"In tillage, the best protection against drouth that can be conveniently practiced to a great extent, is frequently stirring the earth, so as to keep it light and loose. In this way the earth at the surface is in many small particles, which serve as a non-conductor of moisture, and retains it below, where the roots obtain a supply."

The first part of this quotation is correct; the latter part is incorrect, and the fact directly the reverse, as indeed the writer himself demonstrates in the course of his article. This subject is one of so much practical consequence to the farmer, that with your leave I will make a few remarks upon it, as farmers and gardeners are not apt to perform labor in cultivating a crop, unless there seems good reason to suppose it will be repaid.

If there is any axiom in agriculture that will not admit of dispute, it is, that *the power of soils to absorb water depends on their fineness and friability.* This is equally true, whether the water is drawn from the earth by capillary attraction, or from the atmosphere by combination and absorption. It is true that frequently stirred soils give off water by evaporation more rapidly than that not stirred or made fine, but the loss is far more than balanced by the additional power conferred of acquiring it. The fact is, that because the stirred earth is a good "conductor of moisture," and prevents its remaining useless below, that hoeing plants is one of the best methods of counteracting drouth. Loudon says, "the power of the soil to absorb water by capillary attraction, depends in a great measure, upon the state of division of its parts; the more divided they are, the greater is the absorbent power." * * * "The power of soil to absorb water from air, is much connected with fertility. When this power is great, the plant is supplied with moisture in dry seasons; and the effect of evaporation during the day is counteracted by the absorption of aqueous vapor from the atmosphere, by the interior parts of the soil during the day, and by both the exterior and interior during the night."

Chaptal says—"All soils have not the same affinity for water, which arises from their different degrees of tenuity, or the division of their particles, and from the nature of the substances which enter into their composition. In general, the more finely the parts of a soil are divided, the better they absorb water." * * * "The absorbing powers of a soil, have always been found to be in proportion to its fertility." To the same effect, I might quote Davy, Grisenwaithe, and Liebig, but this is needless, as the experience of almost every farmer has proved to him, that in dry weather the soil is moist in exact proportion to the frequency of its being stirred, and the consequent fineness or tenuity of its particles.

The pure earths or alumina, carbonate of lime, and silica, are bad absorbents, and require the mixing of vegetable or animal matters with them to produce this power. Chaptal arranges the power of absorption in the elements of a fertile soil as follows:—Vegetable substances, animal substances, alumina, carbonate of lime, and silica. Davy found that 1,000 parts of a soil celebrated for its fertility, and which contained more than half its weight of finely divided matter, gained in an hour, by exposure to a saturated atmosphere 18 grains in weight; while the same quantity of earth from a coarse, unfertile soil gained in the same time but 3 grains. These facts are demonstrative that the absolving and capillary powers of a soil are depending on its fineness, and that the reason why stirred earth is moist, is because its conducting powers are increased, not diminished by tillage or pulverization.

But the Yankee Farmer in the same article from which I have taken the above paragraph, has overthrown its own premises; and rarely have I seen a greater sacrifice of consistency in support of a theory, than is presented by the following extract, when compared with the latter part of the first quoted sentence. That paper says:—"Last season we cultivated a few acres, mostly dry land, and the drouth was severe indeed. Where the soil was frequently stirred, and kept light and loose on the top, there was a constant moisture a short distance from the top; but where the earth remained unmoved, it dried to a great depth. A narrow strip running across the piece, was left for turneps. On this the soil became dry below the ordinary depth of plowing, and the weeds were almost dead for the want of moisture, while at the side, weeds of the same kind in the edge of the plowed ground, were fresh and vigorous, and the soil was dry only a few inches on the surface."

What then becomes of the theory that tilled, or fine earth, serves as a non-conductor of moisture, and keeps it below? It is clear that the Yankee Farmer's practice is better than its theory, but all error in theory, has a tendency to lead to error in practice, to counteract which must be my apology for troubling you with this. An Onondaoa Farmer.

History of the First Imported Berkshires.

To Syday Hawes, Esq., are we indebted for the introduction of the now famous and popular Berkshire breed of hogs. It is well known in this section, that when he emigrated to this country in the fall of 1832, and settled on the farm I now occupy, called "Three Hills Farm," he brought with him three Berkshire pigs—one boar and two sows, since known by the names of "Jack of Newberry," "Peggy," and "Streatly."

Among the first who appreciated this superior breed of swine, were F. Rotch of Otsego, F. Booth of Ballston Spa, Lossing and myself, who obtained pigs of the first litters. It was not until 1834, however, when Mr. Hawes exhibited them at one of our Fairs, that they attracted much attention; and in fact, they were in so little demand, even in 1835, when I purchased them, which was in July, that most of his spring litters were still on hand, and the boars were altered with the intention of fattening them for pork.

If we are indebted to Mr. Hawes for the first importation of them, we are equally indebted to the Cultivator and other agricultural papers, for a more extended introduction and dissemination of them through the United States, where now the "land shads," "alligators," &c. are fast disappearing, and the round, plump and stately Berkshires are taking undisputed possession.

"Peggy," said Mr. Hawes to me, "was bought at Reading, Berkshire, of a laboring man." Peggy was Mr. Hawes' favorite sow, and from her some of our best Berkshires have sprung; and it is supposed "Maxima," the famous large sow, Mr. Lossing purchased of the Shakers, was a pig of hers. Peggy was in color a blue-black, with considerable white on her head, neck and body, and generally cast her pigs much lighter colored than either of the other imported sows. She was the smallest of the lot, but long in the body, small head, ears small and upright, legs short and medium size, hams remarkably large and well let down. I purchased her of Mr. H. in 1835, and slaughtered her in 1840. I have now a daughter of her 6 years old, got by "Jack of Newberry," that will weigh about 500 lbs., and for size of hams, I challenge the country to produce her superior.

"Streatly," continued Mr. Hawes, "was bought of a large farmer at Streatly, Berks, seven miles from Reading." Streatly was larger and longer than Peggy, of a jet black color, with a white stripe in her face, white feet, and some small white spots on her body. She was larger in the head and longer in the snout, ears longer and pitching forward. She was long in the body, more rangy and straight on the back, and tail set on higher, and was not equal to Peggy in the ham. She was famous for having large litters of pigs, seldom having less than twelve at a litter, and sometimes fourteen to sixteen. I slaughtered her in 1839.

"Jack of Newberry" was the first imported Berkshire boar brought to this section; was a large, rangy and superior animal—as the stock he left behind him is ample evidence; was about as light colored as Peggy, and slightly tinged with red or rusty color; was long and round in the body; very sloping from the hips to the tail; large and heavy hams for a boar; fine large shoulders, with a short thick neck, and medium sized head and ear; would weigh probably, in ordinary condition, from 350 to 400 lbs. Mr. Hawes sold him in 1835, to a gentleman in Troy, and afterwards he was sold again to a farmer in a western county of this State, which is the last we heard of him. "Jack of Newberry" was to the hogs in this country, what the "Godolphin Arabian," was to the horses in England.

In the summer of 1833, Mr. Hawes imported another Berkshire sow, called "Sally," which he said "was bred in Norfolk, from Berks stock." She was the largest and coarsest sow of the three; was larger in the head and legs, ears large, broad and drooping more over the eyes, body long, deep and capacious, very sloping on the rump, and tolerably good in the hams, color blue-black, a little tinged with rust, more white, and spots larger than either of the others. Sally, when young was rather a shy breeder, and Mr. Hawes disposed of her to H. Holland, Esq., of Ballston Spa, and I purchased her at his sale in the fall of 1836. I took three litters from her, one of which numbered eighteen, and then sold her to D. C. Collins, Esq., in May, 1838, when she died just after littering, much regretted by her owner as well as those who had engaged her pigs.

In the spring of 1835, Mr. Hawes imported a boar from another strain or family of Berkshires, who came into my possession with the farm, soon after he arrived, which I called "Siday,"—while others have called him "Telhurst." To use Mr. Hawes' words, "he came from Reading, but I cannot tell where he was bred." Siday was a jet black, with some white on his nose and face, tips of his feet white, but no white spots on his body; rather coarse in the head, wide between the ears, (a point Mr. H. thought much of,) which were large, broad and upright; remarkably deep and thick through the shoulders, short neck, and rather short in the body, but broad across the hip and loin, and falling a little from the hip to the tail. He was not as large nor as rangy as "Jack of Newberry," neither were his stock in general as large, but many of his pigs were beautiful specimens of the breed. Siday was slaughtered in 1839. The foregoing comprises what is termed "Hawes' importations," and came into my possession in 1835, from which most of the Berkshires in this country originated.

From this importation originated the famous sows "Maxima" and "Superior," and all the "large" and "small" Berkshires which were owned by Mr. Lossing, the Shakers at Watervliet, and others which have been sent to almost every section of this country, no other importation having occurred until the fall of 1838, from which pigs were raised in 1839.

It is said that the late John Brentnall, of Orange county, of this State, imported some Berkshire pigs as early as 1823, but they were not properly appreciated, and were hardly known beyond the smoke of his chimney.

C. N. BEMENT

Three Hills Farm, 1841.

Manure.

Manure is an important article in the cultivation of the soil; and its employment is so often referred to in the Cultivator and other agricultural works, that we want a uniform standard to designate quantities when used in the ordinary method, and particularly when relating experiments. In the application of manure, *a load* is an indefinite quantity. In the southern part of the State, where manure is purchased in the city of New-York, a load is a cartman's cart-box full, containing about fourteen bushels, and drawn by one horse. A friend of mine in Connecticut, near a thriving village, purchased some manure from a livery stable, and I saw two loads delivered at his farm. It was contained in ox-carts with loose sides above the permanent ones, and contained at least four times the quantity of a city cart load; and yet these eight were in that case only *two loads* of manure. An ordinary ox-cart will contain two city cart-loads. But ox-carts again vary in size, leaving it uncertain what quantity is contained in *a load.* I have read agricultural works where the quantity of manure applied to a crop, was stated by the *cart-load,* by the *ox cart-load,* by *the ton,* and also by *the cord.* Can the Editors of the Cultivator reconcile these differences, and recommend to their correspondents to adopt a definite quantity for *a load,* and for the better understanding of their readers, to reduce cords and tons into loads? Richmond.

Inquiry—Hay Rigging.

Messrs. Editors—I have been a subscriber to the Cultivator some five or six years, yet among the numerous implements therein described, I do not recollect to have seen any mention made of the humble, but useful *hay rigging.* Cumbrous nondescripts of every form, size and weight, are to be found resting upon the fences and by the wood piles of the farmer. Some intended to be placed upon the regular body of the farm wagon—some having a separate body of their own, and some without any body, formed like the rack of a horse stall, and throwing the center of gravity many feet from the running gear of the wagon. Many farmers feel how inconvenient it is, in the busy season of haying and harvest, to assemble their whole force to "ship and unship" one of these unwieldy hay riggings. Now the object of this communication is to request from one of your numerous subscribers who understands a little of mechanics, and the principles relating to the "center of gravity," a description of a simple and light instrument for the transporting of hay and grain in the sheaf; one that shall not be top heavy upon our rough roads, and which shall be so constructed, as that when wanted or not, it can be taken to pieces and handled by one man. Yours, &c.

Morristown, N. J. June 25, 1841. A Subscriber.

Correspondence, Inquiries, &c.

Farming in the Southwest.

We make the following extract from a letter written by "*Uncle Jo*," Lawrence Co. Tennessee, in acknowledgment of the receipt of a set of the back volumes of the Cultivator, ordered by him. We should be glad to give the whole of the letter did our limits permit, for we like such "off hand" farmer's letters; they always tell. "Uncle Jo" may rest assured that there is no necessity of a corn crop of 25 bushels per acre; and the crops reported from Kentucky, since an improved system of culture was adopted, fully show this. The corn crop of Tennessee now exceeds that of any other State; by a rotation of crops and the feeding of more cattle and swine to make the requisite manure, this crop, if desirable, might be doubled:

> "If you raise 100 bushels of corn per acre, and we get but 25, why in the name of common sense should we not abandon our plan and adopt yours? Is it good sense to persist in known and willful error, merely to be thought consistent? I for one will try your plan, especially in corn, and if it fails, I may then have some grounds for complaining of your advice, and with ease can return to my own ruinous and impoverishing system. I do not believe there is one half of the folks in this part of the country who hear of your large crops of corn, that believe a word of it. Some say the Cultivator is a Yankee machine for making money, and its statements, chaff, stuff, fudge, &c. They ask 'do you believe half '*them*' Cultivators say? Ah! I tell you them editors will print any thing for money.' It is true, there are many things new to us in your papers, and in your systems of farming, and if you are right, we are certainly wrong. I know you are right in one thing, and that is your description of our manner of doing business; true sir, true as preaching. One idea entirely new to many of us, I will mention; that is, your manner of making so much corn per acre with less labor, and not plowing or breaking the roots. We have been taught that deep plowing of corn, and barbarously mangling the roots, was the very life of it; but the new way says you might as well cut off the tops as the roots in order to make the corn grow. Our way says your cultivators for stirring and loosening the surface, will set and plant the grass and weeds; but your way says it is the best method to kill grass and weeds. Notwithstanding these prejudices, I am determined to have me a cultivator made as nigh like some of those figured in your volumes as I can, and give it a fair trial. I expect to make my bread by farming, and I wish to adopt the easiest and best plan. *We* are in a bad *fix*, and so is our husbandry; poor ground, light crops, foul lands, bushes, weeds, briars, &c., bad currency, hard times, money scarce, much in debt, produce low, and hard to make. I tell you, sirs, we farmers must improve our systems and do better, or we must stay or go to the foot of the hill. The banks have failed, government has failed, and for relief we must now look to ourselves and an improved agriculture."

Sugar and Starch from Corn.

A correspondent, "Viator," has suggested that Indian corn might be profitably cultivated for the sake of the sugar and the starch the stalk and the grain would afford; and requests, if any of the readers of the Cultivator are acquainted with any facts having a bearing on the subject, they would be kind enough to communicate them for publication. He wishes to ascertain, if known, the quantity of corn stalk juice it would take to make a gallon of molasses; and whether the "starch which may be obtained from the corn when the ears have attained their full size, and the kernels are filled with milk, would not justify the expense of manufacturing." If any of our readers can give information on this subject, we should be glad to receive it for publication in the Cultivator.

During the revolutionary war, molasses was frequently made from the corn stalk, and while it could be kept from fermentation, it was highly prized; but it soon became tart, an evil doubtless easily corrected by lime, as is now practiced in all sugar manufactories. Corn was tried in France for a source of sugar, but the beet was found to be preferable, and maize was abandoned. According to Humboldt, molasses is sometimes made in Mexico from corn stalks as it is in other places from the sugar cane. We question, however, whether corn will ever be cultivated for the sake of the sugar; if the grain can be converted into starch as Viator supposes, the case may be different. Viator has overlooked an important product of corn which it is possible might be made available. We have seen barrels of a fine lamp oil taken from the vats of a large distillery. It was ascertained that a bushel of corn worked, gave over a pint of oil; was easily purified, and burned, as we can testify, with a clear bright flame. If molasses, starch, and oil could be produced from corn, it would add to the already high character given it by Arator, (John Taylor,) who pronounced it to be "meal, meadow, and meat."

To expel the Clothes Moth and Cockroach.

A "Subscriber" at Long Green, Md., requests some information on the mode of expelling the pests named above from places where they have obtained a footing. Clothes presses that are perfectly close, may be fumigated with sulphur, which will destroy all insects, if thoroughly performed. Tobacco and camphor will prevent injury to clothes, if quantities are placed in contact with clothing of any kind in their place of deposit; unwashed wool is never attacked by the moth larvæ; and it has been used successfully to effect their expulsion, by placing locks of wool as sheared from the sheep, in places infested by them; still when once the moth has established itself, it is not expelled in ordinary cases, without much care and difficulty.

The cockroach may be destroyed by mixing with Indian meal about one-third its quantity of white or red lead, and moistening the mixture with molasses so as to make it moderately adhesive; this being placed in places infested with them will be greedily devoured; and by repeating the dose, the whole will be destroyed. Other poisons, such as arsenic, or sublimate, may be used mixed with molasses, but where lead, or any other poison is used, great care is required to prevent danger or death from its being eaten by others than those for which it was intended.

Chess from Rye.

George Muntz, Esq. of Butler Co. Pa., has forwarded us an account of an instance on his farm, of the transmutation of rye into chess:—

> "He harvested from a field a crop of wheat 'clear of cheat.' turned in the stubble in August, and about the middle of September commenced sowing with rye, plowing it in. When all was sown but two acres, a heavy rain lasting some hours came on, and it was three or four days before the field was fit to commence working upon, and the sowing and plowing was recommenced after that time while the ground was still wet and cloggy. The rye first sown, gave a fine crop of good grain; that sown after the rain, as fine a crop of chess, with but little rye mixed with it. It was observed that the chess was in the greatest quantity in the part sown first after the rain, and decreased as the ground became drier before sowing."

We give the foregoing, not because we deem the conversion supposed, possible, as our readers are well aware, but because the facts stated may be of use in cautioning farmers against sowing lands with any grain, and particularly the less hardy kinds, while the soil is in a wet and unfit condition. We have repeatedly known failures both of grain and corn from this cause, and where the regular crop fails, weeds are sure to supply the place.

Turning Cattle into the Highway.

> "Messrs. Editors—I sat a few days since in my old arm chair perusing the back volumes of the Cultivator, when I came across the farm account of Mr. Asa Carter of Jefferson Co. N. Y. I perused it with a good degree of interest and good feeling till I came to where he says he pastured his young cattle on the commons, when suddenly I felt my indignation getting the better of my good feeling, and I turned away from it with a feeling not unlike contempt, and thinking that in that respect at least, I could find a better teacher than Mr. Carter. It appears to me the man must lack one of the most essential elements of a good neighbor, who will turn his cattle into the road to filch their living from his kind neighbors. Cattle thus turned out, become unruly, and are every where except where they should be; and are kicked, stoned and dogged by all, unless they are endowed with an uncommon share of patience. We have to put ourselves in battle array, and daily examine our fences by the wayside, or wo be to our corn fields. Who would choose that man for a neighbor who makes it a practice to keep a dozen head of cattle in the road, and half as many half-starved, lantern-jawed, piked-nose, saw-horse breed of hogs that will go through a fence any where, where they can put their nose through? The way to have good neighbors, is to keep no more cattle and hogs than you can keep well, and keep them at home; keep good line fences, and your cattle out of the commons, and my word for it you will have a good neighborhood. An Enemy to Litigation."

[We have not had the pleasure of seeing Mr. Carter's farm, but we are aware that in many parts of the western and northern counties where there are large quantities of unenclosed lands, large stocks of cattle run at large, finding in the woods abundance of pasturage, and it is possible Mr. Carter's "commons" may be of that kind, and our correspondent's "indignation" so far misplaced. The remarks are, however, applicable, as the almanac makers say, to more latitudes than that of Jefferson County; and the evil complained of, is one that should be abated wherever it exists.]

Lucerne.

> "Messrs. Eidtors—Were I a writing character, I would tell you of a piece of lucerne planted the first week in September, has been cut once, and is now ready to cut again, to feed my milch cows. It is the first attempt at field culture in this county. A few individuals have had their beds in the garden edged with it, but no one has ventured to try it in lots. Mine has turned out so well, that I think many will give it a trial next year. We should be pleased to have some directions in your paper about saving the seed. M. Rounsaville."
>
> *Lexington, N. C. June* 2, 1841.

A deep dry soil, one containing considerable sand, is found best for the lucerne. In France, where it is cultivated extensively, the two great requisites are "a rich and dry soil." It may be sown in drills or broadcast, but the first is preferred, as it gives an opportunity for hoeing. In Kent, Great Britain, where it is much used for soiling milch cows, it is sown broadcast, and as the roots run deep, after the first year it is manured and cultivated with the harrow, which stirs the soil without injury to the plant. The seed is saved in the same way as clover seed, but is separated from the chaff either by hand, or in mills, much more easily. It is an invaluable plant in soils and climates adapted to its culture, and if experience should show it to succeed in the south, its acquisition for the feeding of cattle, where the common grasses are rarely found, will be an important one.

South Downs and Berkshires.

C. C. Hamilton, Esq. of Cornwallis, Kings Co. Nova Scotia, asks us if we can "inform him through the medium of the Cultivator, the price of pure South Down bucks delivered, at the city of New-York; and if there are any other late improved breeds of sheep imported suitable for the climate of Nova Scotia: also, the price of Berkshire hogs, delivered as above." South Down bucks may be had at from $25 to $50, and Berkshire pigs, 8 weeks old, at $20 per pair.

We do not know of any breed of sheep, which we think would be more likely to prove successful in Nova Scotia, than the South Down, or more intrinsically valuable. They are hardy, make fine mutton, and yield wool fine enough for any ordinary purpose, and are a well formed, fine looking animal.

Mr. Hamilton informs us, that the Provincial Legislature of Nova Scotia, at its last session, formed a Central Agricultural Board, and handsomely endowed it; besides giving £75 to each county, to be expended by the agricultural societies. The friends of agriculture in Nova Scotia have made an excellent beginning, and they are fully justified in expecting many important results in aid of that great source of national wealth from the expenditure.

Straw Cutter for Horse Power.

Jacob Glatz, P. M. Marietta, Pa. inquires "whether there is such a thing as a Straw Cutter that goes by horse power?" We know of none built expressly for this purpose, but there are thousands about the country worked by horse power, and nearly all the approved kinds may be worked in this way. The man who has a horse power, can easily make it available for sawing his wood, thrashing his grain, cutting his straw, &c. Green's or Willis' Straw Cutters, can be easily adapted by any mechanic to horse power.

Corn—Protection against Drouth.

A correspondent, "Pearl," in Hinds Co. Mississippi, after entering a demurrer to the opinion expressed by Mr. Garnett and ourselves, in the first number of the current volume, that "frequent stirring the earth is the best protection against drouth," goes on to say:

> "In the driest year I ever saw a crop made, (1832,) I saw corn in a field where a part was plowed, and a part a plow had never been in, only a row dividing; and the plowed part was so dry that every step you took the dust would rise, and your shoe be covered with the light soil. In this part the corn was badly fired, or rather the stems were dry some three or four inches high, while the others were green to the earth. I pointed out this field to an old planter who believed in frequent plowing to cause moisture to rise, and he acknowledged he could not account for it. Again, in the same year I cultivated a piece of cotton with the sweep and harrow, another piece as usual, with the plow, only a path through the field dividing; and this same individual admitted without hesitation, the first piece stood the drouth the best. But with all this, I say use the plow occasionally, not to prevent the drouth, for when very dry, it appears to me the more the damp earth is exposed, and the dry earth turned in, the more the crop must suffer; and the more the roots are disturbed, the less nutriment the plant must receive. I have seen the finest kind of corn growing by the side of a large log where there was no chance of plowing near on one side, and the other not at all, and I believe the shade of the log prevented the moisture from evaporating; then there is no absolute necessity of plowing for moisture, and will not the dry earth on the surface afford more shade to the earth than by turning it under? I am decidedly in favor of leaving the earth as near level as possible, and keeping it light and mellow, but cannot see how stirring the earth will make moisture rise."

Notwithstanding the statements of our correspondent, we must still be permitted to believe that there is no so certain a method of preventing plants in all ordinary soils from suffering with drouth, as by frequently stirring the earth. We do not recollect that we have assigned as a reason for this process, that it made the "moisture rise," though this is literally true; since, in common soils, the capillary attraction is always proportioned to the fineness of the particles, as every farmer and gardener is aware. We believe in stirring the soil in drouth, because our experience has demonstrated the utility of such a course; while we admit we have never cultivated a very light sandy one, which may possibly be affected as described by our correspondent. In seasons of great drouth and heat, however, we have found that heaping the hot dry earth around plants aggravated the evil. The atmosphere contains moisture at all times, and this is yielded to frequently stirred lands in much greater proportions than to that not moved. This is easily demonstrated by placing a quantity of earth on plates, and expelling the moisture at a high temperature, then pressing one close and compact and leaving the other light and porous, and exposing both to the action of the atmosphere during the night, when it will be found the porous mass has imbibed more than the other. There is another reason why frequently stirred soils have more moisture than those not stirred. All soils contain more or less decomposing vegetable or animal matter. In the conversion of the carbon of this matter into carbonic gas, in which state it becomes food for plants, the oxygen of the air effecting this change is absorbed and the hydrogen set free, and this entering into a new combination, water is the result. This, the following extract from a communication by Dr. Dana, than whom there are few better authorities, will clearly show: "The amount of water proceeding from this source is truly astonishing. It has been found by actual experiment (see Nicholson's Journal,) equal, per hour, from an acre of fresh plowed sward, to 950 lbs. While the undisturbed ground gave not a drop;" and Liebig, in his late great work, admits in effect, the same result. If the effect observed in the vicinity of the log is attributable to the cause assigned by our correspondent, would it not be advisable to have in dry weather, corn shaded with a luxuriant growth of weeds, (for which indeed, some have contended,) to prevent its receiving injury from evaporation?

Carbonic Gas in Wells.—J. S. Slatter, of Glenville, Alabama, has furnished us an interesting account of the expulsion of this gas from a well. It was necessary to dig a well at a particular point, and after sinking it about 20 feet, a rock was struck which it was necessary to penetrate, but the well filled so rapidly with carbonic gas, that the laborers found it impossible to work, and were once or twice drawn up so exhausted that they were with difficulty restored. Throwing water into the well was tried with little benefit; when it occurred to the owner of the farm, to try forcing a current of air into the well. A blacksmith's bellows was brought, a leather tube fitted to its nose long enough to reach the bottom of the well, and by briskly plying the bellows the deleterious air was quickly expelled, the rock perforated, and excellent water obtained.

National Agricultural Society.

We have several communications on this subject, which our limits compel us to abridge. The first is from W. Penn Kinzer, Spring Lawn Farm, Pequea, Pa. Speaking of the advantages of a National Society of Agriculture, he says:

"Information with regard to domestic animals, crops, &c. would not only become common stock by publication, but if annual conventions be held early in autumn, they would at once determine the real state of the crops throughout the Union, by concentrating a store of correct information from the proper source; which at present, is mere *hearsay:* then, of course, the question whether the general stock of bread stuffs will be short for home consumption, is at once ascertained, or if there be a small or large surplus for exportation, farmers will be equally interested in having correct and early information. They will not be held in suspense, whether to sell or store, as at present. The great national question too, in relation to a protective tariff on imposts, which is now producing a contrariety of opinion, will thus be met, by a tribunal which will not and dare not be disregarded. A question, it need not be said, vitally connected with the present paralysis of American industry. Farmers then will look with an eye single to the elevation of the character and standing of the cultivators of the American soil, and select from their number, suitable representatives, to guard their interests, to the exclusion of the mere pettifogger, to whose political appetite they have too long pandered; who, if he *were* desirous, would be ignorant of their interests, yet elevated above their sympathies, he can use the benefit of their suffrages and labor, and, withal, deny to them their just reward. Manufacturers would be equally concerned, their interests being happily blended with successful agriculture. But above all, annual national conventions, composed of the industrious productive classes, from all the states of the Union, states speaking through their delegates, where political and partizan spirit may look in, but dare not enter, where the political hatchet is buried, and all disorganizing and exciting subjects merged into one common whole, for the good of the whole. While other conventions are held, too often engendering sectional jealousies, calculated in the end to sever and divide this great Union, here one will be presented, which in its general bearing, seeks only the public good, cannot fail to do much to cement and unite and strengthen our whole bond of union. In times like these, when we find the nation threatened by foreign invasion without, and by agitating vexed questions, producing civil commotion within, what would be more gratifying to the patriot heart, than to witness a convention composed of delegates, however incongruous in political matters, yet representing the great interest of the productive classes of the nation, altogether forming one harmonious whole, comprising four-fifths, perhaps five-sixths of our population, just imagine, what a controling political power may be wielded in support of the producing portion of our population. A high honor to be a delegate in such a body, to enjoy the 'feast of pleasure and the flow of soul.'"

Mr. Kinzer concludes as follows:

"On his promised route to Washington city in August, will our common friend, S. Robinson, anticipate for himself, or do himself the pleasure of a ride on our Pennsylvania line of improvements, from Pittsburg to Philadelphia, thence by the Baltimore railway to Washington? This route will afford, in addition to its expedition, scenery for the Agriculturist, which I think he will be unwilling to forego. When he shall arrive within fifty miles of Philadelphia, at a point on the railway called the Gap, *we* invite a halt, thence he will be directed a short walk to our *whereabouts.* I need not say, he may here depend on a cordial and hearty welcome. I would just suggest, that he prepare himself to deliver an occasional agricultural lecture while on his tour. May I hear from him?"

"A Young Farmer," of Woodlawn, N. C., says:

"No one, who will for a moment look at the condition of the farming interests of the country, can doubt the necessity of such an institution. This we readily admit. Then why admit the necessity, and doubt the expediency? It seems to me that all that is necessary to make it expedient, is for the farming community to see and feel that such a scheme is necessary. Then why should we hesitate longer? Recollect that the farmers of our country are a diffident and unassuming people. If a few such men as Mr. Robinson and Garnett would take the lead, the great mass of the farmers would soon follow. I am anxious to see something done for the cause of agriculture. But I have no hope of seeing it, unless we can unite, and do it ourselves. We need expect no aid from legislative bodies, unless we first make it a popular measure. Party spirit, like Aaron's rod, seems to have swallowed up their every faculty. Let us then, like a band of brothers, unite on some plan to concentrate our strength. If we succeed in this, we *can* make our power felt and respected in any portion of our commonwealth."

The next we give, is from Mr. A. G. Alsworth, Canton, Mississippi:

"But how true it is, that many of the cultivators of the soil, for want of union and information, have been left for ages to grope their way through ignorance and prejudices. If I am not very much mistaken in the signs of the times, there is a great change now going on in this country. Just at a glance of our agricultural census, what wonders are told of our resources. Now if the cultivation of the soil can be made to appear both honorable and profitable, how many more will be ready to enlist in the cause. We have a great many gentlemen of the bar, bankers, brokers, and others, who will soon have to obtain their subsistence by some other means than their profession, and I doubt not, many of them, with practical knowledge upon the subject, would make good farmers. Now, how is this object, "the elevation of the character and standing of the cultivators of the American soil," to be attained? I think it is to be done, first, by farmers associating themselves together, forming agricultural societies, and publishing and extensively circulating agricultural journals. In this way, every farmer, it matters not how limited his education, if he will take and read them, can obtain the experience, if he will not experiment himself, of those who are endeavoring to promote the interests of agriculture. Thus all are brought almost immediately to the best manner of knowing, obtaining, and promoting their interests. And in the second place, by establishing agricultural schools, to combine theory and the sciences with practice."

A correspondent who signs himself "Northern New-York," from Ballston, takes another view of the matter. He says:

"I have strong doubts of the practicability, and consequently of the usefulness of such a Society, owing to the great extent of our country and the expense of attending such a convention. Our agricultural community is composed of thousands of intelligent, though comparatively small farmers, who never could afford to attend a National Convention; a farmer of a capital of from $2,000 to $5,000, consisting in from 50 to 150 acres of land, it being a fact well known, that a very large proportion of the farmers of the northern and eastern States are of this description, and never would attend such a convention. Again, any result they might arrive at when met, by a majority of votes, touching any disputed point in agricultural science, would scarcely command universal assent. Wheat turning to chess, or chess to wheat, or any mooted case, will never satisfactorily be settled by a vote in convention. It would also have a tendency to create a kind of agricultural aristocracy in which none but the rich could participate. Better lay out the money spent in traveling to distant conventions, in diffusing throughout the length and breadth of this Republic, agricultural papers, containing the investigations, experiments and results of practical and scientific farmers; (on this point, I was struck with the very sound common sense remarks of your correspondent, F. Burt of Ohio, in your July number of the Cultivator,) so that the man who cultivates his ten acres, as well as he that cultivates his hundreds or thousands, can, when he comes in from his garden or field, seat himself on his summer stoop, and in the shade of his shrubbery, read his Cultivator or some other agricultural periodical, costing him one dollar a year, and learn the views, experiments, and practical results of his brother farmers throughout the country, and obtain thereby more knowledge, (book knowledge, if you please,) than by performing a journey at the expense of one hundred dollars to attend an agricultural convention at Washington or Baltimore. If you wish to improve the mind or elevate the standard of the *mass* of the farming community, the means to effect it must be brought within their circumstances."

The "Skinning System," &c.

Mr. J. R. Moser, of Flint Rock, Lincoln co. N. C. gives the following account of the "skinning system," as practiced in that part of the United States:

"The '*skinning system*' is the only system that is generally in vogue among us, and that is practiced by some (excuse the expression) on an improved plan; for they plant their fields year after year in corn, and use no implement in its culture except a wretched fixture called a shovel-plow, with which they scrape their land, or perhaps at times the addition of a hoe. I said they *scrape* their land, that is, they scratch a furrow a few inches deep; then another so far from the first, that it may just cover the space with loose earth, so as to show a plowed surface. This they call 'breaking up their ground;' some do not even 'break up their ground,' but only mark it with their shovel-plows, so as to be enabled to deposit their seed in rows. The after culture is performed pretty much in the same manner as the breaking up. This is about all the culture their ground gets till the next season, when the same process is again gone through. This may give you some idea of our *improved* system of *skinning*. This description, however, does not apply to all our farmers, for there are some who use better implements, cultivate their farms in a better manner, are endeavoring to introduce improvements, and are setting a praiseworthy example. Still it is a source of regret, that most of our farmers are opposed to the improvements in modern farming. They say the plans laid down in the Cultivator, and other publications, will answer well for the wealthy, but for themselves, they are not able to follow them for the want of means."

We hope Mr. Moser will succeed in his intention of carrying out a rotation of crops, as a proof such a system is adapted to the south, and in any country where wheat, corn, beets, clover, &c. can be grown, we are confident there can be no insurmountable difficulties. Animals to furnish manures; lucerne, clover, beets, corn, &c. for feeding them, would, in our opinion, be far more advantageous to the south than present systems, and speedily convince the planter that the great corn crops of the middle and northern States are no 'exaggeration.' Mr. M.'s suggestions respecting Botany and Entomology shall receive consideration.

Transmutation.—Mr. N. Sutherland, a staunch believer in the conversion of wheat into chess, gives the following methods by which that conversion may be effected. As the most of them are not difficult of trial, perhaps some may have the curiosity to prove them; and by performing the feat, entitle themselves to Mr. Ruffin's premium:

"Wheat can be transmuted into chess by taking a few heads at harvest, and laying them on the ground to grow where they will not be disturbed, the land to be rather poor; or some heads may be taken that are scattered at harvest in the stubbles and grow, taking them up late in the fall, and setting them in a wheat-field; or some wheat may be put in a dish, and wet and dried as it is sprouting several times, and it will come up chess; or it may be fed or mowed off when eight or nine inches high; any of these methods will change wheat to chess. There is another cause that is frequently operative, and that is the frequent freezing and thawing of the surface in moist lands, which, by drawing the roots partly out of the ground, so injures the plant that it cannot produce wheat."

Cracked ears in Pigs.—Mr. Sutherland states the cause of this complaint in swine, to be exposure to the heat of the sun when the skin is tender, and feeding exclusively on dry food. The preventive is to keep the pig out of the heat of the sun, and feed the sows and pigs with ground food mixed with boiled potatoes, or once or twice a week a mess of raw ones. The cure is effected by making some ley, by putting ashes in water and stirring them up, let them settle and drain off, and then with a watering pot sprinkle it over their ears, or over the whole body if scurfy; or ashes may be scattered over them while it is raining.

Swill to Sows.—"Do not feed your sows much swill or slop in a day or two after their littering. I have a man on my place, who gave his sow a pail of swill soon after she had pigged, and she died in an hour; and I have known several instances in which from such feeding, sows have died in the course of the day."

N. Sutherland.

Italian Spring Wheat.—J. Edwards, of Virgil, Cortland Co., states the result of a successful experiment in the culture of this grain. He went 70 miles and procured 20 bushels of Italian wheat, which, by thorough cleaning was reduced to 16. This was sown in the spring of 1839, and produced 38 bushels to the acre, or 468 bushels. The land was plowed only once, but well pulverized with the harrow and cultivator, and ten loads of leached ashes applied to the acre. This wheat was sold for seed at two dollars per bushel. Mr. Edwards has about 115 acres of cleared land, and from the tilled part of this, (about one-half,) he has in the last four years, raised more than six thousand bushels of grain.

Poison of Snakes.—The editor of the Tennessee 'Agriculturist,' in noticing the discovery of M. Boucherie, in the coloring and the preservation of timber by impregnating the tree through the circulation of the sap with metallic oxides, (an account of which may be found in the June number of the Cultivator,) makes the following remarks:—"However, there are other phenomena full as mysterious. It is true, there is a kind of serpent called the 'horned-snake,' whose poison will so circulate through a tree it strikes, as to wilt the leaves in less than an hour, and finally to kill the stately oak. We have ourselves seen the experiment tried, of letting a *rattle-snake* strike a pole when in full sap, six or eight feet long, and in a few seconds the poison would ascend from the base end, and make its appearance at the top of the pole." A friend requests us to inquire, in what part of the country the "horned-snake" alluded to can be found; or in what authentic work, a description of it exists?

Great Sale of Improved Stock.

Wm. Neff, Esq. advertises in the Western papers, that he will offer his extensive herd of Improved Short Horn Durhams, at public sale, on the 6th and 7th days of September next, at his farm near Cheviot, seven miles from Cincinnati. The catalogue embraces fifty-two animals, all pure blood, and nine of which were imported. For a notice of this stock, see "Letters from the West," in the July Cultivator. It includes, as we are assured from other sources, some of the best blood and finest Durhams to be found in the country. There will be sold at the same time, a large number of fine hogs of the Grazier and Berkshire breeds, and a number of South Down, Bakewell, and Cotswold Sheep. One and two years credit will be given on the sales.

Notices to Correspondents, &c.

Communications have been received, since our last, from A Subscriber, W. R. Peck, Commentator, J. M. Garnett, A. G. Alsworth, W. Penn Kinzer, J. H. Wilson, J. L. Bowman, C. N. Bement, W. D. Taylor, D. L., Wm. J. Wright, H. S. R., L. Physick, W. H. Sotham, Wm. Cother, An Onon. Farmer, J. M. Weeks, A young Farmer, S. Moore, P., Northern New-York, One always willing to Learn, D. H. Cadwallader, Geo. Woodfire, A. Walsh, M. Quimby, H. W. M., B. W. Brit, Solon Robinson.

☞ Some notices of New Works, Answers to Inquiries, Communications, &c. intended for this number, are unavoidably deferred till next month.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Cattle Show and Fair of the State Ag. Society.

We publish to-day the proceedings of the Executive Committee of the State Agricultural Society, at their meeting on the 18th ult.. to complete their arrangements for the Show and Fair of the 29th and 30th of the present month; the Rules adopted for the government of the exhibition; and the names of the gentlemen constituting the several committees appointed for the examination of articles offered, and the awarding of premiums.

The preliminary arrangements having thus been completed, it now remains for the friends of Agriculture, for the farmers, the mechanics, and all who are anxious for the advancement of agricultural science and practice, to come forward at once and give the Society and its objects their countenance and effectual support. There is the wealth, there is the ability, and we hope the inclination will not not be found wanting, to make the State Society to this country what the Highland Society is to Scotland, the patron and the example of all the minor associations. An examination of the names of the gentlemen composing the several committees, will show that a sufficient guarantee is given for the impartial discharge of the duties assigned; and we may be permitted to express the hope, that all so named, will be found promptly, efficiently and cheerfully, to perform those duties. It is presumed from the interest manifested, that the Show and Fair will be one hitherto unequaled in the United States, and that the collection of animals, implements, &c. will be of the most satisfactory description.

The Show and Fair of the Onondaga county Agricultural Society will be held at the same time and place, and we may expect that the farmers of that rich and populous county, will, by their show of fine animals, vegetable production, agricultural implements, &c. add much to the interst and pleasure of the two days.

New-York State Agricultural Society.

Cattle Show and Fair at Syracuse.

At a meeting of the Executive Committee of the N. Y. State Agricultural Society, held at Syracuse, Aug. 18, 1841—present, Messrs. Nott, Johnson (of Oneida,) Gaylord, Randall, and Tucker,—the following Viewing Committees were appointed to award the Premiums offered by the Society at their Cattle Show and Fair to be held at Syracuse on the 29th and 30th days of September:

ON CATTLE.

Class I—Bulls—*of any breed, 3 years old and upwards.*
Henry S. Randall, Cortland,
A. B. Allen, Erie,
C. N. Bement, Albany,
William Garbutt, Monroe,
J. McDonald McIntyre, Albany.

Classes II and III—Bulls—*of any breed, under 3 years old.*
Francis Rotch, Otsego,
Henry Rhoades, Oneida,
J. C. Hathaway, Ontario,
George Vail, Rensselaer,
George J. Pumpelly, Tioga.

Class IV—Cows—*of any breed, 3 years old and upwards.*
Anthony Van Bergen, Greene,
E. P. Prentice, Albany,
Thomas Hollis, Otsego,
Ira Hitchcock, Oneida,
Hiram Bostwick, Chemung.

Classes V and VI—Heifers—*any improved breed, under 3 years.*
Lewis F. Allen, Erie,
Silas Gaylord, Onondaga,
Thomas Weddle, Monroe,
John Gaskin, Otsego,
Jonah Davis, Chemung.

Class VII—Grade Cows.
Garret Sackett, Seneca,
C. S. Button, Wayne,
M. Bullock, Albany,
Thomas Goodsell, Oneida,
William Ottley, Ontario.

Class VIII—Grade Heifers.
S. W. Brace, Onondaga,
John M. Sherwood, Cayuga.
William Alexander, Otsego,
D. D. Campbell, Schenectady.
Rufus Boies, Cortland.

Class IX—Cows—*native breeds.*
Myron Adams, Ontario,
Thomas S. Meacham, Oswego,
Aaron Barns, Oneida,
——— Crane, Herkimer,
Tyler Fountain, Westchester.

ON HORSES.
William T. Porter, New-York,
Lewis F. Allen, Erie,
William Bartlett, Cortland,
John J. Viele, Rensselaer,
William B. Ludlow, Columbia.

ON SHEEP—Class I—*Long Wooled.*
John P. Beekman, Columbia.
John Snooks, Onondaga,
Thomas Jackson, Otsego,
William C. Cornell, Monroe,
John Holmes, Washington.

Class II—*Middle Wooled.*
A. B. Allen, Erie,
Thomas Dunn, Albany,
L. D. Clift, Putnam,
Howell Gardiner, Saratoga.
William Musson, Otsego.

Class III—*Fine Wooled.*
William Randall, Cortland,
Henry D. Grove, Rensselaer,
L. A. Morrell, Tompkins,
J. W. Kneevels, Dutchess,
Robert C. Nicholas, Ontario.

ON SWINE.
John Randall, Chenango,
Ezra Cornell, Tompkins,
Nelson Washburn, Otsego,
Elon Comstock, Oneida,
William Salisbury, Greene.

ON PLOWS.
Jesse R. Burden, Rensselaer,
Anthony Van Bergen, Greene,
Jeremiah Johnson, Kings,
John J. Thomas, Ontario,
Rawson Harmon, Jr. Monroe,
Humphrey Howland, Cayuga,
Henry Stephens, Cortland,
Elias Phinney, Massachusetts,
Isaac Hill, New-Hampshire,
S. W. Jewett, Vermont.

ON CULTIVATORS, DRILL BARROWS AND HARROWS.
James McCall, Allegany,
L. C. Ball, Rensselaer,
Enoch Marks, Onondaga,
George Walsworth, Oneida,
Arvin Rice, Oswego.

ON THRASHING MACHINES.
L. B. Langworthy, Monroe,
Orville Hungerford, Jefferson,
G. W. Patterson, Livingston,
Lauren Beach, Onondaga,
Micah Brooks, Livingston.

ON HORSE RAKES AND STRAW CUTTERS.
Nicoll Halsey, Tompkins,
Jabez Burrows, Chautauque,
John B. Dill, Cayuga,
Hiram Hopkins, Cortland,
Chester Moses, Skaneateles.

ON FARM IMPLEMENTS—*not enumerated above.*
William Parsons, Niagara,
Samuel Hecox, Wayne,
Jesse Ives, Cortland,
Joseph Hastings, Rensselaer,
Ira Hopkins, Cayuga.

ON SAMPLES OF GRAIN.
Pomeroy Jones, Oneida,
George S. Taylor, Cortland,
Roswell Curtis, Cayuga,
Warner Abbott, Onondaga,
E. S. Beach, Monroe.

ON SAMPLES OF ROOTS.
Heman Chapin, Ontario,
S. P. Rhoades, Onondaga,
Lewis Eames, Oneida,
J. F. Osborn, Cayuga,
S. B. Burchard, Madison.

ON HORTICUTURAL PRODUCTS.
David Thomas, Cayuga,
Alexander Walsh, Rensselaer,
Grant Thorburn, Queens,
E. Holbrook, Dutchess,
Oliver Phelps, Ontario.

COMMITTEE OF ARRANGEMENTS.

State Society.
Henry S. Randall,
Harvey Baldwin,
Luther Tucker,
Wiliam Fuller,
M. B. Bateham.

Onondaga Co. Society.
P. N. Rust,
Jos. Savage,
M. D. Burnett,
E. F. Wallace,
J. M. Ellis.

The following gentlemen were appointed a committee to solicit members and funds for the Society at Syracuse:

M. D. Burnett, Esq.
H. Baldwin, Esq.
J. R. Lawrence, Esq.
B. D. Noxon,
P. N. Rust,
J. Sanford.

Additional Premiums.

TO BREEDERS.

F. Rotch, Esq. having given the Society $30 for that purpose, Premiums will be awarded to Breeders as follows:

To the breeder of the best thorough bred Bull,	$10 00
To the breeder of the best thorough bred Cow,	$10 00
To the breeder of the best thorough bred Heifer,	$10 00

FOR WORKING OXEN.

Willis Gaylord, Esq. having contributed $20, for that purpose, a premium will be given

For the best yoke of working Oxen,	$12 00
For the 2d best do. do. do.	8 00

In awarding this Premium, particular reference will be had to the close matching, *excellent training*, and docility of the animals, as well as to their general good appearance. Committee:—Abel Baldwin, David Bundy and Dan Hibbard.

FAT CATTLE.

Mr. Rust offers a sweepstakes, twenty dollars entry, for the best yoke of fat cattle. Committee:—B. P. Johnson, B. D. Noxon and M. D. Burnett.

☞ A Plowing Match, under the direction of the Onondaga County Agricultural Society, will take place immediately after the Trial of Plows, on the second day of the Fair.

Regulations for the Fair.

I. A Committee of Arrangements, consisting of five members, will in conjunction with a committee consisting of the same number, appointed by the Onondaga county Agricultural Society, exercise a general supervision and control on the day of the Fair.

II. Clerks shall be appointed by the committee of arrangements, who shall occupy a convenient stand near the place of exhibition, who shall give to every one entering animals, cards, with the number of the pens which said animals shall occupy, and the premiums for which said animals are entered, written thereon—and such cards shall be conspicuously placed upon the pens containing the animals. A list of all such entries shall be kept by said clerks.

III. No animals shall be removed from the pens until the close of each day's exibition without permission of a member of the Committee of Arrangements.

IV. Applicants for premiums on animals will be prepared with written statements, accurately detailing the age and method of feeding such animals; and those drawing premiums may be required to make oath to the correctness of said statements. Such written statements will be delivered to the clerks on entering the animals.

V. All animals will be examined and premiums awarded on the first day of the Fair, and the viewing committees will commence their inspection at 10 o'clock, A. M. No spectators will be admitted to the yard, until after the viewing committees have performed their duties.

VI. Implements, products, &c. will be examined on the second day of the Fair. Implements, particularly plows, will be put to a full and accurate test.

VII. Any inhabitant of the State will be suffered to compete for premiums on animals and products, and any inhabitant of the United States for premiums on implements, on the payment of one dollar, if not already members of the Society.

VIII. Viewing Committees shall in all cases have power to examine applicants for pemiums personally, when more particular or satisfactory information is desired.

IX. No premium shall be awarded without a competition, unless the viewing committee shall deem the animal or product or implement exhibited, highly meritorious—nor in cases where there is competition, unless they shall consider such animal, product or implement worthy of the same.

X. All reports of viewing committees shall be made in writing and signed by the members assenting thereto.

XI. All persons intending to compete for the premiums on animals, should give notice to that effect on or before the 20th Sept. to Luther Tucker, Albany; H. S. Randall, Cortland Village; M. B. Bateham, Rochester, or P. N. Rust, Syracuse—in order that the necessary accommodations may be made for them. It is desirable also that those who intend to compete for the prizes on Implements should give notice as above by the 20th September.

☞ Owners of stock throughout the State, and manufacturers and patentees of agricultural and horticultural implements, throughout the United States, are invited to present their animals and implements. Samples of farm and garden products, silk, cocoons, domestic manufactures, &c. &c., are also solicited.

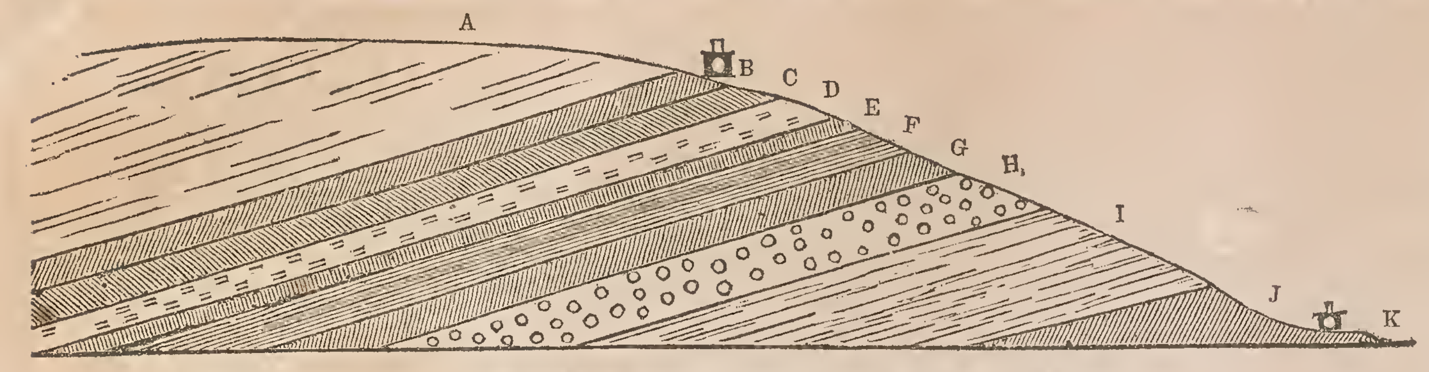
☞ Discretionary Premiums will be awarded on articles not enumerated in the Prize List.

☞ The Society will dine at Rust's, at 3 o'clock, P. M. on each day of the Fair.

☞ The officers of the Society and the Committee of Arrangements are requested to meet at the Syracuse House on Tuesday evening, Sept. 28.

Illinois Swamp Grass.

We have received from G. Churchill, Esq. a specimen of the swamp prairie grass of Illinois. It is a good looking grass, some five feet in height, and appears to be an undescribed species of the *Poa* family. What effect cultivation would have upon it, or whether it would bear competition with the cultivated grasses, such as Timothy, Herdsgrass or the Clovers, remains to be seen. We are inclined to the opinion that most, if not all, of the wild grasses must give way to what are called the artificial ones. It is possible, however, that among the many varieties found in the broad west, some may be found of superior value, and which will take a high rank among the artificial or cultivated grasses.



Geological Section, illustrative of the Onondaga Saliferous Group.—[Fig. 70.]

REFERENCES.
A.—Marcellus shales overlying the saliferous group.
B.—Seneca or upper limestone of the same group; Onon. Hill.
C.—Cornitiferous limestone.
D.—Crinoidal limetone; Split Rock quarries
E.—Oriskany sandstone.
F.—Waterlimes.
G.—Magnesian limestones.
H.—Gypseous formation, and gypsum beds.
I.—Gypseous shales.
J.—Red marl and shales; Geddes.
K.—Level of Onondaga Lake.

Mineral Salt—Onondaga Salines.

THE last number of Prof. Silliman's Journal announces that a regular mineral salt formation, or rock salt, has for the first time been discovered in the United States proper. This discovery has been made in Virginia, about 18 miles from Abingdon, in the process of boring for brine in the salt works, owned by W. Findley, Esq. The information in the Journal, is given on the authority of the Rev. Mr. Taylor of Abingdon, and Prof. Silliman had received a box of the salt. "The salt forwarded to us," says Prof. S., "is highly crystalline in its structure, and except a red color, (obviously derived from iron,) and occasionally fragments of rocks mixed with it, appears very pure." Mr. Taylor states "that in sinking the well in which the rock salt was found, they penetrated earth and rock about 50 or 60 feet, when they came on plaster, through which they passed from 150 to 170 feet. They then struck upon the the bed of salt, and penetrated it 50 or 60 feet without reaching the salt water; they then abandoned the digging, applied the auger and bored about ten feet more, as he supposes, through the salt, but the mixture of salt water renders it uncertain." The roof then appears to be plaster, but the floor is unknown. Prof. S. remarks that from the fragments intermixed with the salt, it is evident that sandstone and marly clays are among the series perforated.

We consider this a very important announcement, and particularly so to New York, which has such an interest in her invaluable Salines at Onondaga. When Mr. Jefferson urged upon the United States the purchase of Louisiana from Spain, one of his arguments was found in the existence of an immense mountain of rock salt in the contemplated purchase, and which might hereafter be of great value to the country. At the time, the existence of such a mountain was disbelieved by four-fifths of the citizens of the states, and some of the most pungent stanzas in Dr. Caustic's, (alias Fessenden's,) 'Democracy Unveiled,' related to this salt mountain. The expeditions of Pike and Long, however, have set that matter at rest, they having ascertained that some of the head branches of Red River flow for miles in a deep ravine, the banks of which, to a great height, are pure rock salt. And Mr. Parker, who was sent out by the Missionary Society some years since to inquire into the expediency of establishing Missions among the Indians of the Rocky Mountains and the Columbia, found rock salt existed in great quantities on the Salmon river, which flows to the Columbia. The close connection which in Virginia has been found to exist between brine springs and mineral salt, it is reasonable to infer exists elsewhere, and it is to be hoped that the circumstances attending this discovery will, when fully investigated, (we shall wait with impatience for Prof. Rogers', the able Geologist of Virginia, report on the matter,) be such as may serve as a clue to guide those near the other great salines of the country, and in particular those of Onondaga, to a successful exploration for mineral salt.

An examination of the various mines of rock salt found in various parts of the globe, will show that there is a remarkable similarity in their geological position with reference to other rocks. Of this, every one who has paid attention to the subject, who has read the accounts given of the mines of Cardona in Spain, of Wielitzka in Poland, Cheshire in England, and those of the salines in this country, as detailed by Dr. Beck in the Geological Reports, must be aware; and every additional investigation made in Onondaga, of the structure, position and order of the rock series, goes to confirm the belief that mineral salt is abundant in that vicinity.

In France, in the Department of La Meurthe, are brine springs which were known and worked before the christian era. No fossil salt was discovered until the modern practice of boring for strong brine was adopted, when at Vic, in the heart of the saline district, mineral salt was reached, as it now has been in Virginia. The boring at first passed though sandstone and clay, with veins of plaster. At the depth of 160 feet, the clay and plaster which the borer brought up was found to be mixed with grains of rock salt; and at about 200 feet the rock salt in mass was reached. The boring was continued to near 300 feet, passing through more than 60 feet of salt, divided by thin strata of plaster, into three beds.

Dr. Hastings, in his lecture on the salt springs of Worcestershire, including those of Cheshire and Droitwich, gives the following as their geological position, as observed at Droitwich:

> "First a stratum of mold 3 feet deep, then a stratum of red marl 40 feet deep, which abounds with water of a brackish nature. After that a stratum of marl which extends 130 feet. In this marl are no springs of water; it is quite dry, but is penetrated with perpendicular veins of gypsum. At the distance of 130 feet from the commencement of the gypsum in the marl, we come to a strong brine which rushes up to the surface as soon as it is bored into. This brine is 10 feet deep, and the rock salt is under this river of brine."

The salt mines of Weilitzka and Hallen, in Hungary, abound in strata of marl, gypsum, and masses of argillaceous matter; but there can be no need of multiplying instances, since it may safely be asserted that no rock salt has been any where found unaccompanied by plaster, marl, (usually the red marl) and nearly always by limestone. The remarkable accumulation of these materials around the Onondaga Salines, would clearly indicate that the source of the brine springs there, as well as elsewhere, is to be found in beds of mineral salt. The important question to be decided is, in what strata are these beds of rock salt, and where are we to look for them?

The formation called the saliferous group of Onondaga and Cayuga counties, is one of great thickness, being, in the vicinity of the Onondaga Salines, not less than eight hundred or nine hundred feet, embracing the whole mass from the Protean or Rochester limestone group up to the Marcellus shales. Its floor may be considered the mass of shales and limestones that form the rocks at Niagara, Rochester and Fulton, dipping to the south at the rate of some 40 or 50 feet to the mile, while the roof is the shales called the Marcellus shales, and which a little south of the central line of the county are superimposed on the saliferous group. That this group is properly so termed there can be no question, when the strata of which it is composed are compared with those of other countries and places where brines and rock salt are found. Here we have the limestone, the plaster, and the marls, and more than these, brine of greater strength than any hitherto found, unless one of the Virginia wells at Holston, and closely connected with the mineral salt beds now discovered, be an exception. Prof. Rogers, in his Geological Report, mentions the curious fact, that at the Holston wells, furnishing the strongest brine, small granules of rock salt were sometimes thrown up by the water pumped, and urges this as a proof of the near vicinity of salt beds of massive salt, a supposition now shown to be founded on fact.

Beginning at the lower part of the saliferous group, is found the red shale or marl, and this is much the thickest deposit [illegible] the group, being not less than 450 or 500 feet. It underlies the whole level region about Salina. Liverpool is built upon it, the hills about Geddes and Salina show it passing into the gypsum shales, and in passing east or west, the canal at some points is excavated in it. It may be said that there is little probability of finding salt in this strata. The brine derived from it, evidently exists in excavations made in it by currents at some distant period, and which have since been filled by coarse diluvial matter, pebbles, gravel, &c. Of this the numerous borings made around the Onondaga lake, at Liverpool, Salina, Syracuse, and Geddes, affords the most conclusive proof. The great boring made by the State, penetrated the whole mass of this shale, and at the depth of nearly 600 feet, terminated in the limestone of the group below, a result confidently predicted by the State geologists. No salt or brine has been found in it, except where a connection could be made out between the well and the adjacent excavated reservoir of brine. The red marls have derived a new importance since the intimate relation they bear to the production or presence of salt has been discovered. The mud of the salt marshes of the Mediterranean is usually a deep red color, and this color M. Joly has discovered is produced by animalculi, called by him *Monas dunalii*, which exists in the water in incalculable numbers, and perishing give their hue to the mass they so essentially aid in forming. The "Annals and Magazine of Natural History" for Sept. 1840, states that the "same infusoria are found in the argello-calcareous marls of Cardona, beneath the rock salt." Do the red marls which form the basis of the New York salines owe their origin to this cause? The subject is well worthy examination.

Above the shale or marl now described, comes a varied mass of shales of different colors and different degrees of hardness. In the lower layers, red predominates, but above are green, blue and yellow, with several repetitions, before the regular plaster series is reached. Gypsum in thin strata or in fibrous masses occurs in this deposit. In speaking of some wells dug in this deposit, Prof. Vanuxem remarks, Report for 1839, page 252, "All the products thrown out were like those I saw in the digging for salt water in the salt valley near Abingdon, Virginia; and the same products were observed in another well about 55 feet deep on the road to Orville, about one mile east of Syracuse." A reference to Mr. Taylor's description of the strata bored previous to reaching the mineral salt at Abingdon, will show that Prof. V. was correct, also indicate the probable position of the rock salt in the Onondaga country. These two deposits, the red marl and the overlying shales, are remarkable for the almost total absence of fossils, which are so abundant in the series above and below.

In the next deposit in ascending is found not only all the plaster of the district, and of New York, but also "positive evidence that salt has existed in this group in a solid state." In passing from Syracuse to Auburn, by rail road, all that part of the saliferous group above the red marl is passed over, and a most excellent opportunity afforded for examination. In the deposit now under consideration, may be observed in several places, but best near Camillus, masses or beds of crystals in precisely the form assumed by rock salt in crystalization, and formed of clay, giving rise to the impression that these clay masses, now occupy the place of salt crystals previously dissolved out. Dr. Beck in his able Reports has suggested that the form of these crystals may have been produced by the presence of a small quantity of salt once disseminated in the substance of which they are composed. He says—"it is certain this clay is composed of carbonate of lime, silica, alumina, and oxide of iron, but does not contain a trace of common salt."

Above the plaster or gypsum producing strata, is found a thick mass of magnesian limestone. This strata is seen to advantage near Hungerford's plaster beds north of Jamesville, and on the rail road immediately below the great quarry at Split Rock, near Syracuse. Still higher in the series, is the water-limes, the Oriskany sandstone, the beautiful sparry crinoidal limestone of the Onondaga quarries, then a shelly impure limestone, followed by the cornitiferous strata, or limestone filled with nodules of flint, and above these, or the highest of the saliferous group, is the Seneca limestone. These several masses above the gypseous group are of little consequence so far as the salt question is concerned, farther than the proof they furnish of the resemblance of the saline group in Onondaga to the one in Virginia, France, and indeed all those containing mineral salt in all parts of the world.

There are two important questions arising in all discussions as to the probability of rock salt at Onondaga, the first relating to its place in the series, and the second as to points to be selected for boring to discover or test its presence. Since it has been demonstrated that the brine now occupies a reservoir excavated in the red marl, the probability of finding salt by boring into that mass has much lessened. At Cardona, the rock salt lies *on* the red marl, not in it or below. At Vic, the salt was found in contact with and immediately below the gypseous deposit, the mass consisting of beds of salt and thin layers of gypsum interspersed; the underlying rock not ascertained. At Abingdon, where salt has been lately discovered, the salt succeeded the gypseous deposit, and from the surface the rocks penetrated bear a most marked resemblance to those in the saliferous group of New York. As at Vic, the strata underlying the salt is at present unknown, but from the evidence furnished by the mines in Poland, Hungary and Spain, there is little room for doubt that the mineral salt of Vic and Abingdon, will be found to rest on the red marl. Is it too much then to infer that the true place of the mineral salt at the Onondaga and Cayuga salines, is in the mass intervening between the plaster strata, and the red marl, and in which strong proof already exists of its presence. At the mines of Salzbourg in Austria, the salt is in a clay shale, beneath strata of limestone, the whole mass of clay and gypseous shale being a kind of salt rock, but so impure that it requires to be dissolved and crystalized before using. A series of chambers are excavated in this rock, which are filled with water by aqueducts. This water dissolves the salt rock that forms the sides and roof of the chambers, all the extraneous matter settling at the bottom of the chambers, and when the water is fully saturated, it is drawn off through another aqueduct, and crystalized in reservoirs somewhat in the manner in which coarse salt is now made at Salina. May not a similar process of dissolving out the salt strata, be going on at the present time near Salina by the action of natural causes, and thus the phenomena of the 'sinks' or settling of the earth in many places in that vicinity be accounted for? It may be mentioned here that the mass of clay marl from which the salt is dissolved, and which is deposited to the depth of about two feet on the floor of each chamber, is found in a few years to be as fully impregnated with saline materials, as when first acted upon.

If as we suppose, the salt exists in the mass of gypseous shales below the proper gypsum beds, and above the red shales or marls, there can be little question as to the best place forboring. Any one will be convinced of this, who understands the geological position of the strata constituting the saliferous group, and the manner in which their outcrop appears. The proper place for commencing borings in the hope of reaching mineral salt, if the views here presented, are correct would be in the plaster formations and penetrating that and the gypseous shales to the red marl. Into this we think it would be useless to bore, and yet in this, strange as it may seem, all the rock boring hitherto conducted in the vicinity of the Salines, has been made. The grand error we think in the examinations made for mineral salt at Salina, is found in the fact, that the borings have begun where they should have ended; in the upper part of the red shale mass, and hence have never touched the strata in which mineral salt may be expected to exist.

But if the source of the Salina brines is where we have placed it, the question will doubtless arise, why do not salt springs appear along the whole northern outcrop of this strata from Manlius to Seneca Falls, extending as the strata indicated do this distance, instead of only at Cayuga and Salina? The question is a proper one, and will be best answered by a simple reference to the geological character and position of the saliferous strata.

As before stated, the whole strata of the rock formation of Western New York, has a dip to the south of some 40 or 50 feet to the mile, a dip remarkably uniform and constant, and to which the group containing the salt, does not form an exception. Some of these strata are more porous than others, giving above them a dry friable soil; this is particularly the case with the limestone formations. There are others which retain water for a long time, and through which it penetrates with difficulty, if at all. Of this nature is the great mass of red shales in which are the excavated reservoirs of brine. Of its capacity to retain water, the immense swamps scattered over it from Canneseraga to Montezuma, are the best proofs. It is clear then from the inclination of the strata that no springs could be expected at the northern out crop of the strata, as this is invariably the highest part of the formation, so long as the strata had been intersected or cut down through in a perpendicular direction several hundred feet below the line of out crop. This cutting down through the whole mass of the saliferous group has been accomplished at two places, and two places only, viz: Cayuga and Onondaga; and at the latter place the most deeply. In this place the gypsum and gypseous shales have been cut through, and the red shale below excavated to the depth of at least 200 feet, (how much farther not known,) and of course the brine, if its source is in the gypseous shales, would not flow over the rim of the basin to the north, but if we may use the expression, through the cracks in its sides, east and west, at Cayuga and Onondaga. The valleys of the Otisco, Skaneateles and Owasco lakes, where they open to the north upon the Seneca level, have not cut through the gypseous shales to any considerable extent, and not into the ed shale or marl at all; this last has only been done at Onondaga and Cayuga, and hence, at these places only, was brine to be expected.

It would seem then, that the source of the brines of Onondaga and Cayuga is to be sought in a position more elevated than the basins the brines occupy; that it was probable this position is the gypseous shale formation immediately below the gypseous rocks; that the currents of brine find an outlet into the deep excavations of the Onondaga and Cayuga vallies, beneath the masses of diluvial matter with which they are filled, at points farther south than has yet been discovered; that the sulphate of lime or gypsum which forms the walls of the canal or bore through which the brine is discharged into the great Salina spring, may be considered as proof of the source of the brine being in gypsum, and that the capacity of holding it in solution has been weakened of accessions of fresh water in its progress from the fountain head, and hence its deposition; and that boring below the gypseous shales or in the red marl, will not result in the discovery of mineral salt.

Such are the conclusions to which we have arrived from a comparison of the saliferous region and strata of Onondaga with those of other places where mineral salt is known to exist. There is every reason to believe that the brines of the New York Salines have their source in beds of rock or mineral salt; it only remains that their true position should be discovered. The immense importance of the subject to the State and to the country, and particularly to the agriculturist, to whom an abundant supply of this article is indispensable, must be our apology, if one could be needed, for the length to which this paper has extended.

Above we have given a section, (fig. 70) showing the geological position of the rocks constituting the saliferous group, from the red shale at the level of the Onondaga lake to the dip of the upper limestones of the formation below the diluvial of the Onondaga valley, some five or six miles from Syracuse. The relative position and general thickness of the strata only has been aimed at, and that these correspond with the facts any one who will cross the strata from north to south or from Onondaga Hill to Geddes may easily satisfy himself. The rail road from Syracuse to Auburn furnishes also an excellent opportunity for examining the position of this group, commencing as it does on the red shale, and gradually rising to the level of the crinoidal mass at Auburn. The section also includes part of the thick mass of Marcellus shales, which overlies the saliferous group.

Retention of Wool by the Merino.

That the Merino does not shed its wool annually as do the common variety of sheep is well known to every one who has grown the animal; and several instances are on record in this country where very heavy fleeces have been taken from sheep, where the wool was of two years growth. In an English publication of 1839, we find a letter from Lord Western, who has taken much pains to introduce the Merino into that country, and has now a flock of the pure blood animals, as well as a cross of the Merino and the South Down, which he calls the Anglo Merino; in which he describes his experiments in feeding sheep on turneps in yards or stalls, and in which he maintains that a sheep fed in that way does as much better as any other animal does when subjected to the restraining process while feeding. From this letter of Lord Western's, we make the following extract:

> "That sheep do not suffer from confinement, I have abundant proof; the Merino rams fight so furiously that I often tie them up like horses in a stall, and keep them there from season to season, and they are as healthy as any that are out, and sometimes get very fat. As a subject of curious experiment, I kept three pure Merino wethers every year in the wool, three successive seasons, from the time of their being sixteen months old, till they were shorn of their three years' fleece; they were never out of their house, and I never knew them otherwise than healthy and in good fleshy condition when stripped of their three years' fleece. I sent one to Oxford that was exceedingly fat, after having a fleece taken from him that weighed 28 lbs. and I shall exhibit another next month extravagantly fat, with a fleece of 30 lbs. weight."

It may safely be inferred, we think, that the pure merino flocks of any country, do not in general average more than three or three and a half pounds per year, nine or ten pounds in three years; while here are sheep yielding three times that amount, or giving for each year's growth of their wool three times as much wool as an ordinary sheep produces. Is this extraordinary growth of wool depending on the treatment of the sheep in folding and feeding? or is the growth of wool rapid in proportion to the time it remains on the sheep, occasioned by the extraordinary secretion of oily matter produced by the mass of wool it carries and the exclusion of external causes from their usual action on the skin? This subject is worthy the attention of farmers; for if such results could be obtained *in all cases* by stall feeding and retaining the wool, without greatly increasing the expenses of keeping, the clip of wool might be materially augmented without adding to the number of animals kept by the farmer. We very much question, however, whether the sheep could endure our hot summers, and remain healthy, if confined in stalls; unless great pains were taken to secure ventilation, and the best food. Still the fact that the Merino can be made to carry such a fleece is a curious one, as overthrowing the general opinion that all animals moult or shed their hair at least annually, and proving the counteracting influence of art or management over nature.

Fattening Animals.

There are some rules which may be advantageously adopted in feeding animals, which however obvious they may be, are too often passed over, or neglected. Some of these will be specified; and

1st. *The preparation of Food.*—This should be so prepared that its nutritive properties may be all made available to the use of the animal, and not only so, but appropriated with the least possible expenditure of muscular energy. The ox that is obliged to wander over an acre to get the food he should find on two or three square rods—the horse that [illegible] two or three hours eating the coarse food he would swallow in fifteen minutes if the grain was ground, or the hay cut as it should be—the sheep that spends hours in making its way into a turnep, when if it was sliced it would eat it in as many minutes—the pig that eats raw potatoes, or whole corn, when either cooked, could be eaten in one quarter of the time now used, may indeed fatten, but much less rapidly than if their food was given them in a proper manner. All food should be given to a fattening animal in such a state, that as little time and labor as possible, on the part of the animal, shall be required in eating.

2nd. *The food should be in abundance.*—From the time the fattening process commences, until the animal is slaughtered, he should never be without food. Health and appetite are best promoted by change of food rather than by limiting the quantity. The animal that is stuffed and starved by turns, may have streaked meat, but it will be made too slowly for the pleasure or profit of the good farmer.

3rd. *The food should be given regularly.*—This is one of the most essential points in feeding animals. If given irregularly, the animal indeed consumes his food, but he soon acquires a restless disposition, is disturbed at every appearance of his feeder, and is never in that quiet state so necessary to the taking on of fat. It is surprising how readily any animal acquires habits of regularity in feeding, and how soon the influence of this is felt in the improvement of his condition. When at the regular hour, the pig has had his pudding, or the sheep its turneps, they compose themselves to rest, with the consciousness that their digestion is not to be unseasonably disturbed, or their quiet broken by unwonted invitation to eat.

4th. *The animal should not be needlessly intruded upon between the hours of feeding.*—All creatures fatten much faster in the dark than in the light, a fact only to be accounted for by their greater quiet. Some of those creatures that are the most irritable and impatient of restraint while feeding, such as turkeys and geese, are found to take on fat rapidly when confined in dark rooms, and only fed at stated hours by hand. There is no surer proof that a pig is doing well, than to see him eat his meal quickly and then retire to his bed, to sleep or cogitate until the hour of feeding returns. Animals while fattening should never be alarmed, never rapidly driven, never be fed at unseasonable hours, and above all things, never be allowed to want for food.

Blight of the Plum.

It is distressing to witness the rapid advances made by the disease called the black blight, towards the entire destruction of our plum trees. So far as we have been able to observe, the unsightly excrescences that mark the existence and spread of the disease, are much more numerous than ever, and some fruit orchards that have hitherto been mostly or entirely exempt, now show that they have been severely attacked. The cherry is also beginning to suffer, and there is reason to believe that, when the destruction of the plum is effected, that of the cherry will speedily follow, unless prompt and thorough measures are resorted to for arresting the evil; indeed, we can see no reason why every kind of tree, that when wounded, give out juices in the form of gum, should not eventually share the same fate.

There has been some dispute and doubt as to the cause of this disease of the tree, some contending the excrescences were the result of vitiating matters in the soil, a redundancy of juices, &c., while others have maintained that it is the work of an insect, the egg deposited in the wood by the parent, and the larvæ produced from this feeding on the juices and rupturing the bark, gives rise to the escape of matter that should have gone to the promotion of wood, and thus produces the unsightly masses that load the branches, and checking the circulation and vitiating the juices, cause the decay and death of the tree. There can be no doubt that the latter cause assigned, is the correct one. Many have been unable to find the grub in these wounded places, but they probably sought for them at the wrong time. The larvæ does not spend the year in the diseased wood. Like the curculio in the fruit, he only feeds on the juices of the tree until the period of his change into the chrysalis state approaches, when he falls to the ground, which he enters, and undergoes in safety those transformations necessary to enable him to perpetuate the mischief already commenced. We have found the grub in these excrescences most plentifully, from the middle of June to the first of July; some make their appearance earlier and some later, but it is at this time we have found them most easily detected and observed. When the swelling of a branch first shows their presence, the grub is too minute to be readily noticed, and at a later period of the season, he has left the limb for other quarters. Gum appears to be their food, and when that ceases to form, or the elaborated juices have been changed to new wood, the worm is, as is the curculio, ready to leave the tree. On the 29th of June, in a single excrescence cut from a young sprout of plum wood, and from which a large mass of gum had exuded, we observed no less than six larvæ, some of them three-eighths of an inch in length.

Although the name and description of the parent insect is unknown, or not identified, and its habits of course not understood, any farther than can be gained from its works, still enough is known to point out the way of remedying the evil, which, if seasonably and thoroughly adopted, cannot fail of success. It is to cut off the branches infested with the larvæ *while they are in it*, and burn them at once. Some cut off those infected or injured in the spring, or fall, but this does no good whatever; the insect is then safe, and beyond the reach of harm. This has been done because the diseased branches are then more easily seen, than when the foliage is out; but from the time that the foliage puts out, till the middle of July, is the time to examine the tree and save it. Any person can determine whether the grub is present, as during the later stages of his residence in the branch, he is easily seen by the naked eye, and a common hand magnifying glass is all that is necessary at any period. If seen in a plum or cherry, the grub might be mistaken by the inexperienced for the larvæ or maggot of the curculio, but a closer observation would show they are entirely distinct. Let the man who has plum or cherry trees which he wishes to preserve, and who does not? lose no time in examining them, and if a single mark of blight is found, let the branch be excised and burned at once. It is possible the insect may have already escaped, but it is possible he may still be in his haunts, and no harm will be done in any event, as a blighted branch will never produce good fruit, any more than a mildewed stem of wheat, will a plump, fine berry. But if too late now, let another season be improved, and from the putting out of the foliage till it falls in autumn, examine your trees, at least once a week, and carefully excise every branch where the disease manifests itself, and be particularly careful to burn them at once. Nothing is gained, if, when the branches are cut off they lie on the ground about the tree, while the grub matures, and again prepares for the mischief of another year. This course would not be so confidently recommended, if instances were not known in which it had proved perfectly successful, and we have no doubt always will prove so where it is properly pursued.

WORK FOR THE MONTH.

Wheat :—Time of Sowing.

September is the month in which our most important crop, wheat, should be sown, as the experience of nearly every farmer proves that putting the seed into the earth in this month, is preferable to any earlier or later sowing. If sown earlier, there is great danger that hot dry weather, such as frequently prevails in August, will prevent the seed vegetating, or give only a weak, spindling plant ; while late sowing prevents the plants getting sufficient root, and by making the harvest late, renders the crop more liable to the attack of the rust or mildew. Wheat sown too early is also more liable to be injured by the Hessian fly. Taking all things into consideration, if the land is properly tilled and in good condition, it will be found that from the 12th to the 20th of September will be as good a time as any for sowing wheat. There is a chance of its escaping the fly ; it can hardly fail of vegetating ; it will get sufficiently rooted ; and will come forward at harvest early enough to escape the mildew, unless in extraordinary cases.

Selection of Seed.

The selection of seed for the wheat crop, is not sufficiently attended to by most farmers, and the losses consequent on their loose practice in this respect is immense. To this it is owing in a great measure, that our wheat fields are covered with steinkrout, cockle, chess, and the multitude of vile weeds that exhaust the crop, and not unfrequently destroy all profitable cultivation. Bright, plump, clean seed, should always be chosen, and impure, shriveled or discolored seed avoided. We have known some farmers cast their wheat for seed, that is, throw it some 30 or 40 feet, or the length of the barn floor, and as the heaviest kernels will go the farthest, this point is selected for the seed. Others select their seed by taking the sheaves and striking them a few blows across a block or barrel by which the ripest and best seeds will be shaken out to be used for sowing. But whatever course is adopted, let it always be remembered, that as a general rule, the more perfect the seed, the better in every respect will be the crop.

Change of Seed.

We have known the very best effects result from a change of seed ; such as wheat grown on oak lands, to be sown on beech and maple lands ; or from one district of the former to another. The farmers of the counties of Madison, Cortland, and those on the high lands of the south part of Onondaga, were for many years in the practice of getting their seed wheat from the limestone districts of Cayuga county, and the course was a most beneficial one. The object at first was to escape the smut, but experience showed that the crop itself was much impoved in quantity as well as quality ; and although by the use of liming seed wheat, smut has been mostly eradicated from the district named, the beneficial effects of change of seed are still apparent. Let those who doubt the importance of a change of seed try the experiment of ordering some pure Genesee wheat, to sow side and side with some that has long been grown on the same farm, or the same kind of soils, and mark the result.

Preparation of Seed.

Next to having good seed, in our estimation, is the preparation of it previous to sowing. This should never be neglected. Washing it assists materially in freeing it from all foul seeds, destroying the ova of insects that may have been deposited upon it, and the alkaline solutions which should always be used, act a most important part in aiding the germination of the seed. Among the experiments which have been made to test the effects of various washes or steeps, the following from Young's Annals of Agriculture, and which have been frequently repeated and varied, but with similar effects, may be considered the best and most conclusive.

> "December 7th, sowed 14 beds with the same seed wheat, as black with smut as ever I saw any."

*Results condensed.**			*Smutty ears.*
Bed No. 1,	sown dry, nothing done to it, had		377
" 2,	washed	well in clean water,	325
" 3,	"	in lime water,	43
" 4,	"	in a lye of wood ashes,	31
" 5,	"	in arsenic and salt mixture,	28
" 6,	steeped	in lime water 4 hours, had	12
" 7,	"	in lye 4 hours, had	3
" 8,	"	in arsenic 4 hours, had	1
" 9,	"	in lime water 12 hours, had	6
" 10,	"	in lye 12 hours, had	0
" 11,	"	in arsenic 12 hours, had	4
" 12,	"	in lime water 24 hours, had	0
" 13,	"	in lye 24 hours, had	0
" 14,	"	in arsenic 24 hours, had	5

M. Dombasle, the celebrated French agriculturist, prefers a wash made of Glauber salts, the seed to be soaked in this three or four hours and then dried in caustic lime. This would not be materially different from the practice now so common of washing or rather soaking the seed wheat in brine, and then drying it with quick lime, a practice we can unhesitatingly recommend to every wheat grower. Let the brine be strong enough to float all light or defective seeds, and after a thorough soaking, drain the seed slightly, pour it upon a floor, and dry it with newly slaked lime, as on the causticity of this, much of the benefit of liming is depending. We have tried drying brined wheat with gypsum instead of lime, but so far as the smut was concerned, it was a decided failure. That part of the field sown with the gypsumed seed was about the smuttiest wheat we ever saw, while that part which was limed was perfectly free and pure. In addition to the advantages of liming wheat for the prevention of smut, we are convinced that alkaline substances, such as lime, soda, wood lye, &c., perform an important part in aiding the germination of the seed, by converting the deposit of nourishment which nature has provided in the seed itself in the shape of starch, flour, gum, or mucilage, into a substance suitable for the food of the young plant, more quickly than would be done if not thus aided. Every person who has made the experiment with seeds prepared with lime, and those unprepared, must have been surprised at the difference in the time of their coming up, and the vigor of their growth. Thus beet or turnep seed soaked and part dried in lime, and the other sowed without, has been found to have the advantage altogether on the side of the limed part ; and the same result will be had in the preparation of wheat.

M. Maltereu, in a series of experiments on the germination of seeds, found that they germinated much quicker in alkaline solutions than in acids ; that they germinate sooner at the negative or alkaline pole of a galvanic battery, than at the positive or acid one ; and as galvanic or electric agency is now known to exert a powerful influence over vegetation, it can scarce be doubted that the alkaline agency is exerted in this way in the chemical changes necessary to fit the starch, gum, &c. for the food of the young plant.

State of the Soil.

The state of the soil, and the manner of putting in the seed wheat, exercises a great influence on the growth of the plant, and the success or failure of the crop. Unless in the very lightest soils, wheat should never be sown while the ground is wet from recent rains, for though moisture is essential to germination, the excess of it is most injurious. Tenacious soils especially, and those are the best for wheat in which some clay, which gives tenacity, is found, will not endure working while wet, and to sow seeds on such soils, while in that condition, is to throw away the chance of a good crop. The soil for the seed bed should be fine, work freely and without any tendency to compactness, and if the requisite degree of moisture be present, which rarely fails of being the case, the seed will rarely fail of germinating well.

Covering the Seed.

That method of covering the seed will be best which places it most certainly and equally at the proper depth. Wheat will grow in some soils from a much greater depth than in others, but many experiments and experience shows that from 3 to 4 inches in ordinary soils is about the depth at which it succeeds the best. Wheat has two sets of roots, one forming at the seed, and the other near the surface. If the distance from the seed to the surface is too great, the connecting stem between the two sets of roots is attenuated and not strong enough for the vigor of the plant ; if the seed is too shallow, the two sets of roots are crowded together, and their extent of space from which to draw nourishment much diminished. We have found those plants apparently the most vigorous in which the length of the connecting stem was about 2 inches ; where it was 4 or 5, the effect was clearly injurious. Some farmers use the harrow altogether for covering seeds, others prefer the plow. We think the plow the best where care is taken to give no more than the proper depth, and make the furrows fine. It covers the seed more completely, and ensures a greater equality in the depth than the harrow, but the process is so much the more tedious, that few farmers are willing to use the plow as much as this method requires, and of course prefer the harrow. We have seen an implement made something in the form of an old fashioned harrow, with cultivator teeth placed in it instead of common harrow teeth. These moved the ground to about the required depth, covered the seed well, and greatly facilitated the work. The wheat crop is of so much consequence to the farmer and to the country, that every thing relating to it demands care in selecting the best methods, and continued experiment and well directed observation in the production of the crop.

Corn for Seed.

September, too, is the best month for the selection and saving of seed corn. Farmers who have not paid attention to this point of husbandry, are not aware of the difference there is both in the ripening and in the yield of corn, between that in which the seed was carefully selected in the field from the earliest ripe, and most vigorous ears, and that in which the seed though ripe, was taken at random from the crib, without reference to these qualities. There is no plant cultivated, which feels the beneficial effect of selection and careful choice of seed more quickly and fully than Indian corn, and the farmer who neglects this selection and choice, and plants at hazard anything he thinks will grow, sadly mistakes the principles and practice necessary to produce a good corn crop. There are few farmers who plant so much corn that an active man will not select in the field (and that is the only way he can be perfectly certain of the best ears,) in half a day, and secure by tracing up, all or more than he will want. As soon then as the corn is ripe, and the husks separate from the corn freely, select your seed corn and place it where it will be safe and dry. In this way only, can the two great points with the farmer in the cultivation of corn, earliness in maturing and productiveness in the crop, be rendered certain of attainment.

Virginia Board of Agriculture.

At the last session of the Virginia Legislature, a bill was passed for the organization of a State Board of Agriculture, and in conformity to its requisitions, Lieut. Gov. Rutherford has appointed the following gentlemen to constitute it :

For the division of the State lying upon tide water :

JAMES M. GARNETT, of Essex, and
EDMUND RUFFIN, of Petersburgh.

For the division between tide water and the Blue Ridge mountains :

JAMES BARBOUR, of Orange, and
RICHARD SAMPSON, of Goochland.

For the division between the Blue Ridge and the Allegany mountains :

NATHANIEL BURWELL, of Clark, and
EDWARD WATTS, of Roanoke.

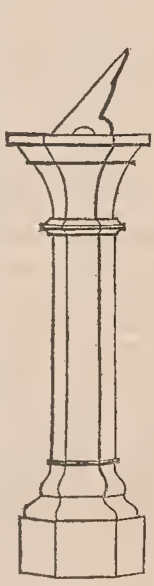
For the division west of the Allegany mountains :

JOSEPH JOHNSON, of Harrison, and
PETER H. STEENBERGER, of Mason

We are glad to see the names of these gentlemen announced in this connection. They are men of talent and influence, well known as eminent agriculturists or deeply interested in its advancement, and the appointment may be hailed as a commencement of a new era in Virginia agriculture. There is not a more decided farming population in the United States than that of Virginia ; and blessed as the state is with a fine climate and fertile soil, nothing seems wanting to render her one of the foremost in the quantity and quality of her productions, but a more enlightened and improved system of culture. Through the efforts of a few patriotic and public spirited individuals, much has been already done ; the attention of the farmers and planters has been called to the necessity of organization and effort ; valuable periodicals devoted to the cause of improved husbandry have been patronized and circulated ; and the first legislative action has been directed to the formation of a Board of Agriculture, from which we are authorised to expect beneficial and decided results.

We must be permitted to add, however, that one important point in relation to the organization, action, and efficiency of the Board was either forgotten or overlooked by the Legislature. To perform the duties, the proper performance of the office to which they are appointed will require, will demand the expenditure of much time, and some money ; and, though the public spirit and liberality of the gentlemen of the Board are well known, still we think common justice required that an appropriation covering at least their actual expenses while employed in the service of the State, should have been made. There can be no doubt but the legislators greatly mistake the true interests, as well as the feelings, of their constituents, if they suppose that a penurious system of legislation on the subject of agriculture, is the one which will be most beneficial or the most approved. The evidence existing in our own country that such is not the case, is most abundant, and further consideration will doubtless correct the error into which other legislatures as well as that of Virginia have fallen.

Sun Dial.


(*Fig.* 71.)

This instrument for measuring time has been known and in use from the earliest ages, and is a common and valued ornament in gardens, pleasure grounds and yards in Europe, but has been comparatively little known or noticed in this country. Our climate is well adapted to the use of the sun dial, the great number of our clear and beautiful days rendering it more useful here, as a correct measurer of time, than in England, where the cloudy days are more frequent. Of late, however, public attention has been attracted to their value and convenience, and we are glad to announce that a manufactory of dials, a correct and beautiful article, has been established by Mr. Moore, of Kensington, (Ct.) specimens of which may be seen at Henry Rawls & Co's. Albany, and at Geo. C. Thorburn's, New York. In the yard or garden, they should be placed on a neat and firm pedestal, and are very ornamental. We have copied a good figure (71) of such a pedestal, from Downing's new work on Landscape Gardening, from which we extract the following just remarks respecting it :

> "Sun dials are among the oldest decorations for the garden and grounds, and there are scarcely any we think more suitable. They are not merely decorative, but have also a tasteful character, and may therefore be occasionally placed in distant parts of the grounds, should a favorite walk terminate there. When we meet daily in our walks for a number of years, with one of these silent monitors of the flight of time, we become in a degree attached to it, and almost look upon it as gifted with a species of intelligence, which looks out when the sunbeams smile upon the dial plate."

We cannot avoid paying, in this place, a well deserved compliment to our friend Mr. Walsh, whose indefatigable labors in the cause of horticulture and correct taste are so well known, as it was his suggestion which called this manufactory of dials into existence.

Great Meeting of the Royal Ag. Society.

We are indebted to J. C. Etches, Esq. Barton Park, Derby, England, for a copy of the *Marklane Express*, with its "Supplement," and to the Editors of the *New Farmer's Journal*, London, for a copy of their paper and "Supplement," both containing the proceedings of the Royal Agricultural Society of England, at its third annual meeting, which was held at Liverpool, commencing on Monday, July 19th, and occupying the whole week. In the "Supplement" to the latter paper, we have beautifully engraved views (occupying the whole of one of the large pages of that paper,) of the "Plowing Match," exhibiting about thirty teams—of the "Grand Dinner at the Pavillion," at which 2,900 guests were present—and of the "Interior of the Cattle Yard," where were exhibited about 500 head of stock. The first prize of 30 sovereigns, for the best Short Horn Bull, was awarded to Thomas Bates, Esq. Kirkleavington, for "his short-horned bull, 4 years 7 months old, bred by himself." "Whether we regard the interest displayed in the objects and operations of the Society," says the Marklane Express, "the numbers and quality of the stock exhibited, or the extent and character of the exhibition of implements, it is abundantly manifest, that the utility of the Society is duly appreciated by all those who are competent to form an opinion on the subject."

We give the following letter from an English correspondent, the writer of which received at the above show, a prize of "10 sovereigns for the best short-horned bull calf, 9 months old, bred by himself." The letter of Mr. Etches, written in September last, to which he alludes, we regret to say, never reached us :

Barton Park, near Derby, Aug. 2, 1841.

Luther Tucker, Esq. :

Dear Sir—Mine of September, in last year, as regards the Berkshire hogs, I have no doubt you have received. With this I send you a newspaper containing a full report of the meeting of the Royal English Agricultural Society, held at Liverpool last week but one. The show of cattle, sheep, horses, and pigs was splendid. To give you an idea of its extent, two thousand three hundreds pounds was received at the door of the show yard. In the list of prizes, you will see my name attached to a bull calf. The largest long-wooled Oxfordshire ram I considered to weigh, if slaughtered, 87 lbs. a quarter. The South Down sheep were splendid; the best ram would weigh, if slaughtered, 45 to 50 lbs. a quarter.

I did not show any pigs; if I had, I have great reason to believe I should have been successful. I have now a new sort, bred in Worcestershire, small and up in their ears, long carcass, good ham, small bone, short face, color red ground with black spots. One of these pigs was kept as well as possible till sixteen months old, killed, and weighed the enormous weight of 33 score and 2 lbs., or 662 lbs. They are called by some, the Tamworth pig; I call them Worcestershire. It is so difficult to trace, with a degree of correctness, the origin of the Berkshire pigs, as the breeders of those animals very much differ in opinion on that subject, I am inclined to think those I have are an improvement on the new Berkshire, yet are sold to me by the breeder as Worcestershire or Tamworth pigs. Their propensities to fatten excel all I have ever seen; they are nice pigs when young, as porkers at six months old, and at nine, twelve, or eighteen months, if fine flesh and fat bacon is required.

I remain, sir, your ob't serv't, J. C. ETCHES.

South Carolina Agricultural Societies.

We find in the "Southern Agriculturist," a valuable monthly devoted to the cause of agriculture, a list of the agricultural societies in South Carolina, and we give the names as follows :—State Ag. Society of South Carolina ; St. Johns, Colleton ; Beaufort ; Ag. Society of South Carolina ; Barnwell Ag. Society ; Ag. Association of St. Andrews ; Sumpter Ag. Society ; Pendleton Ag. Society : Monticello Planter's Society ; St. Helena Ag. Society ; Cambridge (Abbeville) Ag. Society ; Fairfield Ag. and Hort. Society ; Wateree Ag. Society ; Abbeville Ag. Society ; Fishing Creek (Chester) Ag. Society ; St. Luke's Ag. Society, and Greenville Ag. Society.

The seven last named societies have been formed within a few months, a fact which speaks much for the increasing intelligence and zeal of the South Carolina planters. Few, if any, states in the Union are more decidedly agricultural than South Carolina, and from the combined effect of these organizations, and the influence of the several well conducted agricultural journals of the state, we are authorized to expect the best results.

Henrico (Va.) Ag. Society.

We have received from W. H. Richardson, Esq. a pamphlet containing the address of the President of the Henrico Society, with the proceedings, list of premiums awarded, &c., at the agricultural fair of that society, in May, 1841. The proceedings were of the most encouraging and satisfactory kind, and the address, excellent in matter and manner, must have been listened to with much interest. We make room for the following extract, as it contains an important truth well expressed :

"The great mischief, among us farmers, is, that we are in too great a hurry to get rich. We seem to forget that the golden age has passed by, and that we are living under the hard influence of the iron age. We are greatly mistaken too, as I think, as to that in which our true riches consists. One man considers himself rich, because he has a large sum of money to lend, and at an usurious interest, and thus takes advantage of the distresses of the times. Another is accounted rich, because he owns a large amount of stocks in some moneyed institutions. But the farmer's wealth consists not in his stocks, not in his houses, *but in his rich lands.* I recollect when I began farming, an old friend and acquaintance, Mr. John Carter, gave me a piece of valuable advice—'Make your lands rich,' said he, 'and in proportion as they become rich, *you* will be rich.' "

The Maryland State Ag. Society

Will hold their annual Fair, for this year, at Ellicott's Mills, on Wednesday, the 15th of this month.

N. York County Agricultural Societies.

The Cayuga Co. Ag. Society was organized at Auburn, July 22, 1841. Officers :

HUMPHREY HOWLAND, Ledyard, President.

VICE-PRESIDENTS.

John M. Sherwood, Auburn; Loring Willard, Aurelius; Isaac Bell, Brutus; L. M. Hollister, Cato; Levi Colvin, Conquest; D. O. Durkee, Ira; Wm. F. Tompkins, Fleming; Matthias Hutchinson, Genoa; Wing Tabor, Moravia; Samuel Bell, Mentz; Isaac Sission, Locke; Geo. R. Brinkerhoff, Owasco; Jonathan Richmond, Ledyard; Mr. Fuller, Sempronius; John W. McFadden, Sterling; E. A. Howland, Venice; Matthias Vanderheyden, Victory; John Sittser, Sennett; U. F. Doubleday, Scipio; Luther Fuller, Niles; Henry Crane, Springport; Martin Barber, Summerhill.

Wm. Richardson, Auburn, Rec. Sec'y.
Wm. C. Beardsley, Auburn, Cor. Sec'y.
John B. Dill, Auburn, Treasurer.

EXECUTIVE COMMITTEE.

Ira Hopkins, Auburn; Thomas Bell, Aurelius; Moses Dixon, Brutus; Silas Dudly, Cato; Enos Witherill, Conquest; Samuel Phelps, Ira; Elijah Sheldon, Fleming; William Wilbur, Genoa; Isaac Cady, Moravia; Joseph Osborn, Mentz; Mr. Sherman, Locke; John Austin, Owasco; David White, Ledyard; Josiah Wilcox, Sempronius; George Cooper, Sterling; William Bennett, Venice; Peter Bogart, Victory; Wm. Webster, Sennett; Joseph Pettit, Scipio; John Rooks, Niles; Peter Yawger, Springport; A. J. Vanarsdale, Summerhill.

Their Fair is to be held on the 2d Wednesday and the Thursday following in October.

The Seneca Co. Ag. Society was organized June 29, 1841. Officers :

G. V. SACKETT, Seneca Falls, President.

VICE-PRESIDENTS.

Dr. J. L. Eastman, Lodi; Geo. Wodworth, Covert; Andrew Dunlap, Jr., Ovid; Elijah Denton, Romulus; Thomas Burroughs, Varick; Dr. Oakley, Fayette; Joel W. Bacon, Waterloo; Silas Vandermark, Junius; Jason Smith, Tyre; Deming Boardman, Seneca Falls.

A. B. Dunlap, Ovid, Rec. Sec'y.
Samuel Williams, Waterloo, Cor. Sec'y.
John D. Coe, Romulus, Treasurer.

The Washington Co. Ag. Society was organised at Argyle, on the 4th of August. Officers :

HENRY HOLMES, Greenwich, President.

VICE-PRESIDENTS.

John Crary, Salem,
J. C. Whiteside, Cambridge,
James Farr, Fort Ann,
Harvey Brown, Hartford.

John McDonald, Salem, Cor. Sec'y.
Asa Fitch, Jr., Salem, Rec. Sec'y.
Ransom Stiles, Argyle, Treasurer.

EXECUTIVE COMMITTEE.

David Sill, Thomas N. Clark, Argyle; Ezra Smith, Edward Long, Cambridge; David Barret, Ralph Barber, Dresden; Anson Bigelow, Aaron Biarker, Easton; James Rice, Andrew H. Moore, Fort Ann; D. T. Payne, J. Stevenson, Jr., Fort Edward; John Barker, Reuben Skinner, Granville; L. Woodard, P. B. Whelden, Greenwich; John P. Adams, Moses Ward, Hampton; Richard Sill, Solomon S. Cowan, Hartford; S. D. Webster, George White, Hebron; Geo. McGeoch, Thos. Stevens, Jr., Jackson; A. H. Hitchcock, L. Andrews, Kingsbury; Alex. Robertson, A. D. Welch, Putnam; John McNaughton, David Law, Salem; S. Barker, James McKie, Jr., White Creek; George Barney, John H. Boyd, Whitehall.

The Delaware Co. Ag. Society was organised at Delhi on the 15th July. Officers :

SAMUEL A. LAW, Meredith, President.

VICE-PRESIDENTS.

Levi Hanford, Jr., Walton,
George Sturges, Delhi,
Sam'l W. Andrews, Hamden,
Thos. Hymers, Meredith,
John Raitt, Bovina,
Geo. W. Downs, Colchester.

David McFarland, of Delhi, Secretary.
Platt Townsend, of Walton, Treasurer.

The Otsego Co. Ag. Society was organized at Cooperstown on the 14th of August. Officers :

DANIEL H. LITTLE, President.

Vice-Presidents—Orcut C. Chamberlain, Wm. A. Collins, and Elisha Doubleday.

Ex. Committee—J. W. Tunnecl[illegible], Charles Gilchrist, Calvin Underwood, Jerome Clarke, Jr., and Daniel North.

David L. White, Treas. | Ch. McLean, Sec'y.

The St. Lawrence Ag. Society was organized at Canton on the 27th July last, and the following officers appointed :

RICHARD N. HARRISON, Canton, President.

Vice-Presidents—Twenty-six, one for each town in the county, were appointed.

Ex. Committee—Zenas Clark, Potsdam; S. D. Moody, Canton; D. C. Gray, Lisbon; Wm. Bacon, Ogdensburgh; Harvey Lyon, 2d, Oswegatchie; James Black, Lisbon, and Alfred Goss, Madrid.

Nathaniel S. Prentiss, of Canton, Treasurer.
Charles Lyon, of Oswegatchie, Rec. Secretary.
John L. Russell, of Canton, Corresponding Secretary.

The Westchester Ag. Society was organized at Sing-Sing, Aug. 19, 1841, and the following officers appointed :

LEMUEL WELLS, Yonkers, President.

VICE PRESIDENTS.

Wm. Jay, Bedford, and Nehemiah Brown, Rye.

EXECUTIVE COMMITTEE.

Cyrus E. Olmsted, Bedford,
Tyler Fountain, Cortlandt,
D. K. Sherwood, Mt. Pleasant,
Gerard Crane, Somers,
Jos. Schureman, N. Rochelle,
Gilbert Brundage, Newcastle,
Joseph H. Anderson, Harrison,
Edw. B. Underhill, Yorktown,
Andrew Findlay, Westchester.

Jesse Ryder, Mt. Pleasant, Rec. Sec'y.
Munson I. Lockwood, Mt. Pleasant, Cor. Sec'y.
Isaac Seymour, Peekskill, Treasurer.

The Columbia Co. Ag. Soicety was organized at Hudson on the 13th Aug. 1841, and the following officers elected :

EDWARD P. LIVINGSTON, Clermont, President.

VICE-PRESIDENTS.

John P. Beekman Kinderhook,
Erastus Pratt, Austerlitz,
Oliver Wiswall, Greenport,
L. W. Tenbroeck, Livingston.

EXECUTIVE COMMITTEE.

John Martin, of Claverack,
Seymour Smith, of Clermont,
Daniel S. Curtis, of Canaan,
John F. Collins, of Hillsdale,
Henry Snyder, of Kinderhook,
Abraham Bain, of Copake,
Solomon B. Vail, of Greenport,
Waterman Lippit, of Chatham,
Jacob N. Harder, of Ghent.

Wm. B. Ludlow, Claverack, Treasurer.
James McGiffert, Greenport, Secretary.

A Cattle Show and Fair is to be held at Hudson, on the 2d Tuesday of October next.

Liebig's Organic Chemistry.

We are gratified to learn, as we do by a letter from Prof. Webster, that a second edition of this work is already called for, and will soon be put to press. Prof. W. will be happy to receive the results of any experiments which have been made on Liebig's principles, such as statements of the substances tried, the crops as compared with those from the usual treatment, &c., to be addressed to him per mail at Cambridge, Mass.

Berkshire Pig—Acknowledgment.

We have the pleasure of acknowledging the safe arrival of a fine Berkshire boar Pig, from the justly celebrated stock of the Messrs. A. & G. Brentnall of Canterbury, Orange county, N. Y., which we shall consign to the care of H. M. Gaylord, Esq. of Onondaga Co. presuming it will prove a valuable acquisition in improving the breed of swine in that vicinity. His pedigree is unexceptionable, being from the imported "Ontario," one of the most celebrated boars now in the United States, dam "Flower of Orange," from Mr. Hawes' imported stock. It is gratifying to find so much attention paid to improving the various breeds of our domestic animals, and in no case has this been more successfully done than with swine. Let the same skill and attention be directed to our other domestic animals, and the same beneficial results would ensue.

Agricultural Capital.

What, in the hands of the farmer, constitutes capital, is an important query? With the merchant, cash is the capital, with the land owner, land is the capital, and with the farmer, cash, land and stock, is usually considered the capital. But there are many other items that enter into the capital of the farmer generally overlooked, such as implements, manures, and the most important of all, labor. Capital may be productive or nonproductive. A million of gold and silver locked in a strong box, or a thousand acres of uncultivated land, may be capital, but so long as the property remains in this state it produces nothing, and the owner may be actually growing poorer, instead of becoming richer. Increase of wealth does not depend on the quantity of capital so much as in the use made of it; and in nothing is this more observable than in farming. There is many a man who has commenced his career as a farmer with fifty acres of land; on this he annually expended in manure, labor, &c. twenty per cent, and the produce was perhaps forty per cent. Encouraged by this success, he added to his farm another 50 acres, but his expenditure in capital is not proportionally increased, and the profits are lessened in proportion. Still he has not land enough, and he keeps purchasing land, while he adds little or nothing to his active capital, and the consequence is, while on fifty acres of land, he realized forty per cent, on five hundred acres he realizes nothing. He has converted his productive into unproductive capital, and from his five hundred acres he does not clear as much as he did from his fifty acres, or perhaps he actually falls behind. There is nothing more true than that the inordinate desire for large farms has been the ruin of thousands. It is true that a large farm may be made as poductive as a small one, but there must be the same proportion of capital in manure, labor, &c. put upon it, a thing rarely or never done. That part of the farm upon which most capital is expended is the garden, and this is clearly the most productive and profitable; and so with a small farm when compared with a large one. Let no one therefore desire to possess more land, or undertake the cultivation of more acres than he has capital to manage well. If he does, he will find he is rapidly sinking what little productive capital he possesses, and may become a poor man with the means of exhaustless wealth in his hands.

Blossom of the Linden fatal to the Rose Bug.

A writer in the Louisville Journal, speaking of the effects of this pest of the florist and gardener, says they are nearly extirpated from his premises, "and seen only at the places of their destruction; these are linden trees when in blossom." He adds—"my first impression was, that the bugs died about the linden tree, after depositing their eggs and terminating their natural career; but such is not the fact; and I now speak with confidence, after several years observation and experience, when I say the blossom of this tree destroys them, and will extirpate, (or nearly so,) the race from its immediate vicinity on the farm on which they grow. * * In rushing to the delicious fragrance and honey of this flower, they precipitate themselves on their own destruction." Of all the American forest trees there is none the fragrance of which is more attractive than that of the linden or bass wood, and none to which bees resort so gladly to collect honey. That this honey should be fatal to some insects and harmless to others, seems rather strange, and if others have observed effects similar to those noticed by the Journal, it would be well to have the facts made known.

Fair of the American Institute.

Monday, October 11th, 1841, is the day determined upon for opening this celebration to visitors, at Niblo's Garden, in the city of New-York. Contributions from exhibitors will be received on Thursday, Friday and Saturday preceding. All the departments of Industry, Agriculture, Horticulture, Manufacturers, the Arts and Inventions are invited to contribute.

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

GIRDLING. In the settlement of all wooded new countries, one of the principal obstacles encountered, is freeing the land from timber, or *clearing it*, as it is usually called. By leaving a portion of the trees, much labor is saved, and if these are killed, so that there is no foliage, tolerable crops of wheat can be grown, without their removal. To kill the tree by stopping the circulation of the sap, is the object of girdling. It is effected by cutting into the tree entirely around it, either taking out a narrow chip, or simply striking in the bit of the ax to such a depth as to interrupt the flow of juices. The first method is pursued with the maple, bass, elm, &c., while the last is effectual with oak, chestnut, &c. The maple, if girdled in the spring of the year, and the cut made in a spiral form around the tree, so as to receive and conduct the sap as it flows into some suitable reservoir, will yield a large supply of sap for conversion into sugar, but it is fatal to the tree. The water elm, or the birch, if treated in the same way, will pour out a continued stream for several days in succession. It is the opinion of many, that trees girdled and allowed to stand until the bark falls off, are more solid and durable than if used without such preparation.

GLANDERS. This is one of the most disagreeable and incurable of the diseases to which the horse is subject; and unfortunately, too well known to need a minute description. The membrane of the nose is the original seat of the disease, and at first is a mere irritation; but as it proceeds, tubercles form, matter is discharged, the bones of the nose and head become diseased and carious, the poison is absorbed into the circulation, and the horse perishes. The disease may be bred, or it may be communicated by contagion, and it is to this cause most of the instances of the disease are to be attributed. Improper stable management is the general producing cause of glanders. Hot, ill-ventilated, filthy stables are often the cause of the complaint; and hence the horses of the farmer, or those on post routes are oftener afflicted with the glanders than those of the man who takes more care of them, and gives better attention to their accommodation and comfort. Nature sometimes effects a cure of the disease, but in nine cases out of ten, confirmed glanders proves fatal in from eighteen to twenty-four months from the attack. There is scarcely a drug which has not been tried for glanders, yet it may be said that all have signally failed, unless we except *iodine* which seems to have effected some cures. It has been proved that the glanders can be communicated to man, and cases have occurred in which death has ensued from the contagion. Those, therefore, who have to deal with this disease, should be on their guard that none of the matter ejected, comes by any accident in contact with the membranous linings of the mouth or nose.

GLUTEN. This is a substance which, although found in vegetables, has all the properties of animal matter, and yields an abundance of ammonia by distillation or putrefaction. Chaptal extracted it from a great variety of vegetables, but it is found most abundant in the grains of wheat, and it is from this that it is most frequently obtained. Gluten is destitute of taste, turns brown in the air, putrefies, as animal matter does, is insoluble in alcohol, and but slightly soluble in water. The wheat of some countries contains more gluten than that of others, and the same remark is true of some varieties. Wheat is mainly composed of starch and gluten, as the following analysis of several kinds of wheat, by Davy, will show:

			Starch.	*Gluten.*
100 parts of	fall wheat of excellent quality	gave of	77	19
" "	Spring wheat	"	70	24
" "	Barbary wheat	"	74	23
" "	Sicily wheat	"	75	21

The fermentation or *rising* of bread is depending on the gluten of the flour, and grain in which the natural condition of the gluten is changed by partial conversion into sugar, as in *grown wheat*, is from this cause unfit for bread. That the value of flour for *bread* is mainly depending on the gluten, is clear from the following analysis of several kinds of grain from Chaptal's Chemistry applied to Agriculture:

Wheat	contains of gluten	in 100	parts,	from	19	to	24
Barley	"	"	"	"	5	"	8
Rye	"	"	"	"	½	"	1
Oats	"	"	"	"	½	"	2

GRAFTING. This name is applied to an operation for the propagation of fruit, by inserting small branches of the desired fruit tree into one of less value, or the fruit of which it is wished to change. The best place for grafting is the nursery, when the trees are the size of the little finger, but it may be practiced on trees of any age or size; although small branches are always to be preferred. The first operation is heading down the tree, or cutting off the branches it is intended to graft; and care should be used that enough are left to keep up the circulation in the trunk, and shade that from the direct effects of the sun, which otherwise frequently kills the tree. There are several modes of grafting, called whip, cleft, side grafting, &c., which mainly differ in the modes of setting the cion in the stock. March is the proper month for cutting cions, and they may be set as soon as the sap commences to circulate, or the danger of freezing has past. Clay used to be formerly used for excluding the air from the place where the cion was inserted, but the process was a dirty one, and has been superseded by a composition made of 3 parts of rosin, 3 parts of bees-wax and one part of tallow, melted together, and worked like shoe-maker's wax into rolls, or spread on muslin, which is to be cut into strips for use. But in whatever way the wax is applied, it must *exclude the air*, as on this the success of grafting is mainly depending. If the wax is too hard it must be softened before using, but in moderate weather the heat of the hands will usually render the plaster sufficiently pliable. By grafting, we not only secure good fruit, but obtain it much earlier than we could in any other way. There can at the present time be no excuse for poor fruit, as any farmer may practice grafting, and every year is adding to the stock of valuable fruits.

GRAINS. Since the extension of agriculture, and the increase of facilities for transmitting the produce of one country to another, the fear of famines, and the necessity for the great accumulation of grain, or its preservation at any particular points, has mostly passed; still the best modes of preserving grain must always be a question of interest to the farmer. The great secret in the preservation of grain consists in protecting it from the action of air and moisture; a moderate temperature is also necessary. The most common method among the ancients, and it was one which was eminently successful, was putting it into large pits or vaults excavated in rock. Such are what are called Cæsar's granaries, a series of chambers cut in a dry calcareous rock at Amboise on the Loire in France. The Chinese still preserve their grain in pits dug in rock, or firm dry soil, and to protect the grain from humidity, these pits are lined with straw. In France the government have lately instituted experiments on preserving grain in pits or trenches cut in the rock, and carefully closed, and the results, after several year's trial, have been very satisfactory. When St. Louis, King of France, conducted his army through Egypt to Palestine during the crusades, the stores of wheat for the use of the army were collected in Cyprus, the greater part two years before the King's arrival. The history of the expedition says, "the wheat and the barley they had put into heaps in the midst of the fields, and these appeared like mountains, for the rain had moistened the grain a long time, and caused it to germinate on the outside, so that nthing was seen but the green surface. In removing this grain to Egypt, when the outer crust was removed from the heaps of grain, the wheat and barley was found as fresh as if newly piled up." Grain well dried and put up in stacks at harvesting, or in mows, will keep much better than if thrashed and deposited in common granaries, the chaff of the ear serving to absorb the moisture which is most injurious to the grain.

GRANARY. A place in which grain is deposited. Some idea of the ancient granaries may be formed from the preceding article, and from the descriptions given in the Bible of those in Egypt. In modern times, granaries are chiefly used to store the necessary supplies of grain for the year only, or until it can be brought to market. The air in and around granaries should be free and pure, not in the vicinity of stables, or any other vitiating cause; they should also be dry, as on this the sweetness of the grain will mainly depend, and they should be free from all rats, mice, and other vermin. It is better, therefore, where much grain is raised to have the granary separate from the other farm buildings, and built in such a manner that depredators like those named can find no entrance. To prevent the entrance of rats, great attention must be paid to the foundation; or what is still better, let the granary be placed on posts of wood or stone, two feet from the ground, the tops of these to be capped with a projecting board or flat stone to impede their ascent. In this way the only place of approach is by the steps and door, and this may be secured with sheet iron. Granaries should be cleaned annually to prevent the attacks or lodgment of the weevil, which sometimes commits extensive ravages in large deposits of grain.

GRASSES. Next to the cerealia grown as food for man, the grasses intended as herbage or forage for animals, are the most important objects of cultivation. The varieties of grasses are almost innumerable, but the few that have been ascertained as proper for cultivation, and sufficient for all the purposes of the farmer, may be named as follows;—Meadow catstail, or Herdgrass; Red top; Rough stalked meadow grass; Orchard grass; Smooth stalked meadow grass; Rye grass; and White and Red clover. These will be sufficient for a rotation with grain crops, or the formation of permanent meadows or pasture. One great fault in the cultivation of grasses in the United States is, there is not seed enough sown. The consequence is there is no sward formed for pasture; and between the scattering plants, weeds spring up and propagate rapidly.

To show how differently English farmers manage, we copy from Prof. Low's Agriculture the quantity and kinds of grasses used per acre, for temporary, or for permanent stocking.

Land to be only one or two years in grass.

Rye grass	17	lbs.
Herds grass	3	"
Red clover	8	"
White clover	2	"
	30	lbs.

For permanent meadow or pasture.

Meadow foxtail	3 3-4	lbs.
Herds grass	1-2	"
Orchard grass	5	lbs.
Meadow Fescue	2	"
Rough stalked meadow grass	3-4	"
Rye grass	12	"
Red clover	2	"
White clover	6	"
	32	

The Herds grass (*Phleum pratense*) is the most valuable of our grasses at the north, while in the west Blue grass is preferred. But for a rotation, where the growing of grain, or the permanent enriching the soil is the object, the clovers are unrivaled, and indispensable. Clover and plaster may be considered the basis of convertible husbandry.

GRAVEL. Stones from the size of a pin's head to those of two or three pounds weight, are termed gravel, and the greater or less quantity of them in the soil, as well as the kind of rock of which they are composed, has a great influence on the fertility and cultivation of land. If the gravel is course, and the particles slightly connected, the soil will be what is called hungry, as manures put upon it sink among the porous materials, and produce little or no effect on crops. On the contrary, if the gravel is finer, or sufficiently filled with other earths and vegetable and animal matter, it constitutes one of the most valuable of soils, and is particularly excellent for wheat and clover. Gravelly soils are very apt to be too dry; but unless very coarse, the incorporation of clay will have a beneficial effect, by rendering it more retentive of moisture, and consequently giving it more support to the crop. Under the influence of the doctrine promulgated by Tull, that the finer the particles of the soil the better it would be, some farmers in England sifted some of their soils, and carried off the gravel so collected; but the effect was found to be most injurious, as the soils speedily became too compact for profitable vegetation; the experiment was abandoned, and the pebbles returned to their original place.

GREASE or SCRATCHES. This is a disorder to which horses are subject, and only affects the skin of the heel. As there is much motion and tension to this part of the leg, it was necessary the skin should be very pliable and soft, and to ensure this, nature has provided a secretion of greasy matter which is absorbed by the skin at the heel, giving it a sensible greasy feel, and prevents in a healthy state the crack or roughness of the part which would otherwise ensue. Under ill treatment, or bad stable management, inflammation takes place, the secretion of grease is stopped, a dry and scurfy state of the skin succeeds, cracks of the skin show themselves, and swelling and lameness ensues. According to Youatt, "if cracks are slight, a lotion composed of a solution of two drams of blue vitriol, or four of alum in a pint of water will often speedily dry them up and close them. But if the cracks are deep and the lameness and inflammation considerable, poulticing will be necessary, and one of linseed meal, or of carrots boiled soft may be used. After the inflammation is checked, the heel may be dressed with an ointment composed of one part rosin and three of lard melted together, and one part of calamine powder added when these begin to get cold." Occasionally wetting the cracks with the vitriol solution will expedite the healing. Some farmers use an ointment made of grease and sulphur, which is rubbed in, the hair being first clipped. Sometimes from careless management, or inattention, the cracks degenerate into deep sores, fungus springs upon their edges, which dries and assumes a horny form, and is known by the name of *grapes*. The grease is supposed to arise from the filth and urine of the stable acting on the tender skin of the heel; yet some horses are more subject to it than others in any situation. Care is the best preventive, and as this has banished the disease from the cavalry of most nations, it would doubtless prevent its recurrence among farmer's horses where it is most injurious.

GRUB. This name is applied to the larva of several species of insects, of which those the most injurious to the farmer are the larva of the May bug, (*Melontha vulgaris*) and snapping bug (*Eleater segetis*) called the *white grub* and the *wireworm*. The first occasions at times great damage in grass lands or meadows, eating off the roots so that large pieces of turf may be rolled up like carpets. The larva are eagerly sought after by hogs, and whole fields are sometimes rooted over to obtain them. They sometimes occasion much injury to corn and wheat, but they are seldom numerous enough to effect much. The larva remains in the ground three or four years, when it is transformed to the perfect insect, and makes its appearance after sun down as the common May bug. It is quickly attracted by light, and the best method of destroying them is to build bright fires of brush or other materials on those few evenings in which they appear, when they will perish by thousands. The wireworm does much more injury than the white grub, as it attacks the roots of most cultivated plants, and when numerous, will destroy whole fields of corn or spring grain, and we have known it commit serious depredations on the potato. The most effectual method of destroying this grub, appears to be the adoption of fall plowing as late as possible, or after the grub becomes partially torpid. In this way multitudes of them are thrown up to the effects of a cold which is fatal to them.

Educate a community in the idea that to work with their hands is degrading and dishonorable, and you educate them for vice and misery.

Correspondence, Inquiries, &c.

Rearing Poultry.

Mr. Westfall, of Rhinebeck, who at page 116 of the 7th vol. of the Cultivator, furnished a cure for the gapes in chickens, in a communication in February last, (but which was mislaid,) thus gives his further experience in raising poultry:

> "I have again alluded to this disease, the gapes in chickens, in hopes that you, or some of your able and scientific correspondents would give some light upon the origin of the worm in the throat that causes it. Did we but know from whence it came, a great point would be gained, as we might then make a "stitch in time save nine." From 45 hens, I have the past season (1840) raised more than 150 chickens, although I had rather poor success in hatching the eggs. I have sold eggs to the amount of $21·29; have now over 300 on hand, and the year since the receipt of the first egg last spring will not be up till the last of this month, and we are now getting from 20 to 25 per day, from about 80 hens. The question may be asked, why I am getting eggs now, but got none last winter! The reason, I doubt not, is this. A year ago I fed them oats in sufficient quantity to keep them through the winter only, thinking it useless to attempt making them lay in cold weather. This winter I have fed them about as much corn as they could eat, over a peck a day, and believe I have sent that proportion of corn to a profitable market. I have no doubt the value of the eggs produced from the last of December to the last of February will more than pay for the food consumed, and say nothing of the value of the manure. I give them access to a box of pounded clam-shells, sand and lime, for them to pick and dust themselves in. I make use of artificial nest eggs, so few of the eggs get froze."

Productive Farm.

Mr. Westfall gives the following as the products of his farm of 126 acres, woodland included:—1,000 lbs. butter, and 300 lbs. of cheese, and 2 calves, sold from 9 cows—amount of sales $171.42. This was exclusive of milk and butter for a family of 8 persons. 700 bushels of potatoes; 150 bush. of beets; 100 bush. ruta baga; 145 bush. buckwheat, from 4 bush. sowing; 85 bush. wheat; 350 bush. oats; 350 bush. rye; 450 bush. corn: 55 barrels of winter apples and 25 barrels of cider; and sold pork to the amount of $118.13, principally fed on potatoes, pumpkins, and apples boiled. This is a respectable list of products, all will admit, but the expenses of cultivation should also have been stated, to give a full view of the matter.

Urate.

G. W., of Richmond, (Va.) makes the following queries in relation to the account we gave in the July No. of the Cultivator of the European mode of making this celebrated manure:

> "Can this manure, when made according to the directions there given, and reduced to powder, be barreled up and kept for use in the spring?"

When the ammonia of the urine becomes fixed, as it does when mixed with gypsum, it may be kept for any length of time, as it is lost only by moisture and solution. The carbonate of ammonia in this case is changed to sulphate of ammonia, and ceases to be volatile. See Liebig's Organic Chemistry, page 238.

> "Will the urate made from recent urine be better than that made from putrid urine?"

When Madame Daboul commenced the manufacture of urate at Paris the liquid used was fermented, and it is probable that an incipient putrefaction would be preferable. The pungent odor arising from putrified urine is, however, proof that the ammonia is escaping, and this must be arrested, or the most valuable part is lost. G. W. will find much to guide him in this matter, in Liebig's chapter on Ammonia from Urine.

> "Will the application of urate to wheat prove beneficial? If so, when is the best time to apply it, in the fall or spring season?"

Urate may be applied to the growing crops at any time with success. *Poudrette*, and all the preparations of night soil, derive their principal value from the fixed ammonia they contain, and the same rules that govern the application of these or other powerful manures, may be followed with urate. In France urate is applied to root crops by the drill, at the time the seed is sown; to grain crops it is applied either as a top dressing in the manner of gypsum, on the growing plants, or at the time of sowing the seeds.

As the preparation and use of this powerful manure is comparatively new, much is yet to be learned by the agriculturist respecting it; and the proper quantity per acre can hardly be ascertained except by actual experiment. Poudrette has been found in some instances, when applied too liberally to wheat, to produce so much straw as to render the crop of little value; and urate, applied injudiciously in France, produced similar results. The experiment making by "G. W." is an important one, and we wish him every success.

Chess.

A desire to oblige our friends who are believers in the doctrine of transmutation, and the hope of throwing some light on this vexed question in farming, induces us to give the following communications, or the substance of them, on that topic. We do not deem it necessary to offer any comments, perceiving nothing in either case which may not be explained on well known principles, and by well known causes, without reference to the change contended for. Perhaps it would be better for those who hope to receive Mr. Ruffin's premium of $100, to present their evidence directly to him.

Mr. Finley of Oswego, in 1833, prepared five acres and sowed them the middle of September, with good sound wheat. He then prepared three acres of corn ground and sowed it with fine Genesee wheat weighing 62 lbs. to the bushel, the last week in November. Both looked well in the spring, but the late sown promised to to give the best crop. In the fore part of August, the first sown had a plump berry, and the straw began to turn yellow; the late sown was still green, the berry soft, and apparently three weeks later than the other. At this time there was an extraordinary exhibition of electricity, rapid flashes of light proceeding the whole night from one cloud or another, without either thunder or rain. [Vespertine lightning, probably.] Mr. F. had heard that such lightning, accompanied as this was with a close hot air, was injurious to wheat, and found it so in his case, the late sown appearing to ripen almost at once; and while the early sown wheat gave a plump berry and a good yield, the late sown was so shrunk that the millers would not purchase at any rate. By the advice of a farmer, Mr. Finley used this shrunk wheat for sowing eight acres of well prepared land that year, and put it in in September. It came up well and looked promising; but in the spring instead of a broad healthy blade, it was small and narrow; in short it was all chess, and Mr. F. had it cut with a sythe and made into hay. Mr. F. says:

> "I am decidedly of the opinion of your Ontario Subscriber, that sowing sound plump wheat will not yield any chess;—and my opinion is, that chess is not produced by frost, but the transmutation is caused by other atmospheric influences."

The following is from Garret Bergen, an eminent practical farmer of Brooklyn, L. I.

> "Wheat is only apt to change into chess in certain places about a common farm, and with many it is never placed in such situations. Hence their escape, and their disbelief. Sow your grain adjoining your barn yard, and allow a flock of fowls to frequent it in the spring and fall when it commences to grow and prevent it from growing rapidly—in other words to keep it down without killing it—and if it escapes in all cases being changed to chess, it will be contrary to much of my experience. To silence objections being made that the fowls carry the seed there, and thus introduce the Chess, I will give you another case where the objection cannot apply. Sow your grain distant from your barn, on a field which contains small valleys or hollows in which the water remains standing late in the spring, so as to prevent the wheat taking as early a growth as the adjacent parts of the field; and in many cases, the grain in these hollows will be entirely changed to chess. This Messrs. Editors, has been my experience frequently, and the result of observation for upwards of 50 years, and I can assure you that I have been in the habit of sowing *clean seed*. I take the cause of transmutation, therefore, to be a hindrance to the growth of the grain in the spring, when the weather has become sufficiently warm to cause what is placed in more favorable situations to grow and flourish.

Improving Stock—Inquiry.

> "Messrs. Editors—As I am a young farmer, and wish to commence improving my stock, having heard much about 'Herd Book Cattle,' and 'Cattle without pedigree,' and yet remain in the dark on the subject; I will consider myself much obliged if you, or some of your correspondents will give the desired information on these points in your valuable paper, as I wish to start in the right road, and doubtless many others wish the same. A Subscriber."
>
> *East Windsor, Ct.* 1841.

Since the increased attention to the improving of cattle has taken place in England, and particularly since the Collings, Berry, Althorp, &c. have effected such wonders on the Short Horn breed of cattle, in order to prevent imposition, and show that the animal was of the improved breeds, a list of all the principal herds of this stock, those that could claim an undoubted descent and purity of blood, were collected by Mr. Coates in a volume, regularly numbered, and breeders of pure stock, that is those derived from the herds of the gentlemen named, or which can be directly traced to them, are in the habit of naming and numbering all such choice animals as are kept for breeding or are worthy of particular notice, and these recorded in the successive editions of Mr. Coate's book, are termed Herd Book cattle. In the hands of Mr. Collings, the bull Hubback may be considered the founder of the Improved Short Horns, and all of unquestionable purity of blood can be traced to the herds originating from him. Pedigree means nothing more than the list of animals through which the sire or dam or both have received their blood for several generations; and by tracing the breed through these, the value of the stock, and purity of the animal may be easily determined. In improving stock, it is very desirable to begin with animals in which the desired qualities that constitute the value of the breed, whether it be form, aptitude to fatten or milk, have become constitutional, and therefore permanent. Animals of the common beeeds are sometimes found embracing some or all these qualities, but they are accidental, are not types of the race, and the progeny is therefore frequently wholly unlike the parent. With Herd Book animals the case is different. Skillful selection and careful breeding for generations has rendered the desirable qualities of the improved stock constitutional and permanent. If the pedigree of an animal is good, that is, if the Herd Book shows a descent from the best animals, there is little or no danger that the stock will prove inferior, or as the phrase is "run out."

Cisterns—Inquiry.

Our correspondent "P." of Ohio, referring to the method of building cisterns described in the Cultivator, vol. vii. page 61, asks whether "if pebbles and good sand cannot be procured, a water proof wall could be made of lime alone?" He says, "this country abounds in lime, (whether any is hydraulic, I cannot say,) much of it containing a large portion of silex. It also contains abundance of *yellow* sand, but no beds of gravel, pebbles, or white sand, that I am acquainted with. If you can give the desired information through your paper, it would doubtless be acceptable to many of your readers as well as to myself."

One of the best cisterns we have ever seen was made of limestone, the walls cemented with good common lime mortar, and then the wall plastered over with a thick covering of the same. In this way, great care must be taken in laying the walls, as it is frequently found that the mortar will settle from the under side of the stones, and leakage be the result. Broken limestone would answer the same purpose as pebbles, if the mode of building recommended in the Cultivator should be preferred; but it must be remembered that ordinary lime mortar requires a longer time to set, or harden, than hydraulic lime, and if water is admitted before this operation has taken place, it will never be performed perfectly. The color or kind of sand used is of little or no consequence, provided it is *clean* and *sharp*; on these things much of the strength and hardness of any mortar is depending. Unless we are mistaken, hydraulic lime is found in abundance on the line of the Ohio canal, and with that mortar and broken limestone, in the room of pebbles, cisterns of the best quality could easily be made.

The Bloody Murrain.

> Messrs. Editors—On the morning of the 26th June, I discovered that the urine of one of my cows appeared to be very highly colored, and upon examination found it to consist principally of blood. In a short time she commenced trembling violently and fell, and appeared to be convulsed, after which she recovered enough to rise. Her discharges became more frequent, and gradually turned darker colored, until they became almost black, and in a few hours she died.
>
> On the morning of the 4th of July I again discovered another, and my last cow, in the same situation as the one I have mentioned, and upon examining the Cultivator, I found the disease to resemble the murrain, as described by Mr. Cookson in the Cultivator, vol. 5, No. 5. There was a very slight discharge of blood from the bowels. I gave her tar as directed by Mr. Cookson, but it did not produce any good effect; she continued to linger, and on the following morning was much worse, being so stiff in her joints that it was with difficulty she could walk. I gave her another dose of tar, hoping it might relieve her, but she died in about two hours afterwards. Upon examining her intestines, I found her bladder to contain about two quarts of blood, her gall duct was very much distended, and contained a quantity of thick blackish matter; her horns were a little hollow. It may be proper to add, that we have had a disease among our cattle here during the winter and spring called the hollow horn, or horn distemper. Both of the cows that I lost were in fine order, having grazed alternately upon clover and salt marsh. Should you, or any of your numerous correspondents, know what this disease is called, you will greatly oblige a subscriber by publishing it, and the remedy also if any is known, as I fear it will destroy my entire stock of cattle, it appearing to be the most fatal disease I have ever known.
>
> *Nansemond, Va., July,* 1841. WM. J. WRIGHT.

Remarks.—The above are well characterised cases of bloody murrain, a disease which, as it appears in this country, would seem to be unknown in Europe, judging from the best works on cattle published there, such as Lawrence's Graziers' Guide, and Youatt on cattle. The cause of the disease does not appear to be well understood, but the rapidity with which it reaches a fatal termination renders it one of the most formidable diseases the cattle breeder can encounter. As is usual in the case of such diseases there are a variety of cures, and as some of them may be useful, we give a few that have been communicated to us, adding our opinion that none of them can be relied on as a specific, but that the safe course will be found in prevention rather than in the cure.

A correspondent of the Gen. Farm. vol. 6th, page 81, says that a decoction of the green leaves of mullein may be considered a certain cure. He took a quantity of the leaves of the mullein, steeped them in new milk and gave 3 quarts of the tea to an ox dangerously sick, which produced an immediate cure; and a cow attacked by murrain was afterwards cured in the same way.

The Hon. Dan Bradly communicated the following, as a remedy practiced with great success in western Pennsylvania. "Mix together half a pint of spirits of turpentine with a pint of sweet milk—put this compound into a bottle, and after shaking the bottle pour it moderately down the throat of the animal. Soon after this is done, give physic." Salts would doubtless answer as physic, and some discretion might be advisable in apportioning the dose to the size or age of the animal.

Mr. Priestman recommends a half a pound of poke root washed clean, cut fine, and boiled in two quarts of water until it is reduced one half, then turn it down while warm. The dose to be repeated once a day till the cure is complete.

Mr. Sheldon, of Michigan, cured an ox violently attacked, by mixing half an ounce of copperas and half an ounce of alum, dissolving them in hot water and while warm turned it down the animal. In 12 hours he was better, and a repetition of the dose cured him, though for a time weak from the great discharge of blood.

It is stated in the Franklin Farmer, that several cases yielded to two doses of sugar of one pound each, mixed with water. Some animals in the last stages have been cured by this simple remedy.

As we remarked before, however, we have more confidence in preventives than in cures. It is the opinion of many of the most intelligent men in districts where the disease is common, that it arises from bloodsuckers imbibed with stagnant waters, as these animals are most frequently found on dissection; but whether the opinion be correct or not, there can be no doubt the use of stagnant water must be injurious to the health of any animal and predispose it to disease. A farmer in Madison county, Ohio, after suffering many losses from murrain became convinced the cause was in the water they drank, (bloodsuckers being abundant in it and found in cattle after death,) provided his stock with a supply of pure water and in five years not a single animal had been attacked.

Next to pure water, a regular and constant supply of salt may be considered the best preventive of disease in cattle, and if a quantity of ashes or lime is mixed with the salt, the effect will be still more beneficial. For proof of this we refer to the Cultivator, vol. 6th, pages 120 and 149. In the first case, Mr. Warner found that wood ashes given in equal quantities with salt, at the usual times of salting his stock had for 20 years operated as an effectual preventive; and in the latter instance Mr. Sackett, of Michigan, had for eight years secured his numerous stock of cattle by keeping in their troughs, so that they always had access to it, a mixture of equal portions of slaked lime and salt. The lime was kept in a barrel in a dry place, air slaked and always fit for use. Previous to adopting this course, he lost many annually by murrain, afterwards none. To conclude; pure water, and plenty of salt mixed with some alkali, ashes or lime, we consider the best remedies or rather preventives of the murrain.

New-Jersey Marl—Inquiry.

Mr. James Boyle, of Annapolis, (Md.) wishes from some one acquainted with the subject—

> "An account of the Jersey marls, the easiest and best modes of digging and hauling, the usual depth of the pits below the surface, how to raise it from the pits, the mode of application on stiff and on light lands, the vegetation it best suits, and how much (if any) lime is mixed with it after digging before using."

The matter of these inquiries is an important one. Marl like that of New-Jersey, or closely resembling it, is found on a very large portion of the seaboard of the middle states, and from the wonders it has wrought in New-Jersey, it is evident might be successfully used on similar soils farther south. May we hope that some of our friends in New-Jersey, who have a practical acquaintance with the marls, their position, nature, and use, will respond fully to the inquiries of Mr. B. We should be happy to give place to such a paper in the Cultivator.

Milk House—Disease in Fruit Trees.

Messrs. Editors—Cannot some one of your ingenious and experienced correspondents furnish a plan for building a milk room; one that will combine convenience and neatness, and above all ensure the longest time of keeping milk sweet in hot weather, and also keeping it from freezing in cold weather. I have never seen any plan of such a building. As I shall have to build soon, I wish to obtain the best method before commencing. I have been much gratified with the plans of houses, barns, &c. which have made their appearance in the Cultivator at different times, and have drawn my plans chiefly from them; but I have been at a stand as to the best plan for a milk-house, with the qualities above mentioned. I should think some of the proprietors of the milk establishments near the cities, who carry their milk to market, might give the desired information, as I intend and have already commenced an establishment of that kind. Shall I build below or above ground? With what material, brick, wood, or stone?

I perceive that my fruit trees are infected with some disease, which I have no name for unless it is the scab. The bark on the limbs turns black, cracks, and at length withers the whole branch. Sometimes it occurs on the body, and kills the whole tree. I have tried to ascertain the cause, but not being much acquainted with fruit trees, was unsuccessful. An insertion of these inquiries will oblige A Young Farmer.

Burlington, Vt., 1841.

We have several plans of milk and dairy houses in the British Husbandry, and the writings of Dr. Anderson; but as the plans are complicated and expensive, we shall omit them for the present, in the hope that we shall be furnished with plans better adapted to our climate, and the resources of the common dairyman. A few hints on the construction of such buildings may, however, not be unacceptable.

The first and great requisite in a milk house is an equal and low temperature; the second is dryness; and the third perfect neatness. The easiest way of ensuring the first would be to place the milk room over a pure and copious spring of water. This would prevent undue heat in summer, or freezing in winter, and many milk houses are so constructed. But experience shows that where making butter is to be a part of the dairy business, a *dry*, as well as *low*, temperature is necessary to produce good butter, and hence in the best dairies of Holland and England particular reference is had to this point, all water except such as is required for cleansing being excluded. To produce an equal temperature, and at the same time low, it is necessary the milk apartment should be as little influenced by the external air as possible; for this purpose walls of great thickness, 6 or 8 feet, are recommended, the windows and doors double, and the buildings to have a northern and eastern aspect. The roof, too, must be made so as to prevent the heating effect of the sun's rays from being felt in the milk room, which is greatly aided by having trees of heavy foliage around it; and in this manner the temperature of the milk room itself, whatever may be the heat externally, will be little effected. Dr. Anderson recommended that the inner wall should be of brick, one tier, and neatly plastered; as also the window and doorways; while the main body of the wall should be of earth, with an inclination which would admit of its being turfed to the eaves; and some built on his plan, walls 8 feet at the base and 4 at the eaves, proved admirable for the use intended. In our climate, double, or thick stone walls, would probably be better than earth. The floors of milk rooms should be dry, and of materials that will not absorb and retain what falls upon them, whether it be milk or water. Bricks are sometimes used, but they are hardly smooth enough; flag or good paving stones are better, if cut to good joints; and perhaps a floor made of cement, the sand pure and white, and the whole of suitable thickness, would make a first rate one. In the best European dairies and milk rooms, ventilation is performed by having the windows or a movable pannel of the doors provided with a fine wire screen, so that when the wind is in the right quarter, or of the right temperature, air can be freely admitted and all insects, &c., excluded.

We are unacquainted with any disease of fruit trees resembling the one described by our correspondent. It would seem to be a kind of gangrene, as described in the English horticultural works by Knight, McIntosh, &c. Diseases of this class are attributed by these writers to a bad, wet subsoil, and the remedy to be in a correction of this evil. It is possible this disease may, like the fire blight of the pear, or the black blight of the plum, be the work of an insect; if so, a careful examination will doubtless detect it.

Recipes, &c.

Mr. Gray, of Trumbull Co., Ohio, informs us that a gill of melted lard turned down the throat of a sheep is an effectual remedy for that animal when poisoned with the low laurel, which abounds in some parts of the country.

> "It will also cure persons that are poisoned with the vine called running ivy, or mercury, frequently found on low meadows, by rubbing it on two or three times, whenever its effects are felt."
>
> "To cure the bloat in cattle, take about half a lb. of salt pork that is fat; cut it into slices, and draw out the animal's tongue, and place the pork as far down the throat as possible, when it will be swallowed, and relief soon be given, if the bloat is caused by clover or fresh grass. I have known from 1 pint to 1 quart of melted lard (according to the size of the animal,) turned down the throat, used with the best effect in cases of bloat."

Smoking Fireplaces.

"H. E. S.," of Bloomfield, (Ky.) sends the following hints on the construction of chimneys so as to prevent smoking:

> "The best means of preventing that pest, smoking fireplaces, is to build so as to produce a *strong steady draught*. The air in the chimney is rarified by the heat from the fire, and consequently rises; the air in the room fills up the partial vacuum, and a current is established. To insure a draught in the chimney, the air entering it should be heated as much as possible. This is done by having the mantle or front of the fireplace low; this will force the air nearer the fire, and of course cause it to rise with more velocity, because it will be heated more than in a high front fireplace. The back should be of the same height as the front. If a tight room has a large fireplace and chimney, it will smoke, because there will not sufficient air enter the room through the crevices of the doors and windows to produce an active draught up the chimney, and the cooler, heavier air on the outside will reverse the current, and force the smoke down into the room. Long chimneys usually have a stronger draught than short ones, as the column of rarified air is longer, but they may be made so long as to cool the air before it reaches the mouth of the chimney; for this reason, very long stove pipes smoke more frequently than pipes or chimneys that are shorter. It is necessary also that the interior of a chimney should be smooth, so as to present no impediment to the smoke."

Manure on Grass Lands in Indiana.

There seems to be an opinion somewhat common that manure is useless in the western states, such is the natural fertility of the soil. The statement we give below, from Mr. Cadwallader, of Indiana, would seem to prove that manure loses none of its efficacy or value on western lands:

> "In 1836, I bought a tract of land so poor that it would hardly sprout blackeyed peas. I immediately, as the best way of restoring fertility, put it into grass; but the first year it was not worth any thing. In 1838 and 1839, I top dressed the ten acres seeded down with two coats of manure, and in 1840, I, after the army worm had taken about half of the crop, sold hay to the amount of $62·37, besides putting six tons in my mow."

We shall be pleased to learn the results of any comparative experiments making by Mr. C. in the culture and manuring of potatoes.

Sawdust—Planting Trees—Johnswort.

"A. W. L.," of Hempstead, L. I., in a communication says:

> "My predecessor was in the habit of putting large quantities of sawdust, straw, &c., in his pig pen, let it get thoroughly incorporated and rotten, and then use it as a manure. On the purchase of the place last spring, I found on it a quantity of this sawdust manure, horse manure, and long manure; which three kinds I separately put in different parts of my corn field. The result is this: the part with long manure is very poor, (by the way would not poudrette help it?) the horse manure good, and the sawdust *first rate*."

This method of using sawdust has been practiced by the Shakers with great success. Rotted sawdust of itself would be a good manure, but put in a pig pen it not only decays, but it absorbs and retains much of the most valuable part of the manure, that would otherwise be lost. Of the great value of hog manure for the corn crop there can be but one opinion. It is decidedly superior to any or all of the ordinary manures for this crop, and a farmer should use every exertion, by frequently replenishing his pig pen with refuse matter, to increase the amount, or prevent waste.

"A. W. L." will find the treatment he proposes of his Johnswort a good one, (that is, to cut the plants, rake and burn them, plow in the fall, plow in the spring, and plant corn and potatoes,) if he hoes his crops as they should be hoed for a cleansing crop. We once treated a field in a similar manner, following the hoed crop with a grain one and a heavy seeding with clover and herds grass, to which plaster was liberally applied, and with the best results, the Johnswort having scarcely shown itself on the ground since.

The trees about which "A. W. L." inquires, "nut and oak," can be readily transplanted, but more care is required in removing them, and greater care in giving a congenial soil. Forest trees, particularly the oak, have usually long tap roots. When such are removed, therefore, as large a ball of earth should remain on the root undisturbed as is possible. Stuart, in his work on planting, shows that the largest trees, and of any kind, may be removed, if this point is sufficiently attended to.

"A. W. L." says, "last year, in killing some fine Berkshire pigs, I expressed a wish that they were whiter, when an Englishman, who assisted me, took a scrubbing brush and soap, and in three minutes those operated upon could not have been told from white pigs." This may gratify those who object to black pigs, since they can so easily be washed white.

Merited Compliment.

The following merited compliment to a distinguished individual of Mississippi, which we find in a communication to us from J. S. C., Esq. of Jackson, (Miss.) we know to be eminently just. Mr. Elliott, who now holds a responsible official station, finds time to devote to the promotion of agriculture, being well aware that in increased products alone can the country be extricated from the financial embarrassments it now experiences. We may be permitted to mention here, as proof of what may be done by an individual, that we have received through the agency of Mr. Elliott, within the past year, more than 200 subscribers to the Cultivator:

> "A reformation in all departments of agriculture is, I am happy to say, rapidly going on in Mississippi; and to the dissemination of the Cultivator by your staunch friend and the friend of agriculture, J. Elliott, Esq., very much is owing. Mr. Elliott is very justly esteemed the leader in improvements now making throughout the state, in the breeds of all our most valuable domestic animals, sparing no pains or expense to procure the very best of their kinds, although no individual can be more unassuming than he is in this, as in all other matters. His stock of Berkshires is becoming extensive, and has been derived from the most unquestionable sources. The crops of corn are likely to be large in this portion of the state; and those of cotton are perhaps quite as good as usual, though the plant is not generally so large as it should be at this season, (June, 1841.)"

Pine Sawdust—Inquiry.

Mr. White, the owner of an extensive steam saw mill near Jackson, (Miss.) inquires "whether pine sawdust has ever been applied as a manure; with what benefit; and to what description of soils it would be most serviceable?" He says:

> "We have large quantities both of sawdust and ashes; would a mixture be beneficial? There are some low grounds on our place of heavy, tenacious clay, as yet unopened. Could it by ditching and applying the sawdust alone, or combined with ashes, be rendered serviceable in a year. The ashes we have will prove an invaluable manure to the most of our land as we get it opened, which is generally a light sandy loam. Hence a desire for preserving them for that purpose. The sawdust will shortly become a nuisance, unless it can be made useful as a manure. Under any circumstances, it is my intention to make some partial trials with it, but if it has been successfully employed, I would like to know it, in order to avail myself of other people's experience. The point I wish to get at more than any other, is, would the application of this description of dust, before rotting, be injurious to the land?"

Sawdust applied to soils would at first act mechanically, by rendering them less tenacious and more friable; and when rotted, would be the same as any decayed vegetable manure. There can be little doubt that on heavy clay lands, especially when drained, a dressing of sawdust would be useful, both in lightening the soil, and eventually as manure. At the north, sawdust of all kinds is highly prized, but its great use is to put in cattle yards or pig pens, to absorb the liquid parts of the manures, and have the acid, all woods contain more or less, corrected by the alkaline salts existing in such places. Mixed with animal manures in this way, it forms one of the best applications that can be made to land. A mixture with ashes, as alluded to by Mr. W., would correct the acidity, but it is probable the beneficial effects of the ashes would be more apparent on the light than on the heavy soils. *Pine* sawdust, as such, we have never known used extensively, but should have no fears of applying it to any land where it could be of use in rendering it more friable at first, or valuable as decayed vegetable matter afterwards. We should advise Mr. White to use as much of his sawdust as possible in his cattle and hog yards, to be trampled upon and saturated with animal matter, and the rest, mixed with ashes, put on such of his heavy lands as he can drain and open. The experiments, however, upon which Mr. W. is entering, will decide these questions more effectually than any theory.

Bots in Horses.

Messrs. Editors—Will you be good enough to tell me whether in your opinion, a horse ever died from the bots eating *through* his maw? This is a question of deep interest to the community, and I hope you will not fail to give not only an answer, but your reasons as much at large for your opinion as may be convenient. S. J. Wheeler.

Murfreesborough, N. C.

Although we do not imagine that death often occurs from the bot eating through the maw of the living horse, still cases have occurred which could hardly be explained on any other supposition, and for that reason we think horses are sometimes in that way killed by bots. Bots may destroy horses, we imagine, in three ways; by eating through the stomach, by accumulating in such numbers as to choke up the pyloric orifice of the stomach, and by their so irritating that organ as to produce inflammation and consequent mortification. We think the bot sometimes perforates the stomach, from the fact that his mouth and its appendages are adapted to such an operation. All insects like the bot, that derive their subsistence from other animals, are provided with ample instruments for such a purpose. Thus the sheep maggot, the product of the *Musca carnaria*, is furnished with tentaculæ or hooks near his mouth with which he tears the living flesh, and the poor animal is literally (where this fly abounds, and the sheep is once attacked,) eaten alive. The bot is also provided with tentaculæ or hooks by which it fastens itself to the stomach, and with which it can at its pleasure tear and perforate the living wall that encloses it, and on the blood and secretions of which it generally feeds. We incline to the opinion that death sometimes ensues from the perforation of the stomach from the fact that the stomach of the horse dying from their attacks, is frequently found perforated or made a complete sieve by them. It has been maintained with much force and ingenuity that this perforation only takes place after the animal's death, and in consequence of their desire to make their escape from the stomach, as flies, ticks, &c. leave the animals on which they prey, as soon as death ensues. The instances, however, are frequent, in which horses have been opened sometime after death, and though bots were numerous, there was no perforation, the death being clearly attributable to other causes; while in others, opened as soon as breathing was done, and almost before the heart had ceased to move, the stomach was completely riddled. Why the bot will at times remain in the stomach without producing any apparent disturbance, and at others produce the greatest pain and most fatal effect, we do not know; that such is the fact, few we believe will doubt. At the same time it must be admitted that many of the diseases and losses attributed to bots, must be assigned to other causes, such as cholic, improper treatment, &c.

Improved Stock in Georgia.

The following is an extract from a letter received from B. Burch, Esq. of Spring Grove, near Elberton, (Ga.) and is another cheering proof of the spirit of improvement in the breeding of domestic animals, as well as other departments of agriculture, that pervades the whole country, as well as the immense benefits which a few public spirited men can confer on a country by selecting, importing and distributing such improved animals. Mr. Burch has sent us a sample of silk "manufactured in his family without any other machinery than the common cotton wheel, and the worm fed on the common red mulberry leaves." The ladies to whom we have shown Mr. Burch's silk, pronounce it a beautiful specimen, and of superior strengh and quality. It is another evidence of the ease with which silk may be cultivated and manufactured, as Mr. B. had never seen a silk-worm before those that spun the present specimen:

> "I have tried the Berkshires, and am much pleased with them. I should like to have those who still think they are humbugs to call on me, one and a half miles S. E. from Elberton, and see my boar Lord Bacon, that I got from Mr. Bement of the Three Hills; and Black Hawk and Dutch Girl, I got from Mr. Lossing of your city. Dutch Girl has six fine pigs of the "raal grit." I should also be pleased to show those of my friends who will call on me, a Cotswold Ram that was imported by Messrs. Sotham and Corning last fall, that clipped 12 lbs. of wool last spring."

California Wheat.

This is the name given to a variety of wheat described below, and of which a notice was given in the Cultivator of last year, page 188.

> "This wheat was got in the Osage nation, crop of 1839, from a man by the name of Boon, who obtained it from the St. Fe traders. Col. Spierin, of Abbeville, S. C. was then Indian agent, noticed the wheat, and brought it home with him to Abbeville, planted it in a garden and found it to grow well. The first heads counted about 100 grains each. The first crop in Abbeville gave about 150, and the crop of 1841 (the second crop raised,) have counted 204. It may be considered a reasonable estimate that in a good soil, each kernel sown will produce 1,000 grains. The wheat has been free from rust in both seasons of its cultivation, though rust is very prevalent in our southern wheats. JOHN WILLIAMS, Abbeville C. H., S. C."

We have examined an ear of this wheat, and find it to be a kind called by botanists *Triticum compositum*, perhaps a variety different from the one usually known under the name of Egyptian or many spiked wheat.—Of this wheat Low says:

> "It is distinguished from all others by its branched or compound spike, which no other species tends, under any circumstances, to produce. Its seeds are numerous and its produce abundant. It requires a good climate and a fertile soil, for, in unfavorable situations, the branches of the spike are not evolved, and then it assumes the appearance of ordinary wheat."

The specimen of the wheat before us shows a good berry, of a light yellow color, and appears capable of making a fine flour. Should it realize the expectations of the gentlemen who have introduced it, the California wheat will be a great acquisition to the country. Its quality, however, and its adaptation to our climate, remains to be more fully ascertained. To prevent all possibility of fraud, the proprietors have properly determined to sell it only in the ear. These may be obtained, one dollar each, at the stores of George C. Thorburn, and I. I. Roome, New-York, and W. Thorburn, Albany. It is a fall wheat, and should be sown at the usual times of sowing the ordinary fall wheat.

Keeping Ice.—We find in the Kentucky Farmer the following directions for keeping ice:—"We take at sunrise from the ice-house as much as will be probably wanted through the day, and cover it up in some saw-dust placed in a barrel which sits in the dairy-house. At night, the size of any given piece is scarce perceptibly diminished. It is a perfect charm."

NEW PUBLICATIONS.

Downing's Landscape Gardening, &c.

Here is a splendid volume, the title of which we shall give in full, as it will at a glance show the subjects embraced in it:

> "A Treatise on the the Theory and Practice of Landscape Gardening, adapted to North America, with a view to the improvement of country residences. Comprising Historical notices and general principles of the art, directions for laying out grounds and arranging plantations, the description and cultivation of hardy trees, decorative accompaniments to the house and grounds, the formation of pieces of artificial water, flower gardens, &c. with remarks on Rural Architecture, illustrated by Engravings. By A. J. Downing.—New York and London: Wiley and Putnam."

The time was, when the publication of such a work in this country would have been deemed ill-timed and misplaced; but now, thanks to a more cultivated taste, to a greater acquaintance with the beautiful in nature, and to a rational and laudable desire in our men of wealth and influence to surround themselves with higher sources of enjoyment, the appearance of Mr. Downing's book must be deemed most opportune, and a substantial benefit to the public. The subjects treated in the volume are comparatively new to the great mass of our citizens, and much money has been expended to little purpose, so far as regards beauty or comfort in the construction and establishment of country residences, which might have been much better appropriated, had such a work as Mr. D.'s been accessible. The style of building in this country has been miserably defective; all sorts of styles and orders have been blended, and the instances have been very few in which better taste has triumphed over bad example, and the desire of display. From the publication of this work, we think we may date a new era in our rural architecture. The excellent observations, the beautiful and varied illustrations, and the number and style of the engravings, cannot fail to render it popular and useful. Let no person who contemplates the erection of a residence, attempt it without first consulting Mr. Downing's volume. To the gardener or the architect, who desires to be master of his profession and unite to the first principles of his art, a thorough understanding of some of its most important details, this volume is indispensable. It is a work to be read and studied by those who would improve their taste in such matters; and the beautiful manner in which it is got up, with the variety of its engravings, will contribute to render it not less a favorite in the drawing room than in the library. We are scarcely aware how much the mind is influenced and molded by the beautiful in nature around us; the elevating, tranquilizing, and we may add civilizing effects of the natural objects with which we are most familiar. It is the aim of Mr. Downing's book to guide and instruct the mind, to direct and cultivate the taste, and by bringing to our notice the effect of the beautiful, cause it to be sought and appreciated. It is a volume to which we wish every success. Price $3.50.

Lindley's Theory of Horticulture.

This volume, which we have just received from the publishers, Wiley & Putman of New York, must be considered one of the standard works of the age. It is an "attempt to explain the principal operations of Gardening on physiological principles," and perhaps there is no man living so well qualified for the undertaking as John Lindley. The notes added to this edition by Messrs. Downing and Gray, have greatly added to its value, and better adapted it to the American public.

Prof. Lindley's volume is an effort to explain and illustrate the common operations of gardening and agriculture on the principles which govern vegetation, and it is scarcely necessary to say to any acquainted with his skill and knowledge in vegetable physiology, that he has been eminently successful. The great clearness and force of his reasoning and the multitude of facts he has brought forward to support his positions, many of them most curious and interesting, cannot fail to interest and instruct the reader. The necessity of a more full acquaintance with the subjects discussed in this volume, is thus justly stated in the preface to this American edition:

> "A knowledge of these leading principles at once invests with new and peculiar interest, even the most mechanical, and apparently unmeaning and irksome details of the art. With what increased satisfaction are the common processes of manuring or transplanting carried on, to say nothing of the more delicate operations of budding, grafting, propagating by layers, &c., when we are acquainted with the structure of the plants we are endeavoring to control, and comprehend the why and the wherefore of every step we pursue. With this knowledge of vital actions, new modes of culture and various improvements in the operations of the art, are continually suggested to the reflective mind; which derives additional pleasure from the prosecution of scientific experiments, of which the ignorant laborer who turns over the soil, and sows his seeds in precisely the same manner under all circumstencecs, never dreams."

Every part of this work will be found valuable to the gardener or orchardist, and not less so to the farmer who wishes to understand the rationale of vegetable nutrition and the conditions emost favorable to the growth of plants. We consider it a most favorable indication of the spread of correct sentiment, and a proof of the prevalent desire for useful practical information, when such works as Liebig's Organic Chemistry, Downing's Landscape Gardening, and Lindley's Theory of Horticulture are issued from the American press, and in a style of execution rarely exceeded by the London publishers. The enterprising publishers of this work, and the one previously noticed, (Wiley and Putnam, New York,) are deserving the thanks of the community for presenting to them these valuable works, and we trust their success will be such as to encourage them in farther efforts to promote the great interests, Horticulture, Agriculture, and correct taste in our country.

Kollar on the Insects injurious to Gardeners, Farmers, &c.

This is a valuable practical volume written by the celebrated German Entomologist whose name it bears, translated by J. &. M. Loudon, and the notes by J. O. Westwood, Esq. We give the arrangement and subjects of the several parts, as best exhibiting the design of the work:

> Introduction; sketch of insects and their classification, habits, uses, &c.—Part I: Insects which do not live on the body, but are troublesome from their attacks on man. Part II: Insects which live on domestic animals. III: Insects which sometimes attack animals. IV: Insects which injure Bees. The 1st part of section 2d, treats of Insects which injure grain—II: Insects injurious to meadows. III: Insects injurious to culinary vegetables. Section III. Part I: Insects which injure the vine. II: Insects which injure green and hot-house plants. III: Insects which are injurious to fruit trees. IV: Insects injurious to woods and forests.

From this programme, it will be seen that the field of labor is an ample one, and well has it been occupied by Mr. Köllar. He has noticed nearly all the known insects injurious to man, grain, fruits, trees, &c. and the well executed cuts that accompany the work make the distinctions of form, so necessary to a right understanding of the several species, easily seen. This is the case with those that prey on grain, particularly the two called the Hessian fly, and the Wheat fly, which many have confounded together, but which the engraved representations in this volume, as well as the known habits of the two depredators, would prove to be wholly distinct. We may hereafter make room for that part of his article on insects injurious to grain, which relates to these two insects, as the subject is one of much interest to the farmer; the Hessian and the Wheat flies having for many years occasioned most serious losses to the American cultivator. We believe the book has not been republished in this country, but it will be found a most useful publication for those who wish for a full account of insects injurious to the farmer, orchardist and forester. The London edition (price $1.75,) may be had of Wiley & Putnam, New-York.

The American Housewife.

This neat volume, for which we are indebted to the publishers, Dayton & Saxton, New York, is a copious collection of "valuable and original receipts in all the various branches of Cookery," with a large mass of miscellaneous receipts, and instructions relative to housewifery. The whole by an experienced Lady. The subject of carving is also fully elucidated, and illustrated by engravings; and on the whole, there are few volumes, which, to the young housewife, who desires to unite economy with taste and elegance in her cookery and table management, will be more acceptable or useful than this. Of the value of many of the receipts in a former edition of this book, we can speak experimentally, and can cordially recommend it to our lady readers as particularly worthy of their notice. The appearance of the book is worthy of the good things to which it may be considered a prelude, whenever its directions are adopted. (Price 50 cts.)

London Farmer's Magazine.

The July number of this excellent Journal is before us, containing a great variety of papers, interesting to those who take an interest in the great cause to which it is devoted. Among these papers, is the commencement of a notice of Liebig's Organic Chemistry, by J. Towers, Esq: the Agricultural Statistics of the United States; an able article on the cultivation, feeding, &c. of roots, from the Baltimore American Farmer; the description, engraving, &c., of Hussey's grain cutting machine, copied from the Cultivator, with other well written papers on various subjects connected with agriculture. In the spirit and beauty of the engraved portraits of animals, the Magazine is without a rival. Those for this month are, the Aberdeenshire Polled Prize Bull, owned by Isaac Machray, and the Deer Stalker.

Sander's School Books.

Messrs. Dayton & Saxton, of New York, have furnished us with a set of Sander's series of school books, consisting of "The Primary School Primer," "The Spelling Book," and "The School Reader," first and second books. We must confess that we have been, and still are, decidedly opposed to the unnecessary multiplication of school books, as constituting a source of constant change and expense, without any corresponding benefit. The hasty examination, however, which we have been able to give these volumes, has done away much of this feeling, so far as they are concerned, and the long array of most respectable names attached to recommendatory notices in them, would seem to indicate that for the purposes intended they possess no ordinary merit. Such matters, we must leave to those who are more competent, and whose business it is to decide how, and what, the rising generation are to be taught.

ORIGINAL COMMUNICATIONS.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

VERMONT FARMS AND FARMING.

Management of Meadow and Pasture Lands.

Messrs. Gaylord & Tucker—That portion of Western Vermont which lies between the Green Mountains on the east, and Lake Champlain on the west, including the towns of Orwell, Sudbury and Brandon on the south, and Shelburn and Hinesburgh on the north, is the subject under consideration. The main body of this land lies in Addison county, near the center of which is the place of my residence. This broad tract of land is about 15 miles wide and 40 miles long, and very noted for its luxurious grass and grazing country.

The nature of the soil and its situation is rightly adapted for both meadow and pasture land; we much abound in natural and artificial meadows, which are very free from stone. This section is principally clay soil, with a portion of rich loam on the swells, and on the low lands muck and black sand. The soil near the mountains is not so productive as that which lies nearer the lake. There are many indications that the surface of this lake was formerly thirty or forty feet higher than it now is; the rocks in several places appear to be marked and stained with the former surface of the lake. Fossil shells and the limbs and bodies of trees are frequently found at the depth of fifteen or twenty feet in the earth; many of the inhabitants are of the belief that the waters were formerly much higher, and spread to a much greater extent than they now do. There are many artificial meadows which we term intervales. Those meadow lands adjacent to rising ground, from their being generally enriched with the fine mold washed down, are of a rich soil and seldom require much other improvment than the removing of the superabundant moisture by proper draining.

The artificial meadows, from their being situated in wide spread tracts each side of our rivers and smaller streams, where the depth of the soil has been for past ages increasing by the deposition of various sorts of vegetable and other mold, brought down from the mountains and higher grounds, are in a greater state of fertility, and evidently better fitted for the permanent productions of grain and grass than those from which they have derived their richness.

This of all others is the most productive, yielding an abundance of sustenance through the summer, and producing an everlasting source of means for the support of man and beast, and the improvement of the higher lands. These lands cannot be outrivaled for constant productions of grass and grain by the prairies of the far West.

The clearing and improvement of our hill lands was the first work of the new settlers, and the vale or flat lands were mostly left uncultivated, considered to be of little value, by their appearing in many cases as vast swamps, which were often occasioned by the old timber that lay on the ground to obstruct the passing off of the surface water. In most cases, these vale lands or natural meadows should have been the first to attend to for health and profit.

The greater portion is natural meadow land, though we have large tracts in this country that are flooded by Otter, Dead and Lewis Creeks and Lemmon-fair, a low and sluggish stream, New-Haven river and several other smaller streams which overflow their banks, in many instances more than half a mile in width, and become highly profitable to their owners, affording not only an abundance of hay, but yielding large crops of corn.

Our higher meadow lands, which partake more of the loam, demand more attention in their management as respects their being kept always in good heart; these higher sorts of grass lands admit of considerable more latitude in performing different operations, as they are capable of admitting the stock as well as the dung cart more early in the spring months, and of suffering them to be worked at later periods in the fall without inconvenience. The more elevated lands often afford the sweetest feed, and are converted to the use of being fed down by sheep and other animals.

Formerly large quantities of wheat were raised on our clay lands; this grain was very productive, and large quantities were taken to the Troy market. At length we were defeated by the grain worm, which on the whole appears 'all for the best,' for many meadows were materially damaged by the plan, and they never have obtained the durable sward that those meadows have which still remain in the state of nature. In such cases, where the grass runs out, and gets hide bound, to renovate them we have to resort to the plow and raise a crop of oats, or other spring crop, once in six or eight years, then seed down to grass, the roots of which are very liable to be thrown up by frost, where the sward is not well set. Our meadows are sometimes injured by converting the crop into hay for several successive years without admitting it to ripen. If attention be not paid to permit some seed to fall, its quantity will sensibly diminish; those meadows should be the first to cut this year, that were the last that received the sythe last year. The habit of stocking moist lands, spring and autumn, with heavy cattle is common, but a very bad practice; for it must be evident to the most superficial observer, that the breaking of the surface texture, or sward of grass lands, must in all cases be prejudicial, not only by the destruction of plants which is thereby immediately produced, but also by the retention and stagnation of water upon them in the holes and depressions, from small portions of the turf being forced in; the evident necessity of clearing and removing all sorts of live stock, and more especially those of the heavy kinds on both of those descriptions of moist meadow land, and also on pasture land. I came in possession of a meadow where a portion of about six acres was poached up by cattle every fall; it was thereby formed into small bogs of grass, and the space between these bogs produced little or no herbage. I supposed at first it was the nature of the land to be thus boggy, and thought of resorting to the bog hoe for a remedy; but for the last ten years cattle have been most wholly removed, and only sheep permitted to graze thereon,—it has now become quite even, and those portions, of more than one half, where every vestige of herbage was destroyed, are now quite well swarded with valuable grasses of timothy and red top. In the spring season, heavy cattle are too frequently turned into moist pasture lands where they should not be permitted until they begin to possess a proper degree of firmness. In some cases ten head of cattle will drive more turf beyond the action of light and heat in one day, than would require to support one of them through the season.

To stock a farm with horses is the least profitable of any beast; they will in a few years destroy a good pasture by cutting up the sward; they return no manure to the soil that is of any benefit to the herbage.

Another error which exists among our farmers is, in permitting our cattle and sheep to eat down our meadows in the spring. It is very plain that when they are thus treated, we are not sure of an abundant product, and not being so early, of course, they do not have that advantage of making hay and securing it in the proper season. One considerable item in the failure of the hay crop in this region last year was occasioned by pasturing our meadows in the spring. The spring season being wet, it bid fair for a full crop, but it came on very warm and dry the last of June and scorched the grass roots. Those meadows that were not thus early fed, produced from one fourth to two thirds more hay than those adjoining that were late fed. The tread of the animal prevents the sward from giving a fleecy bottom and stints the growth of the young shoots. Some may imagine that barely the weight of sheep in this way cannot have any bad effect, but I am confident that it does in some small degree, more especially on clay meadows, and those soils composed of clay and sand, where the ground is well saturated with water, the weight of the animal assists in consolidating the soil, and on the commencement of a drouth will bake more readily. Those who have cut the sward by a plow or spade across a sheep path in this period could not but plainly see the difference, and grass will not grow in a sheep path.

The difference of situation in pasture lands has likewise much influence in directing the uses to which they may be applied with the greatest benefit; the higher and more elevated grounds being in general mostly used for sheep, while those of the lower are better situated and used for the purpose of neat cattle. Those enclosures of a moderate size are found more suitable for feeding than when the contrary is the case. It is a great fault with most of our graziers to summer different kinds of stock on too large enclosures. This is a point of management in grass husbandry that has been too much neglected by our farmers in general; not only great loss and inconvenience from its running up in tufts to seed, and by that means rendering the pasture patches and unevenly fed down, by which the extent of real pasturage is lessened, but it cannot keep the same quantity of stock in as good plight as where less numbers are permitted to run together.

The true principal of grazing for profit is, so to manage as to *eat all* and not reduce the condition of the stock, which can be done no other way than only by smaller enclosures than our farmers have been accustomed to arrange them, by eating all the briers, thistles, elders and other sorts that spring or shoot out upon the surface; they are in a measure extirpated, when, if left remaining upon and shading the ground, they render the herbage sour, coarse, and improper for the food of cattle and sheep. And here let me recommend that in case the thistle, elder, &c. have obtained too strong hold upon the ground to be mutilated by stock to advantage, it is a sure and most expedient and profitable way of extirpating them to cut them down when full in the blossom; as also willows that grow on the margin of brooks and other streams, may be exterminated by cutting them in August, two or three consecutive years.

Those pastures that are productive in grass of the more sharp, coarse bladed kinds, and other sorts of aquatic plants presenting themselves, it is very important that they be close fed in the spring season, as by this means the water enters their stems and the plants decay; the young shoots being more readily eaten by the stock, and good grass plants thereby allowed to flourish. That feeding down pasture lands of these as well as other kinds in a judicious manner, has the effect of rendering the herbage more fine and better for the support of stock in general, there cannot in my opinion be the smallest doubt. Our soil being so naturally productive of the different varieties of grass that very little attention is paid in regard to strict economy in the saving of manure to be applied to either our pasture or meadow lands other than what may be scattered about by sheep grazing.

To keep the greatest quantity of stock on a given quantity of land, I believe it may be done by turning them out early in the season before there is a full bite, and having a change of pasture to give them weekly fresh feed. By turning stock upon pastures where there is a full bite, the better sorts of grasses are only consumed, the more coarse herbage being rejected and let run to seed, by which the lands are greatly injured at the time, as well as in future; while on the contrary if the stock be allowed to enter during the time such coarse plants are in their more tender, early growth, and before the pasture is covered with better herbage, the whole of the other plants will be fed down in a regular manner with the grass; and the want of a full bite, on first turning out of the store stock, is of advantage to the animals, as they become more gradually accustomed to the change from dry food to succulent herbage.

I would not contend that close feeding for a large stock to range together through the season could be profitable, but it may be done with smaller pastures, rightly managed, with the greatest profit, although some of our farmers are of a different opinion, advising that all kinds of stock should have an abundance of feed at all times. That we have more farmers that over stock than fall short of it, may be too true, but this over stocking our pastures happens oftener on large enclosures than on small ones. The disadvantages of over stocking are scarcely capable of being repaired by cattle and sheep suffering a check in their growth, which, if ever, may take them long to regain their former thriving disposition; by over stocking in some cases, almost the whole produce of pasture lands are thrown away.

I have my doubts in respect to the manner of stocking with only *one* kind of stock, or to have a *mixed* stock to produce the best effects. Some think the more various the kinds the better it is for the stock and the lands. I have found no inconvenience in keeping only sheep on the same pastures for a succession of years in good heart. I have ever noticed that the different kinds of animals are all fondest of pasturing on that which is most sweet and tender. Sheep are well known to ramble over the whole of the pasture in order to pick out the most sweet and delicate morsels. The feeding of neat cattle is perhaps less particular and delicate in this respect, but when not forced by hunger they mostly appear to fix upon such parts of the land as possess the most sweet and palatable herbage, rejecting the coarse spots where it is less tender and agreeable. I think that no mixture of animals will answer the even and regular feeding down of pasture, for where a sufficient supply of herbage is before them, they will be all attracted by the sweetest parts, and those of the more sour kinds in consequence rejected.

The giving the stock the whole range of extensive pastures at once will not summer as much in the same condition that it would if the pasture were so divided as to give them the grass at different times in a fresh, unbroken, untrampled state. There can be no doubt but that much greater waste of grass is made in turning upon the whole at once, especially if the full proportion of animals for the land be put in, as it is obvious that when grass has been trampled upon once, all sorts of stock reject or eat it with great reluctance.

It is considered indispensably necessary that pasture be well supplied with water, as without having this in some degree at command, it is impossible that stock can thrive well. In situations like many farmers on our lake towns where the natural situation of clay is of considerable thickness, there is little difficulty in the construction of such watering ponds so as to be perfectly retentive or water tight, but in loose porous soils the business is not executed without much art.

Timothy, and white and red clover are best adapted to our clay soils and moist loams, but on poor and wet loams and clays it will not abide, but gives way to the water grasses and various plants, or other indigenous grasses. There is no better test of good land than its running spontaneously to white clover. I have known many fallows of new land where this grass took the ascendancy without any seed whatever being sown. Although it has not the sweetness of red clover for sheep, yet it is their main dependence. Whatever seeds be sown, white clover forms the principal part of the dependence for success; this plant requires close feeding to discover its merits, for if left to get a rank start on the ground it becomes sour, and sheep will grow poor and do badly on it, sooner starve than thrive.

I have fattened sheep on white clover pastures where the grass was so short it would seem as though they could not subsist; this fact proves that it does not depend so much on the *quantity* of the food as it does upon the *quality*. The old saying the "nearer the bone the sweeter the flesh," will here apply, that nearer the ground the sweeter the grass. There is but little doubt of the beneficial consequences of hard or close stocking on the older sorts of grazing land, but on the new lays it should be seldom attempted, as injury may be done to such land; close feeding will make most kinds of any grasses fine, sweet and productive, but this effect depends altogether on its being constantly fed close, that is, all seed stems being prevented from rising. The pasturing of sheep has evidently, in the course of fifteen years past, improved the quality of the herbage so as to raise grass of a good species, and in very considerable abundance, where nothing formerly prevailed but bad kinds of grass, and these in no great plenty.

The practice gives undoubted proof of its great advantage in renovating foul lands. On our dry soils it requires much longer time to grow the *second* inch than the *first*, and consequently we find it much more profitable on such soils to stock with sheep than cattle. Sheep feeding not only ameliorates by enriching the soil and fining the herbage, but also by destroying the weeds; we rank Johnswort and white daisys among the worst of weeds; these are over-run by cattle grazing, and thereby frequently get foul in the extreme, but cured by pasturing repeatedly with sheep. It may be proper to remark, that when a field has been pastured long with sheep it becomes rancid and disagreeable to them by large quantities of manure that they return to the soil, and no stock likes to feed near its own dung,—in such cases a rest for one or two years by either stocking with cattle or mowing will be beneficial and necessary.

Ant hills are very common in our pastures and meadows; as respects their extermination and the prevention of the rising of these mounds on our valuable lands, they may be wholly guarded against. I accidently discovered that by digging them up by the core, which lies about level with the surface, just as the ground freezes, it would destroy them; since then we have raised hundreds of their habitations in a winter's thaw with complete success.

Probably as much good fence cannot be found in any of our sister states, in the same extent of country, as now incloses the fields within the above tract, which is constructed chiefly from cedar, pine and ash timber. The central part of this section early frosts does not visit one year with another as soon, by some days, as it does other portions of our state.

Yours, SOLOMON W. JEWETT.

Weybridge, Vt., 1841.

Building Stone Wall.

Messrs. Editors—Living, as I do, in a country abounding with stone, and having had some experience both in drawing and laying, and having been an attentive observer of the improvements that have been made around me in the business, I will venture to make a few suggestions; especially as so little is written on the subject. It demands more attention than I have seen given to it. A fence so costly as stone wall should be well made. A great deal of poor wall has been laid in the country; full enough I think for our credit, as it respects our economy or good sense. Considerable half wall has been laid, 3 ft. or so at the bottom, and 3 or 3½ high, which would soon bulge and tumble down; and the stakes and rails which would be needed to complete the sham fence would tumble about as soon as the stone, on account of the stakes rotting off; and they of course would have to stick out in the way when stuck 2½ or 3 ft. each side of the wall.

In some parts of the country you may see considerable fence made of posts, boards, and stone, or perhaps rails instead of boards; but the wind operating on the upper part, would soon jam the stone a little too much to make them lay well, and the posts would rot off before a great while; so that the two kinds of fence above mentioned have found but few advocates among us. Give us none of your half fence; we want a whole fence; so good that it will not be learning the cattle to jump, and will last a spell.

Finish your wall when you begin it, and make it 5 ft. high; and in ground that is wet, and liable to heave, do not begrudge a ditch, and make a free use of sticks.

Whole wall seems to take but little more stone than half, where it is as narrow at the bottom as it ought to be; our best wall layers say from 2 ft. to 2½. Wall almost always bulges out at the side, when it falls down; and when it is wide at the bottom, it bulges a great deal worse than when it is not, every one knows, that knows much about stone fence: therefore we think if it is as narrow at the bottom as we can well lay it, it will stand the better. Convenience of laying requires more than 2 ft., but otherwise I do not know what objection can be raised against having it that width: we have tried it so narrow considerable. Then make it 5 ft. high, and without your sheep are smarter than mine they cannot climb over it.

Sticks are of great use in a wall. Get wood that will split well, be durable and soft; or almost any kind will answer; split the sticks 1-2 an inch or 1 inch thick, and 2 or 3 wide, and have them nearly as long as the width of the wall where they are used. Mr. Rice, of Hannibal, a man to whom no little credit is due for improvements in wall laying, had some wall that was laid with sticks about 8 years ago, taken down, and after getting down a foot, or a foot and a half, from the top, the sticks resembled lumber seasoned under shelter, all of the way except the ends of the sticks. I have taken down wall after a rain and most of the inside was not wet at all by it. Mr. Rice was of opinion that basswood would last 50 years. The sticks should not stick out quite so far as the stone, or they will be likely to catch water, and carry it on to the middle. They are not needed at the top, where the stones reach across occasionally.

But with the truest proportions, and a liberal use of sticks, the stones will not keep their place if laid on ground that heaves much. Dig a ditch at least 8 in. deep, and fill with small stone. For such a wall as I have been describing, the ditch ought to be about 3 feet wide, and care taken to have it straight, so that the wall will not be on the edge, and especially off the edge, in any place. If the ground is hard to dig, and you can plow a straight furrow, back furrow; but do not plow too wide. If the ground digs easy, a line, a few stakes, a shovel and a peck, and a good digger, would operate to as good advantage as any thing, I guess. In filling in, do not put large stones in the side of it.

If the ground is dry, and not inclined to swell and shrink much, by freezing and thawing, and especially if you build your walls north and south, a ditch would be of little or no benefit; but it makes almost "all odds" on wet ground.

If you have round and flat, small and large stone, take some pains to have the kinds mixed together; especially have plenty of small ones to fill into the middle of the wall.

And no good wall layer needs to be told to have the coarse and fine, round and flat, long and short stone judiciously mixed, and have the wall as well bound as may be. It wants some of the best stone on top, those that are coarse and will reach across; on account of making the wall firm, and staying on good. Cephas.

Oswego, April 16, 1841.

Remedy for the Turnep Fly.

Messrs. Gaylord & Tucker—As every thing is of interest to the farmer which enables him to guard against the depredations of the insect world, as well as to overcome the notions of bygone days which have long since been exploded by the light of science and experience, I have taken the liberty of communicating for the Cultivator some experiments relative to the preserving ruta baga and other turnep plants from their most destructive enemy, the black fly.

Many farmers have abandoned the ruta baga culture entirely, in consequence of the great uncertainty of the crop. I have for several years contended with the little black fly or flea, which attacks the plant as soon as it appears, and often in a single night destroys a whole field. Many a seed seller has been overwhelmed with anathemas for selling bad seed, when the little fly has made way with the plants before the farmer was up in the morning. I have never until this season been able to arrest the depredations of the fly, except partially.

In the June number of the Genesee Farmer, I noticed a remedy for the fly, recommended by Mr. Parsons, of Perry. The method which he has adopted with entire success, is "to soak the seed for 24 or 48 hours in *tanner's oil*, and then roll it in plaster to facilitate sowing." A very little oil will be sufficient. I tried the remedy on my seed this year, and with most entire success. The offensiveness of the oil is imparted to the plant, I presume, and if so, it is no wonder the fly is willing to seek some more delicious herb on which to perch and satisfy himself. I made trial of some seed as usual in the same field, but found that the fly took nearly all the plants.

With Mr. Parsons, I would say to the incredulous, put this receipt by, and make the experiment. It will not cost you much, and if it save you four or five hundred bushels of roots, for an expenditure of *six cents for oil*, you will be repaid for having *yielded once to experimenting.* B. P. JOHNSON.

Rome, N. Y., August 4, 1841.

On the Use of Lime.

Messrs. Gaylord & Tucker—There are few things connected with agriculture about which so great diversity of opinion exists among theorists and practical farmers, as the value and effects of lime when applied to the soil. By some it is regarded as a manure, which may be profitably used upon every soil; others think it a stimulant that can only be used with profit where the soil possesses dormant vegetable matter that requires the action of artificial heat to cause fermentation and prepare it to become food for plants. "The use of lime as a manure is supposed to have been introduced into Great Britain by the Romans, and has been extensively used there for the last two centuries; in fact it may almost be termed the basis of good English husbandry, as a large proportion of the soil in the British islands is of a cold, heavy and moorish nature, and could never have been brought to its present high state of cultivation without the application of an alterative, or some powerful stimulant that would warm up the soil, bring its dormant powers into action, and cause fermentation; thereby changing its very nature, so far at least as its productive qualities are concerned." Thus heavy clay soils, by a sufficient application of lime to cause thorough fermentation, lose their tenacity, and (while the vegetable matter is prepared to become food for plants) the soil itself appears by a chemical process to have undergone a change.

It has been asserted that the expense of an application of lime to heavy clays is amply repaid to the husbandman by the increased facility with which such soils can be worked—perfect tillage not being half as expensive as before the application. We think lime will be found invaluable upon all clay soils, especially in the improvement of those that have been worn down by improper tillage. Such soils receive but little benefit from yard manure, except given in large quantities; at least, they are slow in their action upon vegetation; from the reason of the coldness of the soil, its heavy texture, fermentation is slow and imperfect. By a sufficient application of lime with the manure, fermentation will be more rapid and complete, the close texture of the clay will in a great measure be destroyed, and that an improvement has taken place after tillage and crops will fully attest. I have frequently noticed an experiment made by a farmer in an adjoining town, the results of which are so satisfactory that I am induced to give them in detail. In the spring of 1836, 6 bushels of lime was applied to 4 rods of clay in its hot state; the land was thoroughly worked with a plow and sown to oats; fermentation soon commenced, and was so great as to injure the oats. The process resembled that of yeast in bread, and the effect was the same; the soil was lighter and resembled a soft loam. In July, the oats were turned under and turneps sown; the crop was large and of good quality. The spring following, it received a dressing of manure, with the rest of the field, and was planted to corn. The decided superiority of this piece could be noticed through the whole summer; it grew rapid, rank, and produced double the corn harvested on the adjoining 4 rods. Spring of '38, sown to oats and clover, both of which were vastly better than on the adjoining land treated in the same manner, with the exception of the lime.

The quantity of lime used in this experiment was large, at the rate of 240 bushels per acre. But the experiment has shown that all of the effects that have been attributed to lime may be realized where a sufficient quantity is used. The lime in this case evidently acted as a manure, which is proven by the superiority of all four of the crops, as a stimulus both to the soil and the crops, and as an alterative (how permanent I cannot say) from the appearance of the soil, resembling more a loam than clay, and the ease with which it can be perfectly tilled, compared to the same soil before the application. The results of this experiment are desirable, and the question naturally arises, if heavy or clay soils are to be limed, should not the quantity given be sufficient to produce all the above results? Half the quantity would probably have assisted the partial decomposition of the inert vegetable matter, operated as a stimulant and as a manure, but would not have produced the same effect upon the soil, which was certainly improved, and in addition to being more easily worked, will probably continue to carry heavier crops. Perhaps as a general rule the quantity of lime to be used will depend and should be governed by the quality and nature of the soil, and the results wished to be produced; the lighter the soil the less the quantity required to produce all the good that can be expected on such soils, and *vice versa.* I have seen crops evidently improved by a very slight dressing of lime. There are few farmers that have not noticed its good effects when used as a pickle on wheat, and yet the quantity used was so small that it could only have benefited the crop as a stimulus. I noticed a few years since in one of my neighbor's fields a very great difference in the appearance of the wheat. In one part of the field it was bright and rank; in the other it looked rusty and bad. On inquiry I found he had been building a house, and had drawn the old mortar and rubbish on his fallow. This was five years ago, and the effects may still be seen.

Some writers assert that the *only* benefit vegetation receives from lime is in the heat it imparts to the soil. Lime can only be reduced to a calx by intense heat. And they contend that a great proportion of this heat is partially fixed in the operation. In support of this theory it is said lime promotes the growth of some plants, and is destructive to others, or that all native grasses of northern climates are killed by it, while the cultivated or natives of more southern latitudes are benefited. This theory, like the fixed heat in lime, will hardly stand the *process* of *slaking.* It is more probable that the native grasses are destroyed by cultivation, as an application of lime and good culture generally succeed each other. The heat lime produces when slaked, or rather the heat thrown off from the large quantity of water which by its union with the lime is formed into a solid, is without doubt beneficial: but to assert that this is the only benefit lime produces to vegetation is mere theory, which has been falsified by every experiment that has been made in its use.

Lime is found in the formation of a great many of the plants, grains, &c., and wheat cannot be successfully cultivated without the existence of it in the soil. Our geological survey has shown that there are large quantities of lime in a majority of the counties in this state, which, with the numerous beds of shell and earth marls, are destined to be valuable resources to the farmer. JOHN C. MATHER.

Schaghticoke, N. Y., 1841.

Blight or Mildew in Wheat.

Messrs. Gaylord & Tucker—The notice you were pleased to take of the papers by Col. Smith and myself on the subject of blight, in the Cultivator for July, was not observed by me until now; otherwise it should have had earlier attention. You remark that "it struck us as not a little singular that while the first half of his (Mr. Gowan's) paper is devoted to proving that sudden changes of temperature are the cause of this evil, the last part should be an argument to prove the frequency of the disease in British wheat, a country where the climate is more equable, the range of the thermometer less, and the changes less sudden and extreme than in almost any other."

With permission I beg leave to say a word on what appeared to you so singular, and am especially moved to the explanation because the Cultivator ranks so high with farmers, and circulates so extensively among them, that I am unwilling the position I took, however feebly maintained, should be affected in the view of so many readers by the inference that I was inconsistent.

My sole object in reviewing Col. Smith's theory was, to cause grain growers to pause before they changed their practice of sowing grass seed with their grain, merely to provide against blight, being fully convinced that however proper it might be for other reasons to work for grain alone, it *would be as liable to blight without the grass as with it.*

Col. Smith stated that blight was unknown in England, "because," as he said, "there it was not the custom to sow grass with winter grain," and especially did he point to the drill system as being worthy of imitation. It became me then, to show that the disease *was* known in Great Britain, notwithstanding there, as Col. Smith alleged, it was not the practice to sow grass with grain; and more particularly did I show that the *drilled wheat*, with the plants at certain distances from each other to let in the sun to the very roots, and without grass or weeds, was more susceptible to blight than that sown broadcast. This was conclusive against the theory that the grass was the cause of the blight.

I *did not* attempt to prove "the frequency of this disease in British wheat," but on the contrary took pains to prove that it was owing *to the equableness of temperature, not to the absence of grass*, that Great Britain was indebted for so much exemption from blight. In proof of the difference in the two climates, I gave thermometrical observations made at Plymouth, England, and at the United States Arsenal near Philadelphia, and relied upon them as determining why blight is not as usual in Great Britain as in the United States.

Although the climate of England is more equable than ours, still it is not so uniform as to forbid all apprehensions of blight from change of temperature in the air. Changes sometimes occur there while the wheat is maturing, that blight it, causing considerable diminution in weight, and consequently affecting it most seriously in quality. If the London correspondent of the New York Courier, under date of the 13th July, per the Great Western, may be relied on, this very season in England is likely to prove the correctness of my views as to the cause of blight. In speaking of the corn market, he says—"an extraordinary change in the temperature of the air took place on Sunday last. The thermometer standing at 52 deg. during several hours, and during the whole of the following night, a degree lower than has been known in England on a Christmas day." Now if the wheat in England was in a certain state of forwardness at the time this change took place, and should the cold have continued for a few days, there is little doubt on my mind but it will be injured by blight.

The experience this summer and harvest have afforded, confirms me in the opinion *that grass has no agency in producing the blight on our grain*, and that mildew or fungi, in the proper sense, has as little to do with it. Late sowing, rank, juicy plants, by reason of our rich soil, or culture that keeps the plants too fresh, thereby retarding their ripening, may endanger or predispose, but cannot blight. The *scald*, as I described, and the sudden transition from heat to cold, are the prevailing causes. Very respectfully, your ob't serv't,

Mount Airy, Pa., August 2, 1841. JAMES GOWEN.

Blight or Rust in Wheat.

Messrs. Editors of the Cultivator—Observing the discussion upon this subject, I am induced to throw in an ounce of experience. Perhaps the most universal and most extensive blight ever known, is that which fell upon almost every acre of wheat in the northern parts of Indiana and Illinois in 1840. Upon five hundred thousand square miles of as rich soil as ever the sun shone upon, not one acre in ten was worth cutting. Early and late sown, and upon every grade of soil, on hill or dale, woodland or prairie, all was affected. Though in sheltered situations in woodland, and upon the poorest soil, it was the least injured. And what goes far against the "grass theory of Col. Smith," is the fact that what is termed "sod wheat" was the most injured. "Sod wheat" is the term given to the first crop on the prairie. The land is usually broke in July or August, about four inches deep—it is turned over flat in furrows from 16 to 24 inches wide, and the sod is often in unbroken strips half a mile long; and these are so full of grass roots that the harrow makes but little impression, and the consequence is, that the wheat is drawn into the cracks between the furrows, and as it grows it shows every appearance of having been drilled in long straight rows. Such land is usually very bare of all grass and weeds, and the wheat comes to early maturity.

No local cause could have produced the great blight of 1840. In the latter part of June, the wheat had attained a most luxuriant growth. Then came several nights in succession of most bitter cold, followed by a succession of "scalding hot, *muggy* weather." This must have been the cause that produced a distressing effect. Spring wheat at the time had not reached sufficient maturity, and consequently escaped the blight.

It is my opinion that no human foresight and care can be exercised sufficient to prevent a natural cause and effect of the wheat grower's hopes.

Of the crops of the present year, in this region, the farmer has no cause of complaint. Wherever good seed was sown, good harvests are gathered. And you may be sure there is a goodly quantity here to make up any deficiency in the crop elsewhere. For my own part, I have learned to place but little reliance on the assertions of "crop croakers," which always abound at this season of the year. Indian corn now promises the most abundant harvest ever gathered in this region. Be assured famine is yet "afar off." Let us be thankful for present bounties, and enjoy the pleasure of hope of future ones.

Lake C. H., Ia., July 16, 1841. SOLON ROBINSON.

Preservation of Timber.

To the Editors of the Cultivator—My name having been unexpectedly associated with the publication in your columns of the discoveries of M. Boucherie, relative to the preservation of timber, by the infusion of various antiseptic fluids into the previous circulation of the tree, it seems proper that I should communicate a few explanatory facts.

There seems to be some doubt in the minds of many of the practicability of infusing liquid substances in the manner recommended. To such I respectfully suggest, if they happen to have a favorite ash or oak growing near their dwellings, to bore a few holes with an auger near the place where trees are usually cut with an axe—entirely into the heart of the tree—fill the hole with the preserving or coloring substances, plug up the holes carefully, and mark the progress of the fluid by means of the leaves. This is a very cheap and easy process, and is a practical remedy for those who apprehend any difficulty in placing large timbers in tanks and saturating them by external applications.

Under Kyan's patent, (obtained in England, throughout the most of Europe, and in this country,) corrosive sublimate has been used for preserving from the dry-rot, timber and textile fabrics. This salt combines with the fluids of the timber, and forms solid precipitates that are not capable of absorption from the atmosphere of either nitrogen, oxygen, or ammonia. Many cheap substitutes have been suggested, and as early as six years ago, Dr. Woollastan proposed sulphate of copper, or blue vitriol; and some trials were reported to the House of Commons. The whole evidence produced and submitted to that assembly is important; it seems to prove beyond dispute that Dr. W.'s discovery is more important than Kyan's, and was suggested by his acquaintance with the copper mines, where he had noticed that wood subjected to the operation of the cupreous waters had been preserved many years, while those in the iron and lead mines soon decayed. He has since made numerous trials with various salts, and has uniformly found that sulphate of copper is the best preservative. Since his experiments have been successful, Mr. Margery has taken out a patent for the exclusive right of using sulphate of copper for this purpose, and it has excited much interest in the English journals. A patent, I understand, has been refused in this country, either on account of the individual not being a citizen, or of his not being the inventor.

In the Boston Daily Advertiser, of a few weeks back, you may find a copy of Margery's specification. I have not the paper by me, but the following is part of the specification: "To 1 lb. of sulphate of copper add four gallons of water; let it be for about two days, frequently stirring it; then let it run upon the wood or other substance intended to be preserved, which should be allowed to remain in a tank, and he kept under the fluid two days more; it should be submitted in a perfectly dry state."

Respectfully, &c. CALEB CARMALT.

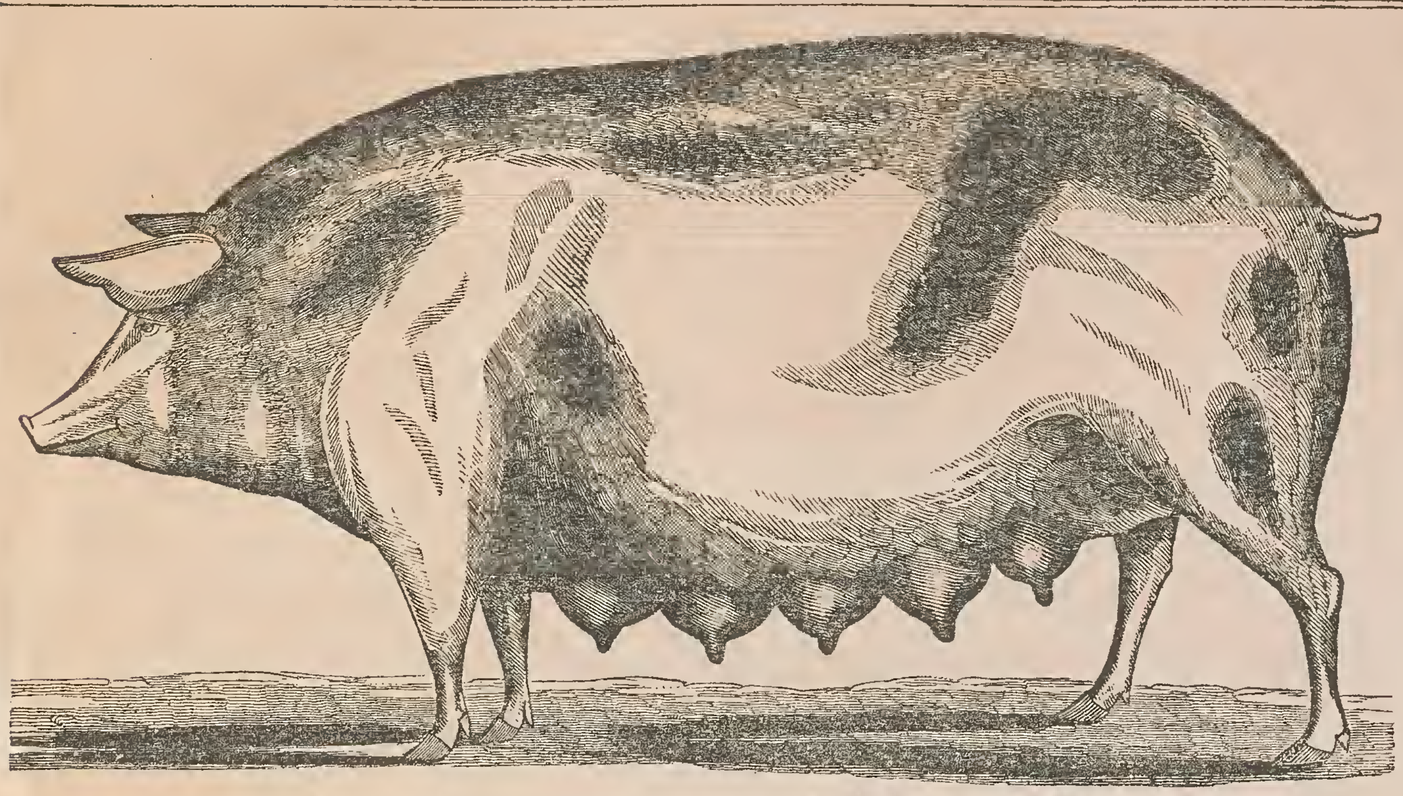
Friendsville, Susquehanna co., Pa., 7th mo. 26, 1841.

The Sulphates and Salts of Iron.

We received a long and pointed communication from our correspondent 'Holkham' in reply to the paper of 'N. N. D.' page 82 of the current vol. of the Cultivator. As 'N. N. D.' in an explicit manner acknowledged the error in part of his former communication, and as the subject in controversy is not one of great or immediate interest to the majority of our readers, 'Holkham' will pardon us if we confine ourselves to that part of his letter which shows the improbability of sterility being caused in a soil by the sulphate of iron; and its concluding paragraph:

"Let us, however, throw aside all our own reasonings and conclusions, and give our opponent *all he asks*, the sulphate and its pernicious qualities; we will then proceed to a calculation of quantities. Dr. Priestly obtained about 1700 cubic inches of sulphuretted hydrogen from a ton of manure; its weight when obtained is probably 500 grains, say one ounce. Now an ounce in a ton of such materials as we have obtained with it [the several substances that result from decomposition] may be of awful consequence, but we advise those farmers who have applied their manure without anticipating its effects, not to be alarmed; inasmuch as *mass in quantity modifies affinity*, and attraction in general is as the weight of atoms; while chemical affinity is as the weight of dissimilar atoms, those which are the *nearest in weight combining in the greatest proportion*, and those combining in the *smallest proportions* which are *most dissimilar in weight;* and two bodies whose particles are of different specific gravity, *being united*, any third body whose particles are heavier than those of the lightest, will decompose the compound and unite with the heaviest.—(Laws of Chemical Affinity by Prof. Vanuxem, page 47.) Now when we come to cart out a ton of manure, and spread it upon the usual quantity of land, and mix it with two or three hundred tons of soil, we have, supposing none of the sulphuretted hydrogen lost in the atmosphere, or absorbed by growing plants, 1·10,000,000 part of the whole: if used with Dr. Jackson's one per cent. of lime, it is just 1·100,000 part as injurious as the lime is beneficial. If we now recollect that all that is lost in the atmosphere, all that combines with alkalies, all that meets with antagonist forces to prevent its joining the iron, is actually beneficial; when we recollect that a hundred thousandth part of one per cent. of lime, potash, or other alkali, all of which are evolved by the decomposition of manure, is adequate, among many other contingent agencies with which we are acquainted, and probably many minute and imperceptible principles of vegetable vitality with which we are unacquainted, to counteract the tendency to barrenness produced by the sulphuretted hydrogen, we shall begin to think that the reasoning in favor of sterility is like beating the air, more troublesome than profitable. They may well afford to grant us fertility upon calcareous soils, constituting perhaps one-tenth of the habitable earth; but we mean to have it upon *all*, because the poorer we are, the more we need assistance. And if, in addition to the loss of lime, we are to be deprived of our manure, we may, like Shakspeare's Iago, when he had lost his character with his purse, be called POOR INDEED. Fortunately, however, there is no land totally devoid of all alkaline substances, and upon these too we are allowed to apply our manure, because the sulphuretted hydrogen acting upon the alkali converts the whole into manure.

"Having thus ventured, with the freedom that should always distinguish the love of truth, to dissent from the opinions of one of your most valuable writers, it would be doing him injustice if I did not bear testimony to the high estimation in which his investigations are held. There are few men whose opinions I have read with more intense interest than his whose conclusions I have endeavored to controvert; and if the great object of these strictures, the leading of farmers to *think*, to take a deep and abiding interest in such subjects, is accomplished, it should, instead of being characterized by N. N. D. as a rebuke, be considered by him as a benefit derived from his contributions. With his objects I heartily concur, and if his efforts to establish an agricultural school should be successful, he may then perhaps have reason to think there is one man who can appreciate the value of the service he has rendered the public; there is *none* who, according to his limited means, will go farther to assist him; and while I express a fear that between a state and a national institute, our efforts may be paralyzed, I cannot be insensible to the infant struggles of either the one or the other."



'Courtenay'--A Woburn Sow, the property of Dr. S. D. Martin, of Kentucky.—[Fig. 72.]
(Copied from the Western Farmer and Gardener.)

Swine--The Woburns.

Editors of the Cultivator—In your July No. there is an inquiry by A. C., about the Woburn hog, and a request from you that I should reply, and would accompany the reply with a correct plate. I will now proceed to reply, and will furnish you with a correct plate and description as soon as a plate can be procured.

The Woburns that I have were first introduced into Kentucky in 1829, by a merchant of Winchester, (Ky.) Shortly after their introduction, I procured of him a pair of pigs, and after his death, which happened in 1833, I purchased his old sow, which I called Pennsylvania. In 1837, I procured three hogs of the same breed from Virginia, accompanied with a certificate that they were pure blooded hogs of the *"Duke of Bedford's breed."* These three were called Belmont, Belmona, and Accident. I send you a plate of Belmont, taken when he was nine months old.—(fig. 74.)

These hogs, when I got them, were called indiscriminately Bedfords or Woburns. But after an extensive trip through Pennsylvania, New-York, Massachusetts, and other states, looking for them, and finding the hogs generally called Bedfords in those states, were not the same kind of hog, I called mine *entirely* by the name of Woburn, to distinguish them from the numerous varieties of Bedfords.

Three or four years ago, Mr. John Blackman imported from England three pigs of the Woburn breed; they were thin fine haired hogs, and I expect it is from these that the pigs spoken of by your correspondent have originated. Those hogs of Mr. Blackman's had the form and appearance of Woburns, except in hair, of which they were nearly destitute, showing a deep cross of the Neapolitan hog. So much for his first question.

To the second, as to size and disposition to take on flesh when compared with Berkshires? I would answer that the warmest advocates of the Berkshires admit that the Woburns are larger. I have tried many experiments as to their fattening qualities, all of which have resulted greatly in favor of the Woburns. An experiment was made in Jessamine county, Ky., by Isaac and Wm. Barclay. They fed a Woburn and a Berkshire boar for thirty days, to ascertain which would gain most. Wm. Barclay was a strenuous advocate of the Berkshire, and Isaac of the Woburn. The gain of the Berkshire was fifty-seven pounds; that of the Woburn was one hundred and seven pounds in the same time. This experiment was so decisive that Wm. Barclay purchased some of the Woburn stock, and after having had further proof, admits their superiority.

Another experiment made by Mr. Fanning, of the Tenn. Agriculturist, and myself, in which half-blooded Woburns were fed against black Berkshires, my pigs gained an average of 20 lbs. more in 61 days than his did in 120 days; the father of these pigs was a *white* Berkshire boar that I imported from England.

Though many of the advocates of the Berkshires admit the Woburns will gain flesh fastest, they contend that the Woburns are the greatest consumers. For the purpose of testing this matter, we shall shortly have some of each stock fed by some disinterested person by measure. Before my proposition to feed by measure was accepted, I made the following experiment:—I put up a sow (Marion) of the Woburn stock that was eleven months old, very much reduced by suckling pigs, on the fifteenth day of June, and had her fed on five pounds of corn a day, and in ten days her gain was twenty-seven pounds. No doubt a part of this gain was filling up; but it was very apparent that she had fattened. The next nine days she was so much indisposed that she only eat thirty pounds of corn, and weighed the same she had done before, having neither gained nor lost. At the commencement of the next nine days she was still so unwell as not to eat her allowance, and eat only forty pounds of corn, and her increase was twelve pounds. Under very unfavorable circumstances, Marion gave an increase of 39 lbs. in 28 days upon 120 lbs. of corn. She was in a close pen and had during the time nothing else but water, and some salt with ashes mixed with it.

Now let us see how this will compare with Berkshires. On page 67 of the present volume of the Cultivator, in Letters from the West, A. B. A. says, "I had twenty-two Berkshire swine in a small pasture during the month of August, where the herbage was so completely dried up as to give them no feed from it. I accordingly ordered them four bushels of corn per day, but this did not seem to satisfy them, and they were roving about the pasture uneasy, and I soon found losing flesh." Here is twenty-two Berkshire sows (for he tells us afterwards that they were sows) losing flesh upon four bushels of corn, which at 55 lbs to the bushel, is exactly ten pounds each.

To the inquiry how would they cross with the Berkshires, I would answer, that the Woburns cross well with all hogs that I have tried them with; with the Berkshires there is size and earlier maturity added by the Woburn, and beauty of a shorter, sleeker coat of hair, by the Berkshire.

To the inquiry, where can they be got, I answer that Mr. Blackman's Woburns can be got in Butler county, Pennsylvania, and such as I have can be got of me near Colbyville, Ky.

SAMUEL D. MARTIN.

Colbyville, Ky., July, 1841.

Soap should never be used until is a year old.—You cannot make your soap too strong, if you will give it age. S. R.

The Sugar Beet and Rohan Potato.

To the Editors of the Cultivator—I have delayed any reply to the numerous notices of my remarks, which have appeared lately in the Cultivator, on the sugar beet, &c., until I could, as well as might be, learn the progress in the cultivation of this root to public favor in our country.

Now, after a number of trips through districts where three years ago the beet was freely grown, not a patch of it is to be seen; nor, notwithstanding the cultivation of this root was introduced into our country many years ago, for the purpose of manufacturing sugar, yet not an establishment for the purpose exists in our country, where a man might go to purchase his sugar. I am, therefore, induced to believe that the public is satisfied that this root, containing as it does NO STARCH OR GLUTEN—(*the grand elements of all seeds and roots known to be rich in nutriment*)—but little sugar, and nothing else except a little mucilage and woody matter, although it is a pleasant addition to a good diet, is not worth growing for the purposes of being fed to cattle or hogs. I am induced to believe likewise that a business, which has always proved itself to be a hard up hill business in France, where it can be better conducted than here, and where it would undoubtedly be discontinued the moment other sugars were admitted free of duty, will find little or no favor in our country.

Allow me to give one illustration—it will show the value of splendid crops of beets, such as your correspondent, Mr. Diehl, proposes to raise, and such as probably would grow upon our rich Western prairies, and I have done. A gentleman in this county, selected from a luxuriant field of beets, one remarkable for its solidity, symmetry and beauty, such an one as any man would be proud to raise, and such an one as would have gained a premium at any agricultural exhibition. It weighed 18 lbs. He dried it carefully, and then weighed it again; it now weighed 1 1-4 lbs., having sustained a loss of 92-100ths; it was reduced to a mere billet of wood.

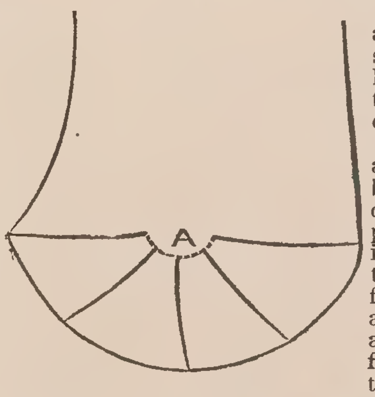
With respect to the Rohan Potato, so far as I can learn, seed brought from the South gives the first year a yield almost incredible; but the second year it yields no more than an ordinary potato upon the same amount of land. I have said they were inferior to some other kinds for feeding to cattle, &c. To ascertain if it were true, I dried an equal quantity of this and the pink eye, and the Rohan lost 16-100ths more than the other. On slicing them one would almost drip whilst the other was comparatively dry. Some imperfect experiments showed that equal weights of both dried to the same degree gave very nearly equal quantities of starch.

Although Judge G—— and his chivalrous companions performed the feat of devouring this root, yet I do not learn that even he has adopted it, to the exclusion of other kinds of potatoes, for *his* table.

S. GUTHRIE.

Sacket's Harbor, N. Y., Aug. 3, 1841.

Shape of the Ax.—(Fig. 74.)



Messrs. Editors—In this age of invention I have thought strange that no improvement has been made on the form of the Ax; an instrument so necessary to the farmer.

I send you the shape of an ax, (fig. 74) that is considered by those who have used axes of this form, really an improvement. You see this form is circular on the edge. Near the center, on a line drawn from the two points, the ax should be thicker than axes commonly are so far from the edge. From that thickest spot A, the ax should taper on the lines, with a very small curve to the edge each way. This shape of the ax secures two properties which are valuable to an ax. One is, it does not stick when struck into wood; the other is, it chips admirably.

As axes are commonly made with little curve on the edge, and nearly of a thickness, when used with a strong arm, they sink even the points into the wood, and stick. Then it requires an effort to get them out, the helve is in danger of being cracked, and time to strike several strokes is lost. This is a hindrance to the chopper.

There is another impediment. The ax cuts a wide chip, of course it is thinner, it bends, sticks at the points of the ax, and does not rive off. One, two, or three strokes must be taken to fling the chip out. If these strokes are not well directed, the chip is cut again and a stroke is nearly lost.

By this improvement, these impediments to the chopper are prevented. The ax with such a circular edge does not stick in the wood; it cuts a narrower chip, of course it is thicker, does not bend, but rives off, so that a chip is flung off almost every stroke.

If this improvement in the ax will be of any advantage to the farmer, he is welcome to it.

A Friend to Aoriculture.

Lewis, Essex co., N. Y., 1841.

Improvement of the Soil and the Mind.

Messrs. Editors—Permit a plain farmer to express his sincere thanks to James M. Garnett, Solon Robinson, and others of a kindred spirit, for the noble and efficient efforts they are making to improve the agriculture of our country. Such correspondents to the Cultivator and other agricultural papers, are doing an amount of good which is not, we think, at present either rightly understood or fully appreciated. Time only can reveal, when abundant harvests shall wave over districts of country, now sterile and worthless from improvident cultivation, and when the whole agricultural community of our country shall become highly enlightened and elevated, the important nature of the services they are rendering. The spirit of improvement which these men have been so active and zealous in promoting, has already given an impulse to agriculture and advanced the interests of the farmer to an extent which is not conceived of by those who have bestowed but little reflection on the subject. The district of country in which the writer resides, affords a striking example of the truth of this remark. Some twelve or fifteen years ago, the system of agriculture here universally practiced, was so rapidly impoverishing the soil, that the majority of our farmers looked to emigration as the only alternative; numbers of farms were annually thrown into market and sacrificed, and wave after wave of our population was successively rolling away to the West. Now this tide of emigration has not only ceased to flow, but is beginning to ebb. The developments of the capacity of the soil (the greater proportion of which was originally exceedingly fertile and productive,) for improvement, have been truly astonishing. Many old fields, that were naked and gullied, now present an even surface, beautifully clothed in green—and our lands have greatly advanced in intrinsic, as well as in market value.

This favorable change in the agricultural prospects of our country, certainly entitle those who have been instrumental in bringing it about to the thanks and gratitude of the farming community. But there is another sense in which the services of those who have been instrumental in bringing about this change, can never be too highly appreciated. It is this, that like the former venerable and lamented editor of the Cultivator, they are laboring not only to improve the soil, but the mind. To excite in the breasts of farmers a thirst for knowledge, that they may become educated and well informed, rightly understand their own interests, and faithfully and intelligently discharge to their country the high and responsible duties which devolve upon them. How much depends upon the success of this effort will be apparent when it is considered that the farmers of this land (out-numbering and out-voting at the polls more than five to one all other classes combined,) constitute that *great majority*, who have a direct and absolute control over the destinies of the republic, and whose high elevation in virtue and in knowledge is the only perfect security we can ever have for the perpetuity of our free institutions. The opinions which we entertain upon this subject, and which we have thus briefly expressed, may possibly be thought somewhat extravagant, but, nevertheless, let the editors of agricultural papers, with their many able correspondents and coadjutors throughout the country, continue to direct their efforts, steadily and singly, to "the improvement of the soil and the mind," never suffering their zeal or ardor for a moment to abate until we are blessed with a soil highly improved, and an agricultural population highly enlightened and elevated, and we believe that then, and not until then, will our national prosperity and our national institutions be based upon a solid foundation. *Liberty, Va., July*, 1841. H. W. M.

Hay Riggings--Answer to Inquiry.

Messrs. Editors—Your correspondent, of N. J., inquires in regard to a kind of hay riggings which are best adapted to carrying heavy loads over rough roads, and one that will sustain the center of gravity longest; and which *one man can handle.* Therefore, I herewith give you a description of my rigging, which, I hesitate not to say, for hauling grain of any kind or hay, for sustaining the center of gravity, and for the facility and ease with which it is "shipped and unshipped," cannot be equaled by any that have come under my observation.

It is one which I consider *"perfect,"* (please to excuse my commendable ostentation,) made with *my own hands*, and it can speak *for itself*, for it has several peculiarities to recommend it to every farmer who has not such an important implement. And, first, it is very *light and strong*, and one man can take it to pieces, and unload it in *five minutes.* Secondly, it is not *"top heavy,"* and will transport safely as heavy loads, and sustain the *center of gravity* as long as any that I have ever used. And, thirdly, grain in the sheaf, and hay can be carried equally well on it, and when that season of the year is past when it is to be used, one man can take it to the *"farming utensil house"* and stow it away in the "dry," with occupying but a small space;—whereas, one of a huge "nondescript" form must remain wherever it can be unloaded handiest, decaying in the weather, *which is a bad streak in farming.* But to the description.

The dimension and form of it are as follows:—It consists of two ladders, fifteen feet in length, in the form of a horse's hay-rack. The side pieces, or poles, are made of light pine with the bark pealed off, and about four inches in diameter, connected together by rounds fifteen inches apart, made of white oak, which extend above the pole to hold the hay. These are set on the wagon, and two light pieces of scantling, for supporters, pass under the top pole, over the bottom one and under the reach. These are fastened to the sides by means of pins. The ends are then secured by boards passing from one side to the other, with the end hollowed so as to fit snugly to the pole, and bound with hoop iron, and a pin prevents it from slipping off.

Now, this is *precisely* such a rigging as each farmer should have, if he wishes to have one that he can *depend upon* in all cases. Those which are built on a common wagon box or a square frame, placed between the stakes, and sometimes with hoops bent over the wheels, are a kind of "Joe Bunker," that you will not find about *me!*

Now, in regard to the center of gravity, *it is that point in a body, upon which being acted upon by gravity, it will balance equally in all positions.* Therefore, the center of gravity, in a load of hay, is higher in proportion to the height of the load. But in an ordinary load of about a ton it is about a foot above the top of the rigging; which brings it about seven feet from the ground. Now, the base of the wagon, being over four feet, one side must, consequently, be elevated above the other, some fifteen inches before a perpendicular line, falling from the center, will strike beyond the base, or that part of the wheel which touches the ground. Then, so long as the center of gravity lies within the base, we need apprehend no danger of turning over.

Farmers, try it and satisfy yourselves; and if my position is not *correct* (which is founded on experiment,) or if I do not have a right view of the subject, I will thank any one to correct me. It is, indeed, strange to me that when many farmers *see* and *feel* a great inconvenience arising from having such *unwieldy, huge* implements to handle, they will persist in the same course. This is not as it should be!

Farmers should always consult *convenience, neatness* and *taste*; and when they are following that which is wrong, and 'tis *pointed out* to them, and they become *convinced* of it, they should lose no time in setting themselves *right.*

Tompkins co., N. Y., 1841. Verus Practicus Colonus

☞ The "drawing" mentioned in the note to the above, will be "acceptable."

An Excursion to Syracuse.

The ride from this place to Syracuse is much of it a pleasant one. A broad and almost unbroken valley stretches from Cortland to the high land known by the somewhat paradoxical designation of "Christian Hollow Hill," and descending from its northern declivity, another valley less broad, and skirted with more precipitous hills, extends to the plain on which the villages of Onondaga Hollow, Syracuse, &c. stand. Christian Hollow Hill is not far from equidistant between Cortland and Syracuse, (the whole distance being thirty-two miles,) and it is the dividing ridge between the waters flowing north and south through the two valleys, as well as the most apparent point of division between the limestone and slaty formations, and other accompanying geological distinctions, which so materially alter the agricultural character of the two regions.

I have said the ride is an agreeable one, but, probably as a matter of course, my preferences go for *home*—for the valley of the Tioughnioga. I have been some little of a traveler, have seen many sections of country generally deemed beautiful; but after returning from *any* of them, when, as has often been the case, the eastern or western stage has brought me to the summit of one of the ridges of hills which shut in our valley, and it lay stretched out beneath—it has never, in my mind, suffered by the comparison which I could not fail to institute. And yet there is nothing striking in the scenery—no wild or picturesquely grouped heights; no broad expanses of water. But there is an air of quiet beauty, of tidiness, comfort, and successful industry, which brings more genuine satisfaction to a reflecting man, than the sight of nature in her more imposing, but less *useful* forms. Not that I would dispense with every thing like taste, and refer all to the commercial standard of profit and loss. But every feature in the prospect, every tint in the Claude-like picture, the white-walled cottages, the vine-clad porches, the neatly-managed farms, and a thousand other nameless but not voiceless indicia—all tell of human comfort, of homes and firesides made happy by intelligence and taste—of advancing civilization—of a state of society beyond that where man labors merely, like the brute or wild beast, for food and shelter, his prey and his den. Is this not better than wild rocks and barren mountains? The valley of the Tioughnioga is a most beautiful farming country, and, as a general thing, most beautifully is it cultivated. And such villages as Homer and Cortland, where do you find them? I will not say there are none such—for I know several in New-England, and a few in our own state, which bear the same stamp of neatness, comfort and taste; but you may travel hundreds of miles and not meet with *one!*

It is true that on our slaty formations we cannot compete with the limestone regions in producing the great staple of our country—wheat. But what of that? In all other crops we can equal them, and in grasses surpass them: and the cattle which we raise in the place of wheat, instead of impoverishing, are constantly adding value to our lands. The grazing districts are steadily improving, while the wheat-growing ones are as steadily deteriorating; and the change on both sides is every year becoming more visible. Vicious weeds are choking up the once valuable farms of the more easterly portion of the wheat-growing district; and the same course of husbandry is producing the same results in the less worn lands of the west. But the once overlooked southern counties are every day advancing in value. What is the inevitable result? It requires but a small knowledge of mathematics to show, that two bodies advancing from opposite points in parallel lines, must ultimately reach the center of the distance which sepatates them, pass it, and reverse their original position. If the wheat country continues to degenerate, ours to improve, the consequences are obvious. Even now, I hesitate not to say, that taken year by year, the grazing yield as great a profit on the capital expended as the wheat-growing districts.

But what has all this to do with an "Excursion to Syracuse?" The truth is, Messrs. Editors, if I mount one of my hobbies I am sure to be run away with! Now, a word in relation to the valley of the Onondaga creek, known popularly as "Christian Hollow." Whether the first part of the appellation was originally bestowed on it, on the *lucus a non lucendo* principle,* or from the sirname of a Dutch family residing in the hollow, I am unable to say. The land is evidently of a superior quality. Seven miles from the hill brings you to the borders of the Onondaga Reservation, occupied by the Onondaga Indians. The land lays, I believe, in a rectangular form, and is four miles by three in diameter. The state last winter appropriated $5,000 for the improvement of the road through it, before which it was nearly impassable in wet weather. The work is going on, and appears to be well done in the finished sections. I was mightily amused at the appearance of some Indian *bucks*, with gaudy belts, "soap locks," low floating hat bands, and that certain jaunty cock of the hat and indescribable air which always characterizes the dandy genus, whatever the color of their skin. Human nature is the same in Broadway or in an Onondaga forest! It is seven miles from the Reservation to Syracuse, through some of the finest land in the county. Onondaga Hollow, four miles from that place, once so thriving a village, has been ruined by the advantages of its more fortunate competitor.

Syracuse exhibits more business, more bustle and activity, than any other place "of its inches" I was ever in. One would think the Syracuse House the focus of one-half the traveling world, such is the constant influx and efflux of travelers. But "mine host" finds time also to be a farmer. He is the owner of a small farm, one of the most beautiful about Syracuse, which is tilled like a garden. I accompanied Mr. Rust over this establishment, and to say nothing of his farming operations, I saw some cattle and hogs, such as are not often met with. A yoke of fattening cattle, beautifully symmetrical in their proportions, and weighing about 3,000 lbs. a piece, are not seen every day! Mr. Rust is a capital feeder. Last year he slaughtered a five year old ox, the hide, quarters and tallow of which weighed 2,089 lbs. The quarters weighed 1,688 lbs. He kills about 100 hogs annually, and gives a decided preference to the Leicester breed. This variety was imported into Wayne county a few years since. They grow very large, well-fatted ones often reaching from 500 to 800 lbs. They are thin-skinned and are easily kept, considering their size. Mr. Rust's store hogs this season are a cross between these and the Berkshires, by a boar purchased of Mr. Lossing. They are a beautiful lot of swine, but are smaller than the Liecesters, and Mr. R. thinks not so profitable. I am a Berkshire man most decidedly, but my motto is in these matters, "*hear both sides*," and I am willing to confess that Mr. R. showed me Liecesters which I have rarely seen equaled by their more successful rivals. One sow, in an especial manner, only lacks a high sounding *name*, and the application of a certain process termed "*puffing*," to be as well worth her *hundreds* as some others. At all events, she has given her owner, in two litters of pigs, both of which were killed before the oldest were fourteen months old, 6,000 lbs. of pork! Here is a fact worth more than *puffs* or *pictures!*

I accompanied Maj. Burnett, the late popular and gentlemanly representative of Onondaga county, to see some young grade cattle which he has bred. They were of a nice quality. I am more and more convinced daily, that let our professional breeders turn up their noses as much as they may at grade animals, a judicious cross with our native stock (one cross and afterwards bred towards the Durham,) will one day be troublesome competitors. When the "time has come, and the man has come," we shall see. Let it be borne in mind that even the Herd Book Durham is the result of *fortunate crosses*. The same is true of Berkshire hogs, the blood horse; in fact, nearly all the most valuable varieties of animals. I have a word more to drop on this subject, at some future day.

In the cool of the day, I had a delightful ride with Mr. Noxon, the celebrated advocate, to "Green Point," a farm of his, lying two or three miles out of town. It slopes up from the banks of the Onondaga lake, and from the farm house, a neat and substantial stone building, you have a fine view of the adjacent country. Another legal gentleman is constructing an elegant mansion on an adjoining farm. Mr. N. is but a beginner in breeding improved cattle, but has a fine young bull from the herd of Mr. Prentice, of Albany. He told me that 100 acres of the farm was cleared in a single season, fenced, and put into wheat. The crop repaid every item of the whole expenditure, interest, &c., as well as expense of harvesting, thrashing and marketing, and a nett profit over and above all these, of *five dollars per acre!* Pretty good farming that, for a lawyer! But one has but to talk half an hour with such a man as Mr. N., or he could tell even by hearing him try a cause, that the native shrewdness, the deep substratum of good common sense which pervades the whole man, would lead to success in any thing. In these particulars, he reminds me strongly of our Vice President, *******.

I was told that Harvey Baldwin, esq., has some improved cattle, but as he was absent from home, I did not see them. He formerly owned several valuable animals. He has recently purchased some imported stock, which, from the description I received of it, I conjectured to belong to the Holstein variety, sometimes called Dutch short horns. They are one of the parent stems of the improved short horns of England, but are coarser, and possess less aptitude to fatten; and in the place of being red and white, they are black and white, with black muzzles, &c. They were introduced into the United States a number of years since by Consul Jarvis, and I have been acquainted with individuals of the family crossed with the Holderness, (which is about the same thing,) and also with the Durham. They are a valuable variety of cattle, but not so valuable as the improved short horn.

Onondaga is suffering fearfully from the drouth, and unless rain comes soon the effects will be terrible. Vines exposed to the sun are dying, and I saw fields of corn the leaves of which are beginning to wither, as if nipt by frost. Roots of all kinds have ceased to grow, wells and water courses are drying up, and even fruit trees of some varieties begin to exhibit indications of perishing. I think a fortnight more of this weather would not make Cortland dryer than Onondaga is now. Not quite so much rain has probably fallen in Onondaga; but here is another advantage of our kinds of soil—they will bear drouth far better than the clay and limestone soils of the wheat region.

How *we* worked yesterday, (for *you* were there, Mess. Editors,) need not here be recorded, and as the sun was sinking in the western sky I turned my horse's head homeward. A delightful moonlight, or rather starlight drive, (for there was no moon,) brought me to a little story and a half farm house, where a troop of

> "—— expectant wee-things [would] toddlin stacher thro'
> To meet their dad, wi' flichterin' noise and glee,"

had it not been midnight, and every soul of them abed more than three hours. *Cortlandville, Aug.* 19, 1841. H. S. R.

Berkshires Imported by S. Hawes, Esq., in 1832.

Messrs. Editors—In the last number of the Cultivator, we observed what is said to be the "History of the first Imported Berkshires," over the signature of C. N. Bement, of Albany. However contrary it may be to our custom or inclination to encroach on the columns of your invaluable periodical, as breeders of Berkshires, we feel it a duty we owe our numerous patrons to inform you, that the distinguished proprietor of the "Three Hills Farm," in his "History of the first imported Berkshires," is altogether in an error as regards their number. After giving a long and minute account of the three pigs, Mr. Hawes took with him to Albany, at the time of taking possession of his farm in 1832, and his two subsequent importations, &c., he goes on to say, "the foregoing comprises what is termed 'Hawes' Importation,' and came into my possession in 1835, from which most of the Berkshires in this country originated."

Now, Messrs. Editors, the true state of the case is this. That Siday Hawes, Esq. did not only import three, but six Berkshire pigs in 1832,—two sows and a boar of this importation he kindly presented to us, besides two boar pigs bred by himself while at his residence in the vicinity of Albany, and from which our Berkshire pigs were descended, until our new importation, which Mr. Hawes sent us out in the fall of 1839.

Should the author of the "History of the first imported Berkshires" feel in the least doubtful respecting this statement, we would beg leave to refer him to Mr. Hawes, who is at this time a subscriber to the Cultivator, and will in all probability read "the History, &c.," in the last number in about twenty days from the time of its leaving the press.

Canterbury, Orange co., N. Y. A. & G. BRENTNALL.

Filtering Cisterns.

Messrs. Gaylord & Tucker—As good wells cannot be had in many parts of our country, permit me to recommend the construction of filtering cisterns. Where they were first made, or by whom, I cannot tell, but having drank water from them several years ago in Dutchess co., N. Y., I can speak in positive terms as to their excellence. They may be constructed as follows:—In the first place make a large cistern in the ordinary manner, of stone or cement—then build a partition wall in the center, resting on a low arch, or having holes left underneath for the water to pass freely from one side to the other; carry this wall to the top of the cistern. On each side of the center wall, at the distance of a foot or eighteen inches therefrom, construct parallel walls four feet in height. These walls may be made of brick 4 inches thick, and well coated with cement on both sides, so that the water will in no place come in contact with the brick. The spaces between the 4 feet walls and center wall are to be filled as follows:—First, gravel to the depth of 4 inches; secondly, charcoal sufficiently pounded to lay compact, then clean white sand, and then charcoal,—and so alternating till the spaces are filled, the top layer being gravel to keep the charcoal from rising. The modus operandi is as follows:—The water from the roof is conducted to one apartment of the cistern, and when it has risen to the height of the 4 feet wall it begins to filter through the sand and charcoal till it reaches the bottom, then passing under the partition wall it rises through a similar filtering bed and floors into the other apartment of the cistern, from whence it is drawn for use, clear and sparkling as from the purest spring. If the cistern is made of sufficient depth the water becomes as cold as that in common wells, and as much better as can well be imagined. *Bowling Green, Wood co., Ohio, June 3d.* P.

Dr. Martin's Pig Beaten.

Messrs. Editors—I observed in the July number of the Cultivator a statement of an experiment made in feeding Berkshire and Woburn Pigs, which has induced me to send you the weight of my pig taken to-day, in the presence of some eight or ten respectable citizens. 'Suze' is 4 months old to-day. Her dam is a middle size white English sow, and her sire a pure blood Berkshire, from the stock of John Lossing, of Albany, and she weighs alive 142 lbs. She was weaned at seven weeks old, at which time I received her, and would not have weighed 25 lbs. My cow, which is half Devonshire, dropped her calf three days previous to this. My pig lived on the overplus milk. After the calf was supplied for four weeks, I gave the whole of the milk to the pig, which is about six gallons per day, (save a little for family use.) I purchased this pig of Mr. Little, jr., near this place, who has taken considerable pains to procure the pure blood Berkshires from Mr. Lossing. Farmers in this vicinity desirous of improving their stock of hogs, would do well to call on Mr. Little. JAMES JONES.

N. B.—You will understand the above is buttermilk.

Hackettstown, Warren co., N. J., Aug. 9, 1841.

Epidemic among Cattle.

For the last five or six weeks a terrible distemper or epidemic has been raging among the cattle in and near the city of Troy. Since it first broke out, between thirty and forty cows have been attacked and most of them have fallen victims.

Being there a few days since on a visit, I was called to see a cow in the last stages of the disease. She belonged to a laboring man, and was the second one of his which had been attacked. The first intimation he had of her illness was the great decrease of her milk in the morning, as on the evening previous she had given her usual allowance, and nothing was observed unusual in her appearance.

It was about 4 o'clock in the afternoon, of the day she was taken, that I saw her—she was lying down, unable or unwilling to move. She did not appear to have any fever, the dew stood freely on her nose, her breath was not unusually hot, her ears and the roots of her horns seemed to have their natural temperature; no heaving at her flanks, and no appearance of pain, though occasionally she would turn her head to her side. Her coat was rough and staring, her eyes dull and weeping; a bloody fœtid discharge at her nose, excrement thin, black, and very offensive, and her strength rapidly diminishing, and when I left, which was about an hour after I first saw her, she was unable to raise her head, her eye glassy, and I was informed she died from 15 to 20 minutes after.

On questioning the owner I learned that for a week or ten days previous to the present attack that he had discovered a slight cough, but did not consider it of any consequence or alarming. Other cases have occurred which have proved equally fatal, when no cough or other symptoms have been observed, until a few hours before their death.

The distemper appears to be confined to the low flat meadows, on the side of the river, south of the city, and confined to two farms adjoining each other, where a large number of city cows are pastured, as well as where the proprietors keep cows for supplying the citizens with milk. One having lost five and the other six cows. It appears to have no regard for age or condition, the young and old, the lean as well as those in good condition, all are equally subject to it, and it is equally fatal to all.

Many conjectures are afloat as to the probable cause of the disease; some attributing it to a poisonous weed or herb which they are induced to eat, in consequence of the scarcity of grass, which has been killed by the drouth, while others contend that it is a miasma floating in the air. Be the cause what it may, it is certainly very alarming and requires investigation; and should any more cases occur I would advise the owner to call on Dr. Wright, a veterinary surgeon of great skill, who may be found in Hamilton, between Green and Pearl streets, Albany.

On post mortem examinations no traces of the disease have been discovered, but they were not made by competent and experienced persons, of course, no reliance can be placed on them.

Three Hills Farm, Aug., 1841. C. N. BEMENT.

Editors Cultivator—The following recipe is left, with a drum of dried fruit in all respects resembling figs, at the patent office. The fruit tastes remarkably well, and I have no doubt that the information will be gratifying to your numerous readers. I send you also a jar of the "tomato figs."

Washington City, Aug. 18, 1841. H. L. ELLSWORTH.

Tomato Figs.

Prepared by a Lady in Washington City, D. C.

Process—Take 6 lbs. of sugar to 16 lbs. or one peck of the fruit. Scald and remove the skin in the usual way. Cook them over a fire, their own juice being sufficient without the addition of water, until the sugar penetrates, and they are clarified. They are then spread on dishes, flattened and dried in the sun. A small quantity of the syrup should be occasionally sprinkled over them while drying; after which, pack them down in boxes, treating each layer with powdered sugar. The syrup is afterwards concentrated and bottled for use. They keep well from year to year, and retain their flavor surprisingly, which is nearly that of the best quality of dried figs. The pear-shaped, or single tomato, answers the purpose best.

Ordinary brown sugar may be used, the larger proportion of which is retained by the syrup.

Imported Berkshires.

By a letter received a few days since from Mr. A. B. Allen, now in England, I learn that he has made two shipments of select Berkshire swine to New-York, where they will probably arrive before your September paper goes to press. He has traveled all over the great pork counties of England, and finds the Berkshires to excel every thing of the swine family in that country. But those of extraordinary size and perfection of form are scarce and high. A number such, however, he has found, and regardless of expense, he has secured them for exportation to America. He has a boar, "Windsor Castle," bred near that place, which will weigh in good flesh 800 lbs., now 2 years old. Another, "Hagbourn," 14 months old, will weigh 500 lbs. The last, he says, is the same figure as his famous sow "Raven Hair;" and although he does not say "these are the finest swine in all England," yet they are the finest that *he* has seen. He was going down to Sussex to find the *largest* hogs in the kingdom, and if their apparent qualities warranted, would probably select a few to gratify the cormorant propensities of some of our western gentlemen, which nothing but inordinate size can gratify.

The most extensive and scientific swine breeder he had yet found, was the Rt. Hon. Shaw Lefevre, speaker of the House of Commons, who has an extensive estate in Berkshire; and noble dukes, earls, and right honorables, go into active competition with the humblest citizens of the empire, in the improvement of their farming stock, with as much zeal as they enter into a plan to double the produce of their acres, or increase the profits of their mines. When *mind*, in *our* country, is thus applied to the development of matter in agriculture, as unhappily for our true interests it is not, then shall we witness equal success and improvement, and then will the landholder take his true position in wealth and influence with the other professions of our country.

Mr. A. had made a few selections of Southdown sheep, and was shortly to visit the three days' fair of the Royal Agricultural Society in Liverpool, and after that, to go into the cattle regions of Yorkshire and the north of England, from which he would return through the middle counties, to Bristol, and take passage for home on the 1st September by the Great Western, where he will probably arrive by the 20th of the same month.

Very truly, yours, L. F. A.

Black-Rock, N. Y., Aug. 14, 1841.

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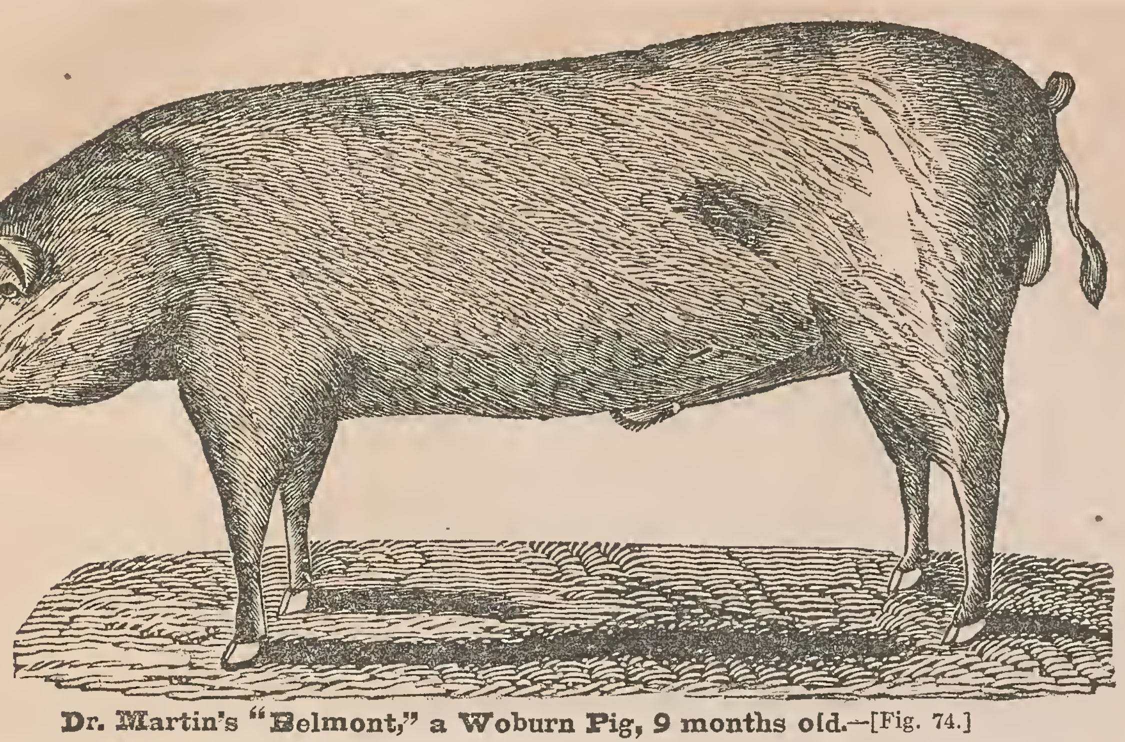
* Freely translated—"called light because it is dark."—Eds.



Dr. Martin's "Belmont," a Woburn Pig, 9 months old.—[Fig. 74.]

Messrs. Gaylord & Tucker—Gentlemen—Accompanying this you have a plate of a Woburn pig, Belmont, taken at nine months old. This pig appeared to be perfectly round in the body, but measured a little more from breast to back than through the sides.

They are of great length, large girth around the body, broad and flat on the back, legs of medium length (the hind legs frequently a little longest,) well tapered down to the foot—stand well and straight upon the legs and feet. The head is small for the size of the hog, with small ears, generally erect, though some have their ears to droop. The prevailing color is spotted with white and black; many of them brown and black. Their hair is long and coarse. They come early to maturity, fatten easily, attain a large size, are productive in pigs—are very gentle and docile in disposition, not disposed to be restless or to get out of enclosures.

As soon as I can get a plate of a grown Woburn, I will forward it on to you. Yours, respectfully,

SAMUEL D. MARTIN.

Colbyville, Ky., July, 1841.

Comments on the July No. of the Cultivator.

Messrs. Gaylord & Tucker—Although perfectly aware that you cannot find room in your paper to publish all the communications which are sent to you, and that you must have much difficulty in making selections from such as you partially notice; yet I am sure there are many of your readers who often regret that your extracts from those had not been more extended. Mr. Colman's Address, I think, furnishes an example; for supposing your other readers have somewhat similar tastes with myself, I must believe that there are hundreds of them who would have been much gratified had you given them at least his argument to prove that "Government *is* bound to protect and promote Agriculture as the surest means of promoting and securing the happiness of a Nation,—the great object for which all governments are instituted." You, as well as all other true friends of American husbandry, know but too well that there are still among our law-makers, both State and Federal, very many hard heads most wofully deficient in all the various species of knowledge which every legislator should possess; and Mr. Colman's hammer, perhaps, might have beat into these enough at least to aid materially the long neglected cause of Agriculture. Forlorn as I acknowledge the hope would be, still the effort was worth making.

In regard to Mr. A. B. Allen's trip to Europe, I readily admit that his objects are highly laudable; and that there are very few, if any of our agriculturists, better calculated to make his visit beneficial both to himself and his country. But it furnishes occasion for a few remarks, which I am almost afraid to offer, since the act will be something like swimming against an almost irresistible wind and tide. Still I will hazard them. To import cattle and hogs at enormous prices has grown into a most violent passion which now pervades our whole country, and resembles nothing that we have ever seen before but the Merino-mania which grew at last to such a pitch that to get *the best*, which should have been the first object of the purchasers, became secondary to that of having their name published in all our newspapers for having given *the most* for their whistles. Far, very far am I from wishing to discourage the importation of fine bred cattle, hogs, or any other improved stock. But I must say that there is a limit in price which seems to me to have been already passed, by some hundreds of dollars, *that* amount by which the purchasers can reasonably expect to make any profit. Although not yet the owner of either imported cattle or hogs, I have seen and known enough of both to be perfectly certain, that unless much more care and experience are bestowed upon them, than upon the breeds of each which we already possess, the superiority of the former, even admitting its existence, will not remunerate those purchasers who have given such prices as have been published in our newspapers.

On the subject of butter, I think we may venture to say that the best mode of preparing and preserving it good, will never be ascertained and generally known until those who have large dairies will take the trouble to make and publish fair and full experiments between all the different methods which are most highly recommended. Let them do this, and all butter makers, from the greatest to the least, will soon know which process is best. But until then, they may go on to the end of time without attaining this very desirable knowledge.

In regard to inoculation, a single remark, perhaps, may be useful in addition to those which you have made. It is, that grafting has been ascertained to be best for all fruits which have soft seed, such as apples, pears, &c., and inoculation best for those which produce hard seed, as cherries, peaches, &c., although either mentioned may be applied to all kinds. The best season for grafting is in February and March,—for inoculating in July and August. Cuttings for inoculating may be kept alive for several weeks during summer, if excluded from air during the day, in tin or glass vases, and spread out at night either in the dew, or in some wet place.

Under the head of "*Work for the Month*," permit me to add the following remarks to your own. As a general rule for the culture of corn it may be said, that until it begins to tassel and shoot, we should work the ground whenever it begins to bake, but *never* when it is wet; and that nothing will guard the plants against drouth so well as the free use of the single coulter in the early stages of their growth.

In regard to the "*saving seed and herbs*," I beg to make the following inquiry, which I hope some of your correspondents will answer. Is there not a material difference between the seeds produced by the central and the lateral stems of the parsnep, carrot, celery and parsley, the middle heads being always the largest and soonest ripe? If there is that difference, which I believe really exists, then none but the seed of the center stems should ever be gathered.

On the subject of corn culture, I regret much to differ in some respects, both from yourselves and Mr. J. McMillikin, whose communication to the Hamilton Intelligencer you so highly commend. But agreeing with you as to the great importance of this crop, not only to the west, but to every part of our country, I hope you will excuse me for stating in what it is that I cannot agree. In the first place Mr. McMillikin has laid down his rules as universal, whereas there are very obvious exceptions to two or three of them. For instance, in his second rule he enjoins that all land "*should be plowed six inches deep*," whereas almost every tyro in agriculture knows that the depth to which any land should be plowed ought to depend on the depth of the soil, and the nature of the sub-stratum, both of which differ materially, in different parts of our country, and often on the same farm. His third rule tells us that "*while small, the corn should be harrowed, and the ground should afterwards be kept loose and mellow by the repeated use of the cultivator.*" Now I venture to assert from at least fifty years experience, that *no stiff soil can be kept thus* without the use of the plow or single coulter. Nay, that the finer you pulverize such soil, the sooner it will bake hard after a rain in very hot weather. To keep it in a friable state, no tillage whatever should be given it when wet, and when given it should always be deeper than that which very light lands require. In Mr. McMillikin's sixth rule he says that "*the fibres or small roots of corn should never be cut, &c.*" To this there is one small objection: it *never can be executed*,—that is, if you give any cultivation at all to corn after it comes up. For we all know that a large portion of the roots of this plant are horizontally, and so near the surface of the earth that no implement ever yet invented can possibly be so used in its culture, as to avoid cutting many of them. Many of us know also that very fine crops are often made where only the plow and hand-hoe have been used. Two of the best corn growers I ever knew relied solely on those implements, and none of their neighbors made larger crops in proportion to the size of their farms. Their plows, too, were always of the size for two horses. A still more remarkable case than the two just mentioned, to prove that the cutting of corn-roots does not sensibly affect the produce of the plant, (if indeed it be not actually beneficial,) is stated in the Farmer's Register, for October, 1840, in a letter from Mr. W. W. Stevenson, of Arkansas. This gentleman states, that in 1834 he planted a small lot of corn in a light, silicious soil, with a red clay subsoil, the hills 4 feet apart. He cultivated solely with the single coulter, running it both ways, seven or eight inches deep, the strokes 8 inches apart, and within 4 inches of the plants. The summer, he says, was very dry and warm, but his corn "*never twisted at any time*," although the coulter was used 4 times!! In confirmation of this statement, I will add one of my own. Several years ago I had a corn-field, the soil of which was dry, and of medium quality between light and stiff. Alongside was one belonging to a neighbor. Both were alike in soil, fertility and situation. His was well cultivated solely with the single plow and hand-hoe. In addition to this culture my own was twice coultered. We had a very severe drouth—the consequence of which was that his corn was nearly destroyed a fortnight, at least, before mine began to fire. Soon after the weather became seasonable, and I made a much better crop than he did. Farthermore, I can truly say, that in the course of a long life, I have seen thousands of very fine crops, in the culture of which no other implements were used but the plow and hand-hoe. The facts which I have stated of my own knowledge are undeniable, and could be confirmed, if necessary, by a host of unimpeachable witnesses; and therefore we must discredit the evidence of our own senses, before we can believe that the cutting of corn-roots will lessen the produce of the plants. The contrary opinion you assert to be "*directly at variance with every well established principle of vegetable physiology, and is opposed by the experience of multitudes of the most successful corn-growers in the country.*" In support of this affirmation you give us Liebig's position, which you say "no one can controvert"—"*That the size of a plant is proportioned to the surface of the organs which are destined to convey food to it: A plant gains a new mouth and stomach with every new fibre of root, and every new leaf.*" In this position of Mr. Liebig's I perfectly agree; but I deny that it disproves the opinions of those who differ from you and Mr. McMillikin; or that their creed is "directly at variance with every well established principle of vegetable physiology," &c. In the latter clause of the sentence of which this is a part, I will agree with you, if you will substitute the word *opinion*, for "*experience*;" since no such accurate comparative experiment has ever yet been published as alone can determine which party is right. Such an experiment would be the following:—Let a few trust-worthy farmers, in different parts of our country, take two small lots, as nearly alike as possible, in soil, fertility and situation. Plant both with corn at the same time, cultivate the one in the most approved way which will cut most roots; the other in the most approved way that will cut the fewest; for some will inevitably be cut by any mode of culture ever yet tried. Then, if either lot produces more corn than the other, it will be proof undeniable that the way in which that lot has been cultivated is best. Should this be the way in which most roots were cut, the effect, I think, may admit of such explanation as fully to accord, not only with Mr. Liebig's position, but with "*every well established principle of vegetable physiology*," instead of being "directly at variance with them." It is this. I, and numerous others, believe (and no experiment has yet disproved our opinion,) that when the end of a corn-root is cut off, fibres enough will soon sprout out from it at least to compensate, if they do not more than do it, the loss of fibres caused by the excision. This we find to be the case *above ground*, with all trees, plants and vines whose extremities it is customary to cut off for the purpose of thickening their growth. Now, if the same law govern *under ground*, the fibrous roots of corn must be multiplied by cutting their extremities in the early stages of its growth; and thus Mr. Liebig's position be fully verified.

The last sentence in the paragraph on which I am commenting, contains a misrepresentation (but I am far from thinking it a wilful one,) of our opinion. You say "*corn is always benefitted by frequently stirring the ground, and as plowing does this, the advantages conferred has, by some strange process of ratiocination, been supposed to be the result of cutting the roots.*" This would be a strange process indeed, had it ever entered into any of our noddles, but so far as I know, it never has. *We* are quite as strong advocates for "*frequently stirring the ground*" as you or Mr. McMillikin can possibly be. We deem it indispensable to the proper culture of corn as well as to that of most other plants. But the "*stirring*," according to our notion, must be considerably deeper than the surface, unless where turf has been turned under, effectually to benefit corn; say from 6 to 8 or 9 inches at first, and gradually shallower until the last working, which should be shallowest of all, because the roots have then nearly or quite attained their full growth, and will put out no more fibres if cut. The root-cutting we consider an unavoidable consequence of that depth of tillage to which principally we ascribe the superiority of the corn crops thus cultivated to those which are made by shallower culture. If any of us have ever spoken or written in such a way as to lead to the belief that we supposed the advantage conferred on corn "by frequently stirring the ground" was ascribable *solely*, or even *chiefly* to cutting the roots, I can only say, that we have made sad havoc of our mother tongue, and should go to school again; but I have not yet met with the man whose mind has ever been mystified and obfuscated by "so strange a process of ratiocination."

I have undesignedly extended my remarks on Mr. McMillikin's 6th universal rule so far, that I must be brief in what I have to say on his 8th and last. His words are,—"The ground in the cultivation of corn should be kept as level as possible," &c. This is true only of high and dry land: for every corn-grower knows that if your land be wet, it must be thrown up and cultivated in beds from 4 to 5 or 6 feet wide;—nay more, that unless this be done you can scarcely make corn at all on any such land.

A few more words on your last sentence, and I have done with the article on the "Culture of Corn." Thus it runs—"*Manure highly, plow deep, make your land dry, use none but good seed, keep the surface frequently stirred, and you may safely leave it without any inequalities, and permit the roots to dispose of themselves as they think proper.*" In the first part of your sentence I heartily concur; but how we can "plow deep" without cutting the roots of the plants; and how those roots, when cut, are "to dispose of themselves as they think proper," remains to be explained. [*]

The wish of your correspondent who signs himself "A Subscriber, Warwick county, Va." to ascertain the best method of cultivating Indian Corn, is certainly a very laudable one; but it can never be attained in the way he proposes. This is, for your subscribers in different sections of our country to communicate their different methods of culture. Now these sections differ so much in climate, soil, fertility, and situation, that it never could be determined with any certainty, whether the reported superiority of any particular crop made in one section, to a similar crop or crops made in another section, was ascribable chiefly to either or all of the above circumstances, or to the mode of cultivation. The only way in which the matter ever can be settled, would be for a few of these subscribers in each section (the more remote the better,) to compare, on their own farms, all the most approved modes of culture. For this purpose let them choose a small piece of ground of uniform soil, fertility and situation; prepare the whole exactly in the same way; divide it accurately into as many equal parts as there are modes of culture to be compared; plant them all on the same day, at the same distances, with one variety of corn in each trial, and afterwards bestow the same care and attention on each division, with as much impartiality as if they were trying a jury-cause between man and man. Incurably obstinate would then be the man who would not at once agree that the method of culture pursued on the division which produced the most corn, was certainly the best. This experiment every corn-grower could easily make for himself; and I cannot even imagine any other way by which the numerous and apparently endless discussions about the best modes of cultivating corn can ever be concluded.

If there are still any gainsayers in our whole country, in regard to the value of the sugar-beet for feeding stock, I would beg them to read attentively your extracts from the communication of Mr. Diehl, of New-Orford, Pa. The great importance of root crops is not doubted by any body whose opinion is worth a straw; it is, therefore, a matter of deep interest to all farmers to ascertain which are the most valuable of all the varieties of roots that are now cultivated.

Your correspondent L. R. Jr., of Knox co., Illinois, seems to require no information in regard to that highly valuable timber—the yellow locust. But some others, perhaps, may not be aware of one important fact in relation to the seed, which he has omitted. If they be soaked in warm water, before planting, until they swell, they will come up as readily as peas or beans, whereas they will not vegetate for many months if planted without soaking. I may add that this process accelerates the coming up of all seed of similar hardness.

Mr. John Johnson, of Ontario co., N. Y., calls all "simpletons" who believe in the convertibility of wheat into cheat. In this he is somewhat unjust, for many of them are really men of good sense; but they are like the two knights, who, as the story goes, once fought a desperate battle about the color of a suspended shield before they had examined both sides of it. And they will continue to fight until the end of time, unless, instead of battling with mere assertions, they will condescend to take the trouble of making such accurate experiments as can alone settle the controversy. I say this for others, not for myself, since, although once sceptical on the subject, I have long believed that it would be quite as easy for pumpkin seed to produce live oaks, as for wheat to produce cheat. Still I admit that there is nothing impossible but for a man to bite his own nose off, and therefore pledge myself to give up my opinion the moment those who differ from me can prove that they are right by such an experiment or experiments as all will agree have been perfectly accurate.

If Mr. David Tomlinson be right in requiring that *every thing new*, or rather what may be so called, should be published in your paper, then you should certainly change the title, and call it an Encyclopedia. For so many new things are constantly being discovered in all the arts and sciences, that an agricultural paper such as you designed yours to be, and such, I believe, as a vast majority of your subscribers wish it to continue, could no more contain all these novelties than Noah's Ark could have contained every living thing that was in the world at the time of the universal deluge.

Commentator.

[* The "deep plowing," as well as the manuring and draining, is to be done before the planting, and consequently before the "roots" are formed.—Eds.]

Tobacco Scaffolds.

It is an old saying that necessity is the mother of invention. Living in a part of the country where wood and timber is scarce, especially those kinds which are used in housing a crop of tobacco, (which has been extensively cultivated in this region from 40 to 60 years) viz. poles and forks, and having neglected to prepare forks and poles for the housing of my last crop until they were wanted, we found a good deal of difficulty in getting such as were suitable in a convenient distance. I then thought of the substitute, which I will briefly explain, as the tobacco grower will shortly have a use for them. Procure 8 poles 22 feet long, (every grower will know how large,) 6 blocks 2 feet long, 15 inches in diameter. Place 3 blocks on end in a row about 8 feet apart; then the other 3 parallel to and 12 feet from the first; upon these two rows of blocks, place two of the strongest poles, the ends extending 3 feet at each end, beyond the outside blocks; across these two bed poles arrange the other 6, equidistant, which is about right for sticks 4 feet 6 inches long. These 6 blocks and 8 poles will give a scaffold 22 feet square, which will hold about 200 sticks of tobacco, which scaffold can be enlarged to any desired extent. This seems to be so plain and simple that it is hardly worthy an insertion, but if it should be the means of helping a young planter out of a tight place in housing season, I shall be highly gratified.

Buckingham co., Va., Aug. 5, 1841. G. M.

Management of Bees--No. 5.

(*Continued from page* 134.)

About the 20th of September, or a little later in the season than this, according to the climate, is the appropriate time for uniting swarms of bees for wintering, as the young ones are principally hatched out at this time, and the breeding season closed for the year; moreover, feeding should be attended to before cold weather will prevent the bees from carrying down the honey from the chamber, which is the best feeder I have tried to use.

To unite the bees of two hives most easily, the hive designed to receive the bees of the other is inverted, and the stranger hive set over it, bottom boards off, entrances closed to prevent the escape of bees or the smoke of fungus (puff ball,) when that is blown into the lower hive. When this experiment is performed by a skillful manager, the bees of both hives are paralized without injury, and are all found together in the lower hive, in five or six minutes, ready to be returned to its place in the apiary, after confining a screen wire bottom board to the hive, to prevent suffocation. The entrances to the hive at this time should be kept closed a day or two, to allow the bees of both swarms to mingle and become associated with each other before they have liberty to go out to work.

The fungus (puff ball) recommended should be picked soon after it begins to turn brown, to prevent the weather from exhausting it of its paralizing quality. As too much heat might injure its quality, it is recommended that the balls be laid in the oven after the bread is out, so as to render it perfectly dry; then it will burn like touch wood without blaze. This fungus, when prepared in this way, is placed in the fumigator, ignited by a lamp, and blown into the hive, which soon accomplishes the experiment. And here I ought to remark that I am greatly indebted to Col. H. K. Oliver, of Salem, Mass., for this valuable information. Col. O. is the inventor of the Fumigator. It is a sheet iron box that will hold about three pints with <O> a cover, and a tube each side, with a strainer like a tea-pot, to keep the fungus in its place, when the smoke is blown into the hive from the mouth of the operator. I can state, on the authority of Col. Oliver, who is one of the most skillful apiarians of the present age, that "notwithstanding the bees are so perfectly paralized by this operation as to appear lifeless, yet they all resuscitate in a few minutes, and are as active and ambitious as ever." Old weather-beaten puff balls will not do this. "It will paralize the bees, and injure them too!" But one serious objection can be urged against uniting feeble swarms in the fall; most of the bees of the stranger swarm are unconscious that they have been removed, and when they commence working from their new abode, they will return to the place where the hive stood, from which they were removed; and if they are not soon taken care of they will cluster there in small bunches and finally perish, or many of them may attempt to associate with other hives, and are taken as robbers and put to death. But this may be remedied by placing an empty hive, containing an empty piece of comb, where the old hive stood, as all the wandering bees will cluster on this empty comb in the day time, the comb and bees may be returned to the chamber of the hive containing their companions every night. This need not be continued but a few days, for the cluster on the empty comb will gradually diminish, and in a short time the bees will all become accustomed to their new residence.

The practice of uniting feeble swarms of bees in the fall has already been adopted by many apiarians in this country, with the finest success: and I hope soon to see this system generally adopted. Tobacco smoke may be substituted for the puff ball, but should not be used when the former can be obtained.

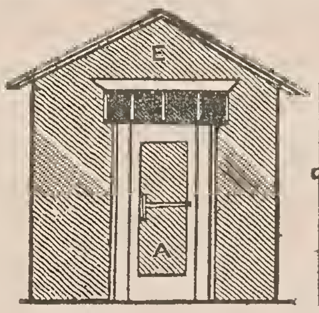
M. D. E. Gelieu, the modern French apiarian, uses tobacco. By blowing a little tobacco smoke into the entrance of the hive from a pipe, the bees are disarmed at once of all hostile feelings; the hive is then turned over on its top, the combs and honey all taken out, the bees brushed off into the hive with a goose quill, and the hive set in its place. At evening all the bees will be found in their own empty hive. Now a little smoke is blown into the hive designed to receive them, and also a few whiffs blown among the stranger swarm, to render the scent of the two colonies as near alike as possible. When this is done, the hive containing the bees emptied of its combs and honey is raised from its place, so that when the hive is dropped suddenly upon a table cloth with one end fastened to the bottom board of the hive that is to receive them, the whole swarm is found on the cloth. Now a trail of bees is made on the cloth by a few spoonfuls of bees to the entrance of the hive, and the swarm enter like an army of men storming a fort without slaughter; and the bees of both hives mingle and work as one family.

Hives nearest each other, only, are to be united in this way. Nearest neighbors, only, among bees associate easily, while swarms standing at a distance, others residing between, are united with "infinite labor." But I must hasten to another improvement in the life-preserving principle, which is referred to in my Manual on Bees, page 105, new ed., but omitted in the copies forwarded to the printer by mistake. It is this:—Prune out the dark colored combs so that the bees may never be compelled to raise their young broods in combs more than three years old. This is done by taking away about one third of the combs yearly, in the month of March, before the breeding season commences, so as to avoid taking away any of the eggs or young bees; thus in three years the whole hive is renewed by removing the black and filthy combs which were rendered useless by being filled up with the bee bread, cocoons of the young, and other filth. Hives of bees that have been pruned in this way have been known to continue in a healthful state, and throw out swarms every year for 25 years. I have made it a practice of pruning my old stocks several years with the finest success. The first thing done by the bees in the spring is to fill up the space I have made by the pruning knife, with beautiful white comb; this gives the bees new cells to breed in, which they so greatly desire and need, and keeps them vigorous and ambitious. I am sensible that most bee keepers will raise an objection to the practice on account of stings; but when it is known, by trying the experiment, that a little tobacco smoke blown into the hive perfectly disarms the bees of any hostility, the objection will no longer be urged against it on that account. When the hive is thinly populated by bees, I have usually pruned the combs without the aid of smoke, or any thing to guard my face and hands; and I have no recollection of ever receiving a sting during the operation; but when the hive has an abundance of bees in it, four or five whiffs of smoke from a pipe or cigar is blown into the hive, then it may be taken from its place, set on its top, and such parts of the combs taken out as the owner desires. Every bee master should be furnished with a pruning knife for this purpose; moreover, it is used for a variety of purposes about the apiary. This instrument should be made of steel, (spring temper,) with a straight blade at one end to cut the combs vertically, while on the other end a small blade like a penknife should be turned in a right angle with the shank to cut horizontally, so that the combs may be cut in any desirable shape, without mutilating or destroying any except the parts removed. It has been stated that pruning the combs should take place early in the season; if, however, it is found that the combs are diseased by moths or any other cause, the combs should be pruned at any time during the warm season.

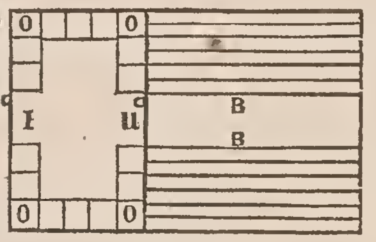
Respectfully, JOHN M. WEEKS.

A Hen House.

Messrs. Editors—If you think the accompanying plans of a hen-house worthy of the attention of your readers, I shall be gratified to see them in the Cultivator. Some farmers are of an opinion that a few boards tacked together, or set against the side of a wall, answer very well for the purposes of a hen-roost; but I have come to the conclusion that to render our hens and other fowls profitable, as much care must be taken of them as of our horses and cattle. This house may be built of pine boards, or it may be clap-boarded and plastered with lime; in either case, it should have a good plank floor. It is 12 feet long, 8 feet wide, and 7 feet high from the bottom of the sill to the top of the plate.



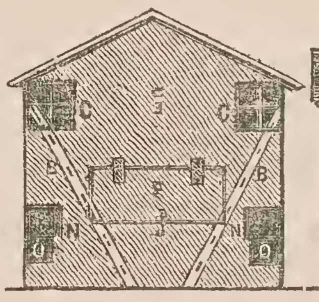
(Fig. 75.)



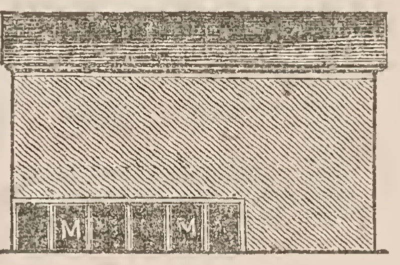
(Fig. 76.)

Fig. 75—View of the east end—A, a door 2 feet wide and 5 feet high—E, a small window.

Fig. 76—Interior view—I, a door—O, O, O, O, boxes for nests, 12 inches square, to be placed in three tiers, one above the other—U, a door, of the same dimensions as the outer one—B, B, are poles or roosts; these may be either of sassafras or wild cherry tree. They are fitted to swing up and hook at the upper floor.



(Fig. 77.)



(Fig. 78.)

Fig. 77—View of the west end—N, N, two holes a foot square for the entrance of the hens—F, a door to throw out the manure; it turns up and hooks at E—C, C, windows with small wire grates.

Fig. 78—Side view—M, M, nests or boxes for brood hens; these should have a long door to swing down and hook at the bottom. J. P. C.

North Scituate, R. I. 1841.

On Farming, Silk and Vineyards.

Messrs. Editors—Being greatly in the arrears to you on the score of often intended, but as often procrastinated communications, I sit down to write you one to embrace or touch upon a diversity of matters, and not unaptly, perhaps, entitled as above. Mine has been, for a few years past, the complicated or three-fold agricultural business of farming, vineyards and silk. Press of occupation thereon may excuse me, perhaps, for writing to you so seldom, and for this promiscuous irregular matter.

The late Mr. Herbemont, of S. Carolina, the pioneer of vine culture and wine making in the South, if not in America, remarked, as a comment on a piece of mine in Mr. Ruffin's "Farmer's Register," advocating the union of silk and wine business, that the business of the dairy should be added thereto, or that the same hands could be profitably employed the year round in that three-fold operation. [See Farmer's Register, vol. vi. page 92.] But the dairy concern cannot well be separated from other farming operations. In short, I employ the same hands, and sometimes parts of the same day in common farming operations, and also in those of my cocooneries and vineyards, and find no particular inconvenience in it; but, properly regulated, not an unpleasant change of employment to the hands, and the general superintendence of all not perplexing to me. For, as in studies, some diversity and change is resting and soothing to the mind; (three different studies a day when I was at Union College, N. Y. state,) so of cares, some diversity is far from being unpleasant. It is true that in my farm and cocooneries, some hands are mostly confined respectively to both, as children and females to gathering leaves and feeding worms, &c.

To encourage perseverance in new and laudable enterprises, and to give some idea of our three-fold operations, I would here draw a contrast. About a dozen years since, I purchased here 300 acres of mostly poor worn out land. So exhausted was the soil that my predecessor, though owning slaves and farming the ordinary way here, was forced to sell his place, not to soon have his all swallowed up by debt. To purchase and begin, I had to incur debt. And since, with hiring all my help, except that of my elder children latterly, I have been enabled to more than double the quantity of my land, and instead of the sterile appearance of my first purchased place, now is presented the sight of near five acres of flourishing vineyard, about the same portion covered with multicaulis trees, fine fields of clover, and good crops of corn and other grain. And also buildings corresponding, as a silk house 32 feet square, another of smaller compass; a wine house and other buildings requisite for the establishment. Again I would contrast the employments and products of these and the *present*, about this time of the year. Then, or at the time I purchased, hands were cultivating the two crops only on the premises, viz. cotton and corn. The corn planted without manuring, one stalk in a hill, and hills four and a half feet each way, and each stalk destined to have *one ear*, not to say *nubbin*. And the plow *tearing* the roots to help produce the result of the *nubbin* instead of the *ear*. Now may be seen my beautiful and promising drilled rows of Baden corn, seven feet apart, and stalks thick in the row, and each stalk to have 3, 4 or 5 ears, and flourishing rows of southern peas between all those of corn; all working or worked over for the last time with cultivators and small harrows. In a piece of low ground, formerly grown over with weeds, bushes and briars, now may be seen towering corn on the ditch banks as well as elsewhere, with pumpkins, and pea vines and young turneps between the drills, as the strength of the ground admits. In short, after the early morning feed of 100,000 or so of silk worms, different hands may be seen repairing to their allotted tasks, as one to the ruta baga patch, another to the sugar beets, another getting clover seed, another mowing, and others attending to plowing, working in the garden, vineyards and the like. While writing, I look from my office and see under my larger silk house a poor widow, a tenant, reeling a batch of cocoons that had lately wound up on her premises, and a little son of her's turning the Piedmontese reel. I say under the silk house; for, by lengthened posts placed on rocks, I raised the building or room (12 feet high) 10 feet from the ground; and this plan, besides effectually barring against the annoyance of rats, mice and ants, affords an excellent facility for drying mulberry branches in rainy weather. Again I see another elder son of this widow just coming in with a crate load of pine leaves or straw to cover over my field just sowed with rye, buckwheat, and clover, (to be a three-fold crop,) for which load and the spreading I allow his mother 20 cents; but as my sheet is nearly written over, I must for the present draw to a close, and if you choose to publish such as this, and wish more I will shortly take up my pen again for you, and tell you more about my silk and wine operations, and successful farming experiments; particularly a discovery of making clover a sure crop in the South, now reduced to a certainty by 3 years' trial. Also a kind of grape bearing my name in part, or Weller's Halifax, which for attested excellence in our best Southern vineyards is second to none. Also of some particulars of the facts that myself and sons from my wife's manufacturing, have silk garments made of perforated cocoons—that our sowing silk is pronounced first rate, and brings 10 dollars a pound. And I add, we calculate 50 pounds of this season's product, and 12 barrels of the pure juice of the grape (no adulteration of brandy or the like) which as heretofore, will sell at rates of two dollars per gallon. But I must stop, and in haste subscribe myself yours and the public's, with all due respect, SIDNEY WELLER.

Brinckleyville, Halifax co., N. Carolina, Aug. 5, 1841.

Odds and Ends--No. 3.

Post and rail fence, or board fence with posts set in the ground, can never be made to be durable upon our prairie land. The soil is so rich, deep and loose, that in the spring of the year the posts will be continually "on the lean." In my opinion, the best way to make such fence is to use posts with heavy butts sawed square and set on the ground, and make the fence crooked, like the common rail fence. It will be much more durable, and the loss of the land in the fence corners is a small item where land is so plenty and cheap as it is in the West.

"Sod Fence."

Upon this subject I have bought some wit—my conclusions are, that all attempts at fencing with sods, or banks of earth upon such a loose friable soil as ours, is buying wit too dear. The only fence that can be made of the earth, must be made *in* the earth. A deep well made ditch may answer a good purpose for a fence, and in almost all places, will be a lasting benefit to the land. But, eventually, the "Chinese system" must be adopted upon all of our large prairies. Whole tracts of country will be cultivated without fence. There are now upon the Connecticut river many thousand acres of land enclosed in one common field, and cattle when permitted to run at large are tended by a shepherd. The same plan must be adopted on the Western Prairies.

Secret of Soap Making.

Many persons are much troubled to make soap *come*; but there is no art and mystery or "luck" about the business. The whole secret consists in having strong lye—and it must be strong. If the ashes are clean, the soap will come without using lime. If the ashes are made from dirty chips, or burnt upon a clay hearth, lime in the leach at the rate of one quart to the barrel of ashes, may be used to great advantage. If lime cannot be procured, boil down the lye until there are coarse grains of salts in the bottom, then pour off the lye and *throw away the salts*. It will 'spoil your luck' to attempt to make soap with the salts in the kettle, for it is the salts of earth, not ashes. If your lye is strong, and you put in as much grease as it will dissolve, you will have soap whether it is put in hot or cold.

Flowers.

"*Why is it that the love of flowers takes such deep hold of the heart?*" Why! Why it is because they are the emblems of love. Show me one who does not feel his own heart expand as he watches the expanding beauties of some delicate flower, and you will show me one who knows nothing of that pure and perfect affection of the heart which binds the human family together. Teach your children to love and cultivate flowers.

Birds.

Next to the love of flowers is the love of birds.—Teach your children in mercy to spare the nests of the harmless little birds, and if you have a heart to be thankful, it will rise up in union with the little songster's carol, to think your lot is cast in such a pleasant vale of flowers and singing birds. These are some of the many things provided to lighten the toil of labor, and it is only a vitiated taste acquired from a false system of education, that prevents us from deriving a great deal of happiness from such small accompaniments of the journey of life.

Shade Trees.

What a singular and unaccountable strange thing it is, that those who settle in forests wage a war of extermination against every tree, not even leaving a single one for shade for man or beast. Look at his log cabin, standing alone in the bright broad glare of sunshine, with nothing upon which the morning larks could perch but a stump near his window, to wake him with her cheerful cheering song.

What a perverted taste has that man who builds his house upon the open prairie, and for years lives on in his solitary black looking prison, with not a single green and waving branch to add to the look of cheerfulness and comfort to his abode. Is it possible that his children can grow up to be good citizens and never know the youthful luxury of a gambol under a green shade?

Reader, go plant a tree. And when the birds come and rest in its branches and pour forth their melody, it will be more soothing to thy mind than ever was that cup to which so many resort to sooth the cares and troubles of life, and which is the cause of sending so many to that dark shade from which they can see no gleam of sunshine, or have no lovely melody of the pleasure inspiring birds, or see the expanding beauties of the love inspiring flower. But teach your children to love these innocent sources of happiness, and they will have less temptation before them to seek pleasure where they will find ruin.

SOLON ROBINSON.

Lake C. H., Ia., July 15, 1841.

Traveling Memoranda---No. 1.

Laporte, Indiana, Aug. 6, 1841.

Editors of Cultivator—I am now fairly on my great Agricultural Tour. I left home yesterday. The roads are dry and fine, for we have had but little rain of late; yet crops have not suffered much. The wheat, of which there is an abundance of the very best quality, is nearly all in stack or barn, and many are already thrashing and getting it to market at 68 cts. a bushel, under the impression that it will be no higher.

Oats in the north of Indiana are not a full crop this year, but corn, potatoes, and other things, give great promise generally. It has been an excellent season for the farmer to secure his hay and grain. But few showers, and many cool days and nights.

You will recollect that last year we suffered an almost universal blight in wheat. A very few pieces are affected this year, and as a matter of course, a very large crop will be put upon the ground this fall.

There is a new improvement in the thrashing machine in operation here. The thrasher is mounted upon wheels, and is drawn through the field, and the bundles taken from the shooks, thrown into the machine, and the straw scattered over the ground, the chaff blown out, and the grain deposited in a box, nearly clean enough for the mill, as the machine moves along through the field. It appears to operate well, and is a great saver of grain, time and labor.

The contrast between this "go ahead" way of getting out grain and the old fashioned flail, is not however so great as the contrast between this country now and ten years ago. Then, an Indian wild, an unbroken, broad waste of prairie and timber: Now, a succession of smiling fields, and happy homes of an industrious and thriving population.

Michigan City, often mistaken at the east for a Michigan town, is in this county. It is the only shipping port in the state of Indiana upon Lake Michigan. Vast quantities of wheat have been, and still more vast quantities of wheat and other products of one of the richest soils and most arable land in the world, of which the five or six contiguous counties are composed, will continue to be shipped from this port.

I am sorry to say that the farmers' prospects of realizing a profit upon pork this fall are very poor. So many packers lost money from their last fall operations, that but few will be tempted into the trade the coming fall. I am sorry for this, for I like to see the farmer well remunerated for his labor, and I am anxious that he should soon get rid of his land-pikes and alligators at such prices as will enable him to buy a better breed, of which there is a lamentable deficiency. The same remark is applicable to stock of all kinds.

But I must close and press forward on my long journey, and I hope I shall be able to meet with many incidents that will be interesting to those who have become familiar with the name of their old friend,

SOLON ROBINSON.

No. 2.

Logansport, Ia., Aug. 8, 1841.

Editors Cultivator—Under the new order of post office regulations, adopted by Postmaster-General Niles, the stage lays over here this day, (Sunday,) and to that you may ascribe the reason why you get a line from me now.

This town is situated upon the Wabash river, and the Wabash and Erie canal, now in operation from Lafayette (the head of steamboat navigation on the Wabash,) to Fort Wayne, passes directly through the heart of the town. There is also a large mill stream, called Eel river, empties in here, and that and the Wabash afford an immense mill power, which will at some day build up a great manufacturing town at this point. The land in the vicinity is of unsurpassed richness, covered in its native state with heavy timber; and owing to the fact that the land lately owned by the Miami Indians lies immediately across the river, the forest still remains in primeval grandeur. Over the rivers and canal are some fine bridges. The whole is one of the sudden, but here substantial, creations of the west. I find here a few, and compared with the numbers and wealth of the place, too few, subscribers to agricultural papers. The Cultivator, I believe, has the greatest number of subscribers; but instead of 20 it should be 200; and I most respectfully suggest to the citizens, that to make the circulation up to that number, would make the county of Cass $2,000 richer every year. There is not that attention paid to agriculture here that should be. There is a small society, but little action. Last fall, the society made a most laudable attempt to import a lot of Berkshire pigs. They were very unlucky. The pigs were landed in cold weather on the wharf at Chicago, and afterwards on the beach at Michigan City, and several of them either starved or froze to death, and those that came to hand have not done credit to the breed. The purchasers complain of the breeder, that he did not send a good lot, or else they were too young, or badly put up, or something. At all events, it was a very unlucky piece of business for all parties concerned, and has tended to put back the improvement in hogs here for several years. From experience, I am bound to advise all my friends to order no pigs shipped to the west in the fall of the year, and to take none at any time less than 8 or 10 weeks old. It is charged against the dealers in Berkshires that they make sale of every living pig, and under the reputation of selling their own stock, that they buy up and send off some very inferior pigs. Such conduct is highly criminal, and I mention it here publicly, that if any person knows of such conduct, that he come out under his own name and state the facts. And on the other hand, that the breeders may be aware of the charges. Hogs are the first and most easy stock to improve, and I think the most important, particularly in this great corn country.

The crop of corn here this year will be much injured by a great drouth, which I am told, however, is much more severe farther south. Wheat is only raised for home consumption, as at present there is no outlet for it. Probably in the course of next year, the canal will be open to Lake Erie, when you will have the whole Wabash Valley in competition in the wheat market. Success attend it. It can be profitably raised here at 50 cents a bushel. Oats are much injured by the drouth. There will not be over half a crop. Hay is not *much* injured, because it is not *much* cultivated.

But I must not dwell too long on the way. So adieu to-day.

SOLON ROBINSON.

Perch Lake Farm, Aug. 18, 1841.

Messrs. Gaylord & Tucker—I read Mr. Randall's letter in your last with much interest, and observed his remarks on the animals he inspected. I am very glad breeders of *good stock* link together in good fellowship, and am happy to hear there are short horns in this state "as near perfect as flesh and blood can make them." I speak with reverence when I say, I hail the names of those spirited breeders, and exalted agriculturists, with true delight, and know of none more worthy of such animals. I only wish their genuine example were better appreciated.

I have frequently seen Mr. Fuller's President, and say with confidence he is the best bull the late Patroon, Van Rensselaer, ever bred, and his progeny keep their standing *equally* well. I trust we shall meet at the fair, on the 29th of September, where I hope we shall all pull together, as just men should, for the public good, and for our own credit support the *high station* of our President with good courage, manly feeling and *true spirit*, leaving discord and cavil to the ignorant and vulgar, for *judgment* must be *weak* when *prejudice* is *strong*. Our motives should be pure and unbiassed to support this noble purpose. You may rely I shall be one of the first to welcome him to his chair, cheer with glee the toast to his health and prosperity, and glory in seeing him at the head of a body of *intelligent* farmers, met to transmit opinions, and glean knowledge for the benefit of themselves and their country. They are the lords of all below, when improvement is the hope that animates them, and their exertions are blessed with success. I have not the honor of a personal acquaintance with Mr. R., but when we meet *face to face*, the challenge he says he has given me shall be *amicably* settled; there is now a misunderstanding between us.

I have no objection to a contest for *butter* with the Herefords and Short Horns, if he will allow me to send to England for another—the number of the latter so much exceed the former; but should he not go beyond his own herd, or that of Mr. Hepburn, I will meet him with one from ours; the time of trial to be fixed at the fair. I have before stated, in the "Farmers' Cabinet," that a good mellow-handling cow will invariably yield much more butter in proportion, than that which is drawn from an animal inferior in the touch; hard handlers require much more food, and must be forced with expensive keep, to make them ripe or rich milkers. This I have known from experience from boyhood.

I have some early potatoes I brought from England, that I think very superior. I planted them on the 26th of May, dug them for the table on the 7th of July, and they were thoroughly ripe and fit to dry for seed on the 14th of August. I think their quality is better than any thing I have ever seen. I have about two bushels of them, and will send you one of them to present to your correspondents, as they may be *well* distributed; they far exceed the Rohan, though not so large, and will stand next in produce if they *continue* as they *commence*.

Yours sincerely, WH. H'Y. SOTHAM.

Review of the New-York Market, Aug. 24.

(Prepared for the Cultivator.)

ASHES.—During the past month, the demand for Pots has been about equal to the receipts, while for Pearls there has been but a moderate inquiry. The receipts have been quite limited, in consequence of the large quantity which has this season been directed to Canada, instead of finding a vent at New-York, as in former seasons. The price has steadily advanced from $5·00, at the opening of navigation, to $5·75, at which price both descriptions now stand, with a good demand and rather an upward tendency. The exports from the 1st to 28th July, were 2,736 bbls. Pots, 159 bbls. Pearls; from 1st to 18th August, 800 bbls. Pots. The amount received from the opening of the canals to the 14th inst. is 19,487 bbls.; stock on hand, 1,090 bbls. Pots and 1,438 bbls. Pearls.

COTTON.—The advices from England received by the steamers which have arrived this month have been unfavorable, almost without exception, and communicated a corresponding feeling to this market. Prices have been gradually drooping, and since the arrival of the Columbia, the lower grades have been sold at prices establishing a decline of 1-2c. per lb. The better descriptions are comparatively neglected, and sales have not been made sufficiently large to show any change in rates. The operations are principally made by shippers. The total receipts from the 1st to 24th August have been 6,334 bales. Total export from U. States since 1st October last, 1,279,000 bales, against 1,818,000 bales last year to same time. The current rates are, Upland and Florida, 8 @ 10 1-2c.—Mobile, 8 3-4 @ 11 1-2c., a parcel very fine at 13 1-2c.—New-Orleans, 8 1-4 @ 11 1-2c.

FLOUR AND MEAL.—From the opening of the canals to the present time, with occasional seasons of quiet, there has been a gradual, steady improvement in the price and demand for Flour. The receipts from the interior have been unusually light this season. Large quantities of Ohio and other Western, which have in former years been sent to this market, have been forwarded to England via Canada. This fact, with a brisk demand for the supply of eastern ports and home consumption, has given prices an impetus, and we now quote all descriptions about $1·00 ⅌ bbl. higher than the ruling rates in the early part of the month. The Columbia brought large orders from England, but the limits are in most cases much too low; some lots, however, as near as can be ascertained about 2,000 bbls., have been taken for England, at $6·50 for Ohio and Genesee. We quote fresh Genesee firm, $6·75—Ohio, $6·50 @ $6·75—Michigan, $6·50 @ $6·62 1-2—Georgetown and Howard-st. fresh, $6·75 @ $7·00—Brandywine, $7·00. The stock of Michigan and Southern is extremely light. Corn Meal is held at $3·75 @ $4·00, in bbls—$16·00 in hhds. Rye Flour, $4·00 ⅌ bbl.

GRAIN.—The supplies of all descriptions throughout the month have been very light and unequal to the demand, in consequence of which prices have rapidly improved, say 8 cts. ⅌ bushel on Corn—6 to 7c. on Rye—10c. on Wheat—and 6 to 8c. on Oats. Within a few days we have had considerable receipts of Corn and Rye, and the market generally does not exhibit the same firmness. A sale of Ohio Wheat was made yesterday at 135c. per bushel, and a cargo of North Carolina brought 134c. @ 133c. The demand for Wheat is good, but considerable supplies arriving would probably depress the market. We quote, with quick sales of all that arrives, Northern Corn 79c. measure—Jersey do. 78c. measure—Southern do. 75 @ 75 1-2 ⅌ bushel of 56 lbs.—North River Rye, 68c. at the boats—Canal Oats, new, 47 @ 48c., old 49 @ 50c.—Southern do. last sales, 40c. The demand for Oats has not been so brisk within a day or two as for other descriptions.

PROVISIONS.—The market for Pork is extremely depressed, in consequence of the immense stock which has accumulated here, (probably never exceeded,) and the comparative light demand for export. There is now but a moderate demand for this article at $8 @ 10 for Ohio Prime and Mess, and some sales are reported at a shade lower rates. N. Y. State brings $8·37 1-2 @ $10·37 1-2, and lower county $9 @ $11. Beef sells in small parcels for consumption at $5·75 @ $6·25 for Prime, and $9·50 @ $10 for Mess. Lard is dull at 6 1-2 @ 8 1-2c. Prime Butter does not arrive freely, and sells at 18 3-4c.—Common brings 12 @ 15c. Cheese is in fair request at 5 @ 6c. ⅌ lb.

RICE.—This article, in consequence of the light supplies received from the South, and the improving rates which have ruled there, has advanced slightly, and may be now quoted at $3·87 1-2 ⅌ 100 lbs., cash. The inquiry has improved within a day or two, partly for shipment to the West Indies, which has strengthened the market.

SEEDS.—The drouth in some parts of the country created a demand for Clover and Timothy during the month, and they have improved in prices. Considerable quantities of Clover have been sold at 9 @ 9 1-2c. ⅌ lb., and Timothy at $22·00 ⅌ tierce. The inquiry has, however, subsided considerably, but sales are still made at these rates. Flaxseed is very scarce, and taken freely on arrival at $10 @ $10·50 per tierce by the crushers. Considerable parcels of foreign are expected.

TOBACCO.—There is not much activity in "Kentucky," excepting for the lower qualities, for which there appears to be some demand. The market, however, though firm, may be considered dull. For manufactured of the low descriptions, there are some sales making for export. The stock of Tobacco generally is large. We quote Richmond and Petersburg, 4 @ 8c.—North Carolina, 4 @ 6c.—Kentucky, 5 @ 10 1-2c.—manufactured No. 1, 12 @ 15c.—No. 2, 10 @ 11c.—No. 3, 9 @ 10 1-2c.—Ladies Twist, 16 @ 20c.—Cavendish 10 @ 40c.

TALLOW—The market is very quiet, and only small sales are making, at 8 3-4 @ 9c. The stock is considerable, especially of city rendered, which is held above the current rates by the butchers, and consequently is accumulating.

CATTLE.—A larger supply than usual was offered at Bull's Head on the last market day, in consequence of considerable lots having been driven in, for want of pasturage. The drouth in the interior has cut off much of the feed. The demand was not very animated, and prices were a little lower. There were 70 head Beeves left over. 80 arrived from the South, and 900 from this state. 850 were sold at $5 @ $7. *Cows and Calves*—55 were offered, and 40 sold at $20 @ $28 each. *Sheep and Lambs*—The supply was large and sellers were forced to give way. The whole at market, 4,500, were sold at $1 @ $4 for Sheep, and 75c. @ $2·75 for Lambs.

HAY.—The receipts have been lately quite light, and loose brings 75 to 100c. ⅌ 100 lbs. Bundle Hay has been in demand, in consequence of supplies being needed by the U. S. Government, and sales have been made within a fortnight as high as $1·06 1-4 ⅌ 100 lbs.

Notices to Correspondents, &c.

Communications have been received during the past month, from B. P. Johnson, Jas. Gowen, Caleb Carmalt, Holkham, S. D. Martin, S. Guthrie, V. P. Colonus, Commentator, G. M., J. M. Weeks, Sidney Weller, Geo. Woodfin, (too late for answer this month,) C. N. Bement, H. L. Ellsworth, Wells Lathrop, Geo. Barnard, J. C. Etches, "H. S. R." M. L Knapp, John Boynton, W. H. Sotham, L. F. A., Solon Robinson, E. Hersy Derby, John H. Cocke, R. Sinclair, Jr. & Co., Nicholas Titus, A. & G. Brentnall, James Jones, and D. Y. O.

Several communications, which we should have been glad to have given this month, arrived too late; and among these are those of Mr. Lathrop, Mr. Derby, and L. F. A.

Our thanks are due to different friends for various newspapers containing notices of Agricultural Societies, and other matters of interest to us—To Geo. C. Thorburn, New-York, for "A Tabular Treatise on Chemistry, for the use of the Agriculturist," and "A Table of Manures, their properties, and mode of application," both by John Robinson, M. B.—To W. H. Richardson and R. Hill, Jr., for copies of the Proceedings of the Henrico Ag. and Hort. Society, with the President's Address—and to the Shaker Family at Niskayuna for specimens of Early Canada Corn.

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THE CULTIVATOR.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NOTICE.—The co-partnership heretofore existing between the subscribers, in the publication of the Cultivator, under the co-partnership name of "JESSE BUEL & Co." is this day dissolved by mutual consent. All debts and liabilities and business of the co-partnership will be settled at the office of the Cultivator by LUTHER TUCKER, who will continue the business on his own account.

JESSE BUEL,
Dated September 1, 1841. LUTHER TUCKER.

Fourteenth Annual Fair of the Am. Institute.

THIS association of individuals in the city of New-York, incorporated for purposes of the greatest national importance, and intended to advance the agricultural interest, and foster and protect domestic industry, holds its fourteenth annual meeting at New-York, on the 11th of October, and several succeeding days. It is not necessary here to refer to the extensive and beneficial agency which the Institute has already exerted by its annual exhibitions, by its numerous premiums, and by the encouragement it has afforded to the spirit of improvement, shown in our stock, our agricultural implements and our manufactured articles. The course of the Institute has been constantly onward. Each succeeding year has added to the interest of the Fair, and the number, variety, and importance of the animals and articles exhibited; and the Fair of the present year promises to far exceed any that has yet been held by the society. This may in part be attributed to the increased means of the Institute, and partly to the greater interest which the objects aimed at by the Institute receive from the public. The Institute is the recipient of that part of the legislative grant made in favor of agriculture, which would fall to the city of New-York, and thus most opportunely and fortunately for the public, its means of doing good are greatly increased. It will be seen from the extract which we give below, from the Circular of the Institute, of the *new* premiums which will this year be awarded, in addition to the former ones on cattle, sheep, horses, hogs, farm and garden products, and labor-saving machines, that the substantial interests are not overlooked or forgotten. The annual address, which is always by some distinguished individual, will this year be given by the Hon. REVERDY JOHNSON of Maryland. There can be little doubt that the Fair this year will be most gratifying and honorable to the advocates of American agriculture and industry.

"1. For the best assortment of agricultural labor-saving machines exhibited by any one person or persons—a gold medal.

2. For the most complete assortment of horticultural machines from any one person or persons—a gold medal.

3. For the best plow—a gold medal or silver cup. Second best—silver medal. Third best—a diploma.

4. For the best silk reel, an improvement on those before exhibited—a gold medal.

5. For the best twisting and spinning machine, an improvement on any heretofore exhibited—a gold medal.

6. For the best silk loom, an improvement, as above—a gold medal. Second best—a silver medal.

7. For the best stocking loom for families, cheap, not liable to get out of order, and simple in its operations—an improvement on those before exhibited—a gold medal.

8. For the best butter, quantity not less than 100 pounds—a gold medal.

9. For the best cheese, not less than 100 pounds—a gold medal.

10. A premium for the best assortment of American Tropical fruits, flowers and vegetables.

11. A premium for vases, urns and artificial fountains.

12. For the best treatise on silk, for the young culturist, from the planting of the mulberry to the completion of the reeling of the silk—fifty dollars and a gold medal.

13. For the best practical treatise on fruit and garden vegetables—a gold medal.

14. For the best design for an ornamental garden, with explanations—a gold medal.

15. For the best assortment of specimens of fancy woolens—a gold medal.

16. For the most complete assortment of specimens of American hardware, the Managers will also award a gold medal."

National Society of Agriculture.

IT gives us great pleasure to state that our friend SOLON ROBINSON, Esq., the zealous and able promoter of industry, and the original projector of a National Agricultural Society, has safely arrived at Washington, and that on the 4th of September a meeting was held in the Hall of the Patent Office, at which the incipient steps for the formation of such a society were taken. We perceive from a report of the proceedings kindly furnished us, that the numbers in attendance were very respectable, and actuated by the best spirit. The meeting was called to order by the Hon. H. L. ELLSWORTH, than whom there is not in the country a more enlightened and decided friend of agricultural improvement. Mr. ROBINSON was called to the chair, and briefly explained the objects of the meeting, after which the following resolution, submitted by Mr. Ellsworth, was discussed and unanimously adopted:

"*Resolved*, That the interests of agriculture imperiously require the co-operation of its friends throughout the Union, to *concentrate* their efforts by the formation of a National Society, for the promotion of national industry, and to "*elevate the standing and character of the cultivators of American soil.*"

Resolutions were then adopted, that a meeting of the friends of such a society "be held at the city of Washington, on the second Wednesday of the ensuing session of Congress;" and that one gentleman from the District of Columbia, and one from each State and Territory, be a committee to draft a constitution for such society. The following gentlemen were named by the chairman as the committee:

Hon. Henry L. Ellsworth, District of Columbia; Hon. James M. Garnett, Virginia; Hon. Chilton Allen, Kentucky; Hon. Oliver H. Smith, Indiana; Hon. Thomas S. Hind, Illinois; Hon. Lewis F. Linn, Missouri; Hon. Francis H. Gordon, Tennessee; M. W. Phillips, Esq. Mississippi; Hon. Dixon H. Lewis, Alabama; Hon. Alex. Mouton, Louisiana; Hon. Wm. S. Fulton, Arkansas; Hon. Augustus C. Dodge, Iowa; Gov. James D. Doty, Wiskonsan; Hon. William Woodbridge, Michigan; William Neff, Esq. Ohio; Wm. P. Kinzer, Esq. Pennsylvania; Edmund D. Morris, Esq. New-Jersey; Dr. James W. Thompson, Delaware; Hon. John S Skinner, Maryland; Hon. Edmund Deberry, North Carolina; Hon. Francis W. Pickens, South Carolina; Hon. Wm. C. Dawson, Georgia; Gov. Call, Florida; Caleb N. Bement, Esq., New-York; Solomon W. Jewett, Esq. Vermont; Hon. Levi Woodbury, New Hampshire; Hon George Evans, Maine; B. V. French, Esq. Massachusetts; William C. Chapin, Esq. Rhode Island; Hon. Thomas B. Osborn, Connecticut.

We here gladly insert the remarks of Mr. ROBINSON, accompanying and explaining the report of the proceedings, in preference to any thing we could add ourselves in enforcing the propriety and necessity of such an organization. It is indeed probable that before this sheet goes to the press, Mr. ROBINSON will have been among us; and we cannot doubt his reception among his agricultural friends in the east and north, will be such as to convince him that they will not be behind those of any section of the Union, in a cordial support to his great undertaking:

"By this, my friends, you will see that the ball is now fairly in motion. I hope I have been fortunate enough in making a selection upon the spur of the moment, of the gentlemen named as a committee, to secure the services of such as will act promptly for the good of this great cause. I hope they will interchange views with one another, and at the day appointed for the meeting to organize the Society, I hope they will come together, and have the satisfaction of meeting the largest body of the real friends of agricultural improvement ever collected together.

I most earnestly hope that every individual friend of a National Agricultural Society, whom bounteous nature has provided with the means, will attend the first meeting. I hope every Agricultural Society in the Union will send special delegates to the National Society.

I have and shall recommend that the price of membership be fixed very low, as the great and grand object is to enlist a great number in this bond of brotherhood, and by concentrated effort of mind more than with money, to produce a happy effect upon society.

A large meeting at the organization is highly important, to give tone and effect to the measure, and to encourage one another. It is probable also that steps will then be taken to found an institution where a course of scientific and agricultural lectures will be delivered every winter, free to every farmer's son or daughter in the United States.

Many of my friends have expressed a wish that the first meeting might be held in the present autumn. But it is thought by those with whom I have advised here, that the time of a session of Congress would be the most interesting. In fact, every freeman of this country ought to have the opportunity at least once in his life, of visiting the Capitol of his country at such a time. There is then enough to be seen and learned, sufficient to repay all the trouble and expense of such a visit.

The Patent Office alone is the greatest and best museum of useful curiosities in the Union.

The Hall of Manufactures, 273 feet long, will be filled with ten thousand curious and wonderful things. It is already worthy of great interest, and before next winter will be much more so.

No doubt manufacturers and mechanics will take advantage of the time of the meeting of the Friends of a National Society of Agriculture, to make exhibitions that will be sufficient to induce great attention, and from which a mass of useful information will be gathered.

I cannot but look upon the first meeting of the friends of a National Agricultural Society as an epoch in the history of my country that will long be remembered.

I hope all my correspondents to whom I have promised information upon this subject, will take this address as particularly addressed to them. And I hope that every paper in the United States that is friendly to that interest which is the base o all others, will make known to its readers what is now doing for the promotion and organization of this society. I am confident that every agricultural paper will afford the information to its readers; and I hope in particular, that every editor of such papers will attend the first meeting.

From Washington, I shall continue my tour through the eastern states, and I hope to have a personal interview with many of my agricultural friends.

But above all things, let all remember "*now is the time*" for them to say that "something *can*, something *must*, something *shall* be done," to advance the interest of agriculture in the United States.

Be assured that I remain your earnest agricultural friend,

SOLON ROBINSON

Washington City, Sept. 6, 1841.

The Hessian Fly.

WE make the following extract from a letter written by an intelligent and scientific correspondent in Pennsylvania. The fact stated is a very important one, and will doubtless lead to important results. Miss MORRIS deserves the highest praise for the perseverance and success with which she has pursued her investigations into the habits of this most formidable foe of the wheat crop:

"I have just been shown a letter from M. MORRIS, in which she says she has watched the progress of the Hessian fly from the time of depositing its ova on the berry, through all its transformations, until it became a perfect insect, and has had this season numerous stalks of wheat growing with the larvæ in them. If this is the truth, (and there are probably many witnesses of the fact,) which we have no reason to doubt, it places her opinions beyond controversy. It also goes a great way to establish mine as to the identity of the *C. destructor*, with the *C. tritici*. The only remaining difficulty is, that the egg is not *always hatched* in the berry, but sometimes in the stalk."

Ag. Association of the State of Louisiana.

UNDER this title we are happy to perceive by the Baton Rouge Gazette, an association or society was organized at that place in June, which we cannot doubt will be eminently prosperous and beneficial. Officers were appointed, and by-laws adopted, and such arrangements made as will ensure its activity and efficiency. Louisiana possesses the elements of wealth in its agricultural productions to an eminent degree, as is proved in their present imperfect development, and the vast field for improvement which the society will occupy, will call out the talent and energy of the able and public spirited individuals engaged in the great cause of agricultural reform. The Gazette states that there was present at the organization a large number of the most respectable and intelligent planters, who evinced a deep interest in the subject, and an ardent desire that the undertaking might be successful. James Buhler, President; Joseph Menard, Treasurer; A. Adams, Recording Secretary; and J. Hueston, Cor. Secretary

Oneida County Agricultural Society.

AT a meeting of the officers of this society, held at Rome, arrangements were made for an exhibition and fair on the 3d Wednesday in October, and from the spirit manifested it is evident Oneida is intending this year to outdo all her former doings in the cause of agriculture. A list of premiums to be awarded, embracing horses and mules, cattle, sheep, swine, dairy, grain and root crops, sugar, silk, domestic goods manufactured in families, with a variety of discretionary premiums, was made out, amounting to about ninety in number, and intended to distribute among the farmers of that flourishing county the sum of $700.

We were glad to see that the resolutions adopted at the meeting called the attention of the claimants for premiums to the requirement of the act of the legislature, that such claimants should deliver in writing as accurate a description of the processes in preparing the soil, the expense and product of the crops, or the feeding and fattening of animals as may be, and we hope that all the state societies will keep this requisition in view, as a compliance with it is essential to carrying out the intentions of the act for the improvement of agriculture.

Committees were appointed on the different classes of premiums, and such measures adopted as seemed best calculated to insure to the county the benefit which can scarcely fail to result from the organization and action of the society.

Crops of 1841.*

The season is now so far advanced, and so many of the principal crops have been either secured, or are so far advanced that a tolerably correct estimate may be formed of their amount, that the means of giving a better view of the whole than we have yet seen offered, seems possible. To do this, we have collected data from all parts of the United States, and from the most careful comparison we have been able to make, have arrived at the following results.

The wheat crop may be considered the great grain crop of this country, as its effect, independent of its value as an article of food at home, is more extensively felt in the trade and monetary matters of the country, than any other. This crop will not equal that of 1840. In Indiana, Illinois, and Michigan, there is a decided increase; on this point all agree, and the advance is variously estimated from one-fourth to one-third. The blight which so destroyed the crop of 1840 in a large portion of these States, was not felt this year; the growth and the berry have proved good, and as a greater quantity of land was sown than in the previous year, the largest rate of increase may not far exceed the truth. Ohio and Kentucky are supposed to have nearly held their own, but in almost every other direction there has been such a falling off, that the increased crop of the North Western States has been more than neutralized. In Tennessee, in Virginia, in the Carolinas, in Maryland, Delaware and Pennsylvania, and particularly in New-York, the deficiency in the wheat crop is great. It is true, the berry is almost uniformily good, but this will not compensate the loss which the severe winter, the backward spring, the fly and the worm, has caused. The difference in the sum total of the wheat crop of 1840 and 1841, we do not consider great, but believe what difference exists, is against 1841. The wheat crop of New-England, is nearly or quite an average one, but the difference either way, cannot be so great as to affect the general result materially. There was not a great amount of wheat in the country when the wheat harvest commenced. A large portion of that which found its way to Buffalo, from the West, did not reach the seaboard; and after allowing for what diverged to the Canadas, it is clear much must have been stopped and consumed in the transit, a result hardly possible had Western New-York contained its usual supply of old wheat. The price of wheat will, however, always be more or less influenced by the state of the other grain crops, and we think an examination of these will show that wheat can hardly fail to command fair, though not exorbitant rates.

Rye, out of the New-England States, is not grown extensively for bread, but cultivated for the pernicious use of distillation, consequently any trifling variation (and the difference from the average this year, all advices would seem to show, is but trifling) cannot materially affect the result so far as bread crops are concerned.

Barley will not be a medium crop. New-York raises more of this grain than all the rest of the United States, and the crop in the best barley counties will be lighter than in 1840. This arises in part from two causes. One was the unfavorable state of the weather in the spring months for such crops, cold and very wet, and this followed by extreme dryness, which materially injured the young grain. The other cause is to be found in the fact, that farmers in the greatest barley producing districts, have become convinced that a course of spring cropping exclusively, is most injurious, filling the soil with all kinds of foul stuff, and that summer fallows, with winter wheat, must, as a cleaning crop, in connection with hoed ones, be resorted to. The effect of this increasing belief has been, that less barley was sown in 1841 than usual; and although the quality is unusually fine, the quantity will not equal that of former years.

Indian corn is the most important grain for bread, next to wheat, of this country, and there is none, perhaps, of more extensive domestic use and utility. Whatever affects this crop, therefore, may be considered as more immediately affecting prices, and influencing the prosperity of the country, than causes operating on any other crop, wheat excepted. Up to the middle of July the corn crop of the United States never looked finer, and there was nothing particularly unfavorable until August. Corn, a native of a warm climate, and throwing out vigorous roots and to a great depth, is less injured by heat, and bears a drouth better than almost any other cultivated plant; consequently, although some complaints were heard of extreme dryness, and partial failures might have been anticipated, still it was not until about the middle of August that serious apprehensions of extensive failures were justified. Severe drouth operates on corn by preventing the setting of ears on many of the stalks, by drying the silks prematurely, and thus preventing the formation of grain on ears already set, and it is evident, that corn has already, throughout large districts of our country, suffered severely in both these ways. From Virginia to Canada, the most distressing accounts of the severity of the drouth reach us, and the Western States are by no means exempt. In many places the corn is irrecoverably lost, and the farmers, for want of pasture, are cutting it up and feeding it to their animals. Corn, therefore, notwithstanding the beautiful and flattering appearance of the crop at the close of July, must now be considered in a state which renders it certain an average crop cannot be produced, and in all calculations respecting grain and its prices, this fact must be kept steadily in view. Late planted corn has suffered the most, as the roots had not sufficiently penetrated the earth, and the great heat demanded a more plentiful supply of moisture for the plants, than under such circumstances could be afforded.

There is but one of the cultivated roots which requires notice in any discussion relating to the food of man, and that is the *ready made bread* of so large a part of mankind, the potato. The quantity used as human food in the States is enormous, and as they are plenty or otherwise, so will their influence be felt in the grain market. We think, from all we have been able to learn, that of all the crops that have suffered from the drouth, the potato has felt it the most severely. So disastrous has been the effect on this crop, that perhaps we should not be wrong if we state the falling off from the crop of last year in this State at one-third, and some consider it equal to one-half. But few roots have set, and those must, of necessity, be small, for though in ordinary seasons, these roots grow much during September, yet rains now would be of little avail, the tops and tubers both being so parched and dried.

We have come, then, to these conslusions, that the wheat crop of the United States is not an average one; that rye is about the average yield; that barley is a short crop; that corn must be below the average; and that potatoes approach nearer to what may be called a total failure than has ever been known in the country. The reasons for these opinions we have assigned; those interested will judge of their correctness, and draw their inferences accordingly. Of want there can be no fear, for extravagant prices no pretence, but a fair remunerating price for his products, an advance on those of the last year, may be confidently anticipated by the farmer.

Proper Improvement of Land.

It always gives us great pleasure to record any facts which go to show the great advantage to be derived from properly cultivating land. There is no truth in American agriculture, we think, more certain, than that as a whole we cultivate too much land for either the improvement of our soils, or the prosperity of our pockets. On this point there is a marked difference between the best farmers abroad, and those of our own country. *Here* the money made from the farm, if not wanted at once for the payment of debts, goes to purchase more land—*there* the annual profits are far the greater part of them immediately applied to the improvement of the soil; and this fact accounts in a great measure for the acknowledged average superiority of their crops over ours. The United States have the finest soils in the world; by good husbandry they can be made the most productive; but this will not be until the farmer ceases to desire the possession of all the land that adjoins him. There has been an article going the rounds of the papers, written by a Connecticut farmer, stating the productions and expenses of two farms of 25, and 100 acres, the first well cultivated, and the last in the ordinary manner; and the result is what any one might anticipate, viz. a decided advantage in the summing up, in favor of the farm of 25 acres. Every well cultivated farmer's garden, is an annual proof that he would derive greater profit from a smaller farm fully improved, than from a large one *gone over* in the common mode. The immense product that may be drawn from a small quantity of thoroughly tilled land is as yet scarcely known in this country; instances, however, are occasionally given that show what might be done, were more correct opinions and a better practice, on this subject, to prevail. As a case in point we abridge from the Ithaca Journal an account of the varieties of articles cultivated in a garden of that place.

The piece of ground was 100 by 200 feet, but a large part of it, (or 5,000 feet of the 20,000,) is occupied by buildings, yards, &c.; on the remainder is grown, strawberry, many varieties, and in abundance; raspberries, 4 kinds; gooseberries 12 or 14 kinds; currnets, 3 varieties; filberts, 4 kinds; 2 early apple trees; 8 pear trees, 4 kinds; 8 cherry trees, 4 kinds; 2 apricots; 5 plum trees, best kinds; 10 peach trees; 4 quince trees; 14 grape vines; 2 asparagus beds, with rhubarb, sea kale, and a variety of sweet and medicinal plants. Most of these fruits produce abundantly, and some of them much more than is required by the family. In the department of flowering shrubs and bulbous roots, are a dozen varieties of roses, lilacs, altheas, snowballs, almonds, dogwood, honey suckles, peonies, tulips, crocus, crown imperial, narcissus, and of annual flowers more than 50 varieties. The ground appropriated to trees, shrubs and flowers is not crowded, but there is room for many more. In the vegetable department was grown lettuces, radishes, cress, parsneps, carrots, vegetable oysters, beets, onions, summer squashes, cucumbers, musk and water melons, egg plant, okre, cabbage, broccoli, cauliflower, celery, &c. &c.

This is what we call occupying the whole ground, and in this case there was doubtless much pleasure as well profit derived from this small piece of land. There is no surer way to keep up kind feelings among neighbors than an exchange of the thousand civilities such gardens enable the proprietor to bestow; and of this one may be certain, the children who are accustomed to the enjoyment of fruit and flowers at home, to their cultivation and protection, are never a pest in the gardens of their neighbors; never stealing or plundering the choicest fruits, never destroying or mutilating the most valuable flowers.

In every point of view then, the thorough cultivator is a gainer; in his comforts, in his pleasures, and in his profits. Let those who covet large farms, think of these things; let them examine facts, and decide accordingly. The capabilities of our lands can never be fully understood, or the amount of products we might offer for sale known, until a more perfect system of farming shall be made common.

Annual Meeting of the Royal Ag. Society.

The meeting of this society, as we stated last month, was held this year at Liverpool, in July, and occupied an entire week. It showed in every respect a vast improvement on any previous one, in the numbers and interest of the members and spectators, the number of animals and implements exhibited, the amount of premiums awarded, and the enthusiasm and good feeling that prevailed. Perhaps few instances can be given better illustrating the efficiency of associated effort, than that of the English Royal Agricultural Society. The number of it members is about 5,000, embracing men of all ranks and professions, but principally composed of the substantial farmers of the Kingdom.

The show of cattle, of all the varieties of English cattle, horses, sheep, hogs, &c. was splendid, and the implements on the ground were almost innumerable, and adapted to all the numerous purposes of agriculture.

In the speeches made at the dinner of the society, reported for the Magazine, we find the following statement by the President of the Society respecting some of the most prominent scientific men in England, who are actively engaged in the promotion of agriculture:—Dr. Daubeny, Professor of Agriculture at Oxford; Dr. Buckland of the same University; Prof. Henslow of Cambridge; Prof. Johnson of Durham University; and Prof. Playfair of Edinburgh, "who had translated the work of the first chemist of the age, (Dr. Liebig,) for the use of the English agriculturist."

Among the "prizes for essays for the year 1840," we find the following one, which will appear somewhat singular to the American laborer, who is little accustomed to consult any thing but taste in his selection of food:

> "1 Food for Laborers.—Ten sovereigns, or a piece of plate of that value, for the best directions to enable laborers to prepare wholesome, nutritious, and palatable food, in the most economical and easy manner,—to Mrs. Gardiner of Mitcblanc."

An able report was made by Prof. Sewell on the recent epidemic which has made such destruction in cattle throughout the country. The report was formed on about 600 hundred communications from different parts of the country. As we can hardly expect to escape the epidemic in this country, the Professor's report, which will appear in the Journal of the Society, will be looked for with some interest by our cattle growers. Like the cholera, the cattle epidemic has been several years in traversing Europe from east to west, and the past season has proved fatal to thousands of cattle in England; and at the present time is commiting fearful ravages among the cattle of Ireland.

As an instance of the number and variety of implements presented for exhibition, we may mention that one firm alone (J. & R. Ransome, of Ipswich,) had on the ground 36 kinds of plows, adapted to the various soils and purposes of agriculture; and of other agricultural implements the number and variety did not fall behind that of plows. Such shows are one of the best schools for the agricultural mechanic, and as such are prized and frequented by the implement maker of England.

Census of Agriculture.

We have been waiting with some impatience for the complete returns of the late Agricultural Census of the United States, for the purpose of laying them before our readers. Such returns have not yet been made, and partial or incorrect reports can be of little value. We find in many of our exchange papers what purports to be a full table of the returns, with the exception of some four or five states or territories, and we had some thoughts of transferring it to the Cultivator, but on looking it over, so many errors were perceptible, that we have concluded it would be better to wait the final and authentic returns, than to encumber our pages with erroneous statictics. To mention one or two items in the table alluded to. The number of sheep in New York, is stated at 5,381,225, and the pounds of wool produced at 4,012,144. In Ohio the number of sheep is put at 3,396,431, and the pounds of wool grown at 3,076, 783. There are other errors, but these are sufficient to show that such returns need correction before they can be depended upon.

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* The above notices of the crops of 1841, were prepared for the September No. of the Cultivator, but crowded out by the press of matter relating to the State Agricultural Society. An examination of the opinions advanced, and the reasons on which they are founded, in consequence of this delay, has caused no change in the opinions advanced respecting the several crops, (unless a slight modification in favor of the potato crop may be such, owing to the reviving influence of showers the fore part of September,) while on the contrary, all additional intelligence goes to prove their correctness. The comparatively small quantities of flour that have reached the seaboard since the harvest, is proof that the old wheat was nearly exhausted. The new comes down slowly, but now that the labors of sowing are over, the wheat will be thrashed and forwarded rapidly. The quality of the wheat crop of 1841 has never been exceeded, and that will materially compensate for any trifling deficiency in the quantity

Correspondence, Inquiries, &c.

Oil from Corn.

In reference to a remark of ours in a former number of the Cultivator, (page 135,) Hon. H. S. Ellsworth, of Washinton city, says:—

> "I have been endeavoring to collect all the information I could on that point, with reference to the West, where corn is *very cheap*. I believe it will undoubtedly repay cost and trouble to grind and ferment the maize, take off the oil, and then feed the mash to animals."

Mr. E. asks for further information on this subject, and we will, if possible, procure such an account of the process of saving the oil, from the individual who made that to which we alluded, as shall be satisfactory. In the mean time, if others have experimented on the subject, we should be pleased to hear from them. We think the suggestion of Mr. Ellsworth a reasonable one, and if the oil can be separated without the development of the alcohol, it would be a great point gained for the west. Some valuable hints on the formation of the oils, during the chemical changes of fermentation, may be found in Liebig's Organic Chemistry.

In answer to Mr. Ellsworth's inquiry, "whether there is, to our knowledge, any mills for making oil from broom corn seed in the country?" we reply, we know of none such, nor have we ever heard that an attempt has been made to produce oil from that seed. That it contains oil cannot be doubted, whether in sufficient quantities to pay the cost of manufacture could easily be ascertained in those districts of New-England where the plant is extensively grown.

Farming in Tennessee.

We make the following extracts from a letter received from a gentleman in Maury county, Tenn. enclosing some inquiries, &c.:

> "I have 350 acres of land, 130 of which are under cultivation—divided into fields of about 30 acres each. Balance in heavy woodland. Well watered; a running stream flowing through the middle of the plantation. Corn and cotton raised on it chiefly for the last 30 years, and no manure or clover. Thirty to fifty bushels of corn to the acre considered a good crop. Land, limestone; soil light and liable to wash; clay subsoil. I put the last year, 60 acres in corn, 30 in clover, 15 in oats, and 12 in wheat. * * A neighbor of mine, raised, as an experiment a few years ago, by manuring, 80 bushels of corn from an acre of land. * * * I have no meadow, use mules for labor, land timbered with poplar, whiteoak, hickory, walnut, &c. No use has been made of manure: stables and barn yard full of it. * * Can we not farm it in Tennessee so as to make it a source of profit? B. M."

Unquestionably you can; your description of the land, timber, &c. is proof; and the reason why it has not been more successful, may be traced to the two causes mentioned, the continued culture of cotton, and the neglect of manure. If B. M. will discard the culture of cotton, altogether; procure some good Durhams and Berkshires; use clover liberally with wheat, oats, and other small grains suitable to the region; make and use all the manure possible, not allowing it to accumulate in the yards and stables; plow deep, and introduce a rotation of crops adapted to his circumstances; he will not fail of making money by farming. "B. M." asks whether he shall not clear more land. We say no; not until every acre he has cleared is so improved as to give him 70 or 80 bushels of corn. The great fault with the farmer, is cultivating more land than he can cultivate well. Corn, wheat, clover, cattle, hogs, sheep, all good, and a farm so managed and tilled that no labor is lost, and ample crops are certain, should be the aim of the owner of the soil. Two truths must be impressed on the mind of every farmer: without manures no fertility; without stock no manures. Secure these two things, and with such a soil as B. M. has, a man can do more than "gain a mere livelihood" by tilling the soil.

Ashes and Meadow Lands.

Our friend, "W. J. D." of Petersburgh, (Va.) has transmitted us the following queries, on the use of ashes, and the general management of meadow land:

> "At what season of the year, are the leached ashes or other manures applied in meadows, and how, and in what quantities per acre?"

Where ashes, or other manures, are applied directly to meadows, the spring is found the best time, as the effect of the application is more immediately felt. The quantity is regulated by the amount of ashes or manure available, or the the sterility of the land. We have used from 30 to 90 bushels of ashes per acre, and in all cases with the best effect. We have applied it to plow lands by spreading and plowing in; to meadow lands by spreading it equally as possible in the spring. Wet lands are benefited by draining previous to its use, but is valuable in correcting the acidity of even such. It is not common now, however, on well cultivated farms to apply the ashes or manures directly to the grass crop. It is given to corn and roots, followed by grains and grasses, and the meadows as well as tilled lands follow the course of rotation.

> "Are your meadows ever grazed in the autumn after sowing?"

They are either mown for the second crop, or are grazed; at least this is the usual practice. Some farmers turn their animals into their meadows as soon as they are mowed; but this is a very bad practice, as the roots should have time to recover from the check they receive from the cropping, and this is best done by the undisturbed growth of the aftermath. In no case should meadows be grazed close, and no animal should be admitted into them in the spring. Our experience would show, that unless pressing necessity exists, it is better to never allow meadows to be grazed, as the second growth preserves the roots from the effects of winter, and in their decay, constitute a valuable top-dressing for the coming crop.

> "Are your meadows ever coultered to open the soil?"

Meadows which it is inconvenient to subject to a course of rotation, have been found to be greatly benefited, by a dressing of ashes or manure, followed by a thorough harrowing. In such cases it is an excellent plan to sow new grass seeds, which is in fact a renewal of the meadow.

> "How long do they usually remain before they are cultivated, and what are the indications of a want of cultivation?"

No definite time can be given for allowing meadows to lie in grass; every thing is depending on circumstances, such as the condition and quality of the soil, the kind of grasses in cultivation, &c. Where a rotation is used, as always should be where practicable, the length of the course will determine the period the meadow lies in grass. The indications of a want of renewal in a meadow, are the appearance of weeds not suitable for hay, the coating of the earth with moss or lichen, the disappearance of the valuable grasses and then the succession by inferior or less nutritive ones, the general lightness of the crop of hay made, or in short, any thing which proves a deterioration of the plants or the soil cultivated, shows that the meadow would be benefited by plowing up, manuring, and new seeding.

> "With whom could I open a correspondence with the best prospect of obtaining a few pure Durham heifers?"

Gentleman having such animals to dispose of, may address "W. J. D." Petersburgh, (Va.) *postage* paid.

Prospects of Agriculture in Georgia—New Grass.

From the letter of a correspondent at Sparta, Ga. we make the following extract. It is gratifying to observe the brightening prospects of the farmer throughout our whole country; of the spread of knowledge on agricultural topics; and the consequent spirit of inquiry and improvement manifested. The grass alluded to by our correspondent is probably one of the stoloniferous varieties, which are propagated by the roots or joints, and which have within a few years been extensively used for turfing over and binding down the drifting sands that were encroaching on parts of England and Ireland. All grasses it is believed produce their seeds, but some, and this class in particular, sparsely and rarely.

> "We are beginning to see the necessity of raising less cotton, and more grain and stock, and making more manure. We are writhing under the scourge which we have brought upon ourselves, by permitting Kentucky to furnish us with pork, mules, and horses; and what is stranger still, we who have been great enemies to the grasses, and have made it our business to kill all that came in our way, now begin to believe that their cultivation is essential to our prosperity. You may ask what has produced this revolution in opinion and practice? I with pleasure inform you that it is the circulation of the Cultivator and Farmers' Register.
>
> "We, apparently by the merest accident, have, in my opinion, one of the finest and best grazing grasses in the world. It is called *Bermuda grass*, from the fact of its being brought from that Island. A gentleman in the southern part of the state brought it from there as a yard grass; it found its way into the interior of the state for that purpose; all animals are fond of it, and it is believed to contain as much or more nutriment than any other grass. We are beginning to cultivate it. It grows well on poor land, resembles what is called the wire grass of this region, takes root at every joint as that grass does, until the land becomes covered and a thick turf formed. It will grow on the poorest worn out clay, and eventually reclaim it, for when the turf is once formed, nothing is lost to the land by washing. It has to be propagated from the root or sprig, *as it has no seed*. When once planted it remains for all time, unless shaded or disturbed by the plow or hoe. The grazing or treading of stock has no effect upon it after turf is well formed, the more exposed to the sun the greater its luxriance, and mixed with white clover, which grows well with it, it affords good pasture for ten months in the year. The herbage is at all times very thick and tender. Some have objected to it, because of the difficulty of destroying it; but one of my neighbors has fine cotton growing where two years since this grass was as finely set as I ever saw it. It will be the salvation of the worn out lands of Georgia. We have a flourishing *Planter's Club* in this county, the annual meeting of which and the fair, is held on the 1st Monday in December. Premiums will be awarded on stock and domestic manufactures, and there will be an address by a member. The thing takes well and will do good. Next year we shall award premiums on crops, our organization being too recent to do it this. Crops here are very good. Farmers talk of making from 40 to 75 bushels of corn on good land without manure; and on much worn land, that never had a shovel full of manure, where the rain has been plenty, they speak of 25 bushels; this is great cropping for Georgia."

Tan Bark—Inquiry.

> "Messrs. Editors—Will you, or some of your correspondents inform a young farmer whether *tan bark* is valuable as a manure—and if it be, what is the best mode of applying it? I have several hundred cart loads of tan bark, much of which has been lying in heaps for twenty years or more. Can it be rendered valuable without lime? If lime is to be used, how should the preparation be made? If valuable, will it be better to apply it on a clayey or sandy soil? and what would be its value as a litter for stables or cow yards, compared with straw or leaves? F. Minor."
>
> *Albermarle County, Va.*

Tan bark, to be of value as a manure, requires decomposition, when it has the same effect as any other vegetable matter. Like fine chips from the wood yard, its influence at first can be only mechanical, but as decay commences, its value as a manure is felt, and as the decomposition is gradual, its beneficial effects will remain for years. There is usually more or less acid in the bark or wood of trees, and the addition of lime would doubtless be beneficial, though the quantity to be used, if thoroughly mixed with the bark, need not be great. Ashes would answer as well as lime, or indeed any other alkaline substance. The best way of using the lime would be to make a compost, or place the bark and lime in layers, which when stirred, would effectually incorporate both. Bark, on account of the mechanical effect it has in keeping the soil loose, as well as its effect as a manure, is best on clayey ground, as it renders light sandy soils still more loose in their texture. As a litter for the pig pen, cow yard, or stables, it would be valuable; acting as an absorbent of fluids and salts that might otherwise be lost, and having its decomposition hastened, and its acid properties corrected at the same time. We have noticed a case reported in one of the eastern states in which tan bark was used in this way:—There was a strong clay subsoil, and the soil itself tenacious. Bark was spread on this to the depth of three or four inches, and then turned in with a plow, cutting to the depth of twelve or fourteen inches. Then another similar dressing of bark was laid on, and turned under in the same manner. The crops have been excellent since, and the texture of the soil much improved. It is evident, however, that the *immediate* value of bark, as a manure, must depend on its state of decomposition.

Chess.

Our correspondent, E. Link, Esq. Greenville, (Tenn.) requests our opinion on the following statement of facts, which we take from his letter to us:—

> "I have a meadow that twelve months ago was pure timothy, with the except of a few bushels of red clover. Early in July of last year, before it was mown, we had a flood memorable in the annals of this county, that swept over it, leaving much of it covered with mud, resembling the botton of a mill pond. It being in a valley through which a small branch sometimes passed irregularly, I cut a ditch on the subsiding of the water, and by fall a greener and more beautiful piece of meadow I have never seen. But what was my surprise this year to find the whole meadow one mass of cheat or chess, as well where the water flowed over for a short time, as where it stood two or three weeks. * * Such cases I find not uncommon here. Many meadows that were inundated last year, have produced little else than chess this. A far more than usual quantity is this year in our wheat. Indeed, in some crops that was sowed from the very imperfect seed generally raised here last year, chess seems to have striven not unsuccessfully for the mastery."

Remarks.—The chess in the meadows was unquestionably produced from seeds brought down from the cultivated fields higher up on the stream, and the rich mud in which they were deposited gave them a start when germinated which caused them to quickly overpower the timothy and clover of the field, just as chess sown with grass seeds in wheat will soon overtop and master them. The fact stated that the wheat crop last year was "very imperfect," is a key to the whole. The chess grown with this imperfect or impure wheat crop, furnished not only the seed that covered the meadows of the valley, but that which gained the mastery of the wheat crop of this year.

Mr. L. adds the following queries:

> "What is the best method of securing a large crop of pumpkins from frost or rotting until used? Is buckwheat a hard crop upon land, and does it make a valuable meal for stock?"

Pumpkins to be preserved require to be kept *dry* and at a temperature above freezing. We have kept them in layers with straw, under cover, better than any other way we have tried; indeed there is no difficulty in keeping them any desirable time, if you do not let them touch each other; keep them dry and safe from frost.

Buckwheat does not reduce or exhaust land faster than any other crop which is permitted to ripen its seeds; perhaps not so much as some. We have never used buckwheat meal for feeding any other stock than hogs; for these it is excellent, and would doubtless prove so for other animals.

Purchase of Farms, Books, &c.

> "Messrs. Gaylord & Tucker—I take the liberty of asking you a few questions, which I hope you will consider as sufficiently connected with your great object to answer. A Reader.
>
> "1st. Where would you advise a young man who has a small capital of say $3,000, and who intends to be a farmer, to lay it out?"

If we intended to have a large family of boys, and wished to provide a farm for each, we would go to the west, and purchase accordingly; if our expectations on this point were moderate, we would expend the money in the purchase of a small but *good* farm in the vicinity of a certain market for farm products, cultivate it well, and thoroughly, and when this was done, convert the profits into more land if wished, since there will always be land to be bought by those able to pay for it.

> "2d. In what part of the country can cultivated farms be purchased the cheapest?"

In the interior, doubtless, and in the northern states there will be no great variation when the location, soil, and facilities for market are taken into consideration. We have been favorably impressed with the inland or upper counties of Virginia, so far as climate and soil is concerned, but the northern laborer may meet with some things not quite so pleasant to him in that region.

> "3d. What works on agriculture do you think best for a young farmer to have or read?"

Of European practical works, "The British Husbandry," 2 vols. and Prof. "Low's Practical Agriculture," are perhaps equal to any. Of those devoted to the science of agriculture, "Liebig's Organic Chemistry," and "Chaptal's Agricultural Chemistry," particularly the American editions, are superior to any others. Few volumes on agriculture have yet been published in this country. "Fessenden's Complete Farmer," "Buel's Farmers' Companion," "American Husbandry," and the "Practical Farmer," are the best known. Periodicals have, as yet, been more depended upon for the circulation of agricultural information than costlier works, and these are to be found in abundance.

Egyptian Barley and Skinless Oats.

One of our subscribers at Greenville, C. H.(S. C.) in a late letter, says:—

> "I have raised during two seasons, the Egyptian barley, (Hordeum cœleste,) which I think a very fine grain and well adapted to our latitude, 34° 45′, but it requires rich, dry, light soil and good tillage. Skinless oats, I think begin to degenerate; the seed was this year very small, but the straw strong and high. Probably the land was *too rich.*"

The Crops in New-Jersey.

We make the following extract from a letter from D. L. Dodge, Esq. dated Cedar Brook, Bloomfield, (N. J.) Sept. 2:

> "Through the whole season up to the present time, we have had a superabundance of rain, except a few weeks in July, so much as to cause delay in getting in the spring crops. We have had a large crop of hay, but more foul weeds interspersed than common. Winter wheat, generally a fair crop and quality. Siberian spring wheat, was promising about the last of June, but afterwards nearly destroyed by blight. Rye promised early a large yield, but did not fill well; perhaps two-thirds of a crop will be realized. Oats that indicated a heavy crop, were struck with rust while in the blossom, and will probably be light in quantity and quality. Corn, buckwheat, potatoes and roots now promise more than an average yield. Some of our meadows, notwithstanding they have been fed, would now yield a tolerable crop of rowen if again mowed. From inquiries, I am led to believe that the abundance of rain with which we have been favored, has not extended far to the west or north of us, and that hay and some other crops, except in this vicinity, will be very light."

Foot Rot in Sheep.

"J. H. M." of Delaware county, says:

> "I placed a flock of about 160 sheep, as fine as the country could produce, upon a farm near by, and vigorous and healthy, and quite fleshy for the season, (April last.) The sheep having come into my possession the fall before, I cannot account for their previous treatment. A few weeks since we were surprised to find more than half suffering severely with the Hoof or Foot Rot, and unless some cure be provided, the whole will be ruined. Will you be so good as to insert the best intelligence in your possession, on the causes and remedy of this dreadful malady?"

We regret that the inquiry of J. H. M. did not reach us in season for our last number, as in diseases of that nature, promptness in cure is very necessary. We shall however, reply to his queries and first as to the *cause*. The excellent treatise on sheep by Mr. Youatt, says:

> "This disease (the foot rot) is the consequence of soft and marshy pasture. The mountain or the down sheep—the sheep in whose walk there is no poachy ground, if he is not actually exposed to infection by means of the virus, knows nothing at all about it; it is in the yielding soil of the low country that all the mischief is done. * * Sheep that are brought from upland to lowland or but soft meadows or pastures are more particularly subject to it."

Blacklock, in his valuable work on sheep, says:

> "The finest and richest old pastures and lawns are particularly subject to this disease; soft, marshy, and luxuriant meadows are equally so; and it is sometimes found in light, soft or sandy districts. In the first of these it is perhaps most prevalent in a moist season, and in the latter in a dry one; in short, it exists to a greater or less extent in every situation which has a tendency to increase the growth of the hoofs, without wearing them away, and more especially when they are kept soft by moisture. * * * Another variety of foot rot is produced by the friction of long grass between the hoofs, but is mostly confined to hill sheep, when first pastured on low land districts. The rubbing of the grass frets the skin in the cleft of the hoof, the gland in that situation swells, becomes enlarged, suppurates, and in no long time the animal unable to stand on, its feet, is compelled to rest upon its knees. This kind of disease is more easily remedied than the former, and does not cause so much suffering to the sheep."

As to the *cure* of Foot Root, the first thing is to remove the sheep to clean dry pastures, and where the above causes of diseases will not act; all the diseased sheep are to be separated from the healthy ones, as it is considered infectious, and unless this precaution is taken, usually spreads with great rapidity. Blacklock says:

> "When foot rot has fairly commenced, pare the hoof from the affected part, and trim away any ragged portions, wash the foot with soap and water, and place the animal in a situation where as few irritating things as possible will be in the way of the tender surface, and give a purgative. If not properly attended to, the suppuration soon terminates in mortification. Cleanliness, in every stage and variety of the foot rot is of the first importance. Many corrosive preparations are recommended for the cure of this disease, but I have decided objections to one and all of them. When the foot is clean, endeavor to keep it so by frequent applications of soap and water, and if ulcers or fungous flesh appears, treat the foot with the following preparation:—wash the foot once or twice a day with a solution of sulphate of copper, (made by dissolving two or three drams of blue vitriol in an English pint of soft water,) and carefully covered over with a pledget of fine tow, spread with lard or any simple ointment, by which means, conjoined with cleanliness, a cure will usually be accomplished."

Youatt says,

> "The first and fundamental thing is to cut away every portion of horn that is in the slightest degree separated from the parts beneath it. A small sharp pointed curve knife, or a small drawing knife will be the best instrument to effect this."

The foot is then to be thoroughly cleaned, unhealthy granulations cut down with scissors or a knife, and then the foot is to be washed in a solution of chloride of lime in the proportion of one pound of the chloride to a gallon of water. This will remove the fœtor, and check the tendency to sloughing and mortification. The muriate or butter of antimony may then, by means of a little stick and tow, be applied to every denuded part, lightly where the surface has a healthy appearance and more severely where fungous granulations have been cut off. So far as these foot cases are concerned, this supersedes all other caustic and other applications. If a considerable portion of the horn of the foot, particularly the sole is removed, the foot may be bound up with tow secured by tape, and the sheep placed in dry straw, or if turned to the field always to one very dry. Close attention, and frequent examinations are required, and if kept clean and dry, a cure will be usually effected. Such, in substance are the directions of Mr. Youatt. In the same work will be found numerous instances where the disease proved infectious, and hence with justness the necessity and propriety of keeping the diseased from the sound sheep is inferred.

Green Corn Fodder for Horses.

> "What is your opinion of Indian corn in its green state, cut up with the stalk and used as fodder or food for horses? do you think it nutritious? Some here recommend it highly; others say horses will thrive on it. I think it acts too freely on the bowels. I should like to see some extended remarks by some of your correspondents on the best manner of treating work and traveling horses. *Elizabethtown, N. C.* W. B."

All plants which abound in juices, if fed to animals without the mixture of other and dryer food, is apt to produce a loosening effect on the bowels. This is the case with beets, carrots, turneps, potatoes, &c. and hence it is found necessary where horses or cattle are fed on these, to give with them a quantity of dry hay. Very green corn would require such an addition, if used extensively for horses, but with this no injury could ensue. There can be no doubt as to the nutritive qualities of corn fodder. But to possess this quality in the greatest extent, the juices should be fully elaborated, as they contain the most saccharine matter, which seems to be essential to the full value of the plant. This time is when the corn is pretty generally glazed, and if cut up at this period, cut in a chaff machine and fed at once, or dried and stored for winter fodder and then cut for use, the stalks of corn will be found most nutritious and valuable. Where corn meal is to be fed to animals, the cob should always be ground with the grain, and there are few kinds of food on which animals will thrive faster, than the stalks and leaves made into chaff, and mixed with corn and cob meal.

Will some of our correspondents, qualified by their acquaintance with that noble animal, the horse, reply to the last part of our correspondent's inquiry?

"Book Farming, Farming Books, and Farming in General."

Under this title, a writer who signs himself Timothy Oldschool, has in a late number of the Alabama Republican Pilot, in a happy style of caustic humor, shown up at considerable length the absurdity of those who object to the manifest improvement of agriculture going on, because owing to books or agricultural papers, and hence condemned as book farming. We can make room for this extract only:

> "These Book Farmers brag about their immense crops, their splendid cattle, their daily improvements, and so on. These are all such vain boastings, that we would not be fools enough to believe them if we were witness to them ourselves. But if what they say about improved stocks being so superior to the common ones is true, why not improve them ourselves? What if it does take 50 or 100 years to make them equal to the imported breeds? Shall we be so unpatriotic as to be dependent on *foreigners* for things we can in time raise ourselves? We should be completely free of all foreign influence. Very true, some may say that by availing ourselves of their labors it will enable us to be independent of them fifty or a hundred years earlier than we otherwise would be: yet still we ought to improve on our own breeds, and be *independent* of all others."
>
> "The butcher houses of London say that within the last fifty years the average weight of animals brought to that market has increased one-third; and those of Boston assert that within the last twelve years, the average increase of weight in animals slaughtered there, has been from ten to twelve per cent. This, however, is like all other assertions of the Book farmers; if we admit it, we acknowledge the possibility that book farming is doing some good; the only way, therefore, is to assert that this alleged increase of weight is all a fabrication."

Manufacture of Manures.

Our correspondent "G. W." of Richmond, will perceive that his former inquiries have been replied to in the September number of the Cultivator. We now proceed to his present ones. He says:

> "I find that 20 gallons of urine is sufficient to saturate 500 lbs. of plaster; I wish to know whether this quantity of plaster will not take up more salts than will be afforded by the 20 gallons. If so, how much more?
>
> "By adding a larger quantity of urine and stirring the whole together, will the plaster take up the salts, &c. of the fluid. If so, will the residue be water which I may draw off or evaporate? It is a great object with me to give the plaster the strongest possible preparation in order to save transportation.
>
> "What quantity of any one of these agents (gypsum, chloride of Calcium, sulphuric or muriatic acid, and super-phosphate of lime (as quoted from Liebig) will suffice to fix the ammonia of 30 gallons of putrid urine?
>
> "I think I am making successfully the 'Alkaline vegetative Powder' of Madame Vebert Duboul, but I wish to ask, does the lime used in the preparation prevent the escape of the ammonia?"

Our limited chemical knowledge does not enable us to answer the inquiries of our correspondent satisfactorily, and as they are important, we copy them in the hope they will receive attention of some of our practical chemists. The preparation of such manures is of great consequence to the farmer, and the best methods, those which ensure the greatest combination of fertilizing ingredients, should be adopted. There can be little doubt, we think, that 500 lbs. of plaster will combine with and retain for the use of the soil or plants, the salts of more than twenty gallons of urine. This could easily be tested by experiment. If a quantity of the mass once saturated with urine be dried at a moderate temperate, and then again wet with the putrid urine and stirred up fully, permitted no escape of ammonia, (a fact known at once by the penetrating odor of that substance,) it would be certain that the highest point of combination or saturation had not been reached. In making an experiment with larger quantities of urine as suggested in the second query, evaporating the urine would be preferable to drawing it off, as in the latter case some of the uncombined salts would be lost, which would be left in the process of evaporation.

We have no means of accurately determining the points alluded to in G. W.'s last queries. Chaptal, Davy, and Liebig simply assert the fact that the substances named neutralize the ammonia of animal matter, urine, &c. but say nothing as to quantities. The odor emitted is probably the surest test of the neutralization or absorption of the ammonia, as this substance is one which cannot pass freely into the atmosphere without detection. The whole science of the manufacture of manures is yet in its infancy, new and useful discoveries are almost daily making, and while science must direct and lead in such inquiries, much is depending on carefully conducted experiments in testing the utility of such discoveries. In this course, we trust our correspondent will persevere, carefully noting and recording his various operations and their results.

Large Calf.

Mr. Samuel W. Bartlett, of East Windsor, (Ct.) has a thorough bred Durham Short Horn bull calf, that when four months and eighteen days old, weighed 525 pounds, having gained 345 pounds in the last one hundred and nine days, or a fraction over three pounds per day.

Culture of Hemp.

We shall be gratified to receive an answer to the following inquiries, made by "A Subscriber," at Griggsville, Illinois, from some of our readers in Kentucky:

> "What kind of a soil is best for hemp—the best time to plant, and how done—how much seed to an acre—when is it fit to cut—what process does it have to go through from the time that it is fit to cut, to get it ready for market—and how much does it produce to the acre?"

More Large Pigs.

We make the following extract from a letter from Mr. Samuel Denison, of Floyd, Oneida county, N. Y., who says he has been for twenty years making efforts to improve his breed of swine:

> "I have a sow crossed with the Leicestershire and our common improved breed of white hogs, three years old last spring, long bodied, short thin haired, fine in bone, and easy to keep; her first litter of pigs came the last of April, and were wintered over, and killed the next autumn, and weighed from 535 to almost 400; her next spring's litter, from a Berkshire boar, came the 4th of March; I fatted and killed six, between Christmas and New Years, a few days short of ten months old; their average weight, dressed, 258 pounds and some ounces; the heaviest 288 pounds. The pigs I am going to give you the weight of, or a part of them, came the 1st March last, seven in number, sired by our improved common breed white boar; one of the number I keep for a boar; the other six I feed, not however, with the expectation of competing with Dr. Martin. You will see by my manner of feeding, that I keep a dairy, and make butter; my pigs I fed with buttermilk and sour milk from six weeks old, the time I took them off to wean, until that began to fail, the latter part of July; as the milk began to fail, I added to it corn, soaked or boiled in water, and nothing more nor less. Two of the pigs I weighed at six months old—one weighed 245 pounds, the other 231 pounds; the other five not much lighter. The boar is for sale, and I shall have pigs to sell in the spring."

The following is from "J. W." Goshen, Columbiana county, Ohio:

> "Henry Hinchman, a near neighbor of mine, has an uncommon fine sow, improved from the common stock of hogs, and has raised several litters of pigs from her and a full blooded Berkshire boar, for which he has been getting great prices, one of which he sold to Thomas Delzel that was pigged the 25th of 3rd month, 1840; at two months old it weighed 54 pounds; at three months weighed 112 pounds, and at six months weighed 262 pounds; and it is supposed that at this time he would weigh near 700. I am not possessed with a thorough knowledge of the manner of feeding, though I believe he was principally fed on corn and the slops of the house, with some bran or meal."

Berkshire Pigs.

Mr. Wm. Anderson, of Ann Arbor, Michigan, thinks Dr. Martin's "Bernice," whose portrait was published in the August No., was indebted to the Berkshire cross for most of her excellence, as she possesses the characteristics of that breed in a high degree. Mr. A. also thinks there is a great difference in the Berkshires, and that those with "long nose and nearly straight face, long neck, a middling good shoulder, long back, light ham," &c. should be avoided, while those only should be selected, which "have short fine heads, dishing faces, short necks, deep thick shoulders, broad hacks, heavy hams, extending down to hock joint, and broad when viewed from behind, long round barrels, and wide in the chest." These, he says, "will keep fat on grass, and will make more pork for the amount of food consumed than any other breed in the United States." Mr. A. has now on hand six litters of full blood pigs, from large and choice sows, and from a boar "five feet ten inches long from end of nose to root of tail, girth behind the shoulders five feet three inches, and weighing over 550 pounds, in grass fed order," which he will be glad to dispose of for $20 per pair.

Early Potatoes.—The editor of the New Haven Farm. Gazette received on the 6th of July a mess of new potatoes from Mr. J. Walton. They are called the egg potato, and were brought from England by Mr. W. They are not great bearers, but are early matured. The Gazette says—"the sample brought to us were from seed planted the 20th of March; they are perfectly ripe, and on being cooked, were as mealy as the best Vermont blues we ever saw."

Farm Houses.

We think there are few points of husbandry in the effect of bad management and want of calculation, so generally apparent among farmers, as in the position, arrangement, and construction of their dwelling houses. Comfort and utility is too often sacrificed to show, and beauty of design and neatness of execution overlooked, where they ought to be most apparent. There can be as much good taste shown in the selection of a position, and in the construction of a farm house, as in that of a palace, and there can be no good reason why it should not here be exercised.

The position of a farm house is of great consequence, and should be determined with particular reference to conveniences, salubrity, and appearance. The whole ground should be examined before the choice is made. The facilities of procuring fuel; of securing a plentiful supply of good water; of having an easily accessible means of ingress and egress to and from the premises; of the manner in which the productions of the farm must be moved, such as hay and grain, and the manure returned to the fields; all these things must be well-looked at before the place for the farm building is fixed upon. It would be obviously improper to build on the highest part of the farm, or on some distant corner, because such spot was on the most public road, since a farmer's travel is mostly on his farm, and a judicious selection of a site for his buildings, may, in a few years, save him hundreds, if not thousands, of miles of travel. If he has occasion to leave his farm twice or three times a week, he had much better travel over the distance of half or three-fourths of a mile that number of times to the main thoroughfare, than by building on one side or corner of his farm, be compelled to do it many times daily. But some will say, if we do not build on the road, how will our friends find us? Let no one give himself uneasiness on this point. The man who has friends will be found by them; and sometimes by being a little out of the way, he will be saved the interruptions caused by what the idle, and those who are obliged to devise some methods of killing time, denominate calls of friendship. A shrewd old farmer, one of the best hearted men, as well as one of the most accurate observers of human nature we have ever known, selected the position of his farm buildings at a considerable distance from the main thoroughfare. His friends objected to the singularity of his choice, as there were places equally favorable, and more accessible. "When a man builds his house in the road, as almost every one does," said our friend, "he must expect to be run over by those who have nothing else to do but to run over other people; if, on the contrary, he puts himself out of the way, the crowd pronounce him a singular man, an eccentric genius, or something of the kind, and as the mass are usually afraid of an uncommon man, they pass him by on the other side."

Salubrity is a point not to be overlooked or hazarded in the choice of a place for the farm buildings. Never allow any consideration to draw you into a swamp or the vicinity of one, where the sun of an American summer is sure to engender in some form the seeds of disease, if not of death. A dry soil, free ventilation, and the absence of all sources of malaria, are indispensable conditions to the robust health the farmer requires. We know of some who have voluntarily subjected themselves to dangers of this kind, under the idea that diseases of this class will wear themselves out. To such we recommend the case of a middle aged woman, found by a young friend of ours in a log-cabin on the banks of the Des Plaines, in Illinois. She was suffering under a fit of the ague, and when told to be of good courage, as the fever and ague was a disease that would wear out, she replied, "She believed it, as that was the fourteenth summer she had had it regularly, and she thought it was not quite as severe as at first."

Those, then, who are yet to erect their farm buildings will, in selecting the position, do well to consider their course of cultivation, the crops they will be most likely to grow, their comparative bulk and ease of removal, the distribution of their manures, the requisites of convenient location and health, and the capabilities of the place for the display of correct taste, before the die is cast, since so much of the value of a farm and the pleasure and profit of cultivation is depending on these things

Another point of very great importance is the plan of the buildings, and the materials of which they are to be constructed. In a house that is well arranged, where the apartments bear a proper proportion and position to each other, where the whole is skillfully constructed with reference to comfort and ease of labor, every housewife knows the advantages that are gained in the saving of work, and in the economy of time. The houses of our farmers are like their farms, usually very much too large. Where a house is so constructed that no room is wasted, a building of very moderate dimensions will furnish ample accommodations for a respectable family; much better, indeed, than half our ill-arranged, half-finished huge "shingle-palaces," as our English friends term our dwellings, can offer. In building houses, comfort in the resident, and ease to the laborer, male or female, is too much disregarded. Great houses, large and high rooms, vast fire places, and abundance of light, seem to be the great requisites. When the cost of rendering a large and a long room comfortable; of furnishing or finishing them so as to cause the execution to correspond with the design; and the little possible use the farmer's family can have for so much room in a dwelling, is considered, we think a more rational style of building should be adopted. But whatever may be the size of the farm house determined upon, the materials used and the execution should be such as to ensure permanence and durability. It may and will cost more in the first place to build well than ill; to use first rate materials than defective or worthless ones; to have the work done in the best manner, rather than half done; but the costly building will be the cheapest in the end. When finished, it is finished for a life, or perhaps half a dozen, and its repairs will cost but a mere trifle, while the cheap house will absorb from five to ten per cent of its first cost annually in repairs, and finally require rebuilding, while the other is only in its prime.

Stone or brick is the best material for building in this country; as in such houses the great conditions of durability, and an equality of temperature, are best attained. Brick or stone houses, however, require dry and well ventilated cellars, and the plastering of the rooms should not be laid immediately on the walls, otherwise they are apt to acquire humidity, and operate unfavorably on health. When proper precautions in these respects are taken, such dwellings are unobjectionable, and their durability, the ease with which they can be kept at a proper temperature for comfort and health, by heat in the winter and the circulation of air in the summer, render them preferable to others. The additional fuel required in the common wood farm house, over that necessary in one of stone or brick will, in a few years, balance the difference in the expense of materials, independent of the pleasure and comfort derived from the avoidance of sudden transitions from a high to a low temperature, or vice versa, and its general effect on the health.

In the construction and arrangement of our dwellings, particular attention should be paid to the economization of fuel. There are few farmers in the United States that do not find their fuel cost more than their bread. This annual expenditure might be lessened one-half or two-thirds by care in building, and the adoption of the improved method of warming houses by heated air, of which illustrations were given in the last volume of the Cultivator. That little extra cost at first, which prevents the necessity of a constant expenditure hereafter, is, to the farmer, the strictest economy; and that method of building which shall secure a desirable temperature at nearly all seasons, certainly should have the preference. Nowhere is the good effects of system, and a well digested plan of operations more conspicuous than in the construction and arrangement of the farm buildings. Order and judgment here exert their full influence, and in a great degree stamp the character and the mind of the man. The most slovenly are not insensible to the value of neatness, and the farmer whose buildings are inconvenient, ill constructed, disorderly, dilapidated, and without taste or design, cannot help a feeling of respect for the man whose domicile exhibits an appearance the reverse of all this. Let the farmer then build well, build for durability, build for comfort and utility, and not for ostentation or show, and he will find his reward.

Audubon's North American Birds.

Several years since Mr. Audubon published in a series of the most splendid volumes the world ever saw, a work with the above title, in which all the known birds of this continent were figured and colored with an accuracy alike creditable to the author who drew them in their "native woodlands wild," and the engravers of London who executed them for the public. The cost, however, of this work, in which the figures were all of the size of life, was so great as to put it beyond the reach of any not possessed of princely fortunes; and the constant discoveries of new birds which Mr. Audubon has been since making, added to the wishes of many, have at last induced him to undertake an edition in which the new varieties shall be incorporated, with the descriptions in the former work, the figures diminished from the first edition, but engraved and colored with equal accuracy. The terms are such as to place it within the reach of many to whom the great work was inaccessible, it being to be comprised in 100 numbers, each containing five plates with letter press, at the price of one dollar each number. The first volume containing fourteen numbers, containing about seventy species, has been completed, and furnishes one of the most beautiful volumes we have seen in many a day. We consider the present undertaking of Mr. Audubon as eminently useful also, or we should not feel the pleasure we now do in calling the attention of the public to the work. Ornithology has taken rank as a science; the history of birds forms one of the most interesting as well as delightful chapters in the natural science; they are creatures with which every one has more or less to do, and of which a knowledge is more or less desirable to every one; and the figures in the volume are so spirited and exact, the colors so just and beautiful, that one almost fancies they will flutter on their light wings from the paper, or pour from their tiny throats the clear sweet music to which he has often listened.

Of the excellencies or the demerits of Mr. Audubon's arrangement we say nothing; we leave those things to more competent judges. We speak only of what we know, when we say that no observer of nature will find any difficulty in recognizing any bird of his acquaintance; and that no one can read the beautiful and correct descriptions which accompany the plates, without perceiving and feeling they are drawn from life. No one can fully appreciate the labor Mr. Audubon has encountered in collecting the specimens he has figured for these volumes, and gaining that intimate knowledge of their habits so necessary to render his labors useful. From the shores of Labrador and Hudson's Bay to the Capes of Florida, the confines of Texas, and the base of the Rocky Mountains, over mountain, and through woodland, glen, and swamp, has Mr. Audubon traveled, and returned laden with his rich and hitherto unknown, ungathered spoils. We are glad to perceive his labors are appreciated, and are about to give him that reward which he has hitherto failed of receiving. In this country alone, his subscription list is about one thousand, and a great addition will be made in England and France. The following extract will show one of the uses to which the labors of the ornithologist have been converted, one to which it is presumed Mr. Audubon never contemplated while engaged in his researches; it is from the lecture on birds before the Manchester Association, by Prof. Rymer Jones:

> "Where are all our important and valuable works in natural history produced? Not in England. Where does the English press give birth to those works in which every tint of the humming bird, blazing and gorgeous as it is, is represented with the minutest accuracy. In France we have these works; but in England they are never purchased, and would never pay. And who purchases and pays for them there? The ornithologist? By no means; but those who make up the patterns for dresses. The weavers and manufacturers of fine goods know the importance of studying the colors that nature puts together. You will find that it is to their support in France that the authors of these works look. They have sense enough to see that to "gild refined gold and to paint the lily," to "add purple to the violet," would be extravagant; and that the combination of color in the animal world, like all the other operations of nature, is perfect. Nothing can be added or taken away without diminishing the effect of the whole. They are content, therefore, to take lessons of nature in this particular, and we must all acknowledge the success with which they manage this department of their manufactories."

For ourselves we look on many of the "counterfeit presentments" in the volume, as upon the faces of long remembered friends; friends associated with some of the happiest moments of life. As we look on them we forget that we are forty years older than we were when we first were delighted with these beautiful "blossoms of the air," days when childhood overlooked the obligations of the future, and care had not graven its furrows on the brow. We go back in imagination to the green meadows when we listened to the sweet merry notes of the bobolink as he fluttered over our head or settled on a wild flower, or tuft of rank grass;—when we rambled in the wild wood, and saw the beautiful oriole darting among the leaf-clad branches, through the openings of which the golden light flushed and danced on the velvet moss, on which we were with our frolicsome playmates, setting time and the schoolmaster at defiance;—when our pulses beat quicker, and hope seemed to string our nerves anew, as the first song of the returning sparrow greeted our ears, and told "that the winter was over and gone;"—when we looked on the swallow as he came back to the old barn, or the sandy bank of the river, from his sojourn in the sunny south, as a creature of mystery if not of awe, reminding us of stories of fairy beings, or visitants from the spirit land; in short, we were young again, and as in childhood, we substitute feeling for reason, and are happy we neither know nor care why.

For ourselves we ackowledge our obligations to Mr. Audubon, not only for the substantial addition he has contributed to our stock of ornithological knowledge, but also for the pleasure his work has in more ways than one conferred. We have from our childhood loved beautiful pictures, and birds are among the most exquisite of these. It is the approach to nature in the grouping and coloring of Audubon's birds that render them so instructive and fascinating. We are glad to learn that he is still devoted to his pursuits; still adding to his ornithological treasures, and busily engaged in conferring new benefits on the cause of science. "May he live a thousand years, and his shadow never be less."

Mechanics' Third Annual Fair of Western New-York.

We have received the Circular of this flourishing and praiseworthy institution, announcing that the Third Annual Fair will be held at Rochester at the Center Market, commencing on the 12th of October, an arrangement adopted to accommodate those who visit the Agricultural and Horticultural Fair, which is to be held on the 15th at the same place, and thus unite the interest and attraction of both. The managers say they "feel the utmost assurance that the success attending the former fairs, is a sure guarantee for the ensuing—pledging that no exertions on their part shall be wanting to render the exhibition satisfactory to the contributors, worthy of the mechanic arts, and the patronage of the community." Rochester is the center of a rich agricultural and horticultural region, and the mechanics of that city are numerous, intelligent and enterprising, and their efforts, combined with those of the farmers, can scarcely fail of producing a fair unequaled hitherto in Western New-York. The advantages of such associations and fairs, cannot as yet be properly appreciated, but they will not be the less felt in the community. A visit to the fair of the New-York or Rochester associations will teach the mechanic more of the present state of his art, show him what is done and what remains to do, more clearly than years of study or travel can do. It is unnecessary for us to say we wish such associations every success.

DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

GUM. Mucilage and the gums differ little or none in their composition, and are generally the product of plants at their most vigorous period of vegetation; in fact, gum is nothing more than the extravasated juices, hardened by exposure to the air. Gum is a constant product in the composition of trees and plants, and exists in a liquid form in their cells. According to Gay Lussac, Gum Arabic is composed of

Carbon,	42·23
Oxygen,	50·84
Hydrogen,	6·93

Gum in this country is most commonly found on the plum and the cherry, and appears to be intimately connected with many of the diseases to which these trees are subject. Some have supposed that the disease called the black blight, which covers these trees with black unsightly protuberances, and speedily destroys them, is nothing more than the juices imperfectly elaborated, and, therefore, poisonous to the tree, while others attribute them, (and we think correctly,) to insect perforations and injury. It is certain, whatever may be the cause, that constant excision of these gummy spots or excrescences, as fast as they appear, is the only effectual cure of the disorder yet known.

GYPSUM. This substance, called also Plaster of Paris, or plaster, is one of the many salts of lime, and is composed when pure, of lime 33., sulphuric acid 44., and water 21., so that it is properly a sulphate of lime. Plaster may be considered as one of the most valuable of what are called the stimulating manures, and its use, already extensive, is annually rapidly increasing. Fortunately, the supply of this valuable substance is quite abundant in the United States, particularly in the central and western counties of New-York, where, in connexion with clover, it forms the great support of the staple crop, wheat, and gives an astonishing fertility to the soil. The *modus operandi* of plaster, or the manner in which it produces its effects, have been the subject of much speculation, and various theories have been proposed, most of which the advance of science has already shown to be untenable. Some have supposed that its action was to be attributed to the force with which it absorbed and retained water for the use of plants. Others have contended, that it acts by favoring the decomposition of animal and vegetable matters; but Davy showed that the mixture of plaster with these substances, docs facilitate decomposition. Chaptal supposes that its value arises from its stimulating properties, which are prevented from being destructive, like some of the other salts of lime, by the slowness with which it is dissolved in water. He says, "The solubility of plaster in water, appears to be of precisely the degree most beneficial to plants. 300 parts of water will dissolve only 1 of plaster. Its action is, therefore, constant and uniform without being hurtful. The organs of plants are excited by it without being irritated or corroded, as they are by those salts which, being more soluble in water, are carried more abundantly into plants, producing upon them the most injurious effects." Another theory has been lately proposed by Prof. Liebig, which is certainly very ingenious, and explains the action of plaster in connexion with the presence of nitrogen in plants, more satisfactorily than any thing yet advanced. Prof. Liebig was the first to discover that *ammonia* was a constant constituent of the atmosphere, and on this fact his theory is based. We quote from Sillimans' Journal: "This fertility arises exclusively from the fact, that the sulphate of lime fixes in the soil the ammonia dissolved in the atmosphere, which would otherwise be volatilized with the water as it evaporates. The carbonate of ammonia contained in rain water, is decomposed in gypsum, in precisely the same manner as in the manufacture of sal ammonia. Soluble sulphate of ammonia, and carbonate of lime are formed, and this salt of ammonia possessing no volatility, is consequently retained for the use of plants."

Gypsum is scattered by the hand at the rate of two or three bushels per acre, and its effects on the grasses are perceptible for three or four years. It is best strewn when the leaves are wet with a slight rain or heavy dew, and after the leaves of the plants begin to cover the ground. Some have objected to the use of plaster, that it produced greater crops at first, but that it speedily exhausted the land, and impoverished it. Those who make this objection, probably, took every thing from the land, and returned nothing to it, relying wholly on the plaster to keep up the fertility, a course manifestly erroneous. Clover should always accompany the use of plaster, and when this crop is fed off on the land, and made part of the course of rotation, no deterioration, but on the contrary, an increase of the grain crops has taken place. The plaster mills of New-York, usually reduce the material to powder after only drying it in the air, but kiln drying at a moderate heat drives off the water of crystalization, and renders it more valuable to the purchaser, as it takes in this case a greater quantity of the active materials, the sulphate and the lime, to make a ton. Considerable quantities of earthy materials are usually mixed with plaster, giving it a dark color, and on the proportion of these in the mass, much of the value is depending. Dried gypsum absorbs water rapidly, but it may be preserved many months without its properties being sensibly affected, if headed up in tight barrels. Chaptal affirms, from his own experience, that though the baked plaster evidently produced a better effect the first year, the next three years the difference was almost nothing.

HAIR. The covering of animals generally is known by the name of hair, although in some of its modifications it is called bristles, fur, wool, &c. while in all cases it is one of their most important appendages, contributing essentially to their safety, health, and beauty. Hair is elastic, and in masses almost impenetrable; it is a bad conductor of heat, and is found the finest and closest on animals exposed to a low temperature; it is a non-conductor of electricity, and materially aids in protecting animals from the electrical changes of the atmosphere; and the oil with which its surface abounds renders it impenetrable to water; thus hair serves to isolate or protect animals from the three most powerful external agents, heat, electricity, and moisture. Hair is subject to few diseases of its own, but its appearance is one of the best indications of the health of the animal upon which it is growing. Smooth and glossy, or coarse and staring, the hair exhibits almost unerringly, the treatment and condition of the animal. In some parts of Europe, and particularly in Poland, the human hair is subject to a complaint called the *Plica polonica*, in which the hair becomes matted together, grows to an enormous length, is exceeding sensitive and painful, and bleeds if clipped or removed. Death is not unfrequently the result from this disturbance of the system. Hair, in its properties, resembles horn, nails, feathers, &c. being soluble in water at a high temperature, and giving out, when burnt, ammonia, &c. Hair is a very active and excellent manure, and should never be wasted, as it too frequently is, by the farmer, but collected after butchering and applied to crops. Large quantities of wool are annually wasted about factories, clothing and carding machines, which might be converted to the effective fertilization of the soil.

HAM. This is one of the most valuable parts of the hog, and which, if properly cured, may be preserved for almost any length of time, retaining its fine properties. The hams most esteemed, are made from hogs fed on solid food, corn being the best, which are allowed considerable exercise; which do not weigh more than 200 or 250 pounds, and which have a large portion of muscular or lean flesh in their structure. When taken from the hog, the edges should be rounded off, or trimmed, and the first step in the preparation is the pickling, or salting. To do this, almost every farmer or butcher has his own way, some applying the salt dry to the ham, and repeating the operation of rubbing in until the requisite saltness is attained, while others prefer making a brine, and salting the hams in that way. The Westphalian hams are much esteemed, and the pickle in which they are prepared is essentially as follows:—"Boil together over a gentle fire six pounds of good common salt, two pounds of powdered loaf sugar, three ounces of salt petre, and three gallons of spring water. Skim it while boiling, and when quite cold, pour it over the hams, every part of which must be covered with the brine. Hams intended for smoking, will be sufficiently salted in this brine in two weeks; though if very large, more time may be allowed. This pickle may be used repeatedly, if boiled, and fresh ingredients added. Hams, before they are put in the pickle, should be soaked in water, all the blood pressed out, and wiped dry." Much of the excellence of the ham is depending on the smoking. This should be done in such a manner that the ham shall be cool and perfectly dry throughout the whole operation. If too near the fire, they will be heated, and their flavor injured; if the building be too close, the hams will be wet, and taste as if dipped in pyroligneous acid. At Hamburg, where large quantities are prepared, the hams are smoked in the upper story of high buildings, while the fires, which are made of oak or maple chips, are made in the cellars. In passing through such a length of pipe to the chambers, the smoke becomes cool and dry; and the flavor of the hams is excellent. Hams intended for summer use, may be kept in any way where they will be dry and cool, and secure from the fly or bug. Washing with lime, or putting in bags of coarse cloth, one ham in each, is practiced by many. Some keep their hams through the season in the smoke house, making a smoke under them once or twice a week.

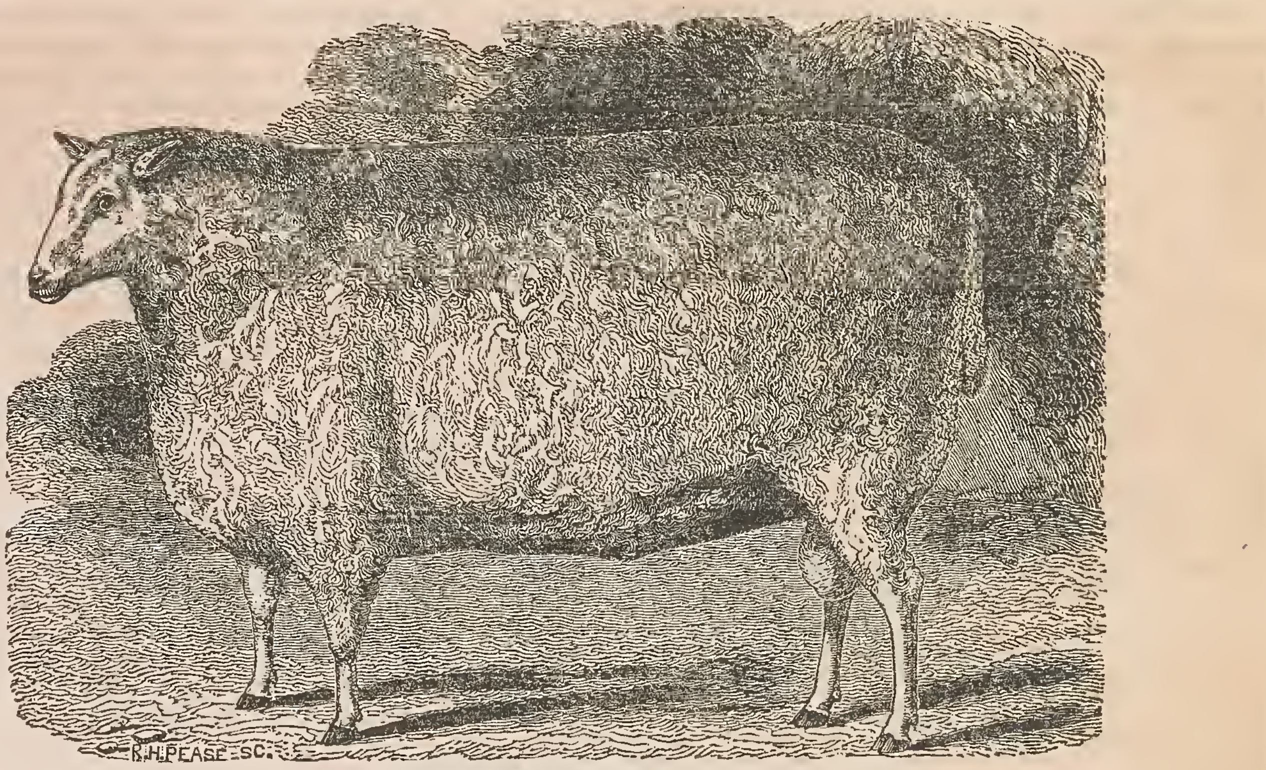
HARROW. Next to the plow, the harrow may be said to be the oldest agricultural implement. It is represented on the most ancient sculptures of Egypt, and is known in some form, wherever the earth is cultivated. Various forms are given to the harrow, from that of the wedge to the square, and the teeth are adapted to the work it is intended to perform. The great use of the harrow is in pulverizing the earth, tearing out and freeing the soil from the roots of weeds and grasses, and covering seeds when sown. For this purpose the harrow is preferred to the plow, as the latter usually places the small seeds at too great a depth for certain germination. Many of our best farmers, however, prefer the plow to the harrow for covering wheat, and as this grain, if sown in autumn, germinates better, and endures the winter better to have a greater depth of earth than the harrow usually gives, they are probably correct in their preference. A variety of figures of the harrow may be found in the present volume of the Cultivator, and the previous ones; also in Low's and Loudon's works on agriculture.

HAY. In all countries where the length and severity of the winters makes some provision for domestic animals necessary, grass cut and cured in the form of hay has been always the cheapest and most valuable. To make hay, the artificial grasses, such as timothy, herds grass, clover, orchard grass, &c. which are sown for the purpose of meadow and pastures are preferred, being more productive, and more nutritive than the grasses not so cultivated. Grass for hay should be cut at the time when the nutritive parts are most developed, and this is in most cases when the plants are forming their seeds, but before they are ripened. In curing it, great care should be taken not to have it damaged by rain, nor should it be long exposed to the sun. In the first case the hay is washed and whitened, and in the last, the leaves crumble and fall off, thus materially lessening the quality of the article for fodder. Clover makes a hay which all animals eat greedily, but it requires more strict precaution in curing, and will bear less handling without injury, than any other of the grasses. Clover should be cut before the heads are fully ripened, and while it contains the greatest amount of leaves. If cut in the morning of a good day, spread out during the heat of the day, and before night put up in tall cocks but slender, that air may circulate through them, clover will cure with little difficulty and makes the best of fodder. For horses and sheep, clover is unequaled. The hay called rowen, or the second crop, is very fine, and good for lambs and young stock, but has not the nourishment which the more matured plant possesses.

HEAT. Into the speculations existing in regard to the nature and cause of heat we shall not in this place enter; its effect on all growth and vegetation is what is of most consequence to the agriculturist. Although some plants can exist with a very small degree of heat, yet some of it seems essential to all fluidity and circulation, and consequently without it there can be no growth. The rapidity of all vegetation is in a great measure depending on the degree of heat combined with moisture to which the plant is subjected, and there are many which cannot exist except in countries and places of high temperature. The effect of heat in forcing the growth of plants may be seen every season in our fields and gardens, and it has been ascertained by actual experiment, that a difference in temperature of 5° will advance or retard plants of the same kind and same advantages, temperature excepted, from ten to fifteen days. Of all our important cultivated plants, corn is the one which requires the highest temperature, and will endure it the longest without injury. By a comparison of our best corn seasons with the registered temperature, we have found that unless the three summer months give an average of at least 75°, good crops of corn cannot be expected. A few of the earlier varieties, and in some of the most favored localities may succeed with a lower average, but the most productive sorts, and the crop in general will not in such seasons ripen. Melons require more heat than the climate of the northern States affords to arrive at perfection, and in England they cannot be grown at all without the aid of artificial heat. Hot beds, by affording the means of an early vegetation, are useful in growing many plants which, without them, could not be cultivated.

HEDGE. One of the most beautiful and durable of fences, made of living plants, usually those of a thorny nature, and disposed to grow in a close and impervious manner. One of the most striking features of the English landscape, is the hedges which serve to divide the estates from each other, or the several farms into suitable fields for the purposes of agriculture. In the United States, numerous attempts at making hedges have been made, but owing to some unexplained cause, with but little success on the whole. The plants used here have generally been some variety of the foreign hedge thorn, but the deep green of the English hedge is not seen on the same plants here, and they are liable to the attacks of worms which speedily destroy them. The osage orange, the honey locust, the crab apple, and the wild mulberry, as natives of this country, have been tried with different degrees of success. Lately the buckthorn has been introduced for this purpose into the vicinity of Boston and Salem, and there are now some beautiful specimens of hedges from this plant, which promise to be all the lovers of this kind of fence can desire. It is probable the difference in the temperature and moisture between this country and Great Britain, is sufficient to account for the failure of the English thorn here, and render it expedient to rely on native plants of some kind, rather than imported ones. The best specimens of the hawthorn hedges we have seen, are in the vicinity of Geneva, and of Sodus Bay, both in Western New-York.

HEMP. The greatest hemp growing State in the Union is Kentucky, although some of the other Western States produce it to some extent; and there can be little doubt, that with proper protection and encouragement, and more attention to the several processes of manufacture, an article equal to the best Russian may be furnished for our consumption, and thus a vast saving to the nation be effected. Hemp requires a warm, rich, vegetable mold to produce it in perfection, and the best limestone lands of Kentucky, Tennessee, &c. are found to be admirably adapted to it. On any soil it must be considered an exhausting crop, but, perhaps, less so than tobacco, and a few others cultivated in the south of the Union. When hemp is fit to secure, it is either pulled or cut with a sythe, and dried in about the same manner as flax. The rotting process is one of the most important in making good hemp, and probably the one to which the general superiority of Russian hemp is owing. Ponds, or gently running soft water, are the places where hemp is best rotted, though dew rotting is much practiced. Hemp is dressed by hand or by machinery, and on the perfection of the dressing much of the value and goodness of the article is depending.



A LEICESTER RAM.—[Fig. 79.]

The subject of the above portrait, (copied from a steel plate in the Farmer's Magazine,) is a shearling Leicester Ram, bred by and the property of Mr. S. Bennett, of Bickering's Park, Bedfordshire, England, to which a prize of thirty sovereigns (about $145·00,) was awarded at the Cambridge meeting of the Royal Agricultural Society of England, in July, 1840.

WORK FOR THE MONTH.

Securing crops constitutes the principal labor of October, and of these corn and roots are the most important. Where it is intended to sow wheat after corn, and this is sometimes a very good course, the earlier sorts should be used that the ground may be cleared the latter part of September. But in ordinary cases, the harvesting of corn in our latitudes, falls in October. There are few crops the quality of which is more injured by carelessness in securing it than corn; and it is one of such importance to the country that the best methods should always be adopted. We prefer cutting up the corn by the root, as soon as the ears are fully glazed, and then curing it by setting it up in small stacks, either in the field or some more convenient place. In this state of the ear, it sustains, as numerous experiments show, no injury from having the stalk cut at the root; and the stalk itself, filled with the elaborated juices and properly cured, makes one of the most nutritious and valuable kinds of fodder that a farmer can have. If cut up at the proper season, and skillfully set up, the corn will stand for some weeks without injury, and the husks loosening from the ear it becomes thoroughly dried, and ready to be placed in the crib when husked. The common custom of topping corn is not a bad one, where the saving of all the fodder is not an object; and a field so treated, presents a beautiful sight, as the husks fall open, and the golden ears stand thick in the mellow rays of an October sun; but experience proves that the ears of topped corn are not so thoroughly cured, and the cob dried as effectually, as when cut up by the bottom, and are more liable to heat in the crib. The experiments of Mr. Clark, Judge Buel, and others, proves also, that there is a loss in weight where corn is topped, and that of all methods, cutting at the bottom, when the grain is in the proper state, gives the greatest product, and the finest grain.

We alluded to the subject of saving seed corn in our last, but the subject is one of much importance to the farmer, and as some may have neglected the method there recommended, we refer to it once more. It is the worst policy to go to the crib, as many farmers do, and take their seed at random, satisfied if it will only grow. None but the best ears, those earliest ripe, large kernels, close set on the cob and well filled at the end, should be selected, and if there are two good ears on a stalk, save them by all means. Select your corn at or before husking, leave a few husks on each ear, and braid them up to be kept till wanted. We this year planted a small piece of corn about half of which was from seed saved by selecting the earliest ripened ears of last year, and the other the best common ears saved in the usual manner, and the first kind was ten or twelve days in advance in all stages of its growth and ripening. Never leave any quantity of corn intended for seed in a situation where the air cannot circulate freely. It is apt to heat and destroy it. Several years since in saving seed corn at the time of husking, the selected ears, with the husks stripped down were thrown into a large tub, which was gradually filled. Some two or three weeks elapsed before it was convenient to trace it up, when it was found quite warm, but no injury was apprehended until it was found by planting it the next season that its vitality was nearly destroyed, not one kernel in ten vegetating.

Potatoes should not be dug before they are ripe, unless they are so late as to be in danger of being frozen into the ground. Potatoes not fully ripened may answer for seed, but are poor things for the table. Some varieties of the potato require a much longer period for their growth than others, and are sometimes condemned simply because they are not ripe. Potatoes imported from a warmer climate than ours will not ripen unless planted early; thus the Rohan and Sommeiller require the whole season for their maturity. Potatoes, if it is desirable to have them in all their excellence, should never have the sun shine on them after they are dug, and be exposed to the air and light as little as may be. Potatoes pitted, or buried in holes in the field, retain their freshness and good qualities much later than those put in open bins in the cellar, and the farmer will always do well to have a few pitted for spring use. The necessity for this may in a great measure be obviated, by lining the bottom and sides of a bin with turf, and when it is filled, covering it in the same manner. Potatoes will keep perfectly sound and good for years, if placed so low in the earth as to have a temperature too low for vegetation. Experiments made in a compact soil on the north side of buildings or walls show that four or five feet will usually be sufficient; in a lighter or more porous soil a greater depth is requisite. No water in any case should stand on potatoes, as it will soon destroy them. If potatoes are dug and pitted early, there should be an opening made at the apex of the heap, and filled with a wisp of straw, to keep out the rain, but at the same time to allow the heated air to pass off.

Turneps, ruta baga, &c. are among the easiest of roots to preserve. They should be left in the ground as long as is consistent with safety from frost; then drawn and put in cellars of moderate or rather low temperature, or pitted in the field at once. The turnep will sustain a much greater degree of cold than the potato, without injury, but heat has a worse effect upon it, and in saving this root, heating is what is mainly guarded against. A hole made in the top of the pits with an iron bar, to be covered with a flat stone when the cold grows severe, will permit the heated air to pass off and prevent danger from this source. In the experience of a number of years we have scarcely had a turnep lost by frost or by heating, either when pitted or in the cellar, a proof to us of the ease with which this root can be secured.

Carrots and beets, like the potato, require more care than the turnep, to prevent the effect of frost upon them. The best way we have yet tried upon them, is to pack them in bins or barrels, and strew fine earth among and over them, to exclude the air, and preserve a uniform temperature.

If your pigs have have had the run of your orchards in September, they will be found doing well in October, and afford proof that apples are worth *something* to the farmer when not made into cider. The cheapest mode we have yet tried in fattening hogs is with apples and potatoes steamed, always finishing with good sound food, such as corn, peas, or barley. All food given to hogs should be cooked; fruit and roots by steaming, grain or meal by boiling. If the latter is not convenient the grain or meal should always be well soaked or mixed with water, and if long enough to ferment and sour a little, it will be none the worse for it. Farmers who feed dry corn and peas to their pigs pursue a very wasteful course; as they may easily ascertain by experiment. Where corn is fed, there is a great saving in having it ground in the cob, and particularly when fed to cattle or horses. From what we have seen, we think there is less advantage in cooking food for horses and cattle than for hogs, and that with such it rarely repays the expense. Grinding, however, where economy is consulted, will always be practiced.

October is the month for saving winter apples. The best time is indicated by the mature ones beginning to fall from the trees, but in all cases the fruit should be suffered to hang on the trees as late as is consistent with safety from frost, or the danger of being blown from the trees. They should be carefully picked by the hand in small baskets, and as carefully deposited in the barrels or bins in which they are to be kept. A good mode is to pack them in empty flour casks, filling them with sand fully dried in the sun. The sand will exclude the air, and absorb moisture, and thus prevent the rotting that frequently takes place by contact. The method extensively practiced near Boston, where large quantities are put up for exportation, is to put the apples carefully picked by hand into clean dry barrels, generally purchased at the bakers, and when filled the head is gently pressed in and secured; no straw or shavings being admitted in packing. The barrels are then packed and laid on the bulge in courses on the north side of some building, with covering of boards to keep off all rain, and there they remain until the approach of a severe frost, when they are removed to a dry cellar of low temperature, and with windows to the north that the temperature may be kept low, and the cellar ventilated as long as possible. During the severity of winter, the windows or openings are closed, and they are thus secured from frost. The barrels are never tumbled about, and are never set on the end. Apples thus packed will endure a severe chill without injury, and do not require repacking; indeed the barrels should never be opened until the fruit is required for use. It has been suggested that well dried sawdust would be good for packing apples, but it is apt to attract moisture and mold, and most kinds would communicate an unpleasant flavor to the fruit.

Plowing may, in many instances, be advantageously performed in the fall. Tenacious soils on which it is intended to put spring crops, are essentially benefited by plowing in the fall, and exposure to frosts during the winter. Freezing pulverizes such lands more effectually than any thing else. If intended for corn, it has by some of the most successful corn growers in the United States, been deemed best to put on a dressing of manure previous to plowing, and then another dressing before the corn is planted in the spring. The first is placed deeper, and is rotted more fully, than if all was put on at the spring preparation. Teams are usually in better condition for labor in October than in April, and what is done in the fall is so much taken from the spring's work. By having that part of the plowing done in the fall, which may be as well done then as ever, the work of the spring is lightened, the labor much expedited, and the crops put in in better season, and in better condition than without it. This was particularly the case last spring, when the season was unusually backward. The seed put in on fall plowed land was not only earlier, but being better rooted, stood the drouth which followed the rains of spring much better, and the crops on such lands have maintained their superiority through the season. Fall plowing is also useful, where the soil is infested with the larva of insects, such as the cut and wire worms, and the white grub. By turning up the soil deep, as late in the season as is practicable, thousands of these in their half torpid state in which they cannot move or again penetrate the earth, are exposed to the cold of winter, which to them is certain destruction.

Many farmers may find October a month for putting in drains in such parts of their farms as require them. Open drains are objectionable from the waste of land they occasion, and the frequent clearing out they require from filling in of surface earth. Covered drains are therefore to be preferred, as they are equally effectual in carrying off surplus water, occasion no loss of surface in cultivation, and require no labor in removal or clearing out, when properly planned and constructed. Open drains are only admissible, where considerable streams, or large quantities of surplus water are to pass off. All drains, when dug should be filled and covered as soon as practicable after digging, as the action of the air and rains is apt to make the banks cave, and add much to the labor of finishing. Drained lands can be worked much earlier than undrained ones, are materially warmer, and crops can be grown on them which on wet soils are impracticable. The wheat fields should now be occasionally examined to see that the water furrows are open, and that no water accumulates after rains on the surface.

The Western Farmer & Gardener's Almanac for 1842.

We have received from the editor, Mr. Thomas Affleck, who is also editor of that valuable agricultural journal the Western Farmer & Gardner, at Cincinnatti, a handsome pamphlet of some 100 pages, bearing the above title, filled with useful and interesting agricultural matter, and furnished in any quantities to purchasers at the low price of $2 per dozen. A glance at the table of contents, will show the variety of matters embraced, in addition to the common calendar pages of the almanac; and the numerous and well executed illustrations, will be found to add much to the interest and value of the work. We pronounce the chapter on swine with its illustrations, worth to any farmer who wishes to understand the varieties of improved breeds of hogs now in the country, and their essential points of difference, worth twice the cost of the almanac. Mr. Affleck is also the author of "Bee Breeding in the west," a most valuable treatise on the history and management of bees, to which we have before adverted in our paper, and in the Almanac will be found plans of the hives invented and used by him, copied from that work. We cordially recommend the "Western Farmer and Gardener's Almanac," to our readers, assuring them that in some, if not in all respects, it will be found adapted to all latitudes.

N. Y. State Agricultural Society.

THE Executive Committee of the N. Y. State Agricultural Society acknowledge the receipt of the following subscriptions, since their last report:

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Woodward, Jona., Cazenovia.
Walton, W. B., Schenectady.
Yates, H. C., do.

Mr. Allen's Importations.

WE had the pleasure some days since of seeing the *first* importation of improved stock, by the London packet Mediator. which Mr. A. B. ALLEN, now in England, is sending to this country. It consisted of a two year old boar, Windsor Castle, a thorough bred Berkshire, with all the characteristics of the same breed in this country as to marks and color, but of much greater size, standing about three feet high, measuring about six feet on a straight line along his side, and weighing some 600 to 700 pounds, and every way fine and well proportioned; Earl Craven, a two year old ditto, not so large but rather more compact and finer, and a considerable number of pigs of the same breed of very large size and promise. These however, from their long and close confinement, did not show to so much advantage as the older ones; but as they have all been selected by Mr. A. from the choicest stock of the country, affording every promise through their parentage and their own appearance, they will, no doubt, under judicious management, come up fully to the models exhibited in the larger animals.

Another shipment of the Berkshires we notice was made in the packet ship Wellington, and further importations of cattle, sheep and swine are to follow.

Agricultural Fairs in October.

By the County Societies of this State:

Cayuga Society, at Auburn, Oct. 13, 14.
Columbia—at Hudson, Oct. 12.
Cortland—at ———, Oct. 6.
Delaware—at ———, Oct. 12.
Erie—at Buffalo, Oct. 6.
Genesee—at Alexander, Oct. 13, 14.
Livingston—at Geneseo, Oct. 22.
Monroe—at Rochester, Oct. 15, 16.
New-York—American Institute, Oct. 11 to 18.
Oneida—at Hampton, Oct. 20.
Ontario—at Canandaigua, Oct. 12.
Oswego—at Oswego, Oct. 6.
Otsego—at Cooperstown, Oct. 6.
Seneca—at Ovid, Oct. 21, 22.
St. Lawrence—at Canton, Oct. 7.
Tompkins—at Ithaca, Oct. 6.
Washington—at Salem, Oct. 12.
Wayne—at Newark, Oct. 16.

In addition to the above, Fairs are to be held in several other counties, but of the time and place, we are not informed. In several counties where societies have been, or are about being organized, no fairs will be held this season, owing to the late period at which the societies were formed. This we believe is the case in Albany, Rensselaer, Saratoga, Greene, &c.

Agricultural Papers.

WE have received the past month, two handsomely executed and ably conducted Agricultural Journals from the British Provinces—*The Colonial Farmer*, TITUS SMITH, editor, published monthly at Halifax, N. S., by R. Nugent, at 5s. currency per year; and *The Canadian Farmer*, published monthly at Kingston, at $1 per annum. A. B. E. F. GARFIELD, editor. They both richly merit a liberal patronage, which, if the farmers of those Provinces understand their true interests, will be awarded to them.

The Western Farmer and Gardener, published at Cincinnati, by C. Foster, and edited by Mr. AFFLECK, has just completed its second volume, and a new one commences with the present month, affording a favorable opportunity for those who wish to obtain the work to send in their names. It is published monthly, 32 pages octavo, at $1 a year.

"*The Plough Boy*," is the title of a semi-monthly, recently commenced at Edgefield C. H., S. C. by WM. F. DURISOE, at $1.50 a year—16 p. octavo.

The Missouri Farmer hails from St. Louis—16 pages octavo, monthly, at $1.00 a year—P. GOULD, editor.

A new volume (the 6th,) of *The Farmer's Cabinet*, Philadelphia, was commenced in August. The character of this paper is well sustained by Mr. PEDDER, the present editor. Terms, $1.00 a year.

Mr. BUCKMINSTER having retired from the *Boston Cultivator*, Mr. H. C. MERRIAM has assumed the editorship of that paper; and we should infer from his opening address, that its character as a useful and interesting agricultural and miscellaneous sheet, will be well sustained. Mr. B. we perceive, has issued proposals for a new paper; to be called the *Massachusetts Plowman*, the first number of which is to appear about the first of this month.

The Yankee Farmer, Boston, is now edited by C. P. BOSSON, its former publisher; and Mr. COLE, its late editor, has commenced *The Farmer's Journal*, a monthly, at, we believe, 50 cents a year,—making the fifth agricultural paper at Boston.

"Review of the Market."

BELIEVING it would be acceptable to most of the readers of the Cultivator, we have made arrangements with a gentleman in New-York, every way competent to the undertaking and familiar with the subject, to furnish us monthly, a report on the state of the markets in that city at the latest possible date previous to our going to press. In the examination of such a report of facts, the intelligent farmer and others will find much to assist them in forming a more correct view of the probable range of prices, and the propriety of sales than they could obtain without it. The influence which foreign markets exercise over our own, render such reviews now much more necessary and acceptable than formerly.

Taking Honey without Killing the Bees.

VARIOUS methods have been suggested and adopted, by which the lives of the bees might be spared, while their unnecessary or surplus honey might be appropriated to the comfort of those who had the care of them. It has always seemed but little short of murder to destroy such multitudes of these little laborers if any method of sparing them could be introduced; and various improved hives, which have been introduced to effect this object, have at different times been brought before the public. All these have been more or less useful, some by giving more room for labor, and some by placing their stores more at the command of the apiarian; still all seem liable to some objections, and the multiplying the methods, or bringing a notice of new ones before the public, may be of service.

The treatment of bees seems to be based on a few facts, or which are usually considered as such, viz: that a large number of bees, or two swarms in the same hive, will consume but a little more honey, if any, than a small number, or each of the two swarms in separate hives; and that as bees are a short lived insect, performing their labors and the various functions of their lives, mostly, if not altogether, in a single year, the necessity of saving those bees in the fall, that are to perform the labor of the coming year, becomes more strikingly apparent. The fact, that bees may be stupefied so as to be rendered harmless, and yet not permanently injured, has long been known; but this knowledge has not been turned to practical use except in very few instances until very lately. The following, which we copy in substance from a foreign periodical, exhibits a method of turning this power to use, both easy and profitable.

The writer says:—In autumn I gather three or four of the large mushrooms or puff-balls growing in meadow lands, before they are fully ripe, compress them a little, and dry them thoroughly in an oven after bread has been taken out, and keep them dry for use. A tin box two inches square, with a pointed top, pierced full of holes, with small holes in the sides, made without solder, is to be provided to contain the puff-ball while burning. It must be supported on a stick some six or eight inches in length when used. As the object is to unite the swarm, from which the honey is to be taken, with another to live over the winter, a hive of the same size as the one to be operated upon is placed in a tub with the open end upwards, with a hole made in the lower part, in which the stick that supports the tin box is set. In this box is now put a piece of fungus or the dried ball of the size of a hen's egg, to which fire has been communicated, and it is placed in the lower hive. The hive with the bees is now removed from its stand, and placed on the other, a wet cloth being closely secured around the line of meeting to prevent the escape of the smoke. The narcotic fumes are soon felt by the bees, which fall rapidly into the lower hive, the upper one being frequently tapped with a stick or the fingers, to jar down such bees as may not fall of themselves, or to disengage them from the combs. The dropping of the bees will be distinctly heard, and when it ceases the hive may be taken off. The torpid bees are now poured upon a table, and the Queen separated and placed under a glass. The bees are then sprinkled with a thick syrup made of a little ale and sugar boiled a minute or two, and applied freely with a feather. They are then returned to the empty hive, and on this is now placed the hive with which it is intended the swarm shall unite, and the cloth is replaced, so that no bee can escape. In this position they remain for twenty-four hours, or the following night, when the cloth is removed and the hive placed on its former stand. The bees in the hive descend to feed on the honey or sugar on the sprinkled bees, and in the operation of clearing them, are so thoroughly mixed, that no distinction is ever afterwards apparent. The few bees that remain in the comb may be killed before they recover from their stupefaction, and after the amalgamation of the swarms is complete, the reserved Queen may also be destroyed. She is reserved thus far to guard against contingencies.

Other narcotics, such as tobacco leaves folded in paper, previously dipped in nitre and dried, have been used, but the puff-ball will be found preferable to any other, both for ease of preparation, and certainty of execution. The writer states that of a great number of cases in which he had taken the honey and united the swarm with another, not one had failed of success. He considers September the best month for taking honey in this way; and if the bees are secured in the hive at night, the application of the smoke may as well be done by day as by night.

An Excellent Regulation—Preservation of Birds.

A FRIEND has forwarded us a law passed at the last session of the Pennsylvania Legislature, providing for the safety of certain kinds of birds during the early part of the season, or while they are most serviceable to the farmer, to take effect in the county of Chester, and parts of the counties of York, Lehigh, Delaware and Montgomery. The act declares it to be unlawful for "any person to shoot, kill or destroy, during the months of April, May, June, July, and the first ten days of August inclusive, in each and every year, any robin, flicker, bluebird, woodpecker, thrush or other insectivorous bird, other than blackbirds, under a penalty of two dollars for each and every offence." The act does not prevent any person from killing such birds as are found attacking newly planted grain crops; and it is to be hoped it will prevent that indiscriminate and wicked slaughter of these useful little birds, that are our most effectual aids in destroying the multitude of insects that destroy the fruit and the crops of the farmer.

The Murrain.

This disease has in many places the present season proved fatal to cattle, and although we have much more faith in prevention than in the cure of this disease, still the following from Mr. Forsyth in Canada, is given in the hope that it may prove as effectual as it is said to be:

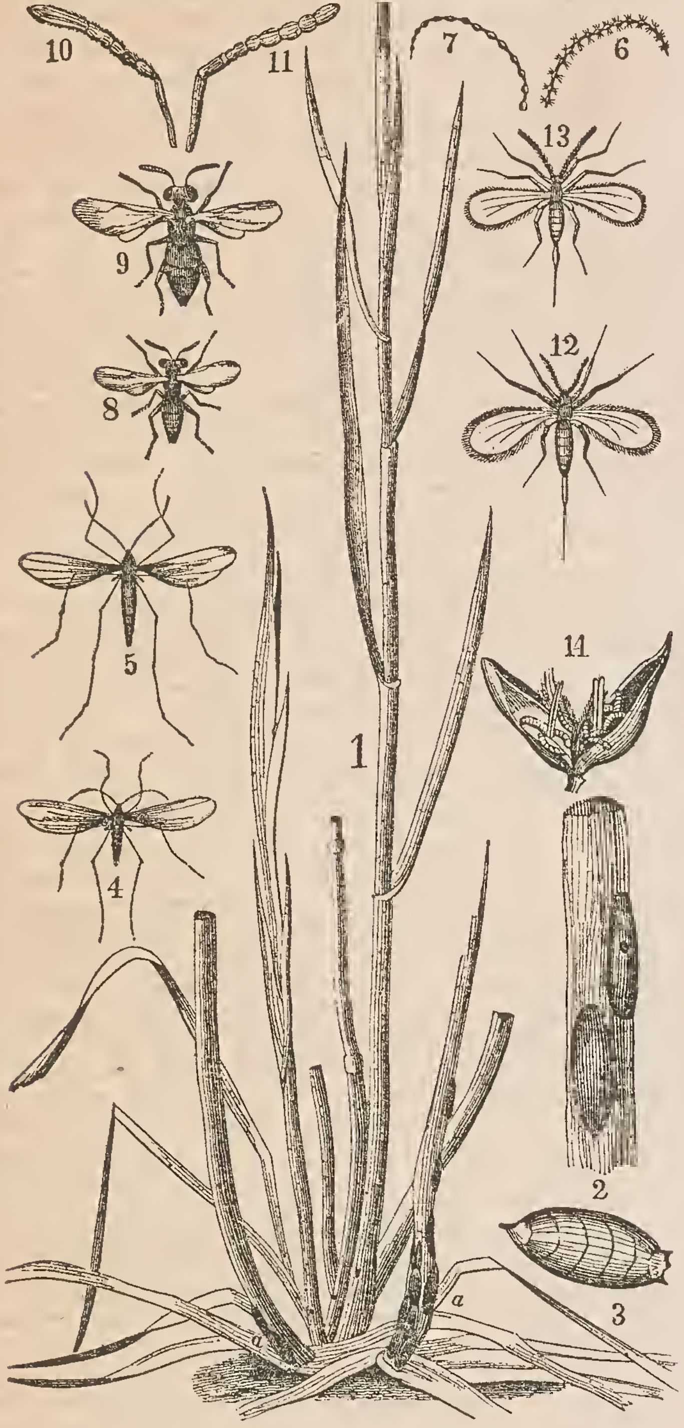
> "Give 1 1-2 oz. pearlash dissolved in two quarts of iron water, (from blacksmith's trough.) If not better in 5 hours, give 1-2 an oz more in a quart of water. The iron water should be warm. Give no drink but warm water for two days. Give warm mash to eat. This treatment in nine cases out of ten will be successful."

SPRING WHEAT—GREAT YIELD.—Mr. Erastus Skinner, of the town of Prattsburg, Steuben Co., N. Y., harvested last season fifty-six bushels of Italian spring wheat from an acre. Mr. Skinner prepares his land for yielding 56 bushels of wheat to the acre, by growing ruta baga, at a nett profit of $70·42 an acre. Such are the practical effects of skill and science directing the toil of human hands.—*Buff. Com. Adv.*

ORIGINAL COMMUNICATIONS.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

The Hessian Fly, Wheat Worm, &c.



EXPLANATION OF Fig. 80.

1—Wheat stalk with the larva of the Hessian fly deposited—three of the stalks punctured by the Ichneumon, *Ceraphron*—natural size, 3-20ths of an inch.—*a. a.* larva and pupa.

2—Section of the wheat stalk, with the larva magnified.

3—Larva advanced to the pupa state, magnified.

4, 5—Male and female Hessian fly, *Cecidomyia destructor*, magnified—6 antenna of the female.—7 antenna of the male.

8, 9—Male and female Ichneumon, *Ceraphron destructor*, magnified.—10 antenna of the male.—11 antenna of the female.

12, 13—Male and female wheat worm fly, *Cecidomyia tritica* of Kirby, magnified.

14—Section of a grain of wheat with the young wheat worm within it magnified.

Editors Cultivator—There is, perhaps, no period of our agricultural history, wherein the ravages of the Hessian fly have attracted more attention than during this season; the memorial to Congress of the individual who professes to have discovered a remedy, and who is asking for a compensation; the reference of this memorial to the Committee on Agriculture at the very moment that efforts are making to establish a National Society; the observations of Margaretta Morris, attracting the attention of so many eminent men and so many acute observers, joined to the extent of the insect's depredations, and to the advancement of agricultural science in all its departments, except entomology, have combined to attract this attention. Among other contested questions, arising out of the discussion, is the identity of this destructive race, *Cecidomyia destructor* of Kirby, with the wheat worm of New-England, the *Cecidomyia tritica* of the same author. The circumstance of the great Linnæus making but one species, under the name of *Tipula tritica*, is itself a strong indication of their identity. Whether future investigations will enable us to restore the system and the nomenclature of this great Swedish naturalist, time alone is to determine. I frankly acknowledge that I dislike innovations upon such perfect systems, and think, as the Hibernian would say, that the two insects are identical; but while we should frown upon all attempts *by men of science* to introduce new names for the purpose of extending their own pretended discoveries, we should be equally disposed to encourage accurate investigation into the true character, habits, transformations and operations of insects:

> "The sacred sons of vengeance, on whose course
> Corrosive famine waits, and kills the year."

Having recently returned from a visit through a wheat country where its ravages have been severely felt, and found that farmers have many more words than ideas respecting it; that there is much confusion in their views, some calling it "the insect," without ever thinking or inquiring whether there are two; others describing what is unquestionably the Hessian fly under the name of the "wheat worm," without knowing whether the worm became an insect, and some vice versa; while some are ignorant enough, and they are no very limited number, to confound it with a coleopterous insect of the beetle tribe, known at the south as the weevil, which infests the granery and the barn,—I have wished myself entomologist enough to describe this depredator or depredators; and let future inquirers tell whether the descriptions can be so reconciled as to make them either cogeneric or identical, but as I am not, and like all other men are prejudiced in favor of my own opinions, the attempt will only be an approximation to the truth. It is necessary to remark that the Hessian fly, (*Cecidomyia destructor* of Kirby,) is the only one known south of latitude 40°. It is a singular fact, tending to the establishment of the affirmative of this question, that the Hessian fly and the wheat worm in the same stage of their existence, are preyed upon by a parasitic insect of the order *Hymenoptera*, (four winged,) belonging to the genus *Ceraphron* of *Latrielle*: "This is frequently taken for the wheat fly or Hessian fly, from the circumstance of its being frequently found in vast numbers during the devastations committed by that insect, and many have been deceived by the specious circumstance of its evolution from the pupa of the Hessian fly under their own eye;" when in truth it is the only protector we have from the total destruction of our wheat by the rapid increase of the fly, and belongs to that vast class of insects included by Linnæus under the name of Ichneumon; this insect deposits her eggs in the larva of the Hessian fly, through a puncture made by her acute oviduct in the stem of the wheat; and this puncture has given rise to the opinion, and in fact furnished the whole ground for it, that the Hessian fly pierces the wheat stalk for the purpose of depositing its egg in the manner I have endeavored to delineate in the above figure, when it is the invariable evidence of the destruction of the fly, and of the birth of its deadliest foe: and is indeed a wonderful display of that instinctive faculty by which the genus *Ceraphron* is enabled to find the true place of deposit, where her young, protected by the indurated covering of the fly in its pupa or flaxseed state, feeds securely until the latter is killed. If the weather happens to be unfavorable to the Ichneumon, or if any other cause prevents its effecting this operation at the proper period, the following season is always a dreadful one to the wheat grower, as the fly upon an average has about eight or ten young, whose ravages over the whole face of the wheat growing region are commensurate with their increased numbers.

In the British Farmer's Magazine, vol. 3, p. 493, we are told that the *larva* of the *Cecidomyia tritica*, the acknowledged wheat fly of New-England, are preyed upon by the Ceraphron, an Ichneumon fly, which deposits its eggs in the body of the larvæ of the wheat fly. "I could not determine," says the very accurate author of that article, "whether it actually deposits its egg in the maggot's body; but there can be no doubt of the Ichneumon piercing the maggot with a sting: and from stinging the same maggot repeatedly, it is probable the fly delights to destroy the maggots, as well as to deposit eggs in their bodies." We shall see presently that the use of the words *larva* and *maggot* in the above extract, indicate strongly, that if the writer has not the Hessian fly before him, he has any thing but the wheat *worm* of New-England; and he uses the terms "*Cecidomyia tritica*" in the same sentence.

I think myself fully justified in asserting, that the puncture so often observed in the wheat stalk, is made only by the Ichneumon, because I have frequently been with Thomas Say, when pursuing his investigations upon this insect, and have seen and assisted in stripping down the glume or leaf of the wheat stalk, examining the dead or punctured larva, and the living Ceraphron; and the circumstance furnishes additional testimony to the truth of Margaretta Morris' discovery, that the fly deposits its egg on or in the grain, and not in the stalk. It seems indeed impossible that the Hessian fly should effect the latter object without puncturing the stalk or stripping down the leaf; but it is not so clear an impossibility that it should be lain in the root. Whether laid on the kernel or in the root, it must have grown with the growth of the plant; and if in the latter, it will probably be found more difficult to provide a remedy. If the Hessian fly and wheat fly both deposit their eggs on the grain, it shows that some of their habits are similar, and that the ova most probably passes through the same process in its transformations.

I frankly acknowledge that Margaretta Morris' observations received no favor in my eyes. I thought it so well ascertained that the Hessian fly deposited its egg in the stalk or culm, that her conclusions excited ridicule rather than conviction. Having been so much in the company of Say, and having relied so much upon his accurate habits of investigation, my faith was not to be shaken by a woman; but it is not the first time men have been compelled to yield to the other sex; and the principal difficulty that remains is, that the Hessian fly has not been seen in the state of a worm, nor the wheat fly in the stalk or culm, by any person who is willing to become voucher for the fact. The insect, whose operations she watched so attentively, may therefore have been the Cecidomyia tritica, which, it is notoriously the opinion of all New-England, deposits its egg on or in the berry; and then, "*credat judeas appella*," makes its next appearance in the shape of long, thin infusoria, their bodies, in the earliest stage gelatinous, semi-transparent, homogenous, contractile, without vertebra, or radiated tentacula, feeding in the berry until it is all eaten. While on the contrary, the Hessian fly in all its earlier stages is found within the stalk; its larva when first produced from the ova, is white, its tail very acute, and abruptly attenuated, the head incurved; the upper surface of the body exhibiting a glassy or hyaline aspect, with an internal viscera like a greenish line; underneath it shows thick white clouds, which as it advances to the pupa or flaxseed state, becomes united so as to exhibit regular transverse segments; when taken from its early membranaceous covering it seems perfectly inert; but when the pupa is advanced to its full stature, and assumes a dark reddish brown color, like flaxseed, with its jointed covering firmly knit together, I have known it to start and roll over several times on being removed from the wheat stalk. If the insect whose habits were thus watched by Margaretta Morris, was observed by her from the time of depositing its egg until it became a larva *in the culm or stalk*, or if its progress was marked from the latter state until the egg was deposited on the berry, so as to say with certainty that it was deposited by the same insect that was hatched from the larva that occupied the culm, then I think the identity of the two is placed almost beyond controversy. It is plain that the writer in the British Magazine could not have applied the terms *maggot* and *larva* to the worms described by Judge Buel.

We have now arrived at what seems an imsuperable impediment to recognizing the two insects as congeneric, viz.: the birth from the ova, of a living active worm in the one case, and of an inert vertebrated larva in the other; and I must be permitted here to make the remark, with perfect deference to the judgment, the accurate observation and excellent intention of that great and good man, Judge Buel, that he has largely contributed to circulate erroneous views upon this important subject. In looking over the early volumes of the Cultivator, I find all his information derived from others; most of it from British writers, and some from very inaccurate correspondents—not one syllable from a man of scientific investigations. In vol. 1, p. 82, he considers the wheat *worm* as oviparous; and even goes so far as to dispute the existence of a *fly* altogether, giving from authorities nearly forty years back, drawings of the full grown worm, in the very act of laying its eggs within the kernel of the wheat where it had attained maturity. The whole of this article commending and adopting a report to some English Society, said to be from the pen of Mr. Bauer, is evidently a labored effort, not to identify the wheat *fly* or *Cecidomyia tritica*, (whose existence is disputed,) with the insect then making such disastrous displays of its power; but to show that the injury was not to be imputed to any thing belonging to the class *insecta*. That the Judge was soon obliged to modify this opinion is manifest from the subsequent numbers of the same vol. p. 115, where he confounds it, through the agency of a correspondent, with the weevil; and in vol. 3, p. 65, he admits it to be a *snuff-brown fly*, and says *it is sometimes confounded with the weevil;* and finally on p. 118, he arrives at the same conclusion as other naturalists, and makes it a FLY, depositing its eggs on the wheat, but dropping when in the pupa state upon the ground where it remains during the winter. As all the prevalent notions of the wheat *worm* deriving its existence from the wheat *fly*, have originated from this or some equally loose foundation, without any accurate or properly authenticated investigation, I shall take the liberty of *thinking* that the wheat worm is the *Ascius pumilarius*, which is said to have been so destructive in Scotland in the year 1830, (Country Times, May 17, 1830.) I place all the *flies* that infest the wheat, if indeed there are more than one, under the order *Diptera*. Mr. Bauer (and Judge Buel endorses his opinion) calls his worm the *Vibrio tritica*, which in plain English, means *a fly vibrating or quivering over the wheat*,—and at the same time furnishes a plate of a *worm* laying its egg in the grain, and surrounded by its young brood, as described in the figure; the Judge naturally enough adopting the figure and rejecting the Latin, cautions his readers against the opinion of a *fly* originating so much mischief and argues in favor of the worm.

But the whole argument derived from the deposit of larva in the one case, and of a living animate being in the other, may be put on the debtor side of our profit and loss account, when we know that there are a considerable number of insects of the order *Diptera*, and a large number of the *Vibrio*, that are oviparous and viviparous in the same stage or period of their existence, i. e. they produce young ones alive in the spring, and then lay eggs till autumn. Whether the Hessian fly or the wheat fly possess this power, I am not naturalist enough to decide; that they neither of them produce living animated contractile *worms*, I am fully satisfied, as well from all the analogies of nature as from the writings of those who favor such an opinion in the columns of the Cultivator. They have had no more success in convincing *me* of such an opinion, than they would have had if they had traced the genealogy of the House of Hapsburgh—or the transmutation of wheat and chess to the same source. When the two insects attain what is called the perfect or fly state, they are so exactly similar that I am at a loss to make the necessary distinctions; and if there is any, it probably arises from the one being hatched from the ova and larva in the grain of the wheat the same season, and the other remaining over the winter, and growing with the wheat stalk. The following very significant remark of Say, who had Kirby's Entomology before him, is worth noticing upon this subject: "When several of them (*Cecidomyia destructor*) are contiguous on the same plant, the pressure on the body of the larva is unequal, and *an inequality* in the form of the body is the consequence."

It is admitted by all scientific writers, that in *both species* of the *Cecidomyia*, the attenna are filiform, with joints subequal and globular; wings incumbent and horizontal, and proboscis salient or moving with a snap; their legs and poisers the same in form and number. Having myself never seen any but what I thought the same insect, and having no compound microscope, but only a small magnifying glass, my description of the Hessian fly would of course be not very minute, but the head and thorax are black; wings *ciliate* dark brown, longer than the body; the abdomen itself is brown and is covered with short black hairs. This description is from the living specimen. Now what says Kirby, who describes both insects, *and every other writer* who undertakes to describe the *Cecidomyia tritica*—that the *head* and *thorax* are black, body of a dark orange hue—*wings* brownish, *fringed with slender hairs*, incumbent and horizontal; shorter and wider than those of the Hessian fly and approaching more to the sub-oval; the whole insect somewhat less than the Hessian fly. He represents it as having a sting or puncturing instrument, which we have not yet detected in the Hessian fly, but which it is very probable the latter also possesses.

If I should follow the example of Judge Buel, reject the writings and adopt the drawing of the wheat head from Kirby, it would be easy to show that every *worm* delineated in the wheat is a true *larva* of a fly; the jointed segments, membranaceous covering, and general aspect indicate this very strongly; and the circumstance of its being preyed upon by the Ichneumon, corroborates the opinion. Holkham.

Friendsville, Pa. 7 *mo.* 20, 1841.

Buckwheat, Rye and Clover.

Messrs. Gaylord & Tucker—Having made an experiment with a triple crop, it may not be uninteresting to some of your readers to give a few particulars thereof, and the result. In the beginning of August last year, I sowed with the same preparation of ground, buckwheat, rye, and clover. All which have done well; so that I am going at this time more largely into this mode of culture. Part of a field I have just covered with wheat instead of rye as the third article. I was encouraged to do this from observing that a few stools of wheat, that accidentally sprung up last year among the buckwheat, rye and clover, were fine.

But in particular. I manured a poor, worn out sandy quarter of an acre, with five cart loads of compost, and having first sowed and harrowed in the rye and buckwheat, I then sowed the clover seed while the ground was fresh stirred. Next I covered a part of the quarter acre (selected for a particular experiment,) with pine leaves, a part with green pine boughs—and a part I left uncovered—and here I observe that all three grew best on the part covered with pine straw, and better on that covered with the green boughs than where uncovered. I sowed this piece on the 5th day of August last, and on the 5th of October, or in two months, I cut the buckwheat and the product was 5½ bushels or rate of 22 bushels per acre. The rye cut in June last, was a good yield, but through an inadvertence was neglected to be measured. The clover was near knee high when the rye was cradled and will yield a fine swath for seed, now nearly ripe. So with the clover in another field sowed in like manner. I hope next year to report favorably of that sowed as above stated this season. In mean time, yours, &c.

SIDNEY WELLER.

Brinkleyville, Halifax Co. N. C. Aug. 6, 1841.

Use of Lime.

Messrs. Editors—I have been induced to take my pen, by reading an account of experiments in the use of lime, by your correspondent at Tivoli, (N. Y.) which appeared in the number for July, of the current volume. He has used lime until satisfied on that subject. He does not state the quantity per acre, but says there was no perceptible difference between the limed and unlimed crops. Lime has been used considerably in this place, and has seldom or never failed of paying the expense of getting it, if used on the spring grains or clover. On potatoes it does but little good in comparison with what it can do on corn or oats Wheat and rye, if sown on the first application, will show but little difference, if any, and it is a prevailing opinion here that it does no good to these crops. Let your correspondent try it on corn, and follow that with wheat. By that time the lime will have begun to act strongly on the vegetable matter already in the ground. If then he can see no difference between the limed and the unlimed, we have only to say his land is not the right sort to put lime on.

Lime here acts more beneficially on land that is naturally quite dry. Therefore, if he puts it on high land, at the rate of from fifty to eighty bushels to the acre, I think he can hardly fail of seeing the difference, unless his land is now strongly impregnated with limestone. Here such land is but little benefited.

D. Y. O.

Walnut Grove, N. J. August 14, 1841.

Buckthorn Hedges.

Willis Gaylord, Esq.—*Dear Sir*—In replying to your favor of the 12th of August, it will give me pleasure to furnish you any information in my power respecting the Buckthorn for hedges. It is nearly forty years since I commenced experiments with a variety of plants for making hedges. First, with the English Hawthorn, and soon found it was not adapted to our warm dry summers; it would blight as early as August and lose its foliage, and was frequently destroyed by the borer. Among other plants, I tried the three thorned acacia recommended by Judge Buel, but the experiment was not satisfactory; it was too open below, and liable to be killed down by the winter as much as it grew the previous season. In the garden of the venerable Dr. Holyoke, of this city, which adjoined that of my brother, there was a large tree of the buckthorn or Rhamnus catharticus. In digging the latter garden, about the year 1808, there were found several young plants which had grown from seed shed by this tree. They were given to me and set out in a nursery; finding they grew rapidly, I was induced to try them for a hedge, and I have been highly pleased with the result. They were set in a single row in my garden, and very soon became a beautiful hedge, and it remains so to the present time. Not a single plant has failed, and has never been attacked by any insect; it vegetates early in the spring, and retains its verdure very late in the fall. It can be trained into almost any form, and makes a beautiful arch over a gate way or passage. I was so much pleased with this experiment, that I have since set out several other hedges, all of which are now making a beautiful appearance. With these properties, it has become quite a favorite plant for hedges in this section of the country, and I have been induced to raise it for distribution. I have now at least one hundred and fifty rods of this hedge, which has been greatly admired by every person who has seen the same. I am so fully convinced that the English hawthorn is not suitable for our climate, I should not advise any one to set out a hedge with it, provided it could be done free of expense. One that nearly surrounded my garden began to fail soon after it was set, and I was induced to set a buckthorn between each of the hawthorns, and it now makes a fine and thick hedge.

Respecting the culture of this plant, I should recommend sowing the seed in the fall (as it is taken from the tree,) rather thick, in drills from 14 to 16 inches apart; it will vegetate the next spring; should leave it in the seed bed the first season, and remove them to a nursery the following spring. As soon as the plants are of a good size, about eighteen inches high, I should plant them out where I wished to make the hedge, in a single row, about eight or nine inches apart, either in the spring or fall of the year as suited my convenience. As soon as they begin to vegetate after setting them out for a hedge, I should head them down to within six inches of the ground, which causes them to thicken from the bottom; this I consider very important as it tends greatly to beautify the hedge. The only fault I find with my first hedge is, that I did not follow this plan, and it is not so thick near the bottom as those I have since set out. In the after management, very little more is required than to keep the ground clear from weeds, and to form the hedge in any way most agreeable to the cultivator. It should be trimmed regularly every year, and I consider the month of June as the most suitable season for that purpose; the greatest portion of the labor may be done with a common sythe.

In answer to that portion of your letter requesting information whether the plants would be suitable to the latitude of Maryland, I can only say, that I have no doubt it would answer for most of the States in the Union. It appears remarkably hardy, and adapts itself to almost any situation. I have been called upon for plants to be sent to several of the States, a number for the neighborhood of Baltimore, and I have not in a single instance been advised that they have not succeeded.

Very respectfully yours, &c. E. HERSEY DERBY.

Salem, Mass. August 21, 1841.

Milking Properties of the Improved D. Cows.

Messrs. Gaylord & Tucker—An esteemed friend, Mr. Bartlett of Connecticut, has called upon my brother and myself, through the July number of your valuable periodical, to give some account of our herd of Short Horned cattle, and I must plead other and more pressing avocations as the only reason why he has not met with an earlier response. The object of Mr. Bartlett appears to be, to show that so far as our animals are concerned, they do not sustain Mr. Colman's position, that Durhams are inferior to the native race for milking and dairy properties. Lewis F. Allen, Esq. to whom Mr. B. refers, has, in the June number of your paper, met the position taken by Mr. Colman with great ability and success.

Besides high grade, and some native, we have twenty-five thorough-bred animals. By the term *thorough-bred*, I mean animals which are themselves, or whose dams and sires are recorded in Coate's Herd Book, which furnishes for them full and undoubted pedigrees. Among these animals, we have one cow and three female descendants, the produce of two animals which were imported by Enoch Silsby, Esq. of this state, under the name of "Boston," and were bred by Robert Curry; one cow with two female descendants, the produce of Washington and Panzy, imported by the late Patroon, and bred by Mr. Champion; two females, the produce of Harriet, imported by Joseph Lee; and one cow, the produce of Arabella, imported by the late Stephen Williams, and seven other female descendants of the last named animal.

One of these cows is sixteen, and two others fourteen years old. All of them are in good health and exhibit the appearance, so far as condition is concerned, of being young animals, and two of them have regularly bred up to this time. These facts do not contribute to prove that this breed of animals are too tender and delicate to endure our cold climate, as I have occasionally seen and heard it alledged.

The milk from nearly all of our cows is unusually rich, and the quantity much greater than we have been able to obtain from superior native cows with the same keep. My brother has regularly had good common cows on his farm for about twenty years, and he affirms without qualification this fact.

Our cows have not given as much milk, nor made as great a quantity of butter, as have some other Short Horns, yet one of them, in April last, on hay, made more than twelve pounds of butter in a week, and we have repeatedly converted the cream in small quantities from this cow, into butter in fifteen seconds. In June, upon grass alone, this cow gave 360 lbs. of milk in a week, being milked but twice a day; the milk at this time was converted into cheese, and consequently no butter made from her. Had she been milked three times a day at this period, I am quite confident that her product of milk would have reached 400 lbs. and of butter not less than 14 lbs. per week. We have another cow which averaged 48 lbs. milk per day in June, and still another, (now quite old,) which a former owner assures me has yielded 28 quarts of milk per day.

We have also two heifers with their first calves, which averaged 37 and 35 lbs. milk per day through the month of June last.

I will readily admit that among the great mass of the common cows of the country, we occasionally find those which are very deep and rich milkers. But little reliance, however, can be placed on their progeny for the same properties, whilst with thorough-bred animals, by using bulls from deep milking families, the produce is quite certain to partake largely of the sires and dams.

It would indeed be remarkable, as Mr. Allen well observes, if, in traversing the whole of this state, in the discharge of his official duties, Mr. Colman, our late highly respectable Agricultural Commissioner, did not discover among the great mass of our common stock, some superior milkers and valuable dairy animals.

In the 4th vol. New-England Farmer, I find the following opinion given of the Short Horns, by Governor Lincoln, in a letter to Mr. Powell:

"I have now (of Denton's progeny) seven heifers in milk, four of them three years old, and three two years old; and for richness in quality and abundance in quantity, they are not excelled by the best cows of *any age* of the native stock. A heifer three years old, with her second calf, has not been dry since she dropt her first calf, having given 4 quarts on the morning of her second calving. For the dairy and the stall, I speak with the utmost confidence of their pre-eminence."

I have recently had an interview with the intelligent and persevering owner of the "Cream Pot" breed of cattle, and Col. Jacques assured me that he attributed the rich dairy properties of his herd more decisively to the Short Horned bull Cœlebs, than to the native Haskins cow, from which his whole herd, as I understand, descended, and it would seem from Mr. Haskin's own account of the produce of this cow, as published in the 5th vol. New-England Farmer, that he must be correct in this opinion; she is there represented as having made in two days 2¼ lbs. butter, which is 9 lbs. 10 oz. per week, being by no means a remarkable product, when compared with that of many of the Short Horns.

In Mr. Allen's valuable communication, he has given the product of six Short Horn cows, viz. in both milk and butter from three animals, in butter alone from one, and in milk alone from two animals.

The butter from the four animals varies from 11½ to 22 lbs. per week, making the average of the four cows 15 lbs. 6 oz. per week.

The milk from the five cows is from 28 to 35 quarts per day, averaging for each animal more than 32 quarts per day.

Besides the product of these six cows, I find the produce of butter from six more Durham cows, as follows, viz:

Mr. Hasket's cow, 19 lbs. butter in one week.
Mr. Calvert's cow 373 lbs. do. in 32 weeks.
Mr. Canby's cow 533 lbs. do. in one year, } *N. E. Farmer. vol.* 7. *p.* 150.
Thomas Ash's cow, 54½ lbs. do. in 35 days—*do. vol.* 12. *p.* 50.
A Durham cow, 14⅞ lbs. do. in one week.—*vol.* 17. *p.* 403.
Mr. Woolwich's cow, 14¾ lbs. do. in one week.—*Cultivator, vol.* 6. *p.* 102.

My belief is that the pure Short Horns, with good keep, (and no animal will thrive when starved,) is much more valuable than any other race, for the shambles, for the pail, and for the dairy; yet if our fathers have reared a better race, without system and without the least care in breeding, I shall bow with submission, regret the cost of my error, and hereafter "tread in their footsteps." WELLS LATHROP.

South Hadley Falls, Mass. August 19, 1841.

Horses—Origin of the Morgan Breed.

Messrs. Gaylord & Tucker—I lately received great satisfaction from hearing what appears to be a correct account of the origin of the Morgan Horses of Vermont; a breed known and esteemed for activity and hardiness throughout all the northern states; not remarkable for size, and scarcely known to sportsmen for speed. This race is perhaps as highly celebrated as any for general usefulness, and for such a degree of fleetness as entitles it to the appellation of *fast traveler*. Their height is from fourteen to fifteen hands, color bay, make round and heavy, with lean heads, broad and deep chests, the fore limbs set far apart, clean and sinewy legs, short strong backs, with that projection of the ribs from the spine which is a sure indication of powerful lungs, and consequently of great wind and bottom.

The original Morgan horse, called also the Goss horse, is well known to have appeared in Randolph and in St. Johnsbury, (Vt.) some forty years since, and to have been kept as a stallion, at first with but little, and subsequently with very great patronage, some five and twenty years, or until he was thirty years old or more. Various accounts are current as to his origin; many think it quite distinct from the Canadian breed of Norman French extraction, and consider the horse to have been of Dutch blood, and to have been introduced from some of the settlements on the Hudson river, southward of Albany. Stories are also told of a traveler's blood mare having got with foal by a Canadian or Indian pony at various places north and west, and having brought forth this horse; all these accounts are improbable, and appear to be unauthenticated.

For the last dozen years, being aware, both by observation and experiment, of the surprising results of crossing the Canadian with other breeds of horses, and having become acquainted with the vast variety and different qualities of various races in the Canadian breed, I have believed that the original Morgan horse was of French Canadian origin. This opinion being confirmed by the account here given, I am anxious to ascertain whether any one can prove it erroneous, and if not to make it puplic, that it may be known that thousands of horses may be obtained in French Canada of the same blood, and not inferior in qualities to the Morgan, whose existence added several hundred thousand dollars to the wealth of Vermont. GEORGE BARNARD.

Sherbrook, P. C. August, 1841.

[Affidavit.]

I was about 13 years of age when the Morgan horse was first brought to St. Johnsbury, in Vermont, where my father lived. As I am now 50, it must have been about 1804. On the eve of the second Tuesday in June, (for I well remember that the morrow was training day,) I was at my father's house, and a man of the name of Abel Shorey, a skillful horseman of the neighborhood, was there also; when David Goss, Jr. my cousin, then aged about seventeen, came up from his father's, distant about three-quarters of a mile, with a message to Shorey, requesting him to go to his father's, (my uncle David's) and trim a horse that uncle John Goss had just then brought over from Randolph, distant forty miles. I accompanied them, and at uncle David's we found uncle John from Randolph, with a little heavy, handsome active bay horse, which he requested Shorey to trim, chiefly by pulling out and cutting the hairs of his tail, which appeared as if it had been gnawed by calves. Uncle John said he was a Canadian horse that he had got from Justin Morgan of Randolph, who had lately brought him from Montreal. I afterwards frequently heard the manner of his purchasing the horse related in my father's and uncle David's families, which was this: uncle John had lent Morgan the sum of forty dollars on occasion of the latter's going a journey to Montreal in Canada. Morgan obtained the horse, then four years old, at Montreal, and being unable to repay the money on his return, disposed of him to uncle John to pay the debt. Uncle John, who was no horseman, now brought him to his brother, my uncle David, who was much of a horseman, in the hope that something might be made by keeping him for mares. I remember Shorey's calling him "a full blood French horse."

Uncle John Goss engaged Shorey to take the horse next day to training at Major Butler's, and there I saw him cover four mares. My uncle David Goss kept the horse through the season, working him on his farm, and putting him to mares when they were brought: he also kept him through the next winter and the ensuing spring, when the foals were found to be universally excellent; uncle John took him back to Randolph where he made his second season: the third season he was brought to St. Johnsbury, and stood at uncle David's again. After this, as I went to learn my trade, I cannot give so particular an account of the horse, but remember that he was kept several seasons in St. Johnsbury.

This and more to the same purpose may be attested by David Goss, sen. Phillip Goss, David Goss, Jr., Clark Stearns, Abel Shorey, Abel Butler and Thomas Pierce, all of St. Johnsbury. JOHN STEARNS.

Sworn before me at Charleston village,
this 14th August, 1841.

David Connell, J. P.

Management of Bees.

Messrs. Gaylord & Tucker—In the last Cultivator, I notice an inquiry concerning diseased bees from Mr Quimby of Coxsackie, in answer to which I propose to give the public some part of my experience and practice on the subject. It is no uncommon thing for bees to be troubled with disease in the months of April and May when improperly managed during the winter and spring. For these diseases I shall only give a preventive. Bees when exposed to the severe storms of winter and the damp east winds of spring, are most liable to disease, especially if the hives are too *open* or too *close*. If too open in spring, after the combs are filled with brood, the bees are obliged to retire during a cold storm to the upper part of the hive and cluster together to raise animal heat sufficient for their safety, leaving the brood to the fury of a northeaster unprotected. Death to the brood is the natural consequence,—the young soon become putrid, and before this loathsome brood of thousands can be removed by the bees, the greater part of them usually sicken and die, and if the colony is not entirely destroyed, it is rendered unprofitable for the season. If the hive is too close at the bottom, (and this is the only place that the air should be suffered to enter a bee-hive during the spring months,) a dampness is collected in the hive from the breath of the bees which is equally fatal to the brood with cold.

It is well known to every apiarian of much experience, that bees die from every hive more or less during winter. Now if these dead bees are suffered to remain under the hive and mold and putrify, it cannot be expected that the live bees will long remain in a healthy condition. But for the remedy. Bees should be kept dry and clean at all seasons; and to accomplish this it is necessary to use artificial means to some extent. Every hive should be of the best of workmanship, and made perpendicular, and if this rule is ever deviated from, it should never be smallest at the bottom, as this would allow much of the filth to lodge in descending, to the great injury as well as annoyance of the bees. I have used the Self-Protecting Hive with perfect success; it is also used by almost every apiarian in this part of the State, and receives the unqualified approbation of all. I place my hives in my apiary after having received the swarms, and suspend them by cleats on the sides of the hives. I then open the double inclined planes about 5-8ths of an inch to admit the free passage of the bees and also to ventilate the hive and discharge worms and other filth when disengaged by the bees. This is undoubtedly the best possible plan for discharging filth, and at the same time preserving the bees. My bees hang in this situation through the year. My apiary is furnished with doors to be closed during the winter, and also a false bottom, making it perfectly dark and dry. The planes being open, and the hive perpendicular, every bee that dies fall to the planes and is discharged, keeping the hives at all times perfectly clean and healthy. About the first of March I unclose the south side of my apiary, and also withdraw the false bottom. I keep the north side closed until about the twentieth of May, when I remove it and give the bees an opportunity to range at pleasure from either side of the hive, making the apiary as open as possible except the roof. In this manner the bees are secured from cold storms during the winter and spring months, so prejudicial to their health and economy, and have their full liberty during the season of collecting honey. I have never known a hive of bees diseased when thus treated. And if your correspondent and other subscribers will use the self-protecting hive, and manage it as described above, I presume you will hear no more about diseased bees.

The self-protecting hive having been illustrated and fully described in the February number of the Cultivator, renders a further description unnecessary here. The above hive may be had of my assignees in almost every state in the Union, and in nearly, if not quite every county in the state of New-York.

Wallingford, Ct., May 10, 1841. WILLIAM M. HALL.

Clearing Land.

Messrs. Editors—I noticed an inquiry by one of your subscribers for the best method of clearing new land, and as there has yet been no reply, it may not be amiss to give my opinion and views on the subject. For the good of land, and for the ease of clearing, I would prefer to have the chopping done in the months of June and July, and take a spring burn the next season. I prefer this course, first, because there will be no sprouts on the land; and second, because the stumps will come out three or four years sooner than they would, if chopped in the winter or spring months, as then they are sure to sprout, and thus long retain some vitality. To clear land slow and easy, I always girdle; and that work should be done in June, when the sign is in the heart. [?] I have seen the leaves withered and dried in one week. I always choose to let beach and maple timber stand until about half the top and branches fall to the ground, which will take place in some five or six years. When I wish to clear the piece, I cut the balance of timber down a few days before I wish to burn, always preferring the spring, as there will be less herbage on the ground at that time, and the burn, of consequence, more complete. I have seen land cleared that would not cost one dollar an acre to fit it for the seed, after the timber was cut down; as in dry weather, when so prepared, the fire usually cuts it up effectually. I will answer friend Robinson in regard to a National Agricultural Society in the language of *Sir* David Crockett, "go-ahead, sir."

Weathersfield, Ohio. O. G.

Large Root of Rye.

Messrs. Editors—Accompanying this, I forward you a root of rye, the product of one kernel, which I thought was remarkable, if not without a precedent. I cut more than one hundred and twenty heads from it, and the mice eat off seven stalks before. The heads were but poorly filled, as it stood alone, and but few of them would come in blossom at the same time. It continued to send out new stalks as long as I let it stand. There were other roots in the vicinity of this, which had from thirty to eighty heads.

Remedy for Girdled Fruit Trees.

I have an apple tree which the mice girdled four or five years ago, taking the bark off for about eight inches. I saved the tree by taking three cions of the previous year's growth, and carefully inserting each end above and below where the bark was off, tying them on, and covering the wound with some grafting cement. The tree appears to thrive as well as if nothing had happened to it. I am glad to say that I am indebted to your valuable paper, the Cultivator, for the idea.

New-Milford, (Con.) August 31, 1841. M. E. MERWIN.

Cylindrical Straw Cutter.—(Fig. 81.)

Messrs. Gaylord & Tucker—Observing frequent inquiries from various parts of the country for a machine adapted to cutting of straw, corn stalks, fodder, &c. by horse power, has induced us to send you a cut of the Cylindrical Straw Cutter, which has been in use in this state many years, and is probably the best machine of the kind in this country, particularly for those who who wish to cut large quantities by horse power. There are also two smaller sizes made suitable for horse or manual power, which cut 600 to 1000 bushels of straw, &c. per day. The former is much more powerful and will cut 1500 bushels of stalks or straw in the same length of time. The letter A represents two cast iron cylinder heads, to which are attached two spiral cast steel knives which act on a steel bed in such a manner as to cut with great ease and neatness; C, a pulley 14 inches in diameter, which should be driven 250 revolutions per minute; D, a cast iron fiuted roller, intended to compress the straw, &c. and to assist the endless leather apron F. to bring forward the straw, which may be cut short or long by a trifling alteration in the gearing; E, an inclined slide board intended to direct the straw, under roller D. K, a large balance or resistance wheel. L, L, two cranks to work the machine when applied to manual power. F, D, are operated upon by several spur wheels H, I, I, simply constructed and intended to move up the straw at suitable intervals. The box G, is about 4½ feet long and 18 iches wide, which, with the operating part is supported by a strong frame work, as represented. Prices $75, $45 and $30 each, according to size, and extra knives per set $8, $5 and $4.

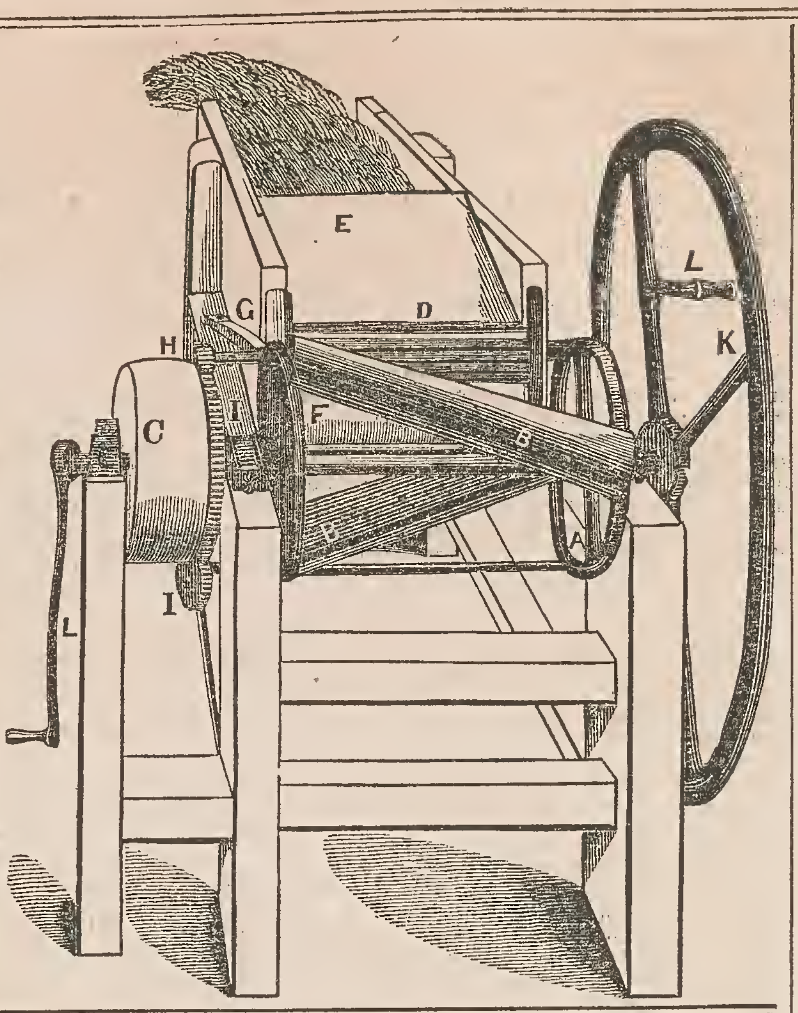
Yours, very respectfully,
R. SINCLAIR, Jr. & Co.

P. S. We are prepared to supply any number of our patent Thrashing Machines and Horse Powers, which are made on the same plan as those sold the last several years, and which have given entire satisfaction to all that have used them.

They will be sold at the following prices, viz:

Two horse powers, with the thrashers and fixtures,	$160
Four horse,	210

Baltimore, August 16, 1841.



"Protection against Drouth."

Messrs. Editors—I noticed in your paper of August, an article signed "An Onondaga Farmer," in which, after quoting several authors in support of his opinion, he congratulates himself in having detected an inconsistency in an article copied from the "Yankee Farmer," entitled "Protection against Drouth." The principle at which he takes umbrage is that advanced by the "Yankee," which reads as follows:—"In tillage the best protection against drouth that can be conveniently practiced to a great extent is, frequently stirring the earth, so as to keep it light and loose. In this way the earth at the surface is in many small particles, which serve as a nonconductor of moisture and retains it below, where the roots obtain a supply." The fact he admits, but denies the principle. Now the whole of this quotation appears to me to be strictly correct, and for these reasons:—It is a well known fact, that water rises in capillary tubes to a greater or less degree in proportion to their size, it rising higher and more rapidly in fine than coarse tubes. It is also well known that evaporation produces cold, or, in other words, carries off heat very rapidly. Apply these principles to the soil, and what is the result? The harder and more compact the earth is beaten, the smaller are the interstices between its particles, which constitute the capillary tubes, and consequently the more readily will the moisture in the earth be raised to the surface, and thence be carried off by evaporation. Not only so, but the more compact the earth is made by bringing its particles closer together, the better conductor of heat does it become, and that heat which should be retained near the surface (or at least that portion of it which is not carried off by this rapid evaporation) is conducted off into the body of the earth, raising the water far below the surface into vapor and dissipating it. The surface is thus left cold and unproductive.

On the other hand, if the surface is loosened up, the interstices (or capillary tubes, if you please,) are enlarged, water rises with more difficulty through them, and is consequently dissipated more slowly. The loose earth forms a very good absorbent, but a poor conductor of heat, which, not being carried off by a too rapid evaporation, is of course retained near the surface for the benefit of vegetation. The same course, however, that makes the loose earth a good absorbent, makes it also a very good radiator of heat. Consequently, as soon as the sun declines, it rapidly gives off the heat from its immediate surface into the atmosphere, until it is cooled below the temperature of the air, and causes it to deposit its moisture in the form of a copious dew. This dew is only temporary in its effects, for it is commonly all dissipated by nine o'clock in the morning. It does not increase the general moisture of the soil. It must not, however, be supposed that because the loose soil radiates heat rapidly that it becomes too cold; for being a pretty good nonconductor of heat, the same principle that prevents its heat from being carried off into the bowels of the earth prevents it from cooling lower than its immediate surface.

From this I would infer that loosening the soil—though upon the principle last stated it increases the quantity of dew—operates much more effectually in obstructing the rise of water by capillary attraction. If this is its effect, it is no less useful in a wet than in a dry season; for as in the one case it prevents the moisture necessary for vegetation from being carried off too rapidly from the surface, in the other it prevents the rise of the superfluous water which would injure the roots of the plants.

I, however, do not believe in too frequently stirring the surface. If the top of the ground is loose and open, no advantage is to be derived from disturbing it; but on the contrary, great injury, if the weather is very dry, as fresh moisture is every time exposed to be carried off from the newly turned earth. Nor should the surface of the earth be disturbed at all times without some regard to the temperature of the air, for by this means the injury done to vegetation by these sudden changes in temperature to which in our latitude we are so liable, are greatly increased. For instance, while our corn is struggling for a doubtful existence in a cold spring, the weather suddenly rises to 75 deg. or 80 deg. Then is the time to push the plow, for the power of the earth to absorb heat is in proportion to the looseness of the surface, and moreover the warm earth is turned under, and the cold exposed to the sun. But supposing the weather has been some time warm, it suddenly becomes colder. By working the ground at such times, you turn up the warm earth from below—the heat is more rapidly radiated—and all the evils of a sudden change of temperature are increased four fold.

I have thus stated to you some of the thoughts that have occurred to me at different times, as I have been following the plow through my corn fields. The style in which they are written will render it unnecessary to say that I am unpracticed with the pen. A. M.

Plattekill, Ulster co., N. Y., Aug. 7. 1841.

Young men, learn wisdom. Spend less money than you earn and you will every day grow richer. Never run in debt, and lawyers and constables will have to become farmers.

Traveling Memoranda---No. 3.

Madison, (Ia.) Aug. 12, 1841.

Editors of Cultivator—The road from Logansport to Indianapolis, 70 miles, lies through a country of mostly level clay land, covered with a great growth of timber and but little improved and the road less improved. In fact it appears as though the settlers of that region consider it a total loss to work upon the highway—at all events they build but few monuments to prove the contrary.

As I progressed south, I became more and more sensible of the effects of the severe drouth. In many places corn will not yield a bushel to the acre, and pastures and meadows, where such things happen to exist, would burn like tow.

There is a great defect in agricultural knowledge in this part of the world, or we should find more attention paid to the cultivation of grass and stock. Around Indianapolis, there are some slight indications of improvement in this respect. But the fact that an agricultural paper was not adequately supported at that place, proves that the country is more rich in soil than any thing else. It is painful to learn that the agricultural society at the seat of government of such a state as Indiana, after struggling through a brief existence, now sleeps too sound to be awakened by the ordinary cries of a community suffering for the want of a better system of agricultural education.

The editor of the Indiana Farmer, after having actually sunk his own small fortune in the attempt to do good to his fellow creatures, was compelled to abandon the enterprise. Oh, Indiana! when will she arouse from her lethargy?

Between Indianapolis and Madison, 80 miles, the country is older and more improved, and in places not so bad and in others worse affected by the drouth.

Like a great many individuals, this state of late years has been so engaged in "great works," that minor ones have been much neglected. Consequently, whoever has occasion to travel by stage here, must make up his mind to have a great deal of riding for a little money. Not but what the charges per mile are ample, yet in crossing miles of pole bridges, one gets a vast amount of perpendicular movement without any extra charge. Strange as it may seem to Yankee ears, and as discreditable as it is to Hoosier enterprise, in traveling 250 miles upon one of the most prominent stage routes in the state, I did not see the indication of a tithe of $250 worth of work having been done upon the roads this season. I therefore have a suggestion to make to agricultural societies; that they offer a premium to that road district which shall keep the roads in the most perfect repair during the year. Nothing gives more character to a country than good roads. And I am firmly impressed with the belief that with very few exceptions, good common roads are more advantage to the farming community than rail-roads. Between Vernon and Madison is one end of a rail-road between the capital of the state and the Ohio river.

It is a good piece of work, but poor stock to the state, and not half as useful to the people as a good turnpike would be. But I found it a great relief in traveling, after having undergone so much perpendicular motion upon the more common "rail-roads" of this country. The face of the country between Vernon and Madison is uneven and rocky, and all the streams are at right angles with the course of the track, and the general level of the country several hundred feet above the Ohio, so that the grade from the town to the top of the hill is a very expensive one, and is not yet completed.

Madison is a fine flourishing town, and what is no little to the credit of several of her merchants, I found the well read numbers of the Cultivator upon their desks, and some fine Berkshire pigs in their yards.

What a proud satisfaction it would be to me to be able to say the same of every business man in my dear adopted state. There I witnessed another creditable indication of an improving state of society, in a very large temperance meeting at which I saw "female influence" fully exerted in a most glorious cause.

But fear of becoming prolix, warns me once more to say adieu,

SOLON ROBINSON.

No. 4.

Prospect Hill, near Washinton, Ky. Aug. 22. 1841.

Editors of Cultivator—For ten days past, I have been in such a busy interesting scene, that my memoranda have fallen behind; but to-day I am domiciled in the house of Judge Beaty, and enjoying one of the many real Kentucky welcomes that I have found in this free-hearted state, with an opportunity to bring up my notes.

I wish my readers to understand that I am no flatterer of persons, and that in speaking of them, I only wish to show what a good, kind, noble feeling exists among agricultural brethren, which is forming a "band of brotherhood" that will prove a blessing to this nation.

I took the Frankfort stage at Madison early in the morning of the 14th, and after being detained waiting for the horse ferry boat till nearly sun rise, we were at length on board, when the cry of "the fog is coming," brought every eye towards a great dark mass that seemed to be rolling down between the high hills that bound the river on each side, like some mighty avalanche, threatening to overwhelm everything in its way. Crack went the whip, and the poor horses had to suffer for the drowsy tardiness of their masters; for strange as it may appear to strangers, so sudden does the fog come on here, that we had scarely time to make the passage of the river, which the great drouth has rendered but a diminutive stream, before the fog settled down so thick that no object could be distinguished across the water, and any attempt to make the passage at such a time is not only fruitless, but sometimes dangerous. It not unfrequently happening, that the boat after a toilsome attempt, comes back to the same shore it left an hour before.

From Madison to Frankfort, 52 miles, the country is extremely hilly, and at present, parched with drouth to a distressing degree.

The town of Newcastle, which is a large country town, has but one small spring, and no wells, and the stream that usually supplies the town, as well as nearly all the cisterns, is quite dry. Much of their water has to be hauled several miles. The town is situated in a valley, and upon a limestone rock, that as yet has defied all attempts to penetrate through to water. In the settlement of a new country, slight circumstances induce the settlement of a place that afterwards grows into a town. Here, it was the fine spring, convenient and ample for the first settlers, but insufficient for the present population.

Frankfort, the capitol of this capital state, is upon the east side of the Kentucky river, 50 miles from the Ohio, surrounded by wild, high, rocky, and romantic hills, and is a very different spot from what modern taste would select for a city. Here the beginning was induced by a favorable location upon one of the hills for defence against the Indians, and upon the "great Buffalo tract" that ranged through "from Limestone to Beargrass," now the flourishing cities of Maysville and Louisville. It may be interesting to some, that I should mention, that in the first settlement of Kentucky, the whole surface was covered with a thick cane brake, and the only method of passing through the country with any ease or rapidity, was to follow the Buffalo trails, or along the beds of creeks. Now that dense vegetable mass has entirely disappeared from the face of the country, except now and then a farmer has had the good taste to preserve a little patch as a memento of olden time. Olden time! did I say? Why some of the first settlers of Kentucky, yet live upon the land they won through a long struggle with the aboriginee, who fought manfully to retain his favorite hunting ground.

When I arrived in Frankfort, I ordered the stage to set me down at the door of Thomas B. Stevenson, the energetic editor of the Kentucy Farmer. Much to my own, and more to his regret, his wife had left home that morning on a distant visit, and when I arrived, I found him also absent; but I found "the way prepared;" my name was familiar to the servants, and I went into possession of comfortable quarters with a feeling of freedom and pleasure that I always feel when I know I am welcome, and which I was sure of here, even before I saw the index of it upon the fine open manly countenance of my friend when he came in shortly after my arrival.

I spent a couple of days at Frankfort very agreeably; saw some fine stock and farms in the neighborhood, took note of the noble improvements of the Kentucky river, by which the state is making a slack water navigation from the great coal, iron and timber region on the head waters, to the Ohio river; also visited the Penitentiary, and took particular notice of the great bagging manufactory; examined the fine specimens of beautiful marble that abound in the hills: and on the evening of Monday, the 16th, by special invitation went out on the Lexington rail-road, five miles, to the plantation of Robert W. Scott, Esq. one of "nature's noblemen," dignified and improved by a location in "glorious old Kentuck."

In Mr. Scott, I found one of the best specimens of "a lawyer turned farmer," that I have ever met with. In his wife, I found those delightful charms that make a wife lovely. It is impossible for me to speak of this city bred pair, retired to and enjoying the comfort, contentment and happiness only to be found upon a farm, as I feel that the amiability of their character deserves. But their remembrance is impressed upon my heart, and forms one of those links of union, "that *can*, that must, that will" be made to exist between the friends of agricultural improvement.

Mr. Scott's farm is a perfect illustration of what may be done upon worn out land, by the improved system of husbandry. His farm is in a high state of cultivation—every acre, woodland and all, yields a good interest upon the valuation of $60 per acre. The entrance to every lot is through a well hung, self-shutting and fastening gate, and every lot numbered with conspicuous figures upon the gate post.

Not a bush, or weed or brush, or old rotton log is permitted to disfigure the beautiful lawn-like blue grass pastures, which are covered by some of the finest specimens of Durham cattle in the state.

The greatest cultivated crop is hemp. Here for the first time, I witnessed the operation of the hemp cradle; and although I had looked upon it as a doubtful improvement, I am bound to say, after conversing with the proprietor, and more particularly with the field hands, that it is a decided improvement, and a highly useful agricultural implement.

After spending one of the most agreeable days of my life, I took the evening train of cars, and arrived in Lexington, Tuesday evening about dusk. The distance from Frankfort to Lexington, 28 miles, over a very rough rail-road; the cars propelled by horses.

I had no sooner registered my name at the hotel, than I found sundry old acquaintances, not of me personally, but by name.

Around Lexington, the garden of Kentucky, I visited so many fine plantations, and met with such a universal hospitable reception, that I should become prolix and tiresome to you and your readers, were I to go into particulars. I however spent a night with William P. Curd, the great Berkshire hog breeder of Kentucky. His fine farm is 2½ miles south of the city, and is a part of the original plantation originally settled by his grandfather. He has about thirty full grown Berkshires and several fine Irish graziers. Five of his Berkshires are imported. Old Ben Shaker, a monstrous hog, is yet active and vigorous. Mr. Lossing's old Maxima and her companions had just arrived and looked full as well as could be expected after so long a journey in such hot weather. Mr. C. has one Berkshire barrow that will weigh near a thousand pounds. He finds ready sales for pigs at $30 a pair. On Thursday, Mr. Curd took his buggy and drove me up to Dr. Martin's, where I experienced the mortification of finding him absent from home. We were however, very politely received by his son, and after spending a few hours among the doctor's numerous hogs and cattle, we took the road in the cool of a very hot day towards Lexington. By previous arrangment, I stopped at the delightful mansion of Richard Pindle, Esq. whose plantation adjoins that of the Hon. Henry Clay.

Mr. Pindle is another fine specimen of a lawyer farmer, he still following his profession. In the morning, after examining his own and the adjoining plantations, and the beautiful show of fine stock, Mr. Pindle took me in his carriage, and spent the whole day upon those unrivaled plantations, that abound in that most beautiful and unrivaled country around Lexington.

I have taken copious notes of many things that gave me great pleasure that day, but I have already spun this letter out to such a length, that I must beg permission, if what I have written should prove interesting, to refer to those notes at some future time.

There is one fact that I must not omit to mention, that speaks volumes in favor of the prosperity of this city and the high state of improvement of the country; and that is, that nearly every one of the roads diverging from Lexington, is a complete Macadamized turnpike.

Upon one of these, the Maysville road, I started yesterday at 4 o'clock in the morning, and after passing over some 60 miles of a very fine country, (excepting the celebrated "Blue lick knobs,") I was set down at 1 o'clock, P. M. at the mouth of Judge Beaty's lane, and calling one of his black boys from a neighboring hemp field, to take charge of my baggage, I walked up to the house, which according to Kentucky fashion, is situated in the middle of a 450 acre tract, about a half mile back from, and out of sight of the road. I found a venerable, good looking, intelligent old man, enjoying his book after dinner, under the shade of a noble old elm in the yard, and at once approached and announced my name, and in five minutes I was as much at home as though under my own roof—and here let me and my readers take a short rest from the labors and remarks of their old friend, SOLON ROBINSON.

National Agricultural Society.

Messrs. Editors—I have been an attentive reader of the Cultivator, and am much interested in the views of your able correspondents, Messrs. Garnet and Robinson, relative to a National Agricultural Society and National Agricultural School. I believe such a school would be productive of much good, notwithstanding the natural tendency such a national institution would have to favor the aristocratic few; but I believe a much greater amount of good back numbers might done with the Smithsonian fund, by purchasing the back numbers of the Cultivator or some equally valuable agricultural journal, and distribute full setts, except the current volume, to the head of every family engaged in agriculture that is not now a subscriber—not, Messrs Editors, that I propose giving you a fat job; far from it—I propose that the work be stereotyped and furnished at as low a price as any publisher in the United States would undertake to do it—for I myself am but a poor farmer, but I am a much better one than I was five years ago, and I attribute my improvement to the Cultivator, and I expect to improve further, either with or without the Cultivator.

Feeding Hay to Sheep.

I am located in a very hilly country, and of course my system of farming is various, but my intention is ultimately to confine myself to raising fine wool. I have tried many ways of feeding sheep hay. I have spread it on the ground, which I consider the most slovenly and wasteful. I have fed in board boxes, or racks made about 2½ feet wide and from 12 to 16 feet long, with a roof to keep the hay dry; they are made of boards about 1 ft. or 15 inches wide, nailed on 4 inch scantlings in each corner; the bottom board to stand on the ground; the next course to be nailed on 8 inches above, leaving that space all round the box for the sheep to put their heads through to the hay; but they will waste considerable hay fed in this way, if they are fed all they will eat. For the last two winters I have let my sheep run to the stacks, which may appear to be very wasteful and slovenly in theory, but I do not find it so in practice, owing to the manner in which I build my stacks. In the first place I take a pole about 5 inches diameter at the butt and about 3 at the top; blue ash is the best. I set this about 2½ feet in the ground and stamp the dirt firm around it; let it be long enough to project about 3 feet above the top of the stack, for convenience of the stacker in topping off: then take 4 blocks about 18 inches high, sawed off a log about 18 inches in diameter, place them around the pole, and on those blocks build a rail pen only three rails high; cover the ground with rails about 6 or 8 inches apart to keep the hay off the ground, and in this pen and around the pole, build the stack in the usual way. I generally put from 2½ to 3 tons in a stack; the sheep will eat out the hay under the rails clear into the pole, and the stack will settle down the pole, the bottom resting on the rail pen, until the sheep will eat it all up, with but little waste. Such has been my practice for two winters past, and I have this summer stacked all my hay intended for sheep in this manner. My sheep are Saxony and grade sheep, and I have about 750. I have tried various lengths for the blocks to build the pens on, and find about 18 to 20 inches the most suitable length; larger sheep would need higher blocks.

Strawberries.

I cannot but earnestly recommend every farmer to bestow more attention to the garden, both on the score of profit and comfort. I last year raised over 4½ bushels of strawberries on a piece of ground measuring 38 by 39 feet. They were set out in hills two feet apart each way, and required but little labor in cultivation. Respectfully, NICHOLAS TITUS.

Rutland, Meigs Co. Ohio, Aug. 4, 1841.

"Knowledge is Power."

The characteristic of the present day, is *reformation* and general improvement in the agricultural department—in the sciences and arts—by general diffusion of agricultural and scientific knowledge and by "*elevation* and *refinement of intellect.*"

Thus it is by a knowledge of the laws which govern material substances, that we are to become acquainted with their *nature* and *composition.* Our success, in performing experiments, depends on our knowledge of the substances.

We can see a great deficiency among our most practical farmers, in the department of scientific knowledge.

There is a very erroneous idea, which is too extensively entertained among all classes of community and which has too long wound its serpentine coils around its abettors, and has been a mighty barrier to improvements in agriculture, that a farmer "*needs no more knowledge than is necessary for him to read and write and keep his account,*" &c. This might, perhaps, stand a better test a century ago, but in these days of intelligence, and in this enlightened age, we are taught different. Our fathers, we know, had but poor facilities for acquiring knowledge of *any kind*; and they raised greater crops than we do at the present day. There are many of our best farms, for wheat growing, that have been "*under the plow,*" as it is termed, until they have become completely impoverished; and then they are thrown aside as good for nothing. Therefore, under such circumstances, we must commence a *renovating system.* But how is this to be accomplished? I answer by *artificial aid.*

But this cannot be done by us, who consider ourselves good practical farmers, because we have been taught to follow in the footsteps of our predecessors—our fathers, who knew nothing of the ingredients of the soil. We have not knowledge to analyze the different soils, nor to learn what plants will thrive most vigorously on a given soil. If we attempt this, we find soon, we are incompetent to the task—and deficient in all the necessary knowledge upon which we may form a correct judgment or arrive at a correct conclusion.

For every reflecting mind most know, that after a farm becomes so impoverished, by a series of exhausting crops, and exhausted of all its nutritious qualities, which artificial aid only will restore, that it requires all the knowledge and skill of the most profound scientific to restore, *in part,* the soil to the state that nature gave it; and even *then,* it requires the most systematic and judicious course of management to accomplish such an undertaking. *A farmer should have more knowledge.*

But I would not be understood that he *should be* a college learned man, nor have him pursue a classical course of study. But he should understand the *sciences,* particularly philosophy, chemistry, botany, geology, &c. By pursuing the sciences, the powers of the mind are unfolded and drawn out into action, and thereby we are rendered close and profound thinkers, critical and scientific investigators, and close and exact reasoners. And furthermore, there is a pleasure in pursuing the sciences, which cannot be described; and which none but those who have experienced it, know how highly to appreciate. If a person becomes well versed in the sciences, he enjoys many pleasures, to which he who is contented to remain in ignorance, must ever remain a stranger. It matters not whether an individual designs to occupy some conspicuous station, or to follow the humble occupation of an agriculturist, he needs a *well cultivated mind.* He needs that knowledge, which will enable him to learn by actual experiment, what soils are better adapted to the growing of wheat, &c.

He should know by what means he can restore a worn out farm to its native fertility, which will be the least expensive. He should know the nature of every plant, and in what locations they vegetate the most healthfully, what is the preponderating ingredient that composes them.

The sciences unquestionably reflect a vast amount of light on these, which are, as yet, unhidden laws to the majority of farmers, which would if rightly appreciated, be productive of an infinite amount of good. And besides there always appears to a scientfic mind, even in the *smallest plants* something that is calculated to expand the mind, and which strikes it with awe.

A. E. A. A.

Lansingville, Tomp. Co. April 8, 1841.

Experiments in the Culture of Potatoes.

Messrs. Gaylord & Tucker—I have been a constant reader of the Cultivator from its first number, and have always esteemed it a highly valuable periodical; but among the very many instructive communications in that valuable work, I occasionally find interspersed, articles which are not calculated to lead to any satisfactory result. I allude to such crack articles as give the extraordinary weight of a calf, six months old, without telling us how many cows he sucked, and what other food he had received, and the great weight of a yearling short horned bull, without stating the amount of milk, meal, roots, &c., he had consumed. Now, if such correspondents had, at the same time, taken a calf of some other good breed and given him food, equal in quantity and quality with his pet, we might arrive at some conclusion as to the relative value of the two breeds; but my principal object in this communication, is a passing notice of some of the reports on the Rohan Potato,—as also an experiment made by myself, with the Rohan and three other varieties of the potatoe.

I shall not undertake to write out the several reports on the Rohans; several of them, however, run thus or nearly so:

From 2 Tubers I raised 2 1-4 bushels.
" 1 " " 2 1-4 "
" 1 " " 2 1-4 "
" 1 " " 2 "
" 2 " " 2 "

In the above list of experiments, some have stated the number of eyes in each tuber, and the number of hills planted; but have not stated the distance between the hills, so that the product per acre cannot be ascertained. Again, few describe the soil and the quantity and quality of manure applied, and none, that I recollect, have tried any other variety along side of them, with the same soil, manure and treatment: so that nothing can be decided as to the relative productiveness of the different varieties. Again, they generally give the amount of the product, from the amount of seed—now, before I begin with my experiment, allow me to state one, made by one of my neighbors, with the potato called the *Irish Cups.* It was not a trial for a great yield from a given quantity of seed; but to settle the question whether potatoes *could* or *could not* be produced without the eyes of the potato. He took two tubers, of the Irish Cups, of medium size, cut them into thin slices, cut the slices crosswise, both ways, leaving the pieces about the bigness of a large pea, and planted them in a rich, moist, loamy soil, well manured. They were a long time in coming up, and when they did come, the plants were very small, and for some time apparently feeble; but they began to grow and soon attained the usual size of potato tops; and when they were dug, the produce was fifteen bushels of Irish Cups, which is a greater yield from two tubers than any recorded in the Cultivator. Still it proves nothing, for he never stated how much ground he occupied, nor did Mr. Jackson, of Wellsboro, Pa., (last vol. Cult., p. 12,) whose increase was 214 fold. Now, if the two Irish Cups planted by my neighbor weighed a pound, which I presume they *did not,* the increase must have been 900 per cent or 900 fold, which puts Mr. Jackson's Rohans in the back ground; but all this only goes to show how illusory all such experiments are, without a comparison with other varieties, and with equal treatment.

Now to my experiment. I purchased a farm twenty-five years ago, which is situated about seven miles from my residence in Waterford, and have let it on shares ever since, (keeping the direction of it in my own hands.) I divided my wheat land into three equal portions as nearly as was convenient, leaving the residue of the farm for meadow, corn and other uses, and put my wheat land under a three years course of cultivation, i. e. one year under wheat and two years under clover, applying plaster to the clover during the two years pasturage, to which use it was constantly applied until plowed up for the wheat crop. Under this course of management, in a few years the land was brought from a state of perfect exhaustion to a pretty high state of cultivation. The plat of ground on which I planted my potatoes is on an elevation, and a part of one of the wheat fields, and had been under the above course of management for twenty-five years—it contains about three acres, is perfectly level, the soil *loam,* on a subsoil of marly clay, and was under two years sod. It had never received a shovel full of manure since it was cleared some fifty years ago, except the plaster which had been put on to it during the aforesaid course of management, and what was dropped by the cattle while feeding off the clover—there is not a shade on the plat, nor any locality to invite cattle to visit or beat upon one part more than another of the piece; the soil was therefore perfectly uniform.

In May last, the ground was plowed, after the grass had been closely fed off, harrowed and furrowed both ways with the plow, as evenly as possible, and planted with potatoes, the seed rolled in plaster, or gypsum, to be a little more *technical,* and in the following order, to wit: four rows of *Rohans* through the middle of the plat, and in contiguous rows on each side, the three other varieties i. e. merinos, flesh colored and Orange potatoes.

At the proper time, the plow was passed between the rows, both ways, and dressed out with the hoe once only. The season was so dry that in our region the potato was considered but about half a crop. With my tenant, we dug and accurately weighed 12 hills of each kind, and by an accurate measurement, ascertained the number of hills in a rod, and by the weight of the 12 hills ascertained that of the rod, and by 160 rods, the weight on an acre. That weight divided by 60 lbs. gave the following results per acre:

Merino ················	364 4-5	bushels to the acre.
Flesh colored ········	336	" "
Rohan ················	322 4-5	" "
Orange ················	288 4-5	" "

Thus, gentlemen, you have the result of my experiment, which was conducted with the greatest possible accuracy and care. Now, whether the proportions (of the yield) would have been similar if they had been planted in other soil and heavily manured, I certainly cannot decide; all I go for is, that when experiments are made to test the relative productiveness of different varieties of the potato, they should be put side by side and honestly treated alike. S. STEWART.

Waterford, March 22, 1841.

Notes of a Traveler in Ohio—Great Barn, &c.

We had been riding all day among villages and rich looking farms, in as lovely a farming country as the sun shines upon. Large Pennsylvania barns, extensive fields, numerous herds, and landscapes of unrivaled beauty, met our admiring eyes at almost every turn.

I hardly know how many places I had picked out during the day, as we drove through portions of Richland, Wayne, and into Stark county, as being each in its turn the most desirable location we had yet seen, and where, if I were the possessor, I would willingly end my pilgrimage, and settle down with scarce a thought or wish that would not be gratified in the scene around.

I thought nothing could be found finer than what we saw in the neighborhood of Wooster. At Massilon we found a very worthy friend and a banker, at his cottage, some distance from town, upon a large farm, and in the midst of his harvest. He seemed to enjoy himself much more among his sheaves and stacks of wheat, than behind his counter, and surrounded by the irredeemable currency, which I am sorry to say, is found in one of the richest states in the Union. His cottage is a perfect gem, and so situated, that you looked out upon nearly a hundred acres of wheat then ready for the sickle. All about him bespoke the thorough and independent farmer. When we took our leave of him I could not help feeling that his, if any man's, was a lot to envy. I thought we should find no more places to equal this, but, as we drove into the rich old town of Canton, I saw several which would have puzzled me much in making a choice. With any of them a reasonable man must have been satisfied.

Our business led us to a little village, some four miles down the river from Canton to a large milling establishment. In one of the proprietors I recognized an old friend, who some twenty-five years ago, while exercising the functions of a pedagogue, had brought me in rather too close contact with his birch sceptre. The smart was soon forgotten, though the person was well remembered. The evening passed rapidly away, and finding it late we abandoned our purpose of returning and put up with our friend for the night. The first thing I did in the morning was to examine the barn, and in this land of agricultural monstrosities, as Ohio may be called, I have seen nothing to compare with "that barn;" indeed I question whether for size and completeness of its internal and external arrangements it has a superior, or equal, in the states.

The building is 140 feet long by 50 wide: standing upon a stone basement 140 feet long by 42 feet wide, and 8 feet high. The basement is used exclusively for stables; and so divided that no room is lost. The upper part is divided into floors of nearly 24 feet in width, and two large doors to each of four of these floors. The manner of filling this barn struck me as obviating the principal, and to my mind the only objection to large barns, viz: the increased labor of stowing away hay or grain. The first 24 feet at each end is without door. The drive way is on the adjoining floor, and from this the first one is filled, giving a surface of only 24 by 50 feet to work over. When that is filled the doors of that drive way or open floor are closed, and this is in turn filled from the adjoining floor, and thus on, until but one of the floors is left unfilled. Mr. Goodwill, the proprietor, is a good farmer, and the best evidence of it is the great pains he takes to save and make manure. His yards are so arranged that all the drainings are saved, and his straw is all washed into the manure heap.

My observations in Ohio, among intelligent farmers, have made me a convert to earthen floors for stables for cattle or horses. I am so well convinced of their superiority, both in economy and health that I will never have any other. I questioned a great many farmers on the subject, and all had used them from one to twenty years, and their answer was uniform, that if they could have wooden floors free, they would not use them. Some have but recently taken out their plank floors and filled up with earth. Whenever they can be made dry I should recommend their use, by all means.

When I commenced, I intended to have gone into some consideration of the condition of agriculture generally in the state, and of the condition of the finances, but I find so much of my sheet is filled by "*that barn*" that I have not room, for which, perhaps, your readers will be thankful. Another day I may resume the subject. T. C. P.

Saving Clover Seed.

In the 12th number of the 5th vol. of the Cultivator there is a plate and description of a clover machine used by Mr. L'Hommedieu. In a subsequent number, No. 3 of the 6th vol., Mr. Saunders gives his experiment, and pronounces it a failure. From the remarks of that gentleman, I was almost deterred from making a trial, but knowing the advantages which would result from a successful experiment, I determined to make the attempt, hoping an improvement might be made in the defective parts. Accordingly I had a machine constructed, agreeably to the plate and description, and soon found that the wheels were too high, for in depressing the teeth to a proper distance towards the ground, it elevated the hind part of the box too much. I had the wheels reduced two inches in diameter. The same objection existed, but in a less degree. On a smooth surface we could have gotten along pretty well, but when the ground was uneven, the jolting of the wheels prevented it from doing effective duty. The wheels were cast aside and runners of three inch scantling substituted, and I am pleased to say, it has met my greatest anticipations. More than twenty acres of clover have been passed over, and the heads gathered cleaner and in half the time, that would have been required to cut it. The advantages of this mode of collecting over the usual one of cutting, are several fold. 1st. The stalks are all left on the ground to benefit the land. 2d. The heads are immediately taken to the barn, ready for the hulling machine, without the delay and labor of separating the heads from the stalks by flails or tramping. 3d. A man with a horse can strip double the quantity in a day, that he could cut. 4th. The seed is better, inasmuch as the heads are taken to the barn and secured from the weather, the dampness of which frequently causes them to *sprout* when exposed in the usual rotting process, as it is termed. For the use of this machine, the clover ought to be permitted to get *fully ripe,* and if the spaces between the teeth become clogged, they can quickly be freed by a sharp spade or shovel, which the operator has with him, in shoveling the heads to the back of the box.

In making another box, I would have the dimensions increased from those in the plate, say six feet wide and five feet deep, because one horse could easily drag it, and it would take off more speedily. The runner ought to be about two inches deeper behind, so as to elevate that part of the box and give the teeth a depression towards the ground. The teeth ought to be left flat on the top, and the two edges sharp,—underneath they should be bevelled dove tail fashion. Those made use of were of wood. I think a further improvement can be made, by having them of iron, and of the shape of a dirk blade.

I have no hesitation in stating that with the alterations above mentioned, the machine has proven satisfactory, and will be continued in use on my farm.

Brownsville, Pa., Sept., 1841. JAMES L. BOWMAN.

National Agricultural Society.

Messrs. Gaylord & Tucker—When I last wrote to you, I little expected so soon to have any cause for addressing you again; but your correspondent, Mr. F. Burt, of Ohio, has made it necessary. I beg, however, that neither you nor your readers will suppose that I notice his communication on my own account. My sole object is, to prevent, if I can, any such misconceptions being entertained by others as Mr. Burt seems to have formed in regard to *"the visionary notions,"* (as he is pleased to call them,) of Mr. Solon Robinson and myself, relative to a National Society of Agriculture. It is true that he has bestowed upon us the most exalted praise, by calling us *"benefactors of the human race;"* but he has done it in a way that reminds me very much of certain plays of "the olden time," which always ended in some of the company being made to redeem the pawns that they had forfeited in the course of the play. One of the most common sentences was, to require the condemned to pay a compliment to some one of the party and to spoil it. At one of these plays, within my recollection, a certain very awkward old Scotch batchelor who was some years past the age entitling him to be called a "Dumbarton youth," was commanded to perform this difficult task to a young lady equally remarkable for beauty of features and weakness of understanding. He had no sooner heard his sentence, than he marched up to the fair girl, and to the infinite surprise and regret of his auditors, said, "Miss Mally, you are an unco pretty lassie, but a grate fule."

Now, our friend Mr. Burt has served Mr. Robinson and myself much after the same fashion; with this great difference, however, in the two cases, that the lady had a perfectly just title to the Scotchman's compliment, whereas we have none to Mr. Burt's, although each of us might with equal justice be called a great fool, if we really entertained any such *"visionary notions"* as he imputes to us. I shall leave Mr. Robinson to defend himself, as he is well able to do, and will proceed to my own vindication, by solemnly assuring all whom it may concern, that I have no knowledge *of*, nor participation *in*, any such scheme or schemes as Mr. Burt has most gratuitously ascribed to Mr. Robinson and myself. True it is, that we both anxiously desire to aid in promoting the establishment of a National Society of Agriculture,—an Agricultural School, and an Experimental Farm. But it neither *is*, nor ever *has been*, any part of my purpose, nor do I believe it is Mr. Robinson's, to petition Congress even for a single cent, much less *"half a million of dollars,"* (as Mr. Burt asserts,) to effect our object. Neither shall I ever ask, either singly or with others, that *"some two or three hundred boys should be taught farming at the expense of the Government,"* and *"in the city of Washington:"* although I can see no good reason why farming could not be quite as well taught within the District as elsewhere, if an agricultural school and experimental farm were established therein. As to *"lobbying about the halls of Congress,"* I think it quite as degrading a practice as Mr. Burt can do, and therefore shall hardly shock his sensibility by being guilty of it. I have, however, no hesitation in avowing my entire willingness, nay, my most earnest desire to unite with other friends of American husbandry, in petitioning Congress to appropriate the Smithsonian legacy to establish an agricultural school and experimental farm somewhere within the District of Columbia. This money, be it remembered, is no part of our Government funds, but was bequeathed by a philanthropic foreigner, for a purpose designated in such general terms, as would well admit of such an appropriation; since there is no profession whatever which requires a more general knowledge of the sciences and arts, than that of agriculture, to carry it to the highest attainable point of perfection. What, let me ask, would do more, nay, so much, towards the accomplishment of this most desirable object, as such an agricultural school and experimental farm as might be established at the seat of the General Government?

Permit me now to notice Mr. Burt's specified objections to a National Society of Agriculture. The first is,—*"the great extent of our country;"* and the reason he assigns in support of this objection, is, that owing to *"the difference of soil, climate and productions,"*—"what *is interesting to one section is uninteresting to another.*" The objection itself might have some weight, if one indispensable condition of the society had been, that there should be *"four,"* or even *one* delegate "from 25 States." But such a requirement has never been made, nor, I believe, even thought of by any friend of the scheme; of course this objection has no validity; for should the scheme be generally approved, members enough, and more than enough will be found in the States most convenient to the place of meeting, to constitute a numerous association. Mr. Burt's reason in support of his objection is really a strong argument in favor of our plan. For admitting it to be true, that *"what is interesting to one section is uninteresting to another,"* it is all important to the perpetuity of our Union, which every true friend to his country most ardently desires,—that this deplorable insensibility and apathy of the States towards the things which constitute their individual welfare, should be changed as speedily as possible. And I put it to the dispassionate judgment of any intelligent, unprejudiced man to decide, whether any means could be better calculated to effect this most desirable change, than annually to bring together, from the remotest parts of our grand confederacy, a large assemblage of the most intelligent, experienced, and zealous of our agricultural brethren. To bring them together, too, as they surely would be brought, solely for the purposes of mutually interchanging their local experience; of mutual consultation as to the best means of improving the husbandry, not of this, that, or the other section, but of our entire country; and above all, for the noble, the patriotic purpose of diffusing to the very extremities of our yet happy Union, that fraternal spirit and cordial sympathy in all each other's general concerns,—the increasing want of which every reflecting man most deeply feels, and which neither the constitution nor the laws of the land can possibly supply.

Mr. Burt's second objection is,—*"the expense"* of the plan. To this, I hope, it will suffice to reply, that none would be subjected to it but those who were perfectly aware of its amount, and voluntarily agree to pay it, in the confident belief that they were contributing a portion of their income which they could well spare, towards establishing a society that, if aided by an agricultural school and experimental farm, would disseminate more rapidly than could be done by any other means whatever, *that* knowledge of scientific and practical husbandry which is more or less wanted in every part of the United States. The attainment of this great desideratum would at once elevate the yeomanry of our beloved country to that rank which their relative importance to our national welfare so justly entitles them to hold; and would go far, very far, towards exterminating forever all those sectional prejudices, jealousies, and groundless dislikes which are at once the disgrace of all who cherish them, and the deadliest bane to our national happiness.

That the foregoing truly patriotic purposes and objects would form the connecting link,—the endearing bond of union between the members of such a national society of agriculture as its friends most anxiously desire to establish, I cannot permit myself for a moment to doubt. But I would most surely oppose it with all my might, could I possibly suppose with the funny Mr. Burt, that the delegates to it would do nothing more than *"get a big dinner, a few sups of good wine; tell and hear some large stories; build a few castles in the air, and return home again."* To this I can only say, that if a sufficient number of planters and farmers can be found in the whole United States, willing to raise and spend for such purposes, *"ten thousand dollars a year,"* which is the sum fixed on by Mr. Burt, as the annual cost of a National Society of Agriculture, I should not question their right to do so, but should certainly never become a member of such an association. The conceit, however, of Mr. Burt, in portraying it, is quite too good for me to desire that any part of the merit should be taken from him. It is well calculated to raise a laugh at the expense of the contemplated society and its projectors, at least among that numerous jest-loving tribe who care not a fig, provided they can indulge their risible faculties, whether it be at something really ridiculous, or at an object of the greatest national importance. Far, therefore, from me be the wish to deprive so merry a brother farmer as Mr. Burt of the self gratulation which he evinces in having excogitated so good a thing as his anticipation of the actings and doings of such an agricultural society for the whole American people, as he has thought proper to imagine that Mr. Robinson and myself would organize and abet, if we had our way. Indeed, I am so great a friend to laughing, rather than crying when we can help it, that I assure our jocular friend, Mr. Burt, he is most heartily welcome to tickle himself and others as long as he possibly can, with the above or any other merry conceit that he can hatch, either against the contemplated society itself, or any of its friends, not excepting myself. If the attempt to organize it should encounter nothing more formidable than such paper-shot, the more that are fired at it the better; for they will probably attract towards it the attention of many who otherwise would hardly know that such a thing was in agitation, and all that the friends of the scheme desire to ensure its success, is, a thorough examination of it in all its bearings upon individual and national interests.

A word or two more, and I have done. After Mr. Burt has fixed it in his own mind, and apparently much to his own gratification, that the members of a national society of agriculture would meet at an expense of 10,000 dollars a year, solely for the purpose of eating, drinking, and making themselves merry with each other's long yarns, and building castles in the air, he proceeds very confidently to ask, if it would not be far better to spend the above sum in the gratuitous distribution of your paper, or some others of the same kind? I entirely agree with him that the latter expenditure would be better, infinitely better. But it so happens that the society which *he* has labored so hard to describe is entirely the creature of his own brain and can never elsewhere exist. Nay, it is so extravagant a caricature of any National Society of Agriculture which possibly could be formed in the United States, that, were any of the true friends of our cause to notice it seriously, they would make themselves even more ridiculous than Mr. Burt has attempted to make them. Should this attempt bring upon himself the ridicule which he has so heedlessly and without any just provocation, aimed at others, he will have none to blame but himself.

I remain, gentlemen, your friend and constant reader,

July 26th, 1841. JAMES M. GARNETT.

Boynton's Straw Cutter.

Messrs. Gaylord & Tucker—I notice in a late number of the Cultivator, a reply to Mr. Jacob Glutz of Marrietta, Pa. referring him to Green's and other straw cutters for horse power.

Will you have the goodness to refer to 5th volume of the Cultivator, p. 220, and look at an advertisement there inserted, of an improved straw cutter for horse and water power. If more information is wanted on the subject, I am prepared to satisfy you by certificates now in my possession that it is not recommended beyond its ability. By adding to your remarks, the straw cutter above referred to, you will perhaps confer a favor upon the community, as well as do justice to the patentee.

Respectfully yours, JOHN BOYNTON.

N. B. A machine can be seen at Mr. Brown's agricultural rooms, State-street, Albany.

South Coventry, (Conn.) Aug. 20, 1841.

Preparation of Lard.

Messrs. Gaylord & Tucker—The following is our mode of trying up lard, of which we make three qualities; that from the intestines, that from the leaf-fat, and that from the upper part of the back-bones. The latter is the *superfine.* So soon as the intestines are taken from the hogs, while yet warm, the fat is rid off and thrown into cold water, where it remains to soak some hours; it is then washed out and put into other fresh water in which it remains until next morning. It is then cut up into pieces not more than two or three inches long, rinsed again and immediately put on in iron boilers *thoroughly cleaned.* The fire is then applied, which must be free from smoke during the whole process of boiling, which should be continued for at least twelve hours. It is very frequently stirred during the boiling, and the bottom of the boiler scraped hard with the sharp edge of the iron ladle to keep the cracklings from adhering and burning, which they are apt to do towards the end of the process if the fire is strong and the boiling rapid. When the cracklings *begin to burn brown,* and the lard becomes clear as water and scarcely any evaporation is visible, the fire should be slackened. The bubbles rising to the top will be as clear as cut glass. Continue the *simmering gently* until the cracklings are quite brown. They never become *crisped*; but although brown and entirely done, will be soft and flabby. The clearness of the lard, the brown color of the cracklings, the crystal purity of the bubbles, and the nutlike scent arising, indicate the end of the boiling. Take the boilers off the fire or extinguish the fire, and when the lard is so cool that you can bear its heat on your finger dipped into it without pain, strain it off into clean tight vessels. Exclude the air; and you will have a nice article even from *gut fat.*

The leaf and chine fat are soaked in water at least forty-eight hours, after being thoroughly washed and cut up into bits not more than cubic inches in size. The frequent agitation and stirring of these in the cold water makes the lard much better. When put into the boilers the water should be carefully drained off, so that as little water as possible should go into the boilers with the fat. Apply the fire, and in eight hours these two kinds, which should be kept separate, will be done. The lard clear as water, the cracklings nut brown and *crisp*, and giving *as they simmer* the sound of rustling dry leaves, emitting the scent of nicely fried pork, and giving off scarcely any perceptible evaporation. Stir very often during the boiling and let no cracklings stick to the bottom of the boiler. For the last hour the *boiling* should be very gentle, *rather brisk simmering* than *boiling*, to prevent burning, which must be most carefully avoided. Cool and strain off, and exclude air as directed for gut fat, and you will have a snowy white, firm, fragrant article that will keep for years without the slightest alteration. Never put *another parcel* into the boilers during the process, and when one parcel is done, have the boilers most carefully scoured and so clean that they will not soil a cambric handkerchief. Much depends on thorough washing, soaking, and agitation in clean pure water before boiling; much on careful boiling and stirring, but most of all on the perfect purity of the boiler. The slightest rancidity, burnt grease or oxydation will impart to the whole parcel of lard boiled in it, offensive or injurious scent, taste or color. Although I have stated the *usual time of boiling*, you must not be governed by *the time*, but by *the indications* mentioned as produced by boiling. These indications must appear, no matter what the time has been, before the boiling or trying up is complete. Leaf and chine lard thus prepared are superior even to the best butter for making pastry, biscuit, all kinds of hard cakes and jumbles. Lard, like butter, should be kept in cool, dry apartments, subjected to as little atmospheric change as possible. In this country we usually keep lard in kegs or firkins of the linden or lime (tilia) tree, containing from 55 to 60 pounds. I however, prefer well glazed stone jars or tin buckets, because they are more impervious to the air. Very truly, gentlemen your obedient servant, JOHN LEWIS.

Llangollen, (Ky.) Aug. 27, 1841.

On Harvesting Grain.

Messrs. Gaylord & Tucker—Observing the remarks in the Cultivator for August, p. 127, respecting the proper time of cutting wheat to prevent its shrinking, having a piece of about four acres of the Italian spring wheat, rather late sowed, I observed it to be lightly struck with rust. I thought it a good opportunity to try the effect of early cutting. I accordingly had about one-third of the piece cut when the grain would have been said to be quite too green, although the sap had filled the kernel, but was easily mashed between the thumb and finger. Fearful of its being too green, I let the remainder stand six or seven days, and cut about half of the remainder, and four or five days the rest; observing the greenest of the first cutting had shrunk the most, I supposed I had made a mistake in cutting too early; but on getting in my wheat, I found the last cutting had shrunk much more than the first. The next question was to account for the difference, why that which stood and became fully ripe in the most favorable weather, should be lightest. On reflection, to me the case is obvious—that is, while the grain is ripening the sap and nourishment is flowing to the head—that when the kernel is full and can receive no more nourishment, and the straw becomes drier than the grain, a reaction in the circulation takes place, and the drying straw draws the sap and nourishment from the grain, which causes the greater shrinkage, but when the grain is cut in the state above mentioned, all circulation must of necessity cease; and I have no doubt but the same principle will apply to Indian corn, rye, barley, oats, &c.

Maysville, N. Y. Aug. 25, 1841. JABEZ BURROWS.

Mott's Agrcultural Furnace Again.

When I gave a notice, last fall, of the above, I did not expect to be called on for any particular information respecting sizes, prices, &c. and had no further interest in the business than to introduce it to the farmers. But having received so many letters of inquiry on the subject, and to save me the trouble of answering them individually, I will, with permission, reply through the medium of this paper.

The one I purchased last fall I continued in use during the winter, and have found no reason to alter the opinion then expressed; but on the contrary, I am more confirmed, and do not hesitate, without qualification, to recommend it, with the late *improvements*, some of which were suggested by R. in the 2d number of the present volume of this paper, *superior* to any thing, for the purposes intended, which I have ever used, or which has fallen under my observation.

Mr. Mott has lately sent me one of the capacity of two barrels, containing the improvements, which consist in casting "points of attachment" or gudgeons, on the rim or sides of the kettle, "so that with a crane or lever" it may be raised out of the casing and the contents emptied out, and to facilitate which a loop or eye is cast on the bottom of the kettle, so that it can be done without burning the fingers. The flange also, has been extended beyond the edge of the casing, so that if water boil over it will not run down the flues and put out the fire.

There was an error in my former communication, which I take the present opportunity to rectify. I said, "one furnace will suit the different sizes of cauldrons, varying from one to four barrels," &c. This arose in copying an advertisement, which referred to the first that was made, where the casing extended only part of the way.

When it is considered that they require only a small piece of pipe to conduct the smoke, they will be found less costly, and take up less room, than those set in brick, when furnace doors, grates, brick, lime, and the inconvenience of obtaining masons, are taken into the account, besides the convenience of lifting off and on to clean the flue or empty the contents.

In answer to a letter I addressed to Mr. Mott, he says—"I have sold them to farmers to boil food for stock—to go to Cuba for boiling sugar—to the upholsters to boil hair—to bakers—druggists—tallow chandlers—to boil and bleach oil—to make starch—to steam and boil wood—to dyers—to the shipwright to boil tar and pitch, without the danger of its taking fire, as it may boil over—many have been sold for washing, and I have sent some on whaling and sealing voyages." "My prices are as follows: for half barrels $11—barrels $18—one and an half barrel $21—two barrels $26—three barrels $35 and four barrels $45. The furnace part is made very heavy, so that it will be very durable."

"I am sending many into Virginia, where they take well among the planters."

They may be obtained of J. L. Mott, 264 Water-street, New-York; G. G. Heermance, 5 Green-street, Albany; Dudley & Thompson, Buffalo, and W. & R. P. Ruser, Cincinnatti.

CALEB N. BEMENT.

Sun Dial.

Messrs. Gaylord & Tucker—Will you allow me a small space in the Cultivator for next month to say a few words about the mode of setting the sun dials you so favorably noticed in your last paper, and one or two other observations regarding them.

The best and most convenient way of setting them is, after leveling the pedestal or plane on which the dial is to be placed, (being particular to get it level in an east and west direction,) then to adjust a clock or watch to the true apparent time, (either by setting it by another time piece known to be correct, or by equal altitudes or other observation of the sun,) and then at 12 o'clock, M. or at ten minutes before or after, to set the dial true, and make it fast to the pedestal by screws or nails.

They can be placed by setting the stile or gnomon true north and south by a meridian line or a compass, but the foregoing method is preferable.

They are accurate for the latitude of this place, (41° 36′) and will be sufficiently so for 150 or 200 miles north of this latitude, and will be entirely correct for any latitude if the dial is inclined in setting, so that the edge of the gnomon that casts the shadow will be parallel with the pole of the earth; in other words, if when the latitude is less than that of the dial, the south side is elevated as many degrees as the latitude is less, and when the latitude is greater, the north side is raised in the same proportion.

Your remark that my manufactory of dials was called into existence by the suggestions of Mr. Walsh, is not strictly correct, as I had been engaged in preparing for making them, for some time before Mr. Walsh's articles met my eye, as will be seen by turning to my note to you in the June Cultivator; but his suggestions hastened the manufacture and I am under special obligations to him for his encouragement and his effort to make them known and introduce them into use.

Kensington, Ct. Sept. 15, 1841. SHELDON MOORE

Comments on the August No. of the Cultivator.

The first article upon which I shall offer any remarks is that under the head of "Signs of better Times." I agree with you in all but the second sign—which is in the following words: "Speculation has had its day, and the thousands who have been ruined, have had time to repent at their leisure. The mass of the nation are convinced that honest industry, and slow and sure profits are far preferable to the hap-hazard and demoralizing influence of such haste to be rich."

It is true that the particular speculations which have ruined thousands *have had their day*; and that the multitude of victims thereof have had full time to repent. But *will they do so*,—at least so far as to be effectually guarded against the first new and strong temptation to speculate in some untried way? Experience, I think, says—no. For although—even ruin itself resulting from too great haste to be rich, may check them for a while, yet all history proves that those whose hearts have once been poisoned by this most destructive passion,—so appropriately called by the Romans,—the "Auri sacra fames," rarely ever recover entirely. Nothing but the early moral and religious education of our whole people, as it should be, can ever save us from it.

—

I believe there are many of your readers beside myself, who heartily thank you for publishing the letter of the English farmer—Mr. John Hannam. Nothing will tend more to strengthen those numerous ties of interest and friendship which should preserve our two nations in perpetual peace with each other, than the frequent interchange of such communications; and whenever needed, I should rejoice to hear that they were published in every state in our union.

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In regard to the proper time of cutting wheat, the very accurate experiments of Mr. Hannam confirm the opinion which, I believe, is now very generally adopted by the best and most experienced wheat growers. The state which Mr. Hannam calls "raw," I understand to be that in which the grain has entirely lost its greenish hue, but will still mash upon being pressed in the hand. And if cut in this state, numerous experiments long ago published in our own papers, prove, that it will not only make better flour, when dry, but will weigh more than that which was not cut until "dead ripe," and consequently is better also for market. But it should not be forgotten, that the proofs of "dead ripe" wheat being best for seed, have been quite as numerous and satisfactory. Indeed, it seems to me pretty well established, that it is still better for sowing, if it be kept until it is a year old. It is said to yield more grain in proportion to straw than newer seed.

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Your correspondent, D. L. of Erie county, N. Y. asks for some information as to the best means of preventing smut in wheat. The kind of smut which he describes is not known in my part of our country. But in regard to that which converts the substance of the grain into a stinking black powder, the general belief is, that if you will suffer your wheat to be "dead ripe" before it is cut, then soak in strong brine, and roll it in lime, no smut will ever affect it. I have witnessed many proofs of the correctness of this opinion.

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Suffer me now to make a few remarks on the communication of your correspondent, "Pearl," of Hinds Co. Mississippi. He will be a Pearl of high value indeed, if he can teach us how to make corn without plowing at all, which, if I understood him, has been done, at least in his own neighborhood. His words are,—"In the driest year I ever saw a crop made, (1832,) I saw corn in a field where a part was plowed, and *a part a plow had never been in*, only a row divided."—"In the plowed part the corn was badly fired,"—in the other part, it was "green to the earth." It is from the words which I have taken the liberty to underscore, that I infer Mr. Pearl knows how to make corn without plowing at all. Now such a mode would truly be a great treasure to all the lazy corn growers of our country; and since it is my misfortune to be one of them, I am particularly anxious to try it in my part of the country; especially since the only plan of the kind that I ever heard of before, most wofully failed with all who tried it. It was sold as a secret by a certain Hibernian, whose name I forget. The price to each purchaser was some forty or fifty dollars, and he actually humbugged a considerable number of very good corn growers in the Ancient Dominion, until he amassed several hundred dollars and forthwith decamped. This, you must admit was quite enough to make me somewhat sceptical, as to the possibility of making corn entirely without the plow. But still it is so great a desideratum, that I am not only willing, but desirous to try the plan mentioned by Mr. Pearl, especially as it seems procurable without money and without price.

Without questioning the gentleman's facts, or claiming to know more about making corn than the "old planter," who acknowledged that he could not account for the firing of the plowed corn, I will venture to offer the following explanation. If the ground had been plowed in a wet state, or not until long after the drouth commenced, then the firing of the corn was an inevitable consequence of the operation. As to his cotton experiment, if the plowed part was the worst, it might have been owing to its having been plowed when the land was in an unfit state; in which condition it is an actual injury to all plants to stir the earth, either with the plow or any other implement. That corn will grow well "alongside of a large log"—is a circumstance which has been seen by many others besides Mr. Pearl. It is simply because the log keeps the earth moist and pliable,—a state absolutely essential to the growth and health of all cultivated plants, which state must be produced by deep tillage, as it would be neither very practicable nor economical to cover our cornfields with logs, especially in the old states wherein timber has become scarce. If Mr. Pearl "cannot see how stirring the earth will make moisture rise," he should console himself with the reflection that it is a misfortune common to us all, not to be able to see any thing which takes place under ground. But if he means, merely that he cannot understand the why and the wherefore, he and all may say the same, even of our own existence, as well as of millions of other facts in regard to which we have no more doubt than we have of our living, and moving, and having our being. But this business of stirring the earth causing moisture to rise, happens to be one among the millions of other facts which are perfectly comprehensible. The process is called capillary attraction, aided by atmospheric heat, which penetrates the earth to a considerable depth, and deeper when it is in a comparatively loose state, than when more compact and hard. Any man who doubts, unless he be one who will not believe his own eyes, may soon convince himself of the fact, by the following very simple experiments: Let him sink one end of a dry string in any vessel of water, and suffer the other end to hang out side. He will soon see,—not only that the whole string has become wet, but that the water begins to drop and trickle from the outside end. Capillary attraction is the cause of it. Next, let him turn two tumbler glasses bottom upwards, and place one over a well, deeply stirred spot of earth, and the other in a hard path. Both will soon show moisture on their inside, but the tumbler over the stirred spot will show a much greater quantity than the other. Both these experiments have been made by thousands, and have always produced the effects here stated. Now, if Mr. Pearl, or any other person can prove that in the latter experiment, the stirring of the earth had nothing to do with causing more moisture to rise in one tumbler than in the other, I can only say that, in my humble opinion, he will be well entitled to rank with Sir Isaac Newton himself in the class of Natural Philosophers.

Mr. W. P. Kinzer of Pennsylvania,—"A Young Farmer" from North Carolina, and Mr. A. G. Alsworth of Mississippi, well deserve the thanks of all who are friendly to the establishment of a National Society of Agriculture. Their advocacy of the scheme will somewhat more than balance the hostile attacks of your correspondents "Northern New-York," from Ballston, and F. Burt of Ohio, who are the only two enemies that have yet publicly avowed themselves. If none more formidable should appear, I think there will be little difficulty in predicting a favorable result.

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Mr. J. R. Moser's humorous account of what he calls "The Skinning System," which prevails in some parts of North Carolina, is a happy illustration of the effects of very shallow culture. But a man has only to travel through some parts of Virginia and Maryland, to find a full match for it. Fortunately, however, for the cause of agriculture, the land-skinners are men who either *will not*, or *cannot* read. There is no hope of their reformation so long as they wilfully continue in this state of deplorable ignorance. But their number is slowly decreasing, and therefore we may reasonably hope—will soon be extinct.

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In Mr. N. Sutherland's enumeration of the various methods by which wheat may be converted into cheat, he has omitted one which I beg leave to add, as I have seen it more strongly recommended than any other I have yet heard of. It is, to have the wheat grazed down by *geese* if they can possibly be procured.

—

Your quotation from "The Tennessee Agriculturist," has something in it so marvellous, that the editor, I hope, will pardon me for asking a few questions. Has he himself ever seen a horned snake? If not, why does he say, "it is true," there is really a serpent so called? No museum I believe, has yet any such curiosity in it. Again, what appearance was it, on the small end of the "six or eight foot pole," struck by a rattle-snake "at the base end," that he saw in "a few seconds" after the stroke, and supposed to be the poison of the rattle-snake? How did he know it to be the poison? Might not the appearance have been caused by something else? I cannot believe it was the poison for this reason. If the viris of a rattle-snake could travel through a green pole at the rate of six or eight feet in a few seconds, would it not be diffused through a human body with equal rapidity? And if so, how could any person who had been bitten, possibly escape death, as they often do in cases where some hours elapse before the usual antidotes can be applied? These considerations induce me to believe that whatever the editor of the Tennessee Agriculturist saw at the small end of the green pole, it could not have been rattle-snake poison.

Commentator.

Culture of Forest Trees.

To Francis H. Gordon, Esq. Tennessee:

Sir—Not having seen any answer to your inquiries in the May number of the Cultivator, for "accurate information on raising chestnut timber from the seed, and red cedar from the berries," I take the liberty of respectfully submitting, that, when a boy, I remember to have often searched for seedlings under chestnut trees, in the spring of the year, pulling and eating the nuts that had germinated after having lain upon the ground through the winter, buried under the leaves. I have noticed that walnuts, hickory nuts, acorns, &c. germinate in the same manner. Taking nature, therefore, as the best guide in these matters, I would say, plant all kinds of nuts in autumn, before drying. Plant in rich soil, for notwithstanding the chestnut seems naturally to delight in poor soils, there is no principle better established in timber growing, than that young trees should always be raised on good land, so as to carry a stock of health and strength with them from the nursery. Cultivate in nursery two years, and then plant out where to stand, six feet apart, early in the spring. It is asserted positively, by experienced English planters, that where the reproductive timbers, as the oak, chestnut, &c. are well managed in this way, they will be larger at seven years old, of nursery culture, and the tap-root cut when transplanted, than at ten years old from seed planted where the timber is to stand.

I have tried, in vain, for two seasons past, to grow chestnut trees by engrafting the scions on oak roots. A neighbor of mine had sent him from New-York, last year, two thousand, I think, of the sweet or Spanish chestnuts, about four hundred of which have succeeded. They came boxed in sand, which is the most approved method, I believe, of packing the seed, and this must be done when fresh gathered. Nuts and acorns intended for seed, must never be suffered to become dry or even wilted.

Relative to the red cedar berries, I am unable to say whether they vegetate the first season, or like the holly, hawthorn, and others, not until the second. If on trial you shall find they do not come the first season, I would suggest that they be treated after the manner directed by Philips, in the Sylva Florifera, for causing the berries of the holly to vegetate the first season, which they will never do unless when they have passed through the stomach of fowls. He says:

"We have therefore only to give them a similar fermentation by art to that which nature gives them in the body of birds, to enable us to raise plants in one year instead of two. For this purpose, take a bushel of bran and mix it with the seeds in a tub, and wet it with soft water, and let it remain undisturbed for ten days, when it will begin to ferment. It must be sprinkled occasionally with warm water, to keep it moist, and in about thirty or forty days, the heat of the moistened bran will put the berries into a state of vegetation fit for sowing. March is the best season for sowing, and September, (in England,) the proper season for transplanting young hollies, but in cold moist soils they may be safely transplanted in the spring. Mr. Evelyn says, he has raised hedges four feet high in four years, from seedlings taken out of the woods, which should induce us to make more frequent trials of raising fences of this prickly plant."

To the farmers of this prairie country, there is no subject that commends itself more forcibly to their notice than the growing of valuable timber and the rearing of live fences. I, for one, am endeavoring to make some advances in this line, but labor under great embarrassments for want of choice timber seeds. Should a National Agricultural Society be formed, I think there might be established a general seed depository of native and exotic plants of great utility. Another legitimate object would be the publication of a concise manual on planting. This business of cutting down and destroying timber is to have a limit, and the whole country will be eventually renovated, like the British Isles, with a choicer growth. It is wise in a national point of view to begin when young, for our live oak is not inexhaustible, and our rail roads and canals every where demand more durable timber in their construction and repairs. Our numerous steamboats too, particularly on the rivers of the west, plying night and day for weeks against the current, should be constructed of better timber than grows here now. In fine, there is no use to which timber is applied, from the common uses of fencing to those of ship building, that would not be greatly subserved by giving to the subject of timber planting that consideration it justly merits, as one of the concomitant concerns of agriculture.

M. L. KNAPP, M. D.

P. S. I see, by referring to page 90, June No. of the Cultivator, that the editors in answer to Hugh Gaston, have given the process for cultivating the cedar from berries. I will not, however, withdraw my quotation from Philips, as he is good authority, and his receipt may be useful in reference to seeds which require two years for germination.

May I avail myself, Messrs. Editors, of this opportunity, there being no depository of timber seeds, or system of exchange, to solicit information through your widely circulated periodical, from farmers of various localities, where any of the undermentioned species of timber may grow, and who will engage to put up for me, and deliver at some point of snipment, the seeds of the chestnut, beech, American poplar, white and red cedar, white and pitch pine, American larch or hackmatac, hemlock, holly, osage orange or box-wood, white mulberry, and the hedge shrub called pyracantha. I am anxious to obtain all of these the coming autumn, and to test the growth of the evergreens, particularly on these prairies. I think the above, added to what I have and can obtain in this locality, to wit: the different varieties of oak, the hickory, ash, maple, black and white walnut, pecan, cottonwood, linden, black and honey locust, elm, sycamore, coffeenut, buckeye, hackberry, catalpa, cherry, black, Chinese and Alpine mulberry, white thorn, and Judas tree, will make a grove of mixed woods, worthy to grace a prairie; and I will be under particular obligations to you, Messrs. Gaylord & Tucker, and those who through your columns, engage to aid me, besides paying for the seeds and holding myself bound in courtesy to answer exchanges.

Middletown, Ill. August, 1841. M. L. K.

Mr. Prentice's Farm--Short Horns, &c.

Mr. L. Tucker—While spending a day in your good city of Albany, a short time since, you were so kind as to invite me to ride with you to view the beautiful farm and country house of Mr. Prentice, two miles below. What I there saw, savored so much of improvement in all that tends to exalt our agriculture, as well as of good taste in embellishing the rural resting places of our opulent men, that I shall be excused for trespassing a moment on your columns in noticing it.

I can only speak of the charming villa and farm of Mr. P. by remarking, that it is in all respects such a spot as a gentleman of wealth, good taste, and of strictly *utilitarian* notions, would select for a country residence, where he could at his ease and leisure enjoy an almost unbounded, yet well defined and delightful landscape, surrounded with all the luxurious appliances by way of buildings, garden, orchard, park, and farm, which even a wide ambition would desire, and where, I hope, he may long enjoy the intelligent and sensible pleasures which he has already drawn into his possession. I was charmed with the grounds, the fruits, and the flowers, which the politeness and kind attentions of the owner pointed out to us, and more than usual with the beautiful landscape which ever spreads abroad from the crowning hills of your glorious Hudson. But what most engaged my attention was the noble herd of

Improved Short Horns,

which Mr. Prentice has for the past five years been collecting, principally from importations of his own, at great expense and labor, from England. His herd now consists of between thirty and forty as fine animals as can be found, I venture to say, in any herd of an equal number in the United States.

They were in excellent condition, which was the more surprising, that there was scarcely any feed in the pastures; and he assured us that they ate nothing besides the scanty herbage growing upon them.

Among so many beautiful animals, it is difficult to remember names, and I took no notes; but I cannot omit to name one individual and her produce, that struck me as a remarkable instance of the value of a fine and fortunate cow. His "Matilda," if I mistake not, seven years old, with her six *heifer* calves and *their* produce, exhibit the most beautiful as well as remarkable specimen of an entire Short Horn family that I have witnessed. Few animals can equal them in excellent points, and still less exceed them in the ripeness, maturity, style, and fashion of their appearance. Several of the cows, Mr. P. informed us, were extraordinary milkers, one or two giving for weeks together, as high as thirty-two quarts of milk per day, a quality, however, characteristic of the Short Horns. Mr. P. has been eminently successful in crossing his fine bred cows with a stout and vigorous bull, "Leopard," from the Patroon's stock of Short Horns, which as a herd, although somewhat coarse, are of great size and most vigorous constitution, and making a capital cross with finer and high bred stocks. This experiment Mr. P. has tried with great success, and I shall be disappointed if some of the best animals in our country do not date their origin or descent from his herd.

Among the cows, were several that were imported during the last two or three years, from some of the best stocks in England, and Mr. P. informed me that four more are now on their way from thence to his farm. It is needless to remark on the high public spirit of such efforts at this peculiar time, to improve at great expense, the stock of our country, when sales of high bred animals are so remarkably dull, and the spirit of improvement seems almost ground under by the extraordinary depressions of the times. Few individuals, indeed, are so patriotic as Mr. P. under *such* circumstances; yet I trust he will find his reward. It is owing to the exertions of such men, although often ridiculed by the many, unthinkingly, that our agriculture has for some years past made such ample progress.

The seekers of fine stock should visit the herd of Mr. Prentice, and as he offers a part of his herd for sale, among which are several likely young bulls, at low prices, they will hardly fail of suiting their wishes if the acquisition of good stock is their object.

In addition to his cattle, Mr. P. has a choice flock of South Down Sheep, imported from England by himself, and equal to any that I have seen. These bid fair as a mutton sheep, and the producers of a good farmer's wool, to take the place of all others on the *common* soils of our country. I also noticed several excellent Berkshire sows and pigs which have been bred on the farm for several years, and of a superior quality. These fine animals, I am pleased to say, are superseding all other breeds of swine, among the *truly* intelligent farmers of the United States.

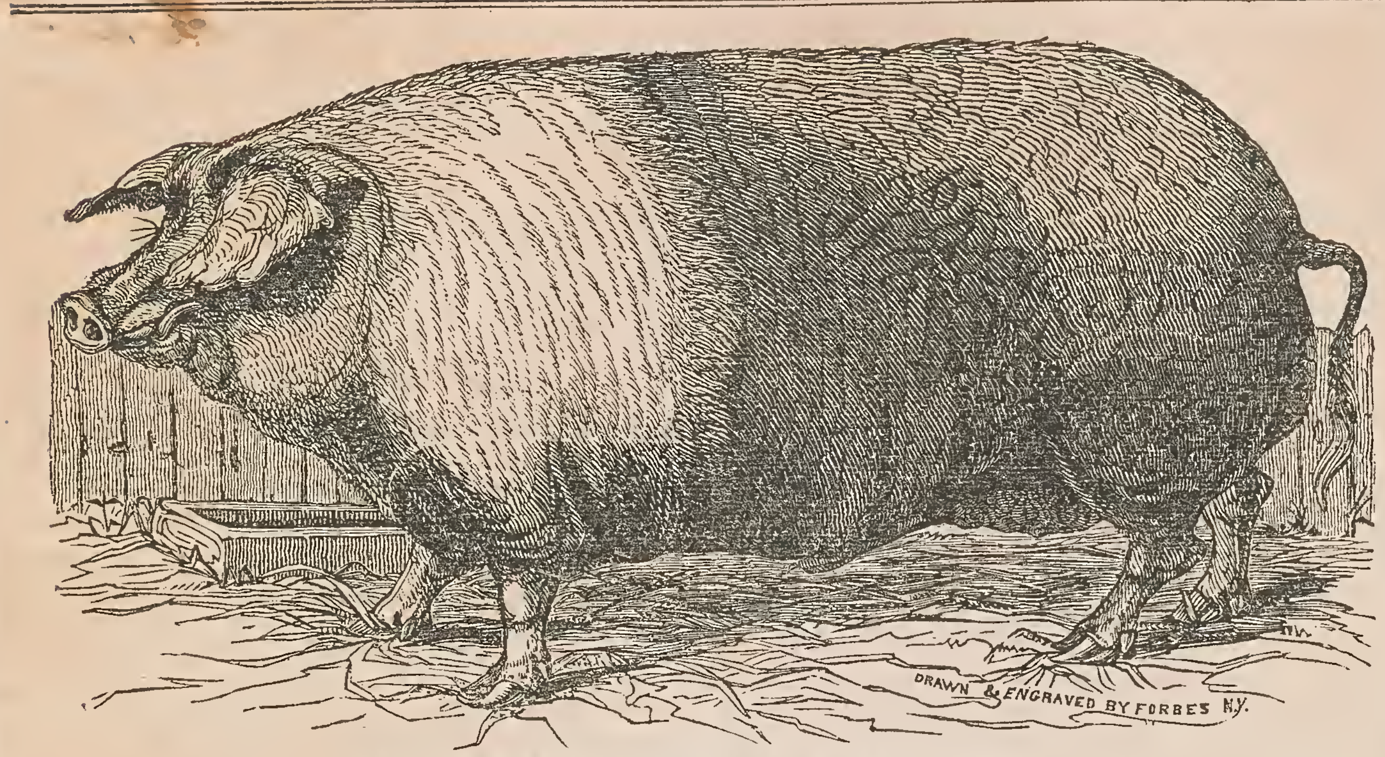
Leaving Mr. Prentice's, we rode on to take a view of the

Hereford Cattle,

of Messrs. Corning and Sotham. These were in fine condition, although suffering, as were Mr. Prentice's, from short and dry pastures. Having seldom seen any of this kind before, they struck me as being a fine and superior breed of cattle for beef, and for laboring purposes, and well adapted to a prolific grass region where the *rearing* of cattle is solely an object. The cows of this breed *cannot* to appearance, be great milkers; or very superior ones; and although they are beautiful in form and look, and a few of them possessed extraordinary points of development in excellence, yet *as a whole*, I prefer the well tried Short Horns, certainly thus far proved to be the best milking cows in the world. Still I will not condemn the Herefords. As working oxen, the Hereford bullock must be an animal of great honesty, strength, and beauty; and for beef, and aptitude to fatten, perhaps has no superior; but the absence in them of that most desirable of all, the milking quality, enhances in my estimation over any others the improved Short Horns.

Our return from this pleasant recreation brought us into your "Cultivator" office, where I could have spent many pleasant hours in conversation, and in looking over at my leisure your capital collection of agricultural works, plates, magazines, pictures, models, &c. and which I commend to all lovers of good agriculture, as they visit Albany. In due time, I hope to see you on your own farm, as every agricultural editor should be, surrounded by your own superior stock and husbandry, and giving practical lessons monthly to your readers, derived from *your own* experience.

L. F. A.


DRAWN & ENGRAVED BY FORBES N.Y.

MR. STARR'S WOBURN BOAR.—[Fig. 82.

Messrs. Editors—Agreeably to my promise, I send you a cut of the Woburn Boar in my possession, which took the first prize at the last fair of the American Institute in New-York. This animal was imported from Woburn, in England, and is considered by many judges of stock, to be the finest specimen of swine in the United States. Two members of the committee, to award prizes on stock at the last Fair of the American Institute, informed me since that they considered him a perfect animal, and could not point out a fault. By the way, these two gentlemen are not interested in any particular breed of swine. His measurement at twenty-two months old, was 7 feet and 8 inches long, 6 feet 2 inches in girth, and 2 feet 8 1-2 inches high; and he was supposed to weigh nearly seven hundred pounds. From the great difficulty of obtaining swine of this breed in England, few have been imported, and they are not extensively known in this country.

The Complete Grazier, (a work on live stock, published in London) says of the Woburn breed, "This is a new variety, introduced by the late Duke of Bedford; its size is large, and color various. These swine are well formed, hardy, kindly disposed to fatten, attaining nearly twice the size and weight of other hogs, in a given period of time."

Rees' Cyclopædia describes them as "a hardy, well formed, prolific sort, rising quickly to a large weight."

An importation of Woburn swine was made several years since to Long Island, and they were nearly all destroyed by the burning of the barn in which they were kept.

A gentleman in Connecticut had obtained some of that stock, and not knowing the name of the breed, called them Norfolk thin rind; they have been crossed with native stock, and are very celebrated in that section of the country. One was slaughtered last fall, fourteen months old, which weighed, when dressed, four hundred and eighty pounds. The steward of the Duke of Bedford, last spring informed Captain Morgan, of the London line of packets, that the Woburn hogs became so fat as to be objectionable on that account. In this country, where Indian corn is used for making pork fat and solid, instead of barley and buckwheat, the objection of the Duke's steward does not hold good, and if any farmer does not prefer fat hogs, he is welcome to propagate the Landpike and Alligator sort.

If any of the readers of your paper, wish to obtain any pigs of the pure Woburn breed, they can be supplied by application to me.

A considerable number of this stock have been forwarded to some of the Southern States, and have given great satisfaction.

CHARLES STARR, Jr.

Mendham, N. J., August, 1841.

Silk Business in Ohio.

Messrs. Gaylord & Tucker—I am advised by our friend Judge Lane, of this place, and others who have witnessed our operations of late in feeding worms, and manufacturing sewing silk, to communicate to you for publication, a plain statement of facts, from our commencement in this business, until the present time. The improvement that we have made is considered of great importance to our country. The article accompanying this, with the certificates, were first intended for the Cultivator, but owing to the anxiety of a number of individuals in this place, it was published for the first time yesterday, in one of our newspapers. I forward you a copy, wishing it to be published in your next number.

Norwalk, Ohio, Aug. 25, 1841. J. B. TILLINGHAST.

This may certify, that four years have passed since I first commenced feeding the silk worm, and have annually increased my stock of trees to half a million. Notwithstanding my success the three past seasons exceeded my expectation in this new branch of business, until the present season, I found some trouble and difficulty and much anxiety in the last stage of the worm before winding, which has led me to adopt a new mode of feeding.

In the first place, in the old way of feeding a large crop of worms, directly after the fourth moulting, so much food is necessary, that much hurry and confusion is unavoidable. And in the second place, much labor is required in frequent changing, in order to keep them clean and healthy. And, thirdly, the difficulty of preparing, in proper season, suitable fixtures for making their cocoons agreeable to the natural instinct of their species. In taking all these difficulties into consideration, I finally came to this forcible conclusion;—unless some material change should take place in the management of the worm, in the manner of feeding, &c., this important branch of industry could not well be carried on to much advantage in this country; therefore I ventured the following experiment:

I feed my worms as formerly in our nursery room, as we call it, about 20 by 40 feet, upon thin board shelves, two and a half feet by four, until they revive from their fourth moulting; at which time they are removed upon those shelves into the cocoon room with the litter that has accumulated since the third moulting. The said cocoon room is constructed long and narrow, 140 feet long and 18 wide, and as low as will admit of convenience. The frame of this building consists only of hewed posts and rafters, set six feet apart. The posts are well set in the ground and the common earth constitutes the floor. The feeding frame is four feet wide, to admit the feeding shelf the longest way, and extends the whole length of the room, except intermediate spaces for storage of foliage. This room is intended to feed, by cutting whole trees, from one to six feet in length, by laying them upon the worms with their foliage. The feeding frame is suspended from the rafters about three feet from the ground, and one tier of frames on each side, two feet from the wall, which leaves six feet alley through the middle, sufficient for a hand-cart to pass with foliage. Two tier of side boards, hung with leather hinges the whole length of both sides constitute both doors and windows, and admit of both light and air; the lower one is hung close to the ground and opened for the passage of the litter, which is very soon removed with a hoe or rake. The feeding frame is made of sawed stuff, one and a half inches by three, and moveable slats of about one inch square, placed at suitable distances to support the trees and worms as they rise from the shelf below, which is supported by buttons: as soon as the worms leave the shelf, it is let down to the ground with the litter. The worms are left with a free circulation of air, and their excrement falls away from them to the ground. The trees are crossed when laid on, which makes a most suitable place for their winding, and remarkable for their being formed single, and less floss than any other fixture I ever saw.

Actual experience has demonstrated the present season, that two hundred worms can be well fed upon every square foot of this frame, and if the whole should be filled at once we should have 200,000 to finish their work every two weeks, and the whole feeding and attendance may be conveniently done without hurry or any difficulty with the help of two men and two boys, ten years old, to pick leaves, gather cocoons, &c.

I believe it to be a safe and prudent calculation, from what we have done and are now doing, with the help we now have, that in three months' time 1,000,000 of worms may be well carried through. As we have had worms hatching about every day since we commenced the present season, and consequently some winding continually, we are quite certain of success with every brood we hatch, if we know our eggs to be from a healthy stock and in good condition. This is all important to every silk grower. We are daily witnessing the great contrast. Eggs from selected cocoons of our own raising have done remarkably well through the season, from hatching and winding, and those we obtained, that were not selected, more or less died in their periods of moulting, and some would die just before winding.

We have good reason to believe that the principal cause of many failures may be attributed to the care of selecting or manner of preserving. We are now selecting our best cocoons for our own stock of eggs for the next season, and contemplate to feed 2,000,000 from five acres of trees.

From the commencement, I have calculated to reel our own cocoons as soon as practicable for the manufactories.

In visiting reeling establishments, where water is heated by steam, I thought I observed the difficulty attending it, by heating with charcoal in furnaces. I concluded to try another operation, by making a wooden box of 2 inch plank, perfectly tight, by making use of sheet iron for the bottom. Said box is 4 feet long, 2 feet wide, and 1 foot deep. This constitutes the boiler, set on a brick arch, with a flue connected with the flue of the chimney. My small filature consists of three of the Piedmontese Reels and one spinning machine of three spindles, which, with the boiler and apparatus for heating water in the reeling pans, are all situated in a common dwelling room of 16 feet square. I have a wooden trough, made of 2 inch plank, 9 feet long, 16 inches wide, and 10 inches deep, raised 2 feet from the floor, tin pans with partitions fitted to the inside of the trough, of convenient length for each reeler. A two inch tin pipe is started from the top of the boiler through the plank and is carried over the top to the bottom of the trough, running four times the length, under the pans, and out at the bottom through the ceiling outside: also, another pipe for letting off the water from the trough.

The same water may be used several days without changing; and in about one hour from the time the fire is started under the boiler, the water is heated by steam the right temperature for common reeling, and continues to keep its temperature with very little tending. It answers the purpose intended admirably. In five weeks from the time the eggs are hatched, the silk is converted into sewing, not much inferior to the best Italian. We expect the foregoing improvements will soon be patented.

We are very much gratified with the token of approbation received from our numerous visitors, and yet would be pleased to wait on all as far as our time will allow, and spare no pains to impart information in this business, as far as we find ourselves in possession.

Norwalk, Aug. 16,1841. J. B. TILLINGHAST.

All communications by mail, for information, must be post paid.

Farmers, cut your Fodder.

Messrs. Gaylord & Tucker—As the great mass of farmers in this vicinity appear to be ignorant of the advantages of making use of cut feed for their stock, I will give you the outline of my experiment this season, hoping that it will be the means of inducing many others to make a trial. It was sometime in February last, that I procured an improved Straw Cutter, (Gibson's Patent) and having a quantity of rye straw, and knowing I should be short of hay, I concluded by making the best use I could with my straw, I could with little labor make a saving equal to a ton of hay, worth $15; and thus save more than one half the expense of the machine this season. But the result is much more favorable, for in addition to my rye straw, I had about three tons of coarse fodder, consisting of different proportions of swamp hay, rye, wheat, buckwheat, and pea straw, to this mixed mass I added as I cut it, about one-fourth part good hay. I fed this to my cattle, (15 in number,) just as it came from the machine; they fed on it with a good relish, appeared satisfied, and rather improved in condition. Instead, therefore, of saving only half the expense of my machine, I have saved more than the first cost, ($20,) and had I obtained one last fall, it would have saved more than $50.

I verily believe that one-third more stock might be kept on farms generally by our would be economical farmers turning to good account all their coarse fodder. By obtaining a good machine, I have saved three tons of good fodder which otherwise would scarcely have been worth three hundred of good hay.

To my team horses, one span, I give 20 quarts ground oats with as much cut straw as they will eat; they prefer this feed to clear oats, and are in first rate working order. The length I cut my straw, &c. is three-fourths of an inch, although I see no objections to cutting it longer for cattle. Brother farmers, are not these things worthy your attention? Will you try the experiment? Purchase some good machine; every farmer ought to have one. RICHARD FISK.

Bennington, Vt. May 15, 1841.

Hydraulics for Farmers.

In the 47th vol. and 7th page of this paper, I made a communication, setting forth the great "Importance of water in cattle yards," and gave a description for a simple apparatus for conveying water from a small stream, lying 50 feet below and 40 rods distant from my house. Further experience only convinces me of its great benefit and importance; and the object of this communication is to introduce a new and very superior double action forcing pump, manufactured and erected for me, by Messrs. Tucker & Richmond, of Troy, N. Y. who I most willingly recommend to those persons who feel desirous of procuring a good and substantial article for raising water, either by water, wind, animal or manual power.

They are also about manufacturing a new lift pump for wells, which, from the specimen shown me, in course of completion, appears to be a very efficient, and from the manner of its construction I should think, durable one. The working part is of metal, and placed in the well below frost.

The forcing pump I first put in operation was cheap and simple; yes, too cheap, and so simple it was rather troublesome to repair when deranged. One difficulty was the connexion of the pump with the discharge pipe, which was effected by means of a leathern hose secured by winding a cord tight around it, instead of being coupled with screws. The simplicity of winding and unwinding the cord when it is necessary to take it up and put it down again is tedious and troublesome, and the hose laying constantly in the water requires to be repaired from three to four times in the course of the year.

Before engaging my present pump, I made a visit to Winthrop Phelps, Esq. in Chatham, who has in successful operation, a very superior apparatus, which is also figured and described in the 11th number of the 7th vol. of this paper. This apparatus was furnished by D. L. Farnam, Esq. of New.York, the inventor of the pump, but was erected by Mr. Richmond, one of the above firm, who was then in the employ of Mr. Farnam. Mr. Phelps awards to Mr. R. the credit of arranging and erecting his apparatus; is well satisfied with its operation; does not regret the expense, and would not be deprived of it for any consideration whatever—in short, would hardly know how to get along without it. It has been in operation nearly two years and never been out of order or ceased to work well, until a few days before I was there, when he was obliged to put new leathers on the piston, which he said took him from fifteen to twenty minutes.

I was delighted with its operation and surprised to find how small a quantity of water, when properly applied, (all of which would apparently pass through a two inch tube with but little pressure,) it requires to force water 35 feet high and 400 feet distant. The water wheel is 9 feet in diameter, and the buckets 12 inches wide. The pump is worked by means of a crank, which is attached to the end of the shaft, and the whole so well adjusted, and works so still, that, standing outside of the building, one would not mistrust it was in operation.

The pump I have now in operation is of the same size and construction as the one of Mr. Phelps, and is worked by a very poor wheel, being only two feet and eight inches in diameter—buckets twelve inches long with a head of only three feet, (all the water that runs on to the wheel passes through a round tube three inches in diameter,) and throws up about 2000 gallons per day into the reservoir, from which my house, stable and poultry-yard, as well as my cattle-yard, sheep-yards, and piggery, are abundantly supplied, and the waste water passing off into a lot which was heretofore without water.

It has been suggested that lands favorably situated may be irrigated by means of one of these pumps.

C. N. BEMENT.

Three Hills Farm, Sept. 4, 1841.

Beast's Tails.

There are several chapters on the subject of sheep, over the signature of L. A. Morrell, in the June number of the Cultivator. I am pleased with his theory of "humanity to brutes," and commend him for his "merciful kindness." Every operation necessary I would have performed in the most tender manner. But as to his cutting off lamb's tails "as short as possible," &c., "to prevent the trouble of tagging," I protest against it as unnecessary and useless. I keep sheep, and the wool that grows on their tails will pay all the expense of tagging for the year. I would ask Mr. Morrell whether it was the same "God of nature that provided the animal for our use and benefit," that gave the brute a tail to brush the flies and secure the tender parts from the burning sun and wintry blasts? If it was, for Heaven's sake, for decency and humanity sake, let the creature wear its tail. "What looks more ungenteel and absolutely vulgar than a sheep" without a tail? Witness the horse, with a long flowing tail provided by a kind Providence to protect, balance, and form a useful part. Then see him with one-half of it cut off, and the other part of it cut half off in several places, leaving a trembling stump—for what, except to gratify a jockey's fancy? Then see how it detracts from his comfort, beauty and strength. See the handsome curl in the hog's tail! It is the only sure sign he exhibits that he is thriving; but many are cut off to gratify a superstitious whim. C. BLISS.

Norwich, Ct., July 31, 1841.

Relief of Choked Cattle.

Messrs. Editors—Having by accident discovered a way to relieve cattle when choked by attempting to swallow too large a piece of ruta baga, or other roots, I thought I would communicate the process of relief to the Cultivator. Some two or three years ago, my beef cow got choked with a turnep, and having tried the usual mode of pouring soft soap down her throat without the desired effect, I concluded to butcher her before the turnep had done its work; she had fallen down before I could get a knife ready, so I took hold of the fore leg to turn her in a better position for opening the veins in the neck, when I perceived that she was relieved and soon got up. I attributed it to drawing the fore leg forward and out from the body.

I have recommended the same process to my neighbors, some of whom have tried it with complete success. I would suggest that each fore leg be pulled alternately.

Yours respectfully, DAVID F. LOTT.

Newton, N. J. August 16, 1841.

The New-York Market.

MONTHLY REPORT FOR SEPTEMBER.

(*Prepared for* The Cultivator.)

ASHES.—The demand for Pot Ashes has been during the past month, very brisk, and the receipts continuing to be light the market has been very firm. In the early part of the month both sorts, Pots and Pearls, were at $5·75, but the small quantities arriving and the favorable news from England induced buyers of Pots to advance their pretensions, to which holders were forced to submit, while Pearls remained stationary at $5·75. Within a few days, however, an increased demand has been experienced for Pearls, which has induced higher demands from holders, and sales have been made of considerable parcels at $6·00, at which price the market is fully established. Pots have steadily advanced to $6·25, and at that price all the receipts are freely taken for export. The news from Liverpool by the last steamer was favorable, the market was firm, and sales had been made of 700 or 800 bbls. Montreal Ashes at 28s. 6d. for Pots, and 29s. for Pearls. The market here, in consequence of these advices and of the limited arrivals from the interior, has still a tendency to advance, and should not the stock be largely increased, the coming month will no doubt see Ashes at a higher figure. It is a very unusual circumstance to find Pots selling at a higher rate than Pearls. The export to the 14th inst. were, Pots 457 bbls., Pearls 151 bbls. The amount received from the opening of the canals to the 18th inst. was 23,460 bbls. Stock on hand 18th inst., Pots 563 bbls., Pearls 1460 bbls. The stock of Pots is small, almost beyond precedent.

COTTON.—In the early part of the past month each successive arrival from England brought accounts of a more and more disastrous state of affairs in relation to this great staple, and the market here, in consequence, was very heavy and had a continued tendency to decline. Previous to the arrival of the Great Western, however, the market acquired a considerable degree of firmness, and sales were to considerable extent at very full prices. The advices by that steamer were considered rather favorable, and the better feeling prevailing in the market continued to be felt until the arrival of the Caledonia with advices of a decline of 1-8d. ℔ lb. at Liverpool. This checked operations, and buyers demanded lower rates. Holders, however, declined submitting to a reduction, and as lots were not pressed on the market and sellers evinced no intention of accepting the bids made, buyers were forced to come into the market at previous rates. The business since the arrival of the Caledonia has not been heavy, but the prevailing quotations show no decline of the prices current before her news was made public. The receipts from the 1st to the 22d inst. have been 2023 bales. The exports from the 1st to 15th inst. 516 bales. The total export from the U. States since the 1st Oct. last, 1,299,242 bales. Same time last season 1,847,108 bales. Same time year before, 1,063,997. The current rates are, Upland and Florida 7 @ 10c., Mobile 8 @ 11c., N. Orleans 7 3-4 @ 11c. The estimates of the coming crop differ very widely, but there is little doubt it will be a large one, probably not far from 1.900,000 to 2,000,000 bales.

FLOUR AND MEAL.—The receipts of Flour from the interior have the past month been somewhat larger than during the previous month, and during the first two weeks the market exhibited little firmness or activity. The sales were merely to supply immediate wants of the trade, and for shipment to eastern ports at $6·65 @ $6·69 for Genesee, and $6·50 @ 6·56 1-2 for Ohio. For a day or two previous to the arrival of the Britannia, the market became more firm and considerable parcels changed hands at $6·75 for Genesee, and $6·50 @ $6·62 1-2 for Ohio and Michigan. Early on the 3d inst., before the advices by the Britannia were generally known, sales were made to some extent at the prices of the day before, but subsequently when the news became disseminated that the English harvest was in a very precarious condition, and that large orders had come out by the steamer for Flour at high rates, holders advanced their pretensions to $7·50 @ 7·75 for almost every description, and during the prevalence of the excitement several sales of Genesee took place at $7·50, and of Ohio at $7·25 @ 7·50, mostly on speculation, as the English orders were limited at a much lower rate. This feeling, however, soon subsided, and the market closed heavily. Later advices from England state that the harvest will be much more favorable than was anticipated, and consequently the demand for foreign bread stuffs will not be so extensive as was supposed. These advices have had the effect of depressing our home market, and prices have gradually declined until they reached a lower point than at the opening of the month, Genesee and Ohio selling as low as $6·25. Within a few days, however, a reaction has been experienced to some extent, and there are now no sellers of Genesee at less than $6·25 @ $6·50, and there appears among the receivers to be not much anxiety to make sales at that rate. Ohio is selling at $6·37 1-2 @ $6·45, Michigan $6·25 @ $6·37 1-2. The demand is fair, but, as is usual on an advancing market, the sales are not very large. A parcel of 2000 bbls. Genesee was taken on Monday last for export to Liverpool at $6·37 1-2. The freight was obtained at 1s. 6d. ℔ bbl. Until we get decisive accounts of the extent of the demand to be expected from Great Britian for bread stuff, it will be difficult to make any plausible conjectures of the prospect of the Flour interests during the coming season. These accounts we shall soon get. Southern Flour has been very inactive during the month, and the market has been very lightly supplied. There has, however, been an improved demand within a few days, and the market is firm at $6·50 @ $6·62 1-2 for Georgetown, Howard-street and Brandywine. The market is almost entirely bare of other descriptions of Southern. The stock of Brandywine is fair, but it is small of Georgetown and Howard street. Corn Meal and Rye Flour have fallen off slightly, and are very dull. The former in puncheons, Brandywine, has been sold at about $15·00 or $15·50, and in bbls. could probably be bought at $3·75. Jersey in bbls. brings $3·50 @ $3·62 1-2. Rye Flour is dull at $3·50 @ $3·62 1-2.

GRAIN.—The quantity of Wheat offering since our last report has not been large, and the price has gradually advanced. The last sales (on Tuesday last) were of 1700 bushels prime old Genesee at $1·50 for shipment, 4,500 do. at $1·47, and 1200 new Virginia, for milling, at $1·40; another parcel offered at the same time was subsequently sold in Albany. It is doubtful if these rates could be obtained for further lots, as Wheat at $1·50 makes Flour cost $7·50 ℔ bbl. There is a fair demand for Wheat for shipment to Nova Scotia and the West Indies, but at the present high rates shippers generally are unwilling to operate. The receipts of Corn during the month have been more plentiful, and this fact, with the cessation to a considerable extent, within a week, of the demand for the supply of Eastern ports, and the disinclination evinced by distillers to come into market at the present low rates for Whiskey, has produced a heaviness in the market, and holders have found it difficult to make sales at a reduction of 3 to 5c. ℔ bush. Sales of Northern have been made at 76 measure, and it is freely offered at 74 weight. Jersey sells at 74 @ 75 weight. The market has been bare of Southern for some time past. We shall probably begin to receive new corn about the last of October. Northern Rye has continued during the month in brisk demand with a light supply, and has for some time been firm at 75c. @ 75 1-2 at the boats, and 76 1-2 delivered. We have received several small parcels of new Rye, and about the 1st Oct. it will arive in considerable quantities. Oats have been in steady demand without material variation. The supply is just now abundant, and the demand has fallen off. We quote the Northern dull at 48c. for new, and 50c. for old. There has been no Southern Oats at market for some weeks. The season for Barley is approaching, but no estimate can yet be formed of the price it will open at.

PROVISIONS.—There is but little change to notice in these articles. The immense stock of Pork which had accumulated here to an amount never before known, has been somewhat reduced, but not to an extent sufficient to affect prices materially. The demand for export is still limited, having been from the 1st to 15th inst. only 1,564 bbls. The market since our last has remained steady at $8 @ $10 for Ohio Prime, and Mess $8·37½ @ 10·37½ for N. York State, and $9 @ $11 for Lower Country. For home consumption the demand, both for Pork and beef, has been languid, and the latter has suffered a slight decline. Sales Prime have been made at $5·50, and Mess at $9·50, for City inspection. Country inspection has been sold at a lower rate. For Lard there has been lately a brisk demand at improving rates, but within a day or two the inquiry has been less active. Prime Western brings in bbls. 7¼c. and in kegs 7¼c. @ 7¼c. Northern brings 8½c. @ 9c. Pickled Hams sell at 5c. @ 5 1-2c. Smoked do. 4c. @ 8c. and Shoulders 3 1-2c. For Goshen Butter there is a good demand at 20c. and the receipts are not large. For the common quality 14c. @ 16c. is obtained. The shipping qualities are at 11c. @ 12c. The stock is fair, and prices will hardly be sustained during the next month. Cheese has advanced, and good sells freely at 6c. @ 6¾c.

RICE.—The high rates at which the article has been held at the South, has, to some extent, prevented shipments to the North, and the drain upon the stock here for shipment and consumption, has reduced it very low. The demand is good, and through the month the rate has remained firm at $3·87 1-2 for first best. Most holders now demand $4, and some small sales have been made at that rate.

SEEDS.—The inquiry for Clover for export has entirely ceased, and for home demand the article is out of season. The market however, is firm at 9 1-2c. @ 10c. ℔ lb. The stock is not large, and the rate is above the views of buyers. Timothy has declined in consequence of a light demand, and is freely offered at $18 @ $20 ℔ tierce. The quantity of Flaxseed arriving is very small, and in consequence of the rise of 15c. per gal. in Linseed Oil, which has taken place recently, sales could probably be made at $10·50 @ $10·75 ℔ tierce to the crushers. The arrivals of Foreign have of late been trifling.

TOBACCO.—The market does not exhibit much animation, and the operations are mostly in small parcels, and at auction. At the last auction sales 15 hhds. low quality merchantable Virginia brought 4 3-4c. @ 5 1-2c. averaging $5·08. Twelve hhds. Kentucky, part unmerchantable, brought 4 3-4 @ 5 1-2c. averaging $4·96, and 6 hhds. do. merchantable, brought 5c. @ 8 3-4c. averaging $7·17. For Manufactured there is but a very limited inquiry for export, and for home use the sales are only in retail lots. The quotations are, Richmond and Petersburg 5c. @ 8c.; North Carolina 5c. @ 6c.; Kentucky 5c. @ 10 1-2c.; Manufactured, No. 1, 12c. @ 15c.; No. 2. 10c. @ 11c.; No. 3, 8c. @ 12 1-2. Do. 32 lumps 16c. @ 20c.; Ladies' Twist 16c. @ 20c.; Cavendish 10c. @ 40c.

TALLOW.—For City rendered, the Butchers are asking 9 1-2c. but sell occasional lots at 9c. to go out of the market. Other descriptions sell freely to manufacturers on arrival at lower rates. The market is bare of Foreign. The stock in the hands of the Butchers is very large, but they are firm at 9 1-2c.

WOOL.—There is not a very active business doing in this great staple, but a demand exists to a fair extent. Primes are not very well sustained, and in the Country a slight decline has been submitted to. It is estimated that the consumption of Wool would have been four or five million pounds greater in the New-England States, had not the drouth stopped much of the machinery. The stock here is rather large. We quote Saxony Fleece 45c. @ 48c.; Full-blood Merino 40c. @ 43c.; half and three-quarter Merino 33c. @ 35c.; Native to quarter 25c. @ 30c.; Superfine, pulled, 36c. @ 40; No. 1 do. 34c. @ 36c.; No. 2 do. 25c. @ 28c.

CATTLE.—Beeves.—The supply on the last market day was larger than for some time past, and prices in consequence declined a shade. Fourteen hundred and fifty head were offered, including 100 left over from the previous week. Twelve hundred head were disposed of at $5 @ $7, averaging $5·75, being a decline of 25c ℔ 100 lbs. on the previous week. The average sales in the first of the month were at $5·87 1-2. Cows and Calves.—Sixty-five, mostly small and inferior, were at market, and fifty were taken at $25 @ $33 @ $38 each. Sheep and Lambs.—There were upwards of 4,000 head brought to the stand, most of which were sold at $1·50 @ $4·50 for Sheep, and $1 @ $2·75 for Lambs, according to quality.

HAY.—There has been a fair supply, and the rate has been firm, with a tendency to advance. Loose, by the load, is selling at 91 @ 106c. ℔ 100 lbs. In the early part of the month, the rate was 81 1-4c. @ 100c. ℔ 100 lbs.

New mode of making Cheese.—A Maine paper gives the following account of a new process of making cheese, which promises well where only one or two cows are kept, as it has been "repeatedly tried with flattering success:"—The milk is set in the ordinary way every morning, and the curd is separated from the whey as well as it can be with the hands. It is then pressed compactly into the bottom of an earthen (or stone) pot, and covered over with several folds of dry linen or cotton cloth. By this process the remaining whey is absorbed, and when the cloth becomes saturated, it is removed and a dry one placed in its stead. In the course of a day and night the whey is removed as effectually as it could be done by pressing. The next morning the milk is prepared in the same manner, and the curd is packed closely upon the top of that prepared the day previous, and the same method pursued in separating the moisture. This process is to be repeated till you have a cream pot full of cheese. The labor is much less than in the old method, and the care of it afterwards comparatively nothing.

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Corn Oil.—A late number of the Niles (Michigan) Republican says,—"We have been burning in a common lamp, for the last few weeks, oil extracted from corn, a quantity of which we received from B. A. Ward, of Berrien, who manufactures the article. It gives a clear, beautiful light, and burns longer than the common whale oil, and emits no offensive smell. On the whole, we should think it better than any kind of oil for lamps." We hope this oil was not obtained from a distillery. We have seen oil so obtained that burned finely, but its production in this case was too intimately associated with woe and misery to afford pleasureable sensations. If the oil can be obtained from corn without this drawback, it would be a desideratum for the country.

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Cure for Burns.—An application of an ointment made of soot from the chimney, and oil, hogs' lard, or almost any fat that is free from salt, is found to be one of the best remedies for burns. The soot should be of that kind which is pure and hard, and be thoroughly incorporated with the lard. If the burn is extensive, the management will be easier if the ointment is spread on strips of cloth, rather than a single piece. No application other than a renewal of this ointment will be necessary. We have known some bad cases cured with this preparation, and it should be generally known as a valuable medicine.

Notices to Correspondents, &c.

We acknowledge the receipt, during the last month, of communications from James M. Garnett, (dated in July,) Solon Robinson, S. W. Bartlett, Charles Starr, jr., C. N. O., Sheldon Moore, A Friend to Good Stock, J. W., J. M. Weeks, A. Huyck, A Reader, S. Denison, C. N. Bement, O. Cardin, B. M., W. J. D., F. Minor, E. Link, M. E. Merwin, Joseph Coe, J. N. Keeler, John Lewis, A Friend to Southern Planters, T. Hudson, Commentator, J. L. Bowman, J. B. Tillinghast, Richard Fisk, (dated in May,) D. F. Lott, J. Burrows, D. L. Dodge, Wm. Anderson, F. D. Huntington.

Acknowledgments.

During the last month we have recived,

From Geo. C. Thorburn, Esq., New-York, "*The Journal of the Royal Agricultural Society of England*, part II., vol. 2," and the last No. of "*The British Farmer's Magazine*," for which, as well as for many similar favors, Mr. Thorburn will please accept our thanks.

From Dayton & Saxton, New-York, a new edition, just issued by them, of Prof. Hitchcock's "*Elementary Geology*, with an Introductory Notice, by Dr. John Pye Smith."

From Wiley & Putnam, publishers, New-York, the first American edition of "*A Treatise on Sheep*, with the best means for their Improvement, General Treatment, and the Treatment of their Diseases, by Ambrose Blacklock."

From Thomas Affleck, the editor, a copy of "*The Western Farmer and Gardener's Almanac*, for 1842."

From William Blurton, Esq., of Field Hall, Uttoxeter, England, copies of his Essays on "*Steam Plowing*," and on "*Milking*," for which he has our thanks.

"*The Mark-Lane Express*," London, from the editor and publisher, to whom we are indebted for the regular weekly numbers of that paper in exchange for the Cultivator.

From C. P. Bosson, editor Yankee Farmer, Boston, "A Short and Simple Letter from a *Conservative Beekeeper*." For sale at his office in Boston, and by Geo. C. Thorburn, New-York—price 12 1-2 cents.

From John Townsend, Esq., of this city, half a dozen ears of *Dutton Corn*, raised on his farm near this city, at least equal to any we have ever seen.

From Wm. H. Sotham, Perch Lake Farm, samples of the *Potato*, mentioned in his letter in the last No. of the Cultivator.

From G. Churchill, Esq., Ridge Prairie, Illinois, Seeds and Leaf of the wild *White Hollyhock*.

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CATTLE SHOW AND FAIR.

Of the New-York State Agricultural Society,

Held at Syracuse, Sept. 29, 30, 1841.

The 29th and 30th days of September, were proud days for the State of New-York, commencing, as they did, a new era in our agricultural career; giving a well founded hope of many succeeding and still more triumphant gatherings of the bone and muscle of our country; and demonstrating to all the wisdom of that legislation which has so successfully called this and so many other societies, having the same great object (the promotion of agriculture) in view, into a prosperous existence. Nothing could more satisfactorily show the interest which such anniversary exhibitions create, than the multitude of gratified spectators, variously estimated at from ten to fifteen thousand, principally farmers, from almost every county in the State, as well as the assemblage of distinguished agriculturists and other gentlemen from other States of the Union. Considered as a first Show and Fair of the Society, an experiment as it were, the meeting was an eminently successful one, although in some respects it cannot be doubted that succeeding ones will be superior.

In making the preparations for the Fair, too much praise cannot be bestowed upon the committee of arrangements at Syracuse, particularly Messrs. Burnet and Baldwin, whose exertions and efforts to do justice to all during the two days, as well as in the preliminary proceedings, were well directed and untiring. The same spirit was evidenced by the public spirited citizens of Syracuse generally; and pleasant associations in the minds of those who for the first time have visited that flourishing city of central New-York, will doubtless long remain. The pens for the exhibition of animals were erected in a beautiful grove near the court house; and the court house itself was thrown open for the reception and exhibition of agricultural implements and products, and specimens of domestic manufactures. The number and variety of these things, however, was such that the halls allotted to their use were found insufficient, and utterly unable to accommodate the crowd of visitors who wished to inspect and examine them.

On the day previous to the opening of the Fair, a train of 25 cars, filled with choice animals from the vicinity of Albany, and from the river counties, left Albany for Syracuse. The counties around poured in their animals, implements and products, and on the opening of the Fair on the 29th, Syracuse presented a scene of gratified interest, and a thronging population, never witnessed, unless during the immense mass meetings of the political parties at that point in the autumn of 1840. The concourse of farmers and mechanics, the producers of wealth, and the proud examples of the real dignity of labor, was unexpectedly great; and with these came the amateur farmer, the professional man, and all who felt an interest in the advance and prosperity of agriculture. The weather, during the two days of the Fair, was such as to prevent in a great measure the attendance of the ladies, although enough were present to show that in every thing that regards the public welfare, man may be sure of the cordial support and approbation of woman. The numerous and beautiful articles presented for exhibition, the evidences of female skill and industry, were much admired and elicited deserved commendation.

The first day was principally devoted to the examination of animals, implements, and articles presented. That as a first effort, some little irregularity and confusion should have taken place, that the committees should not have been as perfectly organized as they might have been, and that some mistakes in not properly noticing some animals or implements at the proper time, should have occurred, is not surprising, or to be wondered at; but the fine manner in which the whole came off, and the strong and general expressions of pleasure and satisfaction from all, showed that such mistakes were not permitted to mar the feelings, or disturb the harmony of the occasion. The number of animals on the ground for exhibition was great; and taken in connexion with those of the Onondaga County Society, which held its meeting at the same time and place, the collection has been rarely equaled at any Fair hitherto held in this country. We may remark here that great discrepancies appear in the reports of the proceedings furnished for many of the most prominent journals of our country, as to the numbers of animals present. These differences are accounted for by the fact that some give only those claiming the premiums offered by the State Society; others includ in their estimate those presented to the county society for premiums; and some embrace all that were shown at the Fair, whether claiming premiums or not. We may here remark too, that the patrons of the Onondaga County Society did not in general come forward as fully and strongly as they might and would have done with their fine animals and agricultural products, had they not relied on the State Society for the principal interest of the two days.

Our host of the Syracuse House, found his powers of providing food for the multitude, pretty well tested, and amply and honorably did they sustain themselves. Not far from twelve hundred partook of his splendid farmers' dinner on the first day. J. B. Nott, Esq. President of the society, presided, and after the many good things on the table had been liberally proved, in a few well timed remarks he introduced to the company that eminent western agriculturist Solon Robinson, Esq. who was present, and who is so favorably known as the pioneer in that great undertaking, the formation of a National Agricultural Society. Mr. Robinson at once responded to the call, and in a speech of some fifteen minutes fixed the attention of the hearers, by his well timed allusions, and happy illustrations. The Hon. Micah Sterling of Jefferson county, long a Senator from that district, and now well known as an agriculturist, being called upon, next addressed the company as follows:

Mr. President, and gentlemen of the Society:—An agricultural society has been organized in the county of Jefferson, and its prospect of success and usefulness is very fair. About 300 farmers have already joined it—they have raised between four and five hundred dollars—they have held their first cattle show, which went off remarkably well—they distributed premiums to the amount of $384.

When the law was first passed appropriating a sum of money for the encouragement of agriculture, I had great doubts as to its expediency, and feared that evil rather than good would be its result. Indeed I looked upon it as little else than a wanton waste of the public money, and had repeatedly, while a member of the Senate, voted against the passage of such a law, not from any intrinsic defect in the law or its policy, but because I had been convinced from experience, it would do no good to vote away the money of the people to help them "who would not help themselves;" that the farmers were not awake to its importance, that public opinion was not prepared for it, that the practical agriculturists would not organize societies under the law, or if societies were established, it would be, as it had been heretofore, by a few theoretical, public spirited men, calling themselves farmers, but really not working men—that such societies would flourish for a while, make a show or two, and then die away for the want of sound practical farmers to support them, whose honor and whose interest it was to keep them alive; but who had heretofore, from one cause or another, shown an unaccountable apathy in contributing time and money to the support of these societies. That his own county of Jefferson had shown a striking example of this fact—a society started there at an early date, and as long as it was supported by the mind and the purse of such excellent and eminent men as its worthy President, James Le Ray de Chaumont, that noble Frenchman who devoted his life to doing good, aided by such men as Gen. Jacob Brown and others, the society flourished; it gave a character to the farming and the stock of the county, and every thing went on admirably. The people and the farmers flocked to the cattle shows and fairs, and were delighted; they were pleasant and delightful holydays for the farmers, their sons and daughters; but when money was called for to pay the expense of the premiums, &c. the practical, hard working farmers, with some noble exceptions, were nowhere to be found—they had gone home and *forgot to leave their dollar* to help pay the expense. In a few years, God in his inscrutable wisdom, removed some of these men by death—poverty overtook others, and the society, left to the guidance and support of the farmers alone, soon dwindled and shortly expired.

Having seen the whole operation of this thing, I had little faith that any societies would succeed, established upon similar principles and having similar objects in view.

But from the indications which have been exhibited, since the passage of this law, in the county of Jefferson, and from the numbers, and the zeal, and the intelligence I see collected around me, I have changed my opinion, and think the prospect is now bright and cheering; that the law will prove beneficial, and that the county and state societies will succeed, as the real farmers show new life and vigor, and act as though they were resolved to unite their energies and place their own profession *in honor*, where it is *in fact*, among the most useful, happy, healthy and respectable occupations of man.

There are a variety of reasons which make me believe that a great and most beneficial change has spread over the state within the fifteen and twenty years past. The farmers of New-York have greatly increased in knowledge within that time; their sons too have come forward with more zeal, more time and more intelligence than their fathers possessed. The circulation of information is much more general, more active, and of a more useful nature than it was. Our agricultural papers scatter much light and knowledge in all parts of the state, and are inculcating the right spirit into the farmers and their sons—they are no longer ashamed to be called farmers, and they begin to see and to feel that they are on the right road to health, to happiness and to fortune.

Our rich men begin to see that they had better make farmers of their sons than lawyers or doctors, if they want them to live long and be blessed with comfort, health, a clear conscience and a competent fortune. It begins to be well understood, that here, as in England, our land owners are destined to be the great men of the nation, its defence, its support, and its honor. Let them be well educated, and they are sure of this; for against them there are no deeply rooted prejudices, but they are now greatly excluded from office, and have to yield to lawyers and doctors, from the inferiority of their education, not of their moral or mental worth.

It is a truth too, beyond all doubt, and as gratifying as it is true, that the number of wealthy and independent farmers has greatly increased within the last quarter of a century.

I can only speak particularly of my own county, where it is a blessed sight to travel among the farmers and see how in a short time things have changed their appearances for the better—how the log cabin has yielded to the beautiful stone, or brick, or wooden mansion, the barn of poles to the stately edifice of boards and timber, the front yard of dirt and filth to the neat lane and shrubbery; and how the whole country has assumed or is rapidly assuming that appearance of neatness, beauty, high cultivation, and comfort, which all American farmers, with honesty, industry and economy, can soon attain to. I dare say other parts of the state are equally changed for the better, and equally sustain the great cause of cultivation and improvement. Add to all this, many men of wealth and taste and science, have devoted their time, and a portion of their wealth, within a few years past, to the importation and rearing of the first order of stock, and while it is hoped they are increasing their ample fortunes, they are becoming the true benefactors of the country, and take an active and prominent part in sustaining the cause of home industry and agriculture.

It is needless to mention their names. One such man makes himself sufficiently conspicuous by the good he does and the gratitude and respect he commands.

The result of this increase of wealth and intelligence among the farmers, is, that they become more patriotic, more social and more communicative. They are not like other professions—they have no professional secrets—on the contrary, they take a pleasure in communicating whatever will interest, or please, or be useful to their neighbors—if they have a better breed of pigs, cattle or horses, they do not strive to monopolize it; and if they have discovered any thing new in the cultivation of the earth, they disclose it to their neighbors with pleasure and pride. This makes them desire to congregate together, exhibit what they have to show, and communicate what they have to teach and enjoy, at least once a year, the "jubilee" of the farmer. In a country like this, where there are so few holydays of any sort, how reasonable and proper this is, especially since the days of rum drinking are gone by, and they collect and part like temperate and rational men.

Society must arrive at a certain pitch as to knowledge, wealth and comfort, before this can take place. Nor does it detract in the least from the merits of the "pioneers" of the wilderness. Their means were too stinted and their occupations too severe to do any thing but to provide the immediate necessaries for themselves and their families.

It is also a truth not be lost sight of, that we have now a fund of experience, partly growing out of the existence of the old societies, partly from the natural course of events, to direct us in the management of these societies, which we did not formerly possess. One great evil we met with in those days was the mode in which premiums were distributed. It seemed on some occasions like a mere scramble for money, instead of reputation; the consequence was that we saw little of that disinterested spirit which should characterize alike the disappointed and the successful candidate; and heart burnings and bitter rivalships frequently grew out of it, which misrepresented and impugned the motives of the judges and operated unfortunately.

More or less of this will perhaps now exist, but if good judgment and great precaution are used, most of it can now be avoided, the more easily from the superior intelligence which now prevails. Another way to avoid it is to gratify as many competitors as possible, and for this reason make the premiums more extensive and general, and give them more weight in character than in money.

With all these advantages arising from this increased wealth and progress in knowledge, if the great body of our hard-working farmers will lend their aid in time and money (and but very little from each is needed,) the society is sure to succeed, a noble impulse will be given to the cause of agriculture, and the beneficial operation of the law be felt in all branches of the community. Wealthy and public spirited citizens will be found among our rich merchants and professional men of age and leisure, who will take pleasure and pride in seconding the efforts of the farmers; and thus an institution will be handsomely sustained, calculated to add greatly to the wealth, power and reputation of the State of New-York.

One great advantage, if no other, will grow out of these annual meetings. It will convene together in one great social body, all the leading and efficient friends of of agriculture in the state. These meetings will be composed of a high order of men, of congenial feelings and occupations.

Their views will be similar, their objects will accord, their meetings will be social and friendly, they will meet in good cheer, act in concert, and part with the kindest feelings. Can any thing but unmixed good come out of such an association? Party spirit and sectarianism will be banished, and no interest will claim attention but such as a gentleman and a christian can conscientiously support. Such meetings will serve to bind together our republic, and would be useful, even did they not give a new impulse and an additional character to the most useful, necessary and healthy of all occupations. The scene before me of hundreds, of happy, intelligent, independent farmers, collected from all parts of the state, not to engage in political strife and quarrel about office, but met together for their country's good, consulting how best to promote the farming interest, with no jarring interest, and no heart burnings of any sort but good will and benevolence smiling in every countenance, is one of unalloyed pleasure and satisfaction.

The county societies will send their delegations, and thus you will have combined in one body, on any anniversary of the society, an immense mass of intelligence, congregated from every section of the state, bringing into social and happy and profitable intercourse, those who would otherwise be strangers; and who by their proceedings will collect and embody an abundance of useful information, not only upon farming but upon other great interests of the state. One subject will pre-eminently claim their attention, for in traveling to this place it will be deeply impressed upon their minds. I mean that of "internal improvement." *This should never be lost sight of*, and depend upon it, if our legislators do, the people will not, and if you who have already had your rail-roads and canals will not help others, we will knock at the doors of your legislative halls till you shall hear us,—yes, and aid us too, especially when you are about to have from the public lands $480,000 a year, and an enormous income from your canals and salt duties. As farmers have no professional secrets, as they delight to communicate all their discoveries and improvements, and exhibit the best specimens of their skill and their flocks, these meetings cannot be otherwise than useful, as well as most interesting and agreeable. As the occupation of the plow is of no party, as the times are those of temperance, as farmers are characterised by the love of order as well as zeal for the public welfare, being identified with the soil, as they justly realize their responsibilities, being the foundation on which rests the happiness and subsistence of all, there is no danger of any sort to be apprehended from these gatherings, but that they will come and pass off as the jubilees of the farmers always do, with the greatest order and decorum.

If husbandry is made respectable, as it ought to be, it will serve to check one of the greatest evils that bears now heavily upon the community—the rush of our young men into the learned professions, which are already filled to the overflowing, especially that of the law, which, under the present wretched course of legislation, of making litigation cheap, is starving this once honorable and most useful profession.

Yet it is thought to be the high road to office and honor, and ambitious fathers and weak mothers are for making their sons great lawyers and eminent judges. Infatuated policy! The greater share of them never rise higher than rspectable pettifoggers. Many of them get disheartened, sink into dissipation and idleness; the best—yes, the very best lead lives of labor and anxiety, drag through a life of dyspepsia and "blue devils," and if they arrive at rank and office, they are made perfect slaves of, with half pay, and get more curses than blessings from their constituents.

The business of the farmer knows no such anxiety, is accompanied with no such risks, it is quiet and peaceful. Make it intelligent, and you open to it the first and highest honors of your country; there are no prejudices against it as against that of the law; there is no limit to it; it is broad and extensive enough for all; a rich and broad domain, the vast possessions of the government lie open to us—it invites to cultivation and improvement. If our rich men will plant themselves in the country, and educate their sons to the care and knowledge of the farm, they would see the land smiling around them, their children be honored in their industry, the occupation of the plow be elevated and respected, their sons prove healthy, robust and strong men, and they and their descendants become, as the land-holders are in England, the great men and strong props of the government. Hard and incessent toil is not essential in any farmer, nor any toil equal to the exhausting unhonored labors of the lawyer and mechanic—a few hours a day devoted to the regulation and superintendance of the farm, affording a most wholsome and agreeable exercise to the body, is all that is requisite in the independent farmer—reading, writing, &c. will pleasantly and profitably occupy the rest of the day.

To my brother lawyers in particular, would I recommend this kind of life as the happiest and the best. They are capable of making good farmers, and when advanced in life they are fit for little else; the strife and raivalship of the law are neither suited to their own temper nor taste. They are often, if not generally, first and foremost in every good work. Let them set the example in this. I regret not meeting more of them on this occasion. It is said to be dull times for them—three hundred are said to have cleared out from the city of New-York. I hoped to have met some of them here—the country and the plow will receive them with open arms, and give them plenty of honest business. There is room enough for them all. I offer my own experience as a slight and hmble instance of what may be easily effected—I have had the pleasure of superintending a farm—I have succeeded to my entire satisfaction—my farm is growing up under my own eye, yearly developing new beauties and new sources of income and improvement, and if it does not make me a richer, it makes me a healthier, and I trust a better man. In fact dyspepsia and the blue devils immediately left me. I am conscious that the occupation is an honest one; I know it is a healthy and pleasant one; and as it interferes with no man, it is a peaceful one, and all nature tells me it is one that God will bless and prosper.

L. F. Allen, Esq. of Buffalo, followed Mr. Sterling, and deeply interested the audience by his happy combination of theory and practice, his plain straight forward manner, his reflections and illustrations, evidently the result of experience, and the earnest manner in which he enforced the facts presented. We are gratified in being able to state that no wine or spirits was provided, and the event showed that they were not needed to enable farmers to talk or hear. This is an example which we hope will be followed on all similar occasions.

The beautiful cattle and horses on the ground were evidently the lions of the first day, and the continued throngs of spectators around the pens that contained the fine animals of Sherwood and Prentice, Corning and Bement, and the warm expressions of admiration they elicited from the observers, must have been gratifying to the spirited proprietors. There was also another point of attraction which drew crowds on this day. There were three yoke of fat cattle on the ground, two from Onondaga county and one from Ontario, which would of themselves have constituted no inferior exhibition, weighing as the six animals did, not far from eighteen thousand pounds. It is much questioned whether any part of the United States can show their superiors. They were in truth mountains of flesh. One of these fine premium cattle, the property of Mr. Rust of the Syracuse House, has since the Fair been slaughtered, and the proprietor, with characteristic liberality, transmitted one quarter of the superior beef to Albany, to be sold for the benefit of the State Agricultural Society. Live weight of the ox slaughtered, Sept. 25, 2,750 lbs.—Weight after he was dressed, including hide and tallow, 2,169 lbs.—His quarters alone, weighed 1,784 lbs.

On the evening of the first day, the large Presbyterian Church was filled to overflowing, to listen to an address to the Society from President Nott of Union College. The address was what was to have been expected from the occasion, and from the man. The subject was a noble one, "The Dignity of Labor," and beautifully and forcibly was it illustrated and treated.

The hearty applause with which the address was received by the audience, spoke most eloquently their approval of the patriotic and dignified truths to which they had listened. But of the address, it is unnecessary to say more at present, as we hope before long to have the pleasure of laying it in extenso before our readers, as a committee, consisting of Messrs. H. Baldwin of Syracuse, M. Sterling of Watertown, and I. Smith of Albany, were appointed to request a copy for the press.

On the second day the trial of plows to test their draft, and the plowing match under the direction of the Onondaga Society, came off, and as was to have been expected, excited much interest among the numerous farmers in attendance. The ground selected by the committee of arrangements, was on the farm of J. H. Johnson, Esq. on the great plain of the Onondaga valley, and near the southern boundary of the city corporation. The ground was hard and dry, falling to pieces when turned up by the plows, rendering it difficult to make a clean furrow, or show the precise manner of the working of the implements. The effort among the plowmen, to the spectators, seemed to be to do the work well, rather than quickly, and considering the nature of the ground plowed, the work in general was done in a way that proved the skill of the plowman as well as the goodness of the implements used. That frequent defect in plows, and in plowing, was, however, in some instances observed here. Instead of the bottom of the furrow being left flat, owing either to a defect in the implements or the holding, the land side of the furrow was cut much deeper than the other, thus giving an uneven or notched appearance to a cross section of the furrows, and failing to stir the ground equally to the same apparent depth. Most unfortunately for the competitors in the plowing match, or the comfort of the crowd of spectators, a cold drizzling rain was falling, which materially interfered with the performances. For the result of and trial of draft we must refer to the report.

A new plow, presented by Messrs. Ruggles, Nourse & Co. of Worcester, (Mass.) to the senior editor of the Cultivator, was on the ground at the plowing match, and though not offered for the premiums, it excited much notice from the excellence of its materials, manufacture, and just construction, as well as for the perfection and ease of its work.

The show of agricultural implements was most satisfactory. The number of thrashing machines, horse-powers, straw-cutters, fanning mills, plows, harrows, cultivators, barrows, drills, cradles, sythes, pitchforks, horse-rakes, &c. &c. was very great, and exhibited much mechanical ingenuity and skill. These, with the farm products, horticultural articles, and domestic manufactures, formed a collection of much interest and variety. Such was the dense mass of spectators which filled every room and avenue of the court house, that it was with no little difficulty the committees obtained access during the hours of exhibition; and it was evident that a proper arrangement of all the articles would require a far more spacious building.

At 2 o'clock the rail-road depot, in its large extent, was filled to hear the premiums announced, and so many of the reports of the several committees as were prepared. The decisions in general appeared to give stisfaction, although in some instances, as usual in such cases, many of the spectators may have differed from the judges, and the numerous premiums awarded were paid to the successful competitors in gold or plate, at their option, it being generally understood that the Benton mint drops are considered unobjectionable "*per se*," and never injurious to the farmer.

About nine hundred persons sat down to dinner at the Syracuse House on the second day, and as on the first day, the feast was enlivened by several excellent speeches from gentlemen present. Among these were Mayor Van Vechten of Albany; Mr. Garbutt of Monroe; Mr. Patterson, ex-Speaker of the Assembly; Mr. Baldwin of Syracuse; Mr. Sanford, President of the Onondaga Agricultural Society, and several other gentlemen.

We are happy to be able to give the remarks of Mr. Baldwin on this occasion, and regret similar reports from the other speakers have not been furnished.

The President of the Society, Joel B. Nott, Esq. having, in a very complimentary manner, alluded to the action of the committee of arrangements, and the manner in which the Society had been received by the citizens of Syracuse, H. Baldwin, Esq. one of the committee of arrangements, rose and remarked:

I could wish, Mr. President, that the pleasurable duty of returning thanks to the Board of the New-York State Agricultural Society had fallen into abler hands. It is sir, no unmeaning compliment when I assure you, in behalf of the citizens of Syracuse and the inhabitants of the county of Onondaga, that we are indeed greatly obliged to you for establishing your first Agricultural Fair, under the late law appropriating the funds of the State in aid of our cause, in this village—and we are the more happy if we have in any way succeeded in our arrangements in giving satisfaction to the board. If in anything we have come short of our duty, it has been owing to inexperience and want of judgment, and not from any want of disposition on our part to please. We hope sir, these visits may be annually repeated, and aided by the light, which the experience of this year affords, we will endeavor to make our arrangements more perfect in future; at all events we will at all times give you a most hearty welcome. From the allusion, sir, which you were pleased to make to our own county agricultural society, it may be expected that I should say something on that subject.

It is but a short time, sir, since the organization of our present society—this is our third fair. It may not be uninstructive to dwell for a moment upon some of the difficulties we had to encounter in getting our society under way.

It is now about six years since, when a few friends united in a public call of an agricultural convention. To our great mortification, when the time arrived, not more than eight or ten were found in attendance, but, sir, those eight or ten individuals were true men—we had enlisted in the cause and were determined not to be discouraged or driven from our purpose, but to "go ahead."

We adopted an address and passed a set of resolutions which had been previously prepared, and gave to our convention, upon paper at least, all the appearance of a pretty formidable one. We resolved among other things to memorialize the legislature then in session, and procure an act of incorporation. This was done, the act was passed, but owing to causes not necessary to detail, two years were allowed to pass away before we organized. But, sir, we did organize, established a fair for that very year, which was well attended, and from that day to this, have been in the full tide of successful experiment.

I have dwelt thus long on this early history of our affairs in order to show our friends that however discouraging matters may appear in the beginning, they should not be discouraged or give back, but press on, and success will ultimately crown their efforts. And in order to show too, how important results flow from small beginnings. If I am not altogether misinformed, this very exhibition is owing in part to those causes, trifling as they are. At the period to which I have referred, the New-York State Agricultural Society was itself struggling for existence—but a few devoted friends were then at work and alone sustaining that institution. Almost ready to despair, and looking abroad through the dim distance to catch a view of their future prospect, they beheld with joy our beacon light, small and feeble as it was—it inspired them with new hope—they saw that here at least were a few congenial spirits, laboring in the same cause with them, and they resolved that they would go up and worship at the same shrine together. Oh, sir, it is a glorious cause—next to disseminating the principles of our holy religion, there is perhaps no way in which man can benefit his fellow man so much and effectually, as in this. And here sir, you will pardon me for a moment if I briefly advert to a very few of those distinguished individuals who have passed from among us, but who when living, gave it the aid of their talents, character and influence.

At the head of this list, in our own state, stands the name of the much and universally lamented De Witt Clinton. Always the patron of science and the arts, while governor of the state, he at an early period invited the attention of the legislature to the subject, and by his recommendation our first societies were established. His hand first put the ball in motion, and although at times partially arrested in its course, it is still rolling on from the momentum which he gave it, accelerated, it is true, by those who have succeeded him. In his successful endeavors to develop the resources of the state, he not only increased its produce but opened a high way to market. His name and memory will ever be gratefully cherished by the farmers of New-York.

Next in order of time, but perhaps not in influence, stands the name of the late Jesse Buel. He established The Cultivator and an Experimental Farm—by his writings in the one and his labors on the other, he has given an impulse to agriculture which is now, and will continue to be, felt by generations yet unborn—he was indeed a public benefactor.

Many other illustrious names might be added to the list, but I forbear—time will not permit. Let us not, however, while we thus bear our grateful testimony to the dead, be altogether unmindful of the living; there is one at least who has honored us by his presence and services on this occasion, whom, you will all agree, we should not pass over in silence.

If it be true, sir, as we have this day heard, that that individual who causes two blades of grass to grow where only one grew before, is entitled to the appellation and rank of a public benefactor, what praise is due, and what shall be said of him whose whole life has been spent in multiplying not matter but mind—in implanting new ideas—in inculcating and instilling moral, virtuous and religious principles—in unfolding the mental faculties—in leading with parental care, thousands of the youth of our country (some of whom now grace the highest stations in our land,) through all the mazes and labyrinths of the abstruser sciences and the higher departments of literature and the arts, and who, (in his sphere,) like the sun of heaven, sheds his rays and benign influence upon all surrounding objects—dispelling the gloom—warming the heart—quickening the pulse and enlightening the understanding. Such an individual, sir, though now absent, has honored us by his presence on this occasion; and great and glorious as it is, such is his elevation of character, that he has rather honored it, than been honored by it. An individual, sir, whose name will be remembered and revered as long as christianity has a disciple—morality and virtue an advocate—genius an admirer, or science and the arts a votary. I need not tell you that I allude to the Rev. Doctor Nott, the orator of the day.

There is another distinguished individual whose absence on this occasion we all regret, but whose name, being closely associated with the object of our pursuit, I beg leave to mention. An individual who for nearly twenty-five years, presided with signal ability in one of the highest tribunals in our state, and, from the high character of whose judicial decisions, is favorably known not only to the state, but to the civilized world.

In the full enjoyment of all his faculties, he has, since retiring from the bench, which he so much adorned, occupied his time to some extent in that primitive, rational and delightful employment, agriculture—enlightening and adorning this, as he has every other pursuit of his long and useful life. In this hasty sketch, brief and imperfect as it is, you will all recognize Chief Justice Spencer, and will all unite with me in the sincere aspiration, that the sunset of his days may be as calm and serene as his eventful life has been long and useful.

There is yet another individual who though absent has manifested his attachment to our cause, by sending hither his two sons, and constituting them by the payment of the required sum, members for life. An individual, sir, who, when the entire western portion of our state was a dense and unbroken forest, plunged deep into its bosom and located himself upon a large tract of its best soil, since which time he has remained its successful occupant. He is emphatically one of the pioneers of the west. His ample domain, embracing more than 30,000 acres, is in a high state of cultivation—his granaries groaning under their burthen—his fertile vales and meadows—his beautiful lawns and woodlands, his rich pasturage, and his flocks upon a thousand hills, are the rich reward of nearly half a century of persevering, successful agricultural toil. Distinguished alike by his equanimity of temprament, blandness of manner, and benevolent disposition, he has long since received the well merited appellation of "The Gentleman Farmer," "The Princely Agriculturist." I need scarcely tell you, that I refer to Mr. Wadsworth of Geneseo. These are the men, and these the living examples we want to elevate and aid our cause.

I have thus, sir, briefly referred to some distinguished names among both the dead and living, to show who are and have been our co-workers, and what individual effort will accomplish.

But, sir, there is yet another cause still more powerful, to which I beg leave for a moment to refer. I mean the press—the public press—that mighty Archimedian lever of power—that matchless engine which stirs and lifts up the whole body politic at one poise—that speaks with a thousand tongues to a whole nation at once, and that in fact does the work. All other causes and aids are merely auxiliary to this. Cast your mind back sir, to the period when the Cultivator and Genesee Farmer were first established; how low in our state, how drooping, how benighted, nay, how degraded was the science and the pursuit of agriculture—how depressed in the scale of human employment, and how little understood was scientific husbandry—and yet by the continued droppings of those two fountains, the adamant of public prejudice has been worn away—the rock of ignorance has been perforated—the rays of science and the light of experience has broken through, and the New-York farmer stands now revealed in his true character—it is now discovered that the pursuit of agriculture is no mean employment. For all this we are indebted to the press, and mainly to those two organs.

In conclusion, I beg leave, therefore, to give as a sentiment—

The press—the public press, and especially the agricultural periodicals of our own state. Distinguished by unusual talent, industry and zeal—they are powerful levers acting upon public sentiment—uprooting ancient prejudices—enlightening the public mind—elevating and ennobling agricultural pursuits—May they receive a generous support by every member of this society and every friend of the cause.

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On the third day, the Executive Committee, by invitation, examined various articles accidently overlooked by the committees, owing to their being improperly placed. Among these were beautiful specimens of salt presented by H. Smith of Salina, a most superior article, and manufactured in such a way as to remove every objection against the strength and purity of the Onondaga salt; also specimens of table knives and forks, a fine article of American manufacture, made by Messrs. G. & D. N. Ropes, and presented by Marsh & Wheaton of Syracuse. They also had the pleasure of examining specimens of mulberry, presented by Thomas Mellen, Esq. of Madison, the *Morus Oregona*, or Oregon mulberry, discovered in the territory of that name west of the Rocky Mountains. The leaves of this mulberry are larger, thicker, and more fleshy than those of the multicaulis; while it is said by Mr. Mellen, to be hardier than any other variety of the mulberry, enduring the winters of this region without injury. Mr. Mellen, from his experience, contends that the cocoons fed on this variety of the mulberry are superior both in weight and quality, to those fed on any other with which he is acquainted.

On the third day, the board of arrangements and various other gentlemen visited the farm of Fletcher Woodward, Esq. which received the first premium of the Onondaga County Agricultural Society, offered for the best farm. Mr. Woodward's farm lies on the strata which crosses the county from east to west, immediately below the upper limestone masses, and like that of the greater part of those similarly situated, is of great fertility, and easily cultivated. The visitors were much pleased with the neatness, order, and high culture shown on Mr. Woodward's farm, and we doubt not, from the statement made of the crops harvested, that he finds in the good management of his farm a profit as well as pleasure. The board also made a brief call at the farm of George Geddes, Esq. a short distance west of Syracuse, well known as a practical farmer of much merit. Here they examined some hydraulic machinery of a new and simple construction, invented by Mr. Geddes, used for watering his extensive farm, and which is also made applicable for several other useful purposes. They were much pleased with specimens of gates and farming implements invented and constructed by Mr. Geddes, as well as with the general appearance of his extensive farm.

J. G. King, Esq. of N. York, forwarded for exhibition, and presented to the State Agricultural Society, some fine specimens of the Neapolitan hog. Under the direction of a committee of the board, these animals were distributed among the following gentlemen: H. S. Randall of Cortland; Harvey Baldwin and George Geddes of Onondaga; Ezra Cornell of Ithaca; and Dr. Button and Samuel Hecox of Wayne county. The gentlemen receiving them, are expected to make a full trial of their merits, and report to the society at a future time. They much resemble the Berkshires, with round bodies, and thick hams, but are finer in the head and ears. They are nearly destitute of hair, (which is their most marked peculiarity,) are black, and said by Mr. King to fatten with unrivaled facility, and to make pork fine and of superior quality. They much resemble the original Siamese, which, crossed with the original Berkshire hog, has produced the beautiful improved Berkshire of the present day.

In the departments of implements, products, horses, cattle, and swine, the exhibition was such as to satisfy all reasonable anticipations, and do honor to the state, but in that of sheep the paucity was so great as to constitute the most material and marked defect of the Fair. It must be considered singular that in a county containing some 15,000 sheep, many of the flocks of pure Saxon or Merino, and grade sheep of all varieties, and in a state with more than four millions of this valuable animal, so very few should have been offered for exhibition; but we have the consolation of knowing that this disappointment is one which will not recur again, and that hereafter this important part of our domestic animals, and to which so much of our prosperity is owing, will be fully represented.

Award of Premiums.

CATTLE—Class I.—BULLS—3 *years old and over.*

To J. M. Sherwood, Auburn, for his bull "Archer," bred by F. Rotch, Butternuts, 1st prize.
To E. P. Prentice, Albany, for his bull "Nero," bred by himself, 2d prize.
To C. N. Bement, Albany, for his bull "Astoria," bred by himself, 3d prize.
To Silas Gaylord, Skaneateles, for his bull "Splendid," 4th prize.

"There were several other animals [in this class] on the ground, possessing in the estimation of your committee, high grades of excellence, and they only regret that the premiums were not more numerous. Among these, your committee particularly noticed the animals of Mr. McIntyre, Mr. Van Bergen, Mr. Fonda, and Mr. Sears."—[*Report of the Committee.*

Class II.—BULLS—2 *years old.*

To John Johnston, Fayette, Seneca co., for his bull "Royal William," bred by G. V. Sacket, Seneca Falls, 1st prize.
To Thomas A. Clark, Chittenango, for his bull "Young Warden," bred by Thomas Hollis, Gilbertsville, 2d prize.
To D. D. Campbell, Schenectady, for his bull "Rotterdam," bred by himself, 3d prize.
To Nicholas Garner, Burlington, for his bull "——," bred by himself, 4th prize.

Class III.—BULLS—1 *year old.*

To Moses Kinney, Cortlandville, for his bull "Daniel Webster," bred by G. V. Sacket, Senaca Falls, 1st prize.
To Enoch Marks, Navarino, for his bull "Brutus," 2d prize
To Benjamin Stoker, Cortland co. for his bull "——," 3d prize
To Joseph Baker, Onondaga co. for his bull "——," 4th prize

"Your committee beg leave to express their regret, that though the exhibition in classes II. and III. were very numerous, yet but few of the animals were in what they considered, *common store order;* which rendered the effort of comparison with such as were high fed very difficult."—[*Report of Com.*

Class IV.—COWS.

To John M. Sherwood, Auburn, for his cow "Stella," bred by F. Rotch, 5 years old, 1st prize.
To Ezra P. Prentice, Albany, for his cow "Daisy," 3 years old, bred by himself, 2d prize.
To John M. Sherwood, Auburn, for his cow "Daisy," 12 years old, 3d prize.
To John M. Sherwood, Auburn, for his cow "Pansey," 5 years old, bred by F. Rotch, 4th prize.
To Corning & Sotham, Albany, for their Hereford cow "Matchless," imported, an extra prize, equal to the highest premium awarded on cattle.

"Your committee further report, that a new and beautiful race of cattle were presented for their examination, the Herefords, imported by a distinguished breeder of cattle, residing in Albany county, which they take pleasure in recommending to the attention of those who desire to improve their stock. Your committee recommend a special premium of twenty dollars for the Hereford cow Matchless, as we consider her a very superior animal; and they would also suggest the propriety of offering and awarding premiums for the best blooded animals of each individual breed, Improved Short Horned Durhams, Herefords, and Devons, at their next annual agricultural meeting, in addition to premiums offered for the best animals of any breed."—[*Report of Com.*

Class V.—TWO YEARS OLD HEIFERS.

To John M. Sherwood, Auburn, for his heifer "Sylvia," bred by F. Rotch, 1st prize.
To E. P. Prentice, Albany, for his heifer "Diana," bred by himself, 2d prize.
To Corning & Sotham, Albany, for their Short Horn and Hereford heifer Eliza, imported, 3d prize.

Class VI.—YEARLING HEIFERS.

To Ezra P. Prentice, Albany, for his yearling calf "Charlotte," bred by himself, 1st prize.
To John M. Sherwood, Auburn, for his yearling calf "Norna," bred by H. S. Randall, Cortlandville, 2d prize.
To John M. Sherwood, Auburn, for his yearling heifer "Dianthe," bred by J. Alexander, Burlington, 3d prize.
To William Fuller, Skaneateles, for his heifer calf "——," bred by himself, 4th prize.

☞All the animals, on which the above prizes were awarded, with the exception of the Hereford cow and the Short Horn and Hereford heifer of Messrs. Corning & Sotham, were thorough-bred improved Short Horns.

Class VII.—GRADE COWS.

To William Ward, Camillus, for his 8 years old half blood Holderness cow, 1st prize.
To W. H. Sotham, Perch Lake Farm, for his half blood Durham cow, No. 1, 2d prize.
To W. H. Sotham, Perch Lake Farm, for his half blood Durham cow, No. 2, 3d prize.
To W. H. Sotham, Perch Lake Farm, for his half blood Devonshire cow, 4th prize.

"The best grade cow which came under our observation, belonged to G. V. Sacket of Seneca Falls, but he being one of the committee, generously withdrew her from competition."—[*Report of Com.*

Class VIII.—GRADE HEIFERS,

To H. S. Randall, Cortlandville, for his roan heifer, bred by himself, 1st prize.
To G. V. Sacket, Seneca Falls, for his red and white heifer, bred by himself, 2d prize.
To G. V. Sacket, Seneca Falls, for his roan heifer, bred by himself, 3d prize.
To H. S. Randall, Cortlandville, for his red and white heifer, bred by himself, 4th prize.

Class IX.—NATIVE COWS.

"The committee on native cows would report that very few cows, and those of an inferior quality, were to be found in the pens; and they probably not intended for exhibition. They regret that the farmers in this vicinity should have refrained from taking advantage of the very liberal encouragement offered by this society, by the false impression that cows were going to be brought from a distance which would have eclipsed the cows of this neighborhood. We are unwilling to believe that there are not cows in this village and vicinity that would have honored the exhibition, and been a credit to the state. They regret that a matter so important as the improvement of our native cows does not excite more attention Such cows must of necessity be the ground work of much of the improvement in cattle. If a farmer has a cow possessing some excellent qualities, he is prepared to improve in any desirable point. The general dissemination of high blood animals renders such crossings easy and cheap; and it is a matter yet at issue whether such crosses will not make the most desirable animal for the common farmer. We want the best native cows for such crosses, and the committee are of opinion that the Executive Committee of the State Society are holding out liberal encouragement for active competition in the matter of improving our native cattle. In conclusion, we would add that we hope that no future committee will be under the necessity of reporting no competition, but let the farmer, the lawyer, the merchant, and mechanic, bring forward their best cows, and render it a matter of nice discrimination to decide between them."—[*Report of Com.*

Class X.—WORKING OXEN.

To Caleb Gasper, Marcellus, 1st prize.
To Samuel Allen, Jr., New-Haven, 2d prize.

FAT CATTLE.

To P. N. Rust, Syracuse, for the best yoke of fat oxen, one of which was bred by G. V. Sacket, 1st prize.

BULL CALVES.

To Ezra P. Prentice, Albany, for his thorough bred improved Durham bull calf "Homer,"* 6 months old, bred by himself, 1st prize.
To Samuel Phelps, Ira, for his grade Devonshire, 2d prize.

TO BREEDERS.

To Francis Rotch, Butternuts, as the breeder of the best bull, prize.
To the same, as the breeder of the best cow, prize.
To the same, as the breeder of the best 2 years old heifer, prize.

[The premiums to breeders having been offered by Mr. Rotch, he declined receiving more than a Certificate of the Award, leaving the money ($30) with the Society, to be offered in premiums for the same purpose next year.]

HORSES—Stallions.

To Nathan A. Cooper, New-York city, for his bay horse "Messenger," got by Membrino, dam by imported Messenger, 1st prize.
To J. B. Thompson, Fayetteville, for his bay horse "Young Membrino," got by Mr. Thorn's Eclipse, dam by Membrino, 2d prize.
To P. & G. Warren, Manlius, for their grey horse "Messenger," got by Ehle Messenger, dam Queen Ann, 3d prize.
To Caleb Gasper, Marcellus, for his bay horse "Gasper,"—pedigree not known—4th prize.

MARES.

To Samuel Townsend, Canterbury, for his bay mare "Lady Syracusa," by "Onondaga," out of "Lady of the Lake," 1st prize.
To W. Colton, Lenox, for his grey mare, 2d prize.
To Wm. Cook, Lysander, for his bay mare, 3d prize.

"The committee on horses who have had the honor of being selected by the society, having examined the different horses exhibited to them with much care and attention, make the following report; in doing which your committee have endeavored, so far as their judgment would lead them, to take into consideration the interest and use of the farmer, as to the kind, form, size and blood of the horse from which the farmer should breed.

1st. We consider the kind should consist of the horse, which, at market, would bring the largest price. An inferior horse can always be obtained for less money than it will require to raise him.

2d. The form we consider should consist of sufficent height, length and breadth, well and strongly connected, placed on a set of limbs calculated to carry the same; the limbs to be composed of bone and sinew, and that alone, free from all flesh, gum, &c. and we would add, clean and as free from hair as possible.

3d. The size of a horse, the experience of your committee has led them to believe should be sixteen hands, or as near that height as possible, considering that size the most saleable, which to the farmer and breeder is certainly very desirable.

4th. The blood of a horse, although lastly named, is by no means (in the minds of your committee,) the least requisite, dnd we consider should consist of that which has proved itself of the greatest endurance, and in the judgment of your committee, no competition can be selected with that of England, from which in our humble estimation, the finest blood has been obtained by the energy and enterprise of many American gentlemen, at very costly prices; we would instance the blood of Old Messenger, which has proved itself in every quarter of the state to which it has been taken, and is well known to all farmers and breeders of horses.

Adopting these principles for their guidance, the committee adjudged the premiums as given above. The committee conclude their report as follows :

Your committee will here remark that many other stallions were shown; the want of limb in some, movement in others, and figure and size in most of them, prevented them from competition with those named. We would also remark that the horse called Sampson, (imported,) although a horse having great size, still in our judgment, wants the requisite qualifications for a farmer to breed from; and also the Canadian grey horse, we cannot approve of, for the reasons given, believing that we as a committee were to be governed in our judgment and decision by the simple fact of deciding from which horse, we, as farmers and breeders of horses, would breed. We would however say that the gentlemen who have imported those horses and have been to the trouble of exhibiting them, deserve the thanks of the society. We also have the pleasure to state, that your committee were unanimous in making the above report. We regret that the exhibition of mares and colts generally, were rather of an inferior order, and not such as farmers should breed from."—[*Report of Com.*

SHEEP.—Class I.—LONG WOOLED.

To Corning & Sotham, Albany, for their imported Cotswold buck, No. 1, 1st prize.
To Corning & Sotham, Albany, for their imported Cotswold buck, No. 2, 2d prize.
To Corning & Sotham, Albany, for their imported Cotswold buck, No. 3, 3d prize.
To Robert S. Musson, Gilbertsville, for his pen of three Leicester ewes, being the only ones in this class, presented for exhibition, 2d prize.

"The committee would make honorable mention of three ewes presented by Mr. Henry Clift of Onondaga, which were a cross between the long wooled and the short wooled varieties, but inasmuch as they did not come exactly under the class they were requested to examine, they could not award a premium to Mr. Clift, which under other circumstances they would have been very happy to have done."—[*Report of Com.*

Class II.—MIDDLE WOOLED.

To Francis Rotch, Butternuts, for his South Down buck, 1st prize.
To Uri Jackson, Jr., Butternuts, for his South Down buck, 2d prize.
To John Snook, Skaneateles, for his South Down buck, 3d prize.
To Francis Rotch, Butternuts, for his pen of three South Down ewes, 1st prize.

There being no others presented, the other premiums were not awarded.

Class III.—FINE WOOLED.

To Daniel Marsh, Pompey, for his buck, 2d prize.
To Chester Moses, Marcellus, for his pen of ewes, 2d prize.

"The committee have first to express their great disappointment, on accuont of the very few sheep exhibited for premiums on this highly important occasion. And second, the indifferent character of those which came under their examination.

In reference to the first remark, it is unnecessary to say, that the disappointment, and we may justly add, chagrin, now no less entertained by the immense body of spectators than by the committee—and it is confidently hoped and expected that on no future occasion of this kind will like disappointment again occur. The state of New-York has within its borders no less than five millions of sheep, and how astounding will it appear abroad, when the fact is made known, that but barely *seven* sheep were exhibited of the class coming under the cognizance of the committee!! When it is a truth, and well known, that no state in the Union can produce so great a proportion of sheep producing fine wool, compared with the whole number within its bounds. The causes of this meagre display, however, are several and very obvious; and first, the expense of transportation, but more particularly timidity, grounded on the expectation of great competition and consequently an apprehension of failure to obtain an award. This should not be so, for if many are disappointed, let it be noted and remembered, that on all future occasions of this kind, animals characterized by general excellence will meet with ready sale, and at prices much exceeding those in the immediate neighborhood where they belong. This remark is confirmed by the large number of wool growers who have come here at this time—and many from a distance—to make purchases of the class of sheep under consideration.—[*Report of Com.*

SWINE.

To C. N. Bement, Albany, for his Berkshire boar, Rip Van Winkle, 1st prize.
To Jesse Campbell, Sullivan, for his Berkshire boar, 2d prize.
To P. N. Rust, Syracuse, for his Leicester boar, 3d prize.
To Samuel Hecox, Lyons, for his Leicester boar, 4th prize.
To C. N. Bement, Albany, for his Berkshire sow, 1st prize.
To Anthony Van Bergen, Coxsackie, for his Berkshire sow, 2d prize.
To Wm. McKnight, Syracuse, for his Berkshire sow, 3d prize.
To L. G. Collins, Butternuts, for his Berkshire sow, 4th prize.

ON PLOWS.

To Howard Delano, Mottsville, 1st prize.
To E. G. Holladay, Dansville, for the Lochlan Plow, 2d prize.
To Elijah Wilson, Vernon, for the Livingston County Plow, No. 4, 3d prize.
To Chester Dexter, Utica, for the Wiskonsan Plow, 4th prize.
To Mooers & Slater, Ithaca, for their double mold-board side-hill plow, an extra prize, equal to the first premium.
To Stevens Cook, for an improvement in the Onondaga Plow, an extra prize of $5.

"The committee appointed by the executive board to examine and test the valuable properties and improvements in the plow, beg leave to report, that they have had a most arduous duty to perform. Near 20 of them were presented for our inspection, and the committee are free to say that they never have seen so great a number of remarkably excellent plows together before, and have to regret that they are circumscribed in their award of premiums, when they are confident so many are entitled to the favor of the society.

After as careful an examination of the subject as we have been able to give, and a trial of plows by the dynamometer, we have awarded the first premium of $30 to Howard Delano, for a very beautiful and highly finished plow, with a new form of a cutter in place of the common coulter, which we consider an improvement well worthy of a fair trial among the farmers of the country.

The second premium of $20, the committee have awarded to E. G. Holladay, for his plow, already favorably known as the Laughlin plow, and which the committee found to work by trial with the Dynamometer with great ease of draft and steadiness.

The third premium of $10, the committee award to Elijah Wilson, for a very fine well made and well proportioned plow, called the Livingston County Plow, No 4.

The fourth premium, a diploma of the society, the committee award to Chester Dexter of Utica, for his Wiskonsan Plow.

The committee have also determined to award an honary premium equal to the first premium on plows, $30, to Moore & Slater, for a newly invented double mold-board side hill plow, which the committee believe will prove a very valuable acquisition to the farmer for many other purposes besides side hill plowing, it having performed admirably handsome work upon a level surface.

The committee also award a premium of $5, to Stevens Cook for an improvement made by him in the mode of fastening the land side of the Onondaga Plow, including a very good model.

The committee cannot close without saying that owing to the unpleasantness of the day, and the want of time, they were unable to devote that attention to this important subject, that this most important of all agricultural implements require, and we most earnestly recommend to the society to devote more attention to this matter another year, and we hope that the competitors who have been unsuccessful this year will not be discouraged, but will continue to press forward in this grand work, recollecting that the committee distinctly say that the whole collection of plows exhibited were such as do great credit to American manufacturers of agricultural implements."—[*Report of Com.*

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* This calf was sold by Mr. Prentice, at the Fair, to Mr. Dunn of Lyons, for $250, cash

CULTIVATORS AND DRILLS.

To C. N. Bement, Albany, for the best *Cultivator,* 1st prize.

To Anthony Van Bergen, Coxsackie, 2d prize.

To Calvin Olds, of Vermont, for a *Drill Barrow,* 2d prize.

THRASHING MACHINES.

To A. Douglass, Skaneateles, for *Thrashing Machine,* 1st prize.

To Henry Olds, Syracuse, 2d prize.

To D. G. Stafford, Syracuse, 3d prize.

HORSE POWERS.

To Norman Ackley, Rochester, Dibble's Horse power, 1st prize.

To David G. Stafford, Syracuse, 2d prize.

To Archibald Douglass, Skaneateles, 3d prize.

STRAW CUTTERS.

To Jonathan S. Wilcox, Auburn, for Gilson's Machine, 1st prize.

To J. S. Wright, Jordan, 2d prize.

To W. B. Abbott, Syracase, 3d prize.

HORSE RAKES.

But one was exhibited, and as there was no competition, the the 2d prize only was awarded to A. Holbrook, Whitesboro'.

SOWING MACHINE.

To Julius Hatch, Rochester, for a machine for sowing seeds and plaster, a prize of $10.

PITCHFORKS.

To Lewis Sandford, East Solon, a premium of $5, for half a dozen, of superior manufacture for strength and finish.

FANNING MILLS.

To Orrin Heffron, Dryden, 1st prize.

To James Beebee, Sullivan, 2d prize.

To John Gilbert, Lyons, 3d prize.

AGRICULTURIST'S FURNACE.

To Jordon L. Mott, New-York, for his Agriculturist's Furnace and Cauldron, a silver cup.

SMUT MACHINE.

To Jireh Durkee, Utica, for "Grimes' Patent Smut Machine," a premium of $20.

The committee report, that they have examined with great satisfaction "*Grimes' Patent Smut Machine,*" presented by Mr. J. Durkee, of Utica; and in all its parts they have found it simple and permanent in its construction, and in a manner to preclude the possibility of heat. They have also viewed one of the machines in operation, and its performance upon a very smutty quality of wheat, so much so as to be unsaleable in any market—and with a single operation of this machine, was rendered pure and clean.

The committee, with much pleasure, observe that in their opinion, this machine surpasses all others which have come within their knowledge, in many years experience in the milling business; and they deem the introduction of it of great importance to millers and wheat growers, and most cheerfully award a premium of Twenty Dollars to Mr. Durkee, in accordance with the resolution of the State Agricultural Society to award premiums in cases of no competition when the implement is highly meritorious.—*Report of the Com.*

ROOT CUTTER.

To Wm. Thorburn, Albany, for Fowk's machine, a prize of $2.

SILK, &c.

To Mrs. D. Carter, of East Bloomfield, for samples of 100 skeins of sewing silk of 74 different shades, samples of fringe and silk prepared for weaving, 1 pair silk hose, 2 pair mitts, 1 purse, 1 piece of cloth from silk floss, a premium of $20.

To Mrs. Melora Shove, Onondaga, for 100 skeins of sewing silk, a premium of $10.

To Mrs. Harvey Baldwin, Syracuse, for specimens of Needle-work, a prize.

The committee on Silk Culture have examined samples submitted for inspection by the following persons:

Thomas Mellen, of the town and county of Madison:

1st. Four skeins of reeled silk, of different numbers of filaments to each thread, and fed on different varieties of mulberry.

2d. Several varieties of cocoons, fed on different varieties of the Morus multicaulis, and made by different kinds of worms, as the Peanut, Sulphur, Orange, and Two Crop.

3d. A fine, but small, sample of sewing silk.

4th. He showed a sample of the trees and leaves of a variety of Mulberry which he calls Morus Oregona, which he represents as possessing excellencies not to be found in any other; his cocoons were very fine, and his samples of silk showed an elegant lustre; his trees were very small, but their leaves large, and taken all together were meritorious. However much the Committee may have been pleased with Mr. Mellen's samples, they would have been more gratified had they been larger.

By Mr. Robins, of Brighton, Monroe county:

A small sample of sewing silk, manufactured very handsomely, dyed and put up with taste and success, worthy of encouragement to all new beginners.

By Mrs. Melora Shove, of the town and county of Onondaga:

A large sample of sewing silk, successfully manufactured, and that upon the common spinning-wheel and reel, handsomely skeined, after having been beautifully colored, and all this without instruction, evincing much perseverance and crowned with corresponding success.

By Mr. Leonard, of Carthage, Jefferson county:

1st. A sample of beautiful floss from the pierced cocoons, together with samples of valuable knitting yarn manufactured therefrom, a valuable article.

2d. An elegant sample of reeled silk with a large sample of sewing silk, all handsomely manufactured in his own family, and upon the ordinary spinning-wheel and reel—the sewing of beautiful and various colors, a very successful experiment.

3d. Samples of Sulphur and Orange cocoons, fed on Multicaulis and were a fine size and firm. Mr. Leonard also exhibited a model of a feeding frame, combining much that is useful with some that is new. The ingenuity, perseverance and success of Mr. Leonard commends him to the approbatory notice of the Society, and a worthy example to all who may feel disposed to enter upon the silk culture.

By Thomas Goodsell, of Utica, Oneida county:

1st. A specimen of outside floss, perfectly neat and clean, but not boiled out, in fine order for manufacturing.

2d. A sample of floss from pierced cocoons boiled, free from gum, and drawn out in roping form and wound in balls without twist, and about the size of oranges, which he is instructed is the form and condition for the article to be marketed.

3d. Very fine specimens of cocoons in point of size and firmness, from the Orange, Sulphur, and Peanut varieties.

4th. A sample of reeled silk, a worthy article for lustre, evenness and strength, wrought on the Piedmontese and Dennis' silk reels.

5th. A Multicaulis tree of the present year's growth, (and not far from the average growth of his lot,) nearly nine feet high, with leaves accompanying it, (although plucked from it,) measuring thirteen by fourteen inches.

6th. One bent of his Cabinet Feeding and Winding Frame, full size.

This Frame, in the opinion of the committee, possesses advantages which should recommend it to the attention and consideration of silk growers. It is a neat and compact structure, occupying little room, requiring less labor in tending, and rendering greater facilities for winding, than most articles of this kind in use.

By Mrs. Darius Carter, of East Bloomfield, Ontario co.

1st. A sample of fair cocoons of the Peanut variety.

2d. A large sample of sewing silk, pretty well manufactured, and very successfully dyed, exhibiting (as she informed us) seventy different shades of color.

3d. A very handsome piece or specimen of Black Fringe.

4th. One pair of ladies stockings, black, and a pair of mitts.

5th. One elegant reticule, 1 purse, 2 pair mitts, all of net work, manufactured from yarn prepared from floss.

6th. One piece of cloth, 1 apron, 2 handkerchiefs, together with yarn enough already colored to make 20 yards of cloth, all of which articles and yarn prepared from floss, the whole of which is the work of her own hands; she informed the committee that her cocoons measured one hundred bushels; the manufacturing, all performed with household implements only. Enterprise, industry, and success like this should not pass the committee nor the Society, unheeded or unrewarded.

By the Agent of the State Prison, at Auburn:

A fine sample of sewing silk from convict's labor, which for uniformity and equality of filament, lustre of staple, brilliancy of colors and taste of putting up, would not discredit an Italian factory, and is to the State of New-York, an encouraging earnest of what we may expect with the advantage of a few years' experience.

The committee recommend that a premium of $20 be awarded to Mrs. Carter, and one of $10, to Mrs. Shove, for their specimens of silk, above enumerated. —[*Report of Com.*

SAMPLES OF GRAIN.

To Rawson Harmon, Jr., Wheatland, for samples of 21 different varieties of wheat, exhibited in the berry, and in the head on the stalk, a premium of $10.

To M. B. Bateham, Rochester, for 12 varieties of imported wheat, a premium of $5.

To Seth Starr, of Sullivan, for the best specimen of Spring Wheat, $5.

To John Townsend, of Albany, and to Wm. Ingell of Volney, for two best specimens of Indian corn, $3 each.

ROOTS.

The Committee on Roots notice with commendation, samples of Potatoes from J. F. Osborn, Port Byron; Wm. P. Buel, Albany, and Wm. Ingells, Volney.

Samples of White Carrots, from C. N. Bement, Three Hills Farm, and Wm. P. Buel, Albany—Yellow do. from John Bainbridge.

Samples of Mangel Wurtzel, from J. F. Osborn, and Red Beets, from Rufus Cosset.

Also, a very fine sample of Onions, owner's name not known.

FRUITS AND FLOWERS.

Premiums of Books on Horticulture were awarded

To David Thomas, Aurora, for a lot of about forty varieties of Apples, Pears, Peaches, Plums and Grapes, some of them of new and valuable varieties, presented by J. J. Thomas, nurseryman, of Macedon.

To Dr. Beaumont, Lyons, for several baskets of very fine and excellent grapes, including the Grey Tokay, Golden Chasselas, Scuppernong, Purple Royal Chasselas, Isabella, and Sweet Water, the quality of which the Society had an opportunity of testing at the dinner table, "in committee of the whole."

To Samuel Hecox, Lyons, for a lot of sixteen varieties of foreign and domestic grapes, very fine and well ripened,—of which Mr. H. raised above fifty bushels the present season

To James Wilson, nurseryman, Albany, for a beautiful boquet, and a large lot of Dahlias of splendid varieties.

To Wm. P. Buel, Albany, for a miniature parterre of Dahlias of very perfect and well chosen varieties of great beauty, and twenty-one kinds of well selected varities of Apples of fine growth.

To Ezra Cornell, Ithaca, for a basket of fine Red Cheek Malacaton Peaches, some of them measuring more than seven inches in circumferance.

To James Cochrane, Oswego, for a basket of foreign varieties of Grapes, among which were the Chasselas, Sweet Water, Frontignac and Pinon Noire, a hardy variety with a vinous and pleasant fruit—also a basket of Silver Cling stone Peaches.

To Mr. Wiltse of Oswego county, for a basket of fine Apples of of known varieties.

To J. F. Osborn, Port Byron, for twenty-nine varieties of cultivated Apples of well selected sorts, together with three varieties of Pears.

To Mr. Cossett, Onondaga, for a basket of fine Grapes, including the Isabella, Alexander, Munier and Sweet Water, well ripened and large growth.

Mr. Huntington of Onondaga, presented a large basket of Apples of beautiful form and fine flavor.

M. B. Bateham, proprietor of the Rochester Seed Store, presented two Seven Year Pumpkins, raised by H. N. Langworthy, of Irondequoit, in 1837 and 1840.

John Richards presented the vine and products of one seed of the Citron Watermelon, amounting to eighteen in number, and weighing over 300 lbs.

☞ Those to whom Prizes were awarded, and who have not received them, can obtain them by application to E. P. Prentice, Esq. Treasnrer, or to L. Tucker, Secretary, Albany.

Dear Sir—I hear complaints against Western gentlemen, for their not exhibiting any of the fine stock that they are known to possess. I believe there is justice in their being censured. I do not consider their reasons for not presenting their stock at all satisfactory. But that no part of the censure should rest on our county, I would inform you that I endeavored to have a specimen of the animals of Tompkins county at the Fair. They were prevented being there in season to be examined, by an accidental delay on the canal, caused by the grounding of the boat. In the lot was a Short Horned Durham Bull, a Leicester Buck, a South Down Buck, and a Berkshire sow. The sow was looked at by the swine committee, and would have drawn a premium had I not been one of the committee myself. I insisted that a premium should not be given to my sow. The other animals were not seen by the committees at all. I exhibited ten of the most approved varieties of seed corn, viz: Dutton, Brown Corn, King Philip, Improved China, Toronto, New-Jersey White, Red Blazed, White, and other varieties that we have no names for, none of which were noticed by the committee, as I was not on hand to call their attention to the subject. Yours respectfully, E. CORNELL.

Vote of Thanks.

At a meeting of the Executive Committee of the New-York State Agricultural Society, held at Syracuse on the 1st October, the following resolutions were unanimously adopted:

Resolved, That the thanks of this Board be presented to James G. King, Esq. of New-York, for the very valuable present made by him to the Society, consisting of nine head of Neapolitan Swine, imported and bred by Mr. King.

Resolved, That the thanks of this Board be tendered to the citizens of Syracuse, generally, for the liberality manifested by them in contributing to the funds of the Society, and to the Committee of Arrangements for the ample accommodation made for the fair, in the erection of pens, &c. without expense to the Society.

Resolved, That the thanks of this Board be tendered to Mr. Corning, the president of the Utica and Schenectady Rail-Road Company, and to Mr. Wilkinson, the President of the Syracuse and Utica Rail-Road Company, for their liberality in directing the train of cars, with stock from Albany, to be taken over their roads *free of expense.*

Resolved, That the thanks of this Board be presented to Mr. Costigan, Superintendent of the Mohawk and Hudson Rail-Road Company, and to Mr. Livingston their agent in Albany, for their praiseworthy efforts to aid the Committee in making the necessary arrngements for the transportation of stock, &c. by rail-road to Syracuse—and also to Mr. Young, Superintendent of the Utica and Schenectady Rail-Road, and to Mr. Lee, Superintendent of the Syracuse and Utica Rail-Road, for the efficient aid they rendered the Society by the prompt manner in which their train of cars was taken over those roads.

Brewer's Grains as a Manure.

A writer (Mr. Buckland,) in the Mark Lane Express, says that in consequence of witnessing the effect of a small quantity of brewer's grains scattered on grass land, "he was induced to manure several meadows with grains mixed with stable dung, and a few acres with grains only. The crop of hay is an extraordinary one off the land manured with grains and stable dung together; but from the lands manured with *grains alone,* the crop is *prodigious.*" On part of a steep declivity a good sprinkling of grains was given, which had the effect of raising the crop from 12 cwt. per acre, the usual rate, (and which the ungrained this year yielded) to two tons of hay, and the grass of the finest quality. Being of the opinion that all plants are best manured by their own species in a state of decay, Mr. B. expects that for the barley crop, grains will be excellent, and has made some experiments with a view to settle the point. As a manure for meadow land, he pronounces grains to be a "very economical and efficient manure."

New-York State Agricultural Society.

Annual Meeting, Jan. 18 and 19, 1842.

At a meeting of the Executive Committee, held at Albany, on the 20th October, A. Walsh, Esq. of Lansingburgh, in the chair, it was unanimously resolved, that the Premium list for Field Crops and Butter and Cheese, be enlarged and amended so as to read as follows:

PREMIUMS ON BUTTER AND CHEESE.

For the best sample of Butter, not less than 100 pounds, ···	$30
For the second best do do	20
For the third best do do	10
For the best sample of Cheese, over one year old, not less than 100 pounds, ······	20
For the second, best do. do	10
For the best do., less than one year old, not less than 200 pounds, ······	20
For the second best do. do	10

The butter offered for premiums may be presented in tubs, jars or firkins. Each lot must be numbered but not marked, and any public or known mark must be completely concealed, nor must the competitors be present. In default of either of these requisitions the claimant will not be entitled to a premium.

The claimant for premiums on butter, must state in writing, the number of cows kept on his farm; his mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed; the best time for churning and keeping butter in hot weather; and the best mode of preserving it in and through the summer and winter, and in what vessels.

Those who present cheese for the premiums offered, must state in writing the number of cows kept; whether the cheese is made from one, two or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used and the mode of preparing it; the mode of pressure and the treatment of the cheese afterwards.

PREMIUMS FOR FIELD CROPS.

For the best acre of *Wheat*,	$20	The best acre of *Potatoes*, ·	$15
For the second best, ·······	10	For the second best, ·······	8
The best acre of *Barley*, ···	15	Best acre of *Sugar Beets*, ··	15
For the second best, ·······	8	For the second best, ·······	8
For the best acre of *Rye*, ··	15	Best acre of *Ruta Baga*, ····	15
For the second best, ·······	8	For the second best, ·······	8
For the best acre of *Oats*, ··	15	The best acre of *Carrots*, ··	15
For the second best, ·······	8	For the second best, ·······	8
Best acre of *Indian Corn*, ·	20	For the best acre of *Peas*, ·	15
For the second best, ·······	10	For the second best, ·······	8

Those who present claims to premiums for farm crops must state in writing the following particulars:—the condition of the soil at the commencement of cultivation for the crop; the previous cultivation, product and manure used upon it; the quantity of manure the present season; the quantity of seed used; the time and manner of sowing, cleaning, and harvesting the crop; the amount of the crop determined by actual measurement; and the expense of cultivation. The land shall be measured by some sworn surveyor, and the claimant of the premium, with one other person shall certify to the above particulars.

Applicants for the premiums on butter, cheese and farm crops, must make known their determination to Luther Tucker, Albany, (if by letter, post-paid,) on or before the first of January next, and the parcels deposited in such place in Albany as the Ex. Committee may hereafter direct, on Tuesday morning, the 18th of Jan. before 10 o'clock, at which time the committee will proceed to examines the lot offered for premiums.

At the same meeting of the Executive Committee, on the motion of Willis Gaylord, Esq. Miss Margaretta Morris, of Germantown, Pa., John Hannam, Esq., North Deighton, Yorkshire, England, and Elias Phinney, Esq. of Lexington, Mass., were unanimously elected honorary members of the New-York State Agricultural Society.

The following members were admitted:

Life Members—[*By the payment of* $50.]

Wadsworth, James S., Geneseo.
Wadsworth, Wm. W., Geneseo.

Subscription Members.

Gaylord, Willis, Otisco, ·· $20
Morris, W. H., West Farms, $5

Annual Members—[*By the payment of* $1.]

Abbot, W. B., Syracuse.
Avery, Harry, LaFayette.
Ackley, Norman, Rochester.
Allen, L. F., Black Rock.
Baldwin, Abel, Clarkson.
Brewer, Henry, Enfield.
Bateham, M. B., Rochester.
Bacon, J. W. Waterloo.
Barber, G., Cortland.
Beaumont, A. L., Lyons.
Barnes, Mr.
Burchard, S. B., Hamilton.
Baldwin, Denison, Springport.
Baker, Joseph, Manlius.
Beebe, James, Sullivan.
Beardsley, S. R.
Cross, John D.
Cheesebro, Henry, Auburn.
Cosset, Rufus, Onondaga.
Carter, Mrs. Darius, East Bloomfield.
Cook, William, Oneida co.
Case, Solomon, Vernon.
Cook, Jacob M., Skaneateles.
Crane, Mr., Carmel.
Clary, Eli, Salina.
Church, Dennis, Riga.
Colton, Willard, Lenox.
Cornell, William C., Henrietta.
Campbell, J.
Chapin, Heman, East Bloomfield.
Delano, Howard, Mottville.
Dickey, P. W., Ontario.
Dutton, Mrs., Utica.
Douglass, A., Skaneateles.
Durkee, Jireh, Utica.
Dean, John, Westmoreland.
Fowler, Augustus, Skaneateles.
Franklin, Joseph L., Flushing.
Fonda, Jacob A., Hoosick.
Gaylord, Silas, Skaneateles.
Greely, Horace, New-York.
Gardner, N., Otsego co.
Godfrey, Charles, Geneva.
Gasper, Caleb, Marcellus.
Gould, Phares, Skaneateles.
Garbutt, William, Wheatland.
Goodsell, Thomas, Utica.
Gilbert, John, Lyons.
Herrick, Don F., Oswego.
Holbrook, A., Whitesboro.
Hopkins, Hiram, Cortland.
Hulbert, Elijah, Waterloo.
Hitchcock, Ira S., Oneida Castle.
Harrop, Thomas.
Hutchins, Thomas, Onondaga co.
Howell, J. W., New-York.
Hinman, John E., Utica.
Holladay, Elias G., Dansville.
Heffron, Oren, Dryden.
Hopkins, G., Auburn.
Hendrick, Levi, Wolcott.
Harmon, Rawson, Jr., Wheatland.
Johnson, Abner A., Denmark.
Jones, Smith.
Johnston, John, Geneva.
Jackson, Uri, Jr., Butternuts.
Jennings, Chester, Turin.
Kinney, Moses.
Lawrence, E.
Lyon, L. R., Lyonsdale.
Langworthy, L. B., Handford's Landing.
Losee, Lewis.
Ludlow, W. B., Claverack.
Leavenworth, Hendrick & Co., Wolcott.
Leonard, Mr., Carthage.
Munger, Asa, Auburn.
Mayell, Jefferson, Ballston.
McMaster, Truman J., Auburn.
Miller, Francis T., Liverpool.
McKnight, Joseph, Onon. Co.
Musson, Robert S. Gilbertsville.
Marsh, D., Pompey.
Moses, Chester, Marcellus.
Morrell, L. A., Lake Ridge.
Mellen, Thomas, Madison.
Nurse, A. W., Madison county.
Noxon & Leavenworth, Syracuse.
Newberry, A. S., Waterville.
Olds, Calvin, Marlborough, Vt.
Pitts, John A., Albany.
Perkins, W. C., Oneida county.
Pratt, F. Jr., Onondago county.
Palmer, Wm. S.
Phelps, Samuel, Cayuga co.
Rotch, Francis M., Butternuts,
Rowe, George B., Canistota.
Randall, Wm., Cortlandville.
Rhoades, E., Syracuse.
Rowley, Seth.
Reynolds, J. P., Jordan.
Robbins, John.
Reeves, John, Onondaga co.
Sears, Francis.
Sackett, G. V., Seneca Falls.
Sotham, William H., Albany.
Starr, Seth, Sullivan.
Salisbury, Wm., Leeds, [$3.]
Sage, A. G., Madison.
Sherwood, J. M., Auburn.
Snook, John, Skaneateles.
Thompson, J. B., Onondaga.
Thomas, David, Aurora.
Thomas, John J., Macedon.
Townsend, John, Albany.
Talcott, William, Owego.
Taylor, Russell, Marcellus.
Taylor, Richard, LaFayette.
Townsend, Samuel, Canterbury.
Warren, P., Manlius.
Weed, Harry, Camillus.
Wilson, Elijah, Vernon.
Woodward, Fletcher, Geddes.
Wright, William B., Rome.
Whitney, George, Rochester.
Weddell, Thomas, Greece.
Wood, Samuel, Wheatland.
Wooley, H. P. Burnt Hill.
Whitney, E. G., Rochester.

N. YORK COUNTY SOCIETIES.

Oneida County Fair.

Messrs. Gaylord & Tucker—The Oneida County Agricultural Society's Fair and Cattle Show has just closed, and it gives me great pleasure to say to you, that the exhibition has in every respect exceeded my most sanguine expectation. The show of cattle, swine, and sheep, was most excellent both as to number and quality. The show of blood cattle good, and of young cattle and working oxen finer than I have ever seen. Our farmers may well be proud of this day, and those who have forboded ill to our society, I am glad to say, are disappointed, and the fast friends of the canse are much encouraged from this exhibition to renewed exertion in the good cause. On Tuesday evening the cattle, horses and swine began to arrive—and this morning, the streets of Hampton were filled with cattle arriving from the east, west, north and south. The stock of Cray, Maj. Hitchcock, Ingersoll, and others of Vernon, excited much observation, and three yoke of cattle and steers of Samuel Look of Schuyler, Herkimer county, which he sent up here to be seen, were very much admired.

The exhibit of domestic manufactures, though not as large as was desired, was much of it very fine, and the articles wrought by the ladies were truly admirable.

In the dairy department, the exhibition of butter and cheese, as to the quality exhibited, was worthy of the best dairy county in the State—and I only wish some of your wealthy citizens had been here to have shown their liberality as well as their taste and judgment, in purchasing some of the premium butter and cheese.

In the sugar department and in the silk we had some very fine samples, which show, that in the above articles, this county is not deficient.

The show of horses was good—and in some particulars very superior. A pair of matched horses of our friend Ira S. Hitchcock of Vernon, which took the first premium, could not easily be beaten.

We had a fine fat bullock of four years old, which though not of the mammoth size of friend Rust's at Syracuse, yet with a weight of 2,156 lbs. he was not to be passed by without receiving attention.

The stock of sheep was vastly superior to Syracuse, both as to number and quality.

The number of people present exceeded all expectations, and had the day been pleasant, this little village would have been so full that instead of one-half not being accommodated, as was the case to-day, not one-quarter of them would have been.

The reports from the towns on crops, were, considering the dryness of the season, very respectable. Corn 97, 84 and 83 bushels per acre; Oats, 84 and 61; Winter Wheat, 37½; Barley, 50; Potatoes 384; Ruta Baga, 426. This too, actual measure, and full weight.

We had a good dinner at Mr. Paterson's at 2 o'clock, and after dinner, a procession was formed under the direction of Col. J. E. Hinman of Utica, as Marshal, and proceeded to the Presbyterian Church, where the exercises were opened with a most appropriate prayer, by Rev. T. A. Spencer, pastor of the church, and after appropriate music by the band and choir, P. Jones, Esq, President of the Society, delivered a most excellent address, a copy of which we shall publish.

The number of Horses entered for premiums were 33; of Bulls 16; Cows 13; Working Oxen 13 yoke; 24 Steers; 22 Heifers; 16 Calves; 92 Swine; 80 sheep.

Of farm implements and samples of grain there was a very fair exhibition. To-morrow we are to have our plowing match, and our premiums declared. We shall pay out in premiums about $625, and to say we have done this, the present season, is doing as we think well. Great credit is due to the enterprising farmers in Westmoreland and Vernon, for the efforts they have made, and I trust they will find when they hear the premiums declared to-morrow, that their exertions have been crowned with success. A full report of our proceedings will be published in our county papers, where you will be enabled to learn the details of our exhibition.

Yours, B. P. J.

Village of Hampton, Westmoreland, Oct. 21, 1841.

P. S. In looking over the reports of the committees and the papers connected with them, from our Fair, I find a statement relative to the quantity of milk from a three years old heifer, which was exhibited and received a premium. She was a mixture of the Devonshire with some good native stock, of a beautiful deep red, and was a very fine animal. She belonged to Frederick Ingersoll, a very enterprising farmer of the town of Vernon.

Account of milk, commencing			Again,		
July 6, ··········	35 lbs.	13 oz.	Oct. 5, ··········	29 lbs.	12 oz.
" 7, ··········	35 "	14 "	" 6, ··········	28 "	12 "
" 8, ··········	33 "	14 "	" 7, ··········	28 "	
" 9, only w'gh'd at night, ··	19 "	14 "	" 8, ··········	28 "	12 "
" 10, ··········	33 "	12 "	" 9, ··········	28 "	8 "
" 11, ··········	32 "	8 "	" 10, ··········	28 "	4 "
" 12, ··········	32 "	12 "	" 11, ··········	27 "	12 "

The amount of butter made from the last named milk was 9¼ lbs. Heifer kept in common ordinary way, but never stabled. Presuming this statement would be interesting to your readers, I have taken the liberty to send you the same. Yours, B. P. J.

Cortland County Fair.

Messrs. Editors—The fair took place in Cortland village on the 6th inst. The day was beautifully fine. The show of animals was large, and of a very superior quality. Indeed it is a matter of doubt, in my mind, whether there is a county in the state, which contains more cattle of the improved breeds. The show of young animals, from three years old downward, I have never seen excelled. There was a yoke of three year old steers, a little more than half bred Durhams (five-eighths,) which I think I never saw equalled. There were others not far behind. The two year old heifer which received the first premium at the State Fair, stood "neck and neck" as the sportsmen say, with some fifteen or twenty competitors, and the committee in their report remarked that it was truly difficult to decide where the claimants were so numerous and so nicely balanced in merit. There were some good yearlings, and some remarkably fine calves. The show of swine was pretty good—sheep ordinary—horses good, in mares and colts, but not one valuable stallion on the ground! It is astonishing how few good stallions there are in the country. We have been overrun with dull heavy-heeled dung-hills, and little sprightly but powerless and diminutive blood horses. Blood is well enough where you can get size and strength with it, but there is no aristocracy among brutes, (unlike men!) which will supply the place of actual excellence. But to return to our Fair. At 3 P. M. the Society partook of a good dinner at the Eagle, after which Hon. John Miller of Truxton, addressed the Society in his usual happy and forcible manner, and then we adjourned in "high-heart" for another year. H. S. R.

Cortlandville, Oct. 15, 1841.

Columbia Cattle Show and Fair.

Editors of Cultivator—The Cattle Show and Fair for Columbia county, was held yesterday, to the pride and gratification of many hundreds of our yeomanry. The preceding night had been rainy, and from the shortness of the notice, and the ill success which had attended previous efforts to get up similar exhibitions, it was feared the present would prove almost a failure, but at ten o'clock, long trains of farmer's wagons were seen entering the city from every avenue, and by eleven o'clock, the streets were literally thronged. The articles, other than live stock, were deposited in the court house. The chief attraction here, was one of Week's patent bee-hives, exhibited by Rensselaer Livingston of Livingston, the agent of the patentee. It received the warm commendations of all the apiarians who visited it, and very many expressed their determination to purchase them the ensuing spring. A carpet was exhibited by John Van Dusen of Johnstown, worked in worsted throughout by his wife, which was spun and dyed by herself; it was 6 yards by 3½, and was highly creditable to her taste and perseverance. There were mammoth specimens of squashes, beets, &c. edge tools, cocoons and sewing silk; one specimen of the latter, exhibited by Seymour Smith of Clermont, was reeled on the common yarn reel, and spun on a common wheel. This gentleman expressed his belief that all the silk required for a farmer's family might easily be made in this way. The show of cattle, horses, and hogs, was truly fine. Capt. Eleazer Cady of Chatham, had a Berkshire boar, and a sow and pigs, that extorted the highest encomiums from all who were on the ground. I certainly never saw more beautiful creatures than the pigs; every line and curve in their bodies was as perfect and symmetrical as the Etruscan Vases, and there was a quiet dignity and repose about their manners that contrasted very pleasantly with their swinish brethren of other families. Some very splendid Bulls were on the ground, and the working cattle were well worth looking at. The gem of the exhibition, however, was a calf, 5½ months old, which for size, symmetry and beauty, &c. I believe equal to anything ever imported; he was reared by —— Blakeman of Tagkanick, in this county, and received, as he richly deserved, the first prize.

John W. Jenkins of Claverick, had a bull on the ground, a cross of Alderney and Durham, which was a good animal, and attracted a good deal of attention from the circumstance of his appearing on the ground in harness and attatched to a single wagon; he was perfectly docile, and was guided by reins as easily as a horse; he has carted out all the manure of the farm this year, and that is not a little. After dining at the Hudson House, (on cold water principles,) the Society adjourned to the City Hall, where, after an address by Dr. Beekman, the first Vice-President, the premiums were awarded, and the festivities of the day were concluded, and the Society separated, highly gratified with the first Fair under the new organization, and fully resolved that the next one should be still better than this.

Before I conclude, allow me to mention the wonderful efficacy of cream of tartar in preventing excessive sweating in horses. Riding in the mail one day last summer, when the air was very warm and sultry, I remarked to the driver that his horses, although they had traveled about twelve miles, were quite dry; he told me that on starting he had dissolved one table spoonful of cream of tartar in a pail full of water, and allowed each horse, half a pail full. After traveling five miles farther they began to perspire a little; when he gave them another spoonfull; the perspiration soon dried up, and although the horses that passed us on the road were in a dripping sweat, ours showed no signs of perspiration at the end of the journey. This being entirely new to me, I thought the information might be useful to some of your readers. Respectfully yours, N. N. D.

Stockport, 10th mo. 14th, 1841.

Tompkins Co. Ag. Fair.

Messrs. Editors—In conformity with your request made at the "glorious meeting" at Syracuse, I proceed to give you an imperfect and hasty account of the doings of the Tompkins County Agricultural Society, at its Fair, in Ithaca, on the 8th and 9th inst. It was a *rouser!* yes, gentlemen, that's the word, it was a rouser in every sense of the term. The "active few" had endeavored to arouse the great majority of the agriculturists to the importance of this association: they had expended their eloquence in the highways and byways; and very many has the humble individual who now addresses you almost persuaded to enrol their names as brothers in the good cause; but the one thing was not at hand to clinch the *bargain—the show.* They were disposed to act only on the *quid pro quo* principle—they wanted to see first what *we* could *do.* This was the ground on which hundreds of our most thrifty farmers rested,—and hence you can readily perceive how much depended on this exhibition, and all else connected with it, in order to increase the numbers of the association, and the promotion of the great objects for which it was formed. Well, the day came, "big with our fate," not "heavily in clouds," however, but sunny, and a temperature delightful, which continued till the end of the second day. At about 9 A. M., the hardy sons of the soil, with their stalwart sons and bright eyed daughters, were seen winding their way down the picturesque hills which gird the beautiful village of Ithaca. They came not singly, nor often in pairs, but by companies and batallions; and by 11 o'clock, the place and grounds for the indoor exhibition and stock, were thronged by thousands. Of this mighty gathering the far greater proportion "came there to see," and to know finally whether they could hereafter afford to give their 50 cents for *the sight.* And did we disappoint them? No, gentlemen, we nobly triumphed; the war came up to the manifesto, and great is the cause for rejoicing, for you have little idea of the difficulties we have encountered in obtaining a sufficient sum from membership to pay our premiums. Scores came to me in the course of the two days, and assured me of their great satisfaction; that their half dollar was ready for another year; all doubts having been removed of the utility of the society.

The exhibition of stock was large, with good specimens of each kind, especially swine and sheep; of the former particularly, those to which premiums were awarded would have proved ugly customers to Mr. Bement, at Syracuse, had they been there; but it is but justice to say, that they originated from this distinguished breeder's stock. A very perfect animal was on the ground from Mr. A. B. Allen's piggery, 5 months old, which it was the opinion of many would be hard to beat at the next fair. A fatted barrow was exhibited, 16 months old, merely to prove the fallacy of the notion which generally prevails, that Berkshires cannot be made to *weigh* against a land-pike. The weight of this was nearly 600 pounds. He was literally a "whole hog." I understood he was from Mr. Lossing's stock. The almost *beardless* Neapolitans, presented to Mr. E. Cornell, of Ithaca, by the State Society, were exhibited and attracted much and favorable notice. But two full blood Durham bulls were on the ground, although I learned that two others were owned in the county, and their non-appearance created much regret, as report spoke highly of them. I shall not discourse further on the cattle, as we had a "chiel amang us takin' notes," and will no doubt in due time "prent them." There were some capital South Downs, which originated from the superlative flock of Mr. Rotch, of Otsego, as well as Leicesters; and methinks, a couple, at least, of Saxons, which, if they had been at Syracuse, would have spiked the artillery of the "fine wool committee," as well as allayed some of the grumbling of the multitude.

With regard to horses, although there were several good stallions, yet the geldings, matched spans, &c., were but little above mediocrity. The able chairman of the horse committee told me there was not *one good* horse now, where there were formerly *ten.* This is unfortunately too true; and will continue to be so, until the same enthusiasm, energy, and skill is manifested in their improvement, which now characterizes the breeders of the Durham and Berkshire. This period will and must soon arrive; and let us one and all speed the time, for the great majority of horses which now overspread the land, "fright the country from her propriety." One word here in regard to the plan we adopted, connected with the exhibition of every animal, or product. When an animal, for instance, was presented to the marshal, the owner's name, with the animal, were registered, and a number attached; the number only, was then transcribed upon a paste board ticket, which was tacked to the pen where the animal was consigned. This blindfolded the viewing committees as to ownership, and served as a guard against *suspicion* of *partiality.* This word *partiality* is the name of the *rock* on which many agricultural societies will split, unless every means are adopted to avoid it. The "green-eyed monster," *suspicion* of favor, must not be permitted to exist for a moment. But there is another begetting cause—the selecting of viewing committees in the same county where the society exists. On this occasion our stock viewing committees were chosen from the adjoining counties; they left their prejudices and partialities behind them; and this, together with their known ability, inspired confidence, and I need not say that their decisions gave undivided satisfaction.

But enough, *allons* to the *indoor* exhibition, which was held in the spacious assembly room of the Ithaca Hotel. The exhibition consisted of articles from the shop of the mechanic, "household productions," vegetables, and fruits—all of which were neatly arranged. Had you been present, Messrs. Editors, to have remarked the skill displayed by our ingenious mechanics in almost everything, from the silver spoon and butter knife, to the smooth hammered and well turned horse shoe, you would have said, "we will put the Yankees against the world in all that appertains to art and skill in manufactures!" Why, sirs, on that occasion we could have served you with a saddle or a harness of which Victoria herself would be proud; carpets and other furniture, which the greatest aristocrat in the land would not sneer at; hats and caps which would lend additional grace and comeliness to the brow of Prince Albert; kerchiefs and collars for a dutchess, and embroidered baskets for her table; flannels soft as down; traveling trunks with a toilet apparatus; and fruits, the very sight of which a Shenstone would have envied!! together with hundreds of other articles which redounded equally to the taste and enterprise of our mechanics, as well as the wives and daughters of our industrious farmers.

I pass to the second day, which, to me and very many others, was as interesting as the first. At 9 A. M. the plowing match and trial of plows came off. Seven teams were entered, and several plows tested as to their relative merits. For level plowing, the Livingston County Patent took the prize; and for side-hill plowing, the premium was given to the same which received the first premium at the State Fair, invented by Messrs. Mooers & Slater, of Ithaca. At 1 P. M. a procession was formed, and accompanied with a band of music, marched to the Presbyterian church, the place appointed for hearing the address and the reports of the viewing committees. The address was delivered by the worthy and indefatigable Corresponding Secretary of the State Society, Col. Henry S. Randall, of Cortlandville; and to the readers of the Cultivator any encomiums upon this address will be deemed almost superfluous. It was eloquent, argumentative, practical, caustic, and occasionally humorous; indeed, it was just what an agricultural address should be, and a model for *State occasions.* Of the many subjects which the talented gentleman treated with ability, want of space will prevent me from adverting to more than one, namely, that "sheet anchor" of the farmer, *manure.* After dwelling on its importance at considerable length, he proposed that he who spread on his farm only 50 loads of manure, should be called *plain* John Doe; if he doubled that quantity, *Mr.* John Doe; that 200 loads should confer the title of *Squire* Doe; and 400 that of *Honorable* John Doe! In spite of the soundness of the plan, this drew down thunders of applause, which signified something more, I sincerely hope, than mere compliment to the speaker, viz: a determination to secure the title *Honorable,* standing as it would on so *profitable* a foundation. Yes, this would not be the empty bubble which deludes the world, but that truly enviable distinction, gained by furnishing the means which would cause four blades to grow where grew only one before. Suffice it in conclusion to say, that a resolution was promptly and enthusiastically passed, tendering the thanks of the Society to Col. Randall, and the appointment of a committee to solicit a copy of his address for publication; and then, Messrs. Editors, you and the public will judge that I have not, with the hundreds who heard it, overpraised.

The reports of the viewing committees were then read, and after some further business was transacted, the society returned in order to the hotel, where a splendid dinner awaited them; after which the members expressed to each other their great gratification at the result of the present Fair, and pledging their efforts to go beyond it at the next. Much praise is due to Mr. E. Cornell, the marshal of the day, for the order and good appointment of everything connected with the stock exhibition; and to Mr. Julius Ackly, the distinguished horticulturist of Ithaca, for the tasteful arrangement of the indoor Fair. Your friend, L. A. M.

Lansing, Tompkins Co. N. Y.

Lee Town Society Fair.

Messrs. Editors—I propose in this communication to say a few words in relation to the Lee Agricultural Association, and to offer some suggestions relative to the organization of similar associations in other places. Much as I am in favor of State and County Societies for agricultural improvement, I am fully convinced that it is to town associations, that we are yet to look for that encouragement to the great mass of farmers, which is needed in order to effect that general and permanent improvement which every friend of agriculture so much desires. A few reflecting farmers in this town (Lee, Oneida Co.) convinced that much good might result from associated effort, organized the Lee Agricultural Association, and the result has far exceeded the expectation of any of its friends.

Meetings have been held monthly ever since the organization of the society in December last, at which addresses have been delivered by members of the society, or reports from committees on different branches of farming, read; giving great interest to the meetings and an impulse to agricultural improvement, such as has never before been witnessed in this vicinity. The society yesterday held a Fair and Cattle Show, which has perhaps contributed more than all other causes, to awaken a spirit of improvement among our farmers, which is destined to accomplish more in three years, than has been accomplished in the last ten years. The exhibition of stock was far greater than was expected, the different kinds occupying about forty pens, and exhibiting in a striking manner the difference between careful breeding with good feeding, and the careless inattentive manner in which much of the stock in this country has been raised. The show of Berkshire pigs was very fair, exhibiting much care and attention in breeding, and showing a wonderful contrast between the Berkshires and the common hogs in this vicinity.

Premiums were awarded to the amount of between $50 and $60, the society appealing rather to the public spirit of farmers than to selfish purposes. Proud as we are of yesterday's exhibition, we regard it as but the commencement of a system of improvement, which is to place the town of Lee in the front rank in everything relating to the welfare of the agricultural community.

I want to make one suggestion to farmers everywhere. It is this: that they meet in their respective towns, and organize town agricultural associations. Of their utility no one who has witnessed their effects can doubt. They are within the reach of every farmer, and the subject is thus brought home to those who would never be reached by county or state societies, and an impetus may be given to the cause, which will be felt as long as agriculture is the great business of the citizens of this country. Respectfully yours,

ELON COMSTOCK.

Stokes, October 14, 1841.

Erie County Fair.

The Buffalo Republican furnishes us the following notice of the Erie Co. Cattle Show:

> We yesterday attended the meeting of our County Society, and were gratified at the exhibition of the neat cattle, of the swine, and of the vegetables. The horses were few however; and we did not see as many household manufactures as we expected. We observed one trunk, and one box full of the cocoons of the silk worm, that were very beautiful. Mr. Allen produced a tremendous boar, and there was one other, only one year and twelve days old, that was very large. Two very remarkably fine Durham bulls were also on the ground, with a fine show of cows, calves, &c. Among the manufactures, there was an excellent lock, of Mr. Davock's, the lard lamps, and many other things that we cannot enumerate. Squashes of all lengths and weights, pumpkins, cucumbers, &c., and last not least, Mr. Grider, a mammoth specimen of the genus homo. The exhibition was a good one, and we believe that a spirit is aroused, that will make it still better next year

Monroe County Fair.

We are indebted to the Rochester Daily Advertiser, for a notice of the Cattle Show of this county, which was held in that city on the 15th and 16th Oct.:

> "There were a large number of persons at Franklin Square to witness the exhibition of stock from various sections of the county—probably not less, at any time, from 11 in the forenoon to 3 in the afternoon, than five thousand. The exhibition was quite rich, exceeding in some points, particularly in working oxen, the State Cattle Show at Syracuse. The show of cattle indeed was quite full and rich, as was also that of swine—the prevailing variety being Berkshire. There were a goodly number of sheep, Merinoes, South Downs, &c. The Merino stock being the more prevalent. The turn out of horses was not large, though there were several passable stallions, several excellent mares and foals—one particularly fine, for her age, having much the form and build of the English Dray Horse. There were several quite fine hackneys, but the main excellence of the show was in the cattle, sheep and swine line. About half past one, we passed round the Square for the purpose of noting the number of animals on the ground, and, as near as we could count, there were of Bulls 22; Cows 19; Calves 12; Oxen and Steers 72; Horses and Colts 40; Sheep 96; Swine, young and old, 66. On the whole, the cattle show was a spirited affair, terminated by a plowing match, the result of which we may notice hereafter. From the spirit evinced by the farmers of Monroe—the samples of production presented on this, as on former occasions, it may safely be asserted that agriculturists are forsaking the beaten track of their fathers—reducing their business to a system, and

acting on the conviction that, to excel in any thing, they must adopt the improvements which scientific research has proved the most feasible for the attainment of that object."

Ontario County Fair.

THE Ontario Repository says that an immense crowd of people attended the Fair and Cattle Show in Canandaigua, and that "the exhibition of fabrics, products, cattle, horses, &c. was by far the most satisfactory, both in regard to numbers and quality, that has ever taken place in this county." The number of competitors for premiums was unusually large, far exceeding the most sanguine expectations of its friends. The annual address was delivered by GEO. WILSON, Esq. and is said to have been an effort highly creditable to its author.

Jefferson County Show and Fair.

THE Agricultural Show and Fair of Jefferson county, was held at Watertown on the 16th of September, and the proceedings reflect great honor on the farmers of that section of New-York. The number of farmers and others interested in the cause of agriculture that attended was very great, and notwithstanding the short time which the several committees had for the performance of their respective duties, (owing to the recent re-organization of the society,) a numerous list of animals, &c. were presented for exhibition and for premiums. The show of domestic manufactured articles was good, and reflected credit on the thrifty farmers of the county. The exhibition of animals, both of the improved and domestic breeds, was most satisfactory, and constituted the great point of attraction in the Fair. An able and admirable address was delivered by the President, O. HUNGERFORD, Esq. It abounded with plain, practical remarks, and was listened to with interest by a crowded auditory. A very handsome list of premiums were distributed, and the result cannot fail to be most advantageous to the agricultural cause in that prosperous county. The agricultural census shows that the farmers of Jefferson have reason to be proud of the aggregate amount of their varied and successful industry.

Onondaga Cattle Show and Fair.

THE proceedings of this society are so closely interwoven with those of the State Society, being held at the same time and place, and the details of which are to be found so much at length in the present number of the Cultivator, we are obliged to pass it with a less distinct notice than we should otherwise have done. About ninety premiums on cattle, implements, &c. were awarded, and a decided impulse given to the cause of improved agriculture.

Cayuga County Agricultural Society.

THE Show and Fair of this Society took place at Auburn on the 13th and 14th of October, and went off in the most satisfactory manner. We are gratified to learn that the Society is in a most flourishing condition, and indeed it would be a libel on the good citizens of that county to suppose that any other than success could be its result. Premiums to a large amount were awarded; the appearance of the animals was very fine; the collection of implements and domestic manufactures worthy of the occasion, and the display of fruits, vegetables, &c. greater than at any former meeting in Cayuga. The address was delivered by HUMPHREY HOWLAND, and we have read it with much interest. It contains many facts and suggestions worthy of the consideration of every farmer. The first premium on corn was awarded to Joseph F. Osborn, the yield per acre being 144 bushels 14 lbs.; and the second was awarded to Joseph Sherwood, the crop being 121 bushels 15 lbs. to the acre. As was to be expected, the quality of the corn in both cases was very superior. Several specimens of silk of beautiful appearance were exhibited, and it is already evident that the bounty granted by the state will be claimed to a considerable extent.

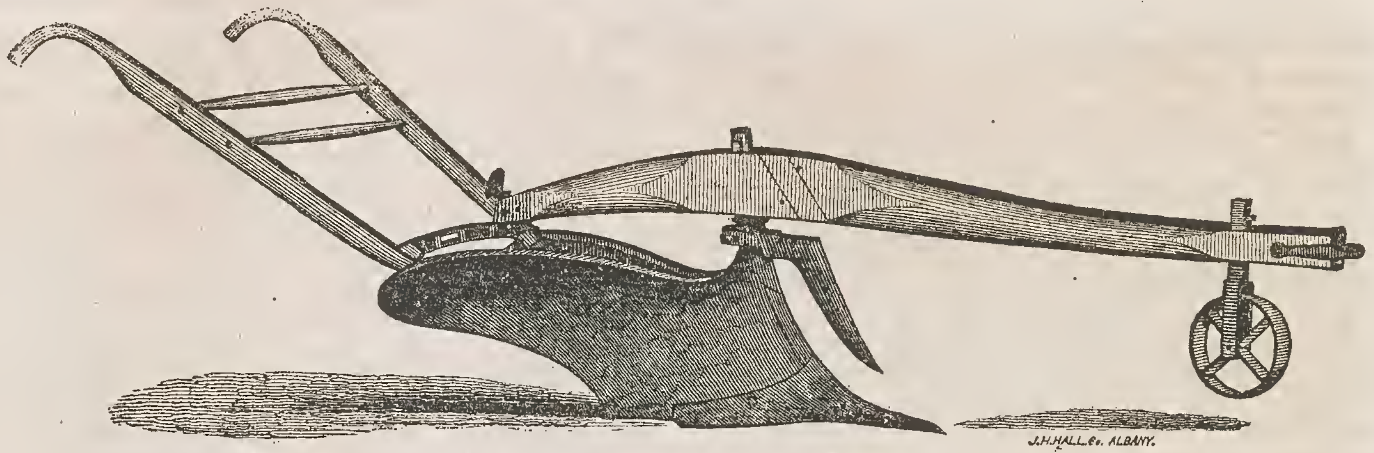
Columbia Floral and Horticultural Society.

WHILE Cattle Shows and Agricultural Fairs are the order of the day, and are producing such happy effects on the farming community, we are glad to notice that the scarcely less important department of husbandry, Horticulture, is also receiving the attention it deserves. The Floral and Horticultural Society of Columbia held their annual meeting at Hudson recently, and the meeting was numerously attended. A great variety of fruits and vegetables, flowers, &c. were presented, premiums were awarded, and the whole proceedings were such as to afford abundant proof of the benefit of such associations.

☞ Notices of Fairs in several other counties, will be given in our next.

More Berkshires for the Southwest.

WE have learned with much pleasure that our enterprising and public spirited friends, Messrs. J. H. Cunningham & Co., of Springfield, Ky., have made a large purchase of A. B. ALLEN, Buffalo, N. Y., of this invaluable breed of swine, for the purpose of supplying to some extent, the constantly increasing demand for this favorite stock, in the fertile valley of the Mississippi. We do not doubt that the purchasers will find they have made a profitable investment, while at the same time they will be essentially contributing to the prosperity of their section of country.


J.H.HALL Sc. ALBANY.

Barnaby and Mooer's Premium Side Hill Plow—[Fig. 83.]

THE above cut gives a very correct representation of "Barnaby & Mooer's (of Ithaca, N. Y.) patent Side hill and Level land Plow," to which was awarded an extra premium of $30, by the New-York State Agricultural Society at their late Fair at Syracuse. It received also last year, the first premium of the Amercan Institute, and the gold medal offered by the same institution this year for the best plow. As a side hill plow it is undoubtedly superior to any thing of the kind, while it is found to work admirably on level lands, turning the furrows all one way, or in the common way of laying out the ground into lands, or by placing the beam in the center, it will throw furrows both ways, serving for ditching or ridging at the option of the farmer. One of these plows may be seen at the office of the Cultivator.

Correspondence, Inquiries, &c.

Compost from Marsh Mud and Sod.

"MESSRS. EDITORS—Having much salt marsh adjoining my farm, I am desirous of getting some information respecting the best mode of rendering the sod available as manure, since I find it very difficult to rot or decompose. I hauled 20 or 30 loads into a heap and stacked them, and it was two years before I could get any of it for use, and then only about half the mass was fit for application to the soil. This was applied to Indian corn, with very satisfactory results, the corn being larger than on the same piece where the best hogpen manure was used.

"*Little Compton, R. I.* J. C."

In order to promote the rapid decomposition of turf, peat, swamp muck, marsh sod, &c., the mixture of sufficient animal matter to promote fermentation with the mass of vegetable matter, seems necessary. Peat is almost inert on soils until it has been fermented, or its acid properties neutralized by the addition of lime or ashes. When so fermented or prepared it is very valuable. Marsh mud or sod is still better than peat for making compost, as in addition to the vegetable part, it contains more or less animal matter, one of the most efficient agents in fertilization. Dr. Jackson, in his Geological Survey of Rhode Island, in his chapter on manures, has some remarks on composts from which we make the following extract relating to the inquiry of our correspondent:

"I should most strenuously advise the employment of fish with peat and swamp muck [or marsh matters] where they can be obtained: one barrel of fish being a sufficient quantity of animal matter, to convert a large wagon load of peat into a valuable manure. Let the peat be spread on some convenient place on the farm, and then fish be mixed with it in layers, lime being spread over it to hasten the decomposition. The whole heap will undergo the putrefactive fermentation, and ammoniacal gas and salts will be abundantly produced, and will impregnate every portion of the peat or swamp muck, so as to render it a most powerful manure. No odor will be perceptible, if the heap is well covered, and the whole mass will be converted into a black pulp or powder, and may be used like other manures either in broadcast or in the hill. Every farmer ought to spread at least 20 loads of compost manure per acre on his tilled land every year, if he means to improve the soil so as to render it more and more fertile."

As the inquiry of our correspondent is of much importance to many farmers on the sea coast, where marsh mud, sea weed, and sod, abound, we hope some of our friends who have had practical experience in the formation of composts from these materials, will favor us with their processes and the results.

"Use of Toads."

WE make the following extract from the letter of a correspondent at Attakapas, (La.)

"A very wealthy neighbor of mine, has been suffering for many years from what he calls rheumatic pains, but which is more probably gout. All the watering places and the best physicians could afford him no relief. An old Indian prescribed for him the *oil of toads*, to be used by rubbing on the suffering part. From the use of this, he has never failed to obtain almost immediate relief, even in the severest paroxysms."

Transmutation.

MESSRS. GAYLORD & TUCKER—As I perceive that various opinions are entertained respecting the transmutation of wheat and other grains to chess, I wish to state a fact that came within my personal observation in 1819. I sowed a small piece of oats as the first crop on a farm entirely new. They were sown so late in the season, that the roots lived through the succeeding winter, which the next season produced a luxuriant growth of chess—nothing but pure chess! The fact that no seed of any description had before been sown on the farm, united with the fact, that the chess was seen to grow from the same identical roots, which the previous year had produced oats, and nothing but oats, was to my mind a satisfactory proof, that oats at least, will under similar circumstances produce chess. As to wheat and rye, I have no certain proof that they will thus degenerate, but will venture the opinion that either, if sown so early that the young heads will be destroyed by frost, or any other means, a crop of chess will be the result. The subject is susceptible of experimental proof. For instance, wheat or rye might be sown as early as the first of August, or so early that the young heads would make their appearance before winter. Previous to the setting in of winter, let the whole be mowed close to the ground, and the roots carefully protected through the winter, and the produce of the next season would probably settle the question. Will not some of your readers try the experiment? *Hudson, Ohio,* 1841. T. HUDSON.

Why not try the experiment yourself, Mr H.? since if you succeed you not only settle an important point in vegetable physiology, but entitle yourself to the premiums which have been offered for indisputable proof of the transmutation of wheat into chess, amounting to some two hundred and fifty dollars, and which we presume will be forthcoming. We give Mr. Hudson's paper a place, not because we think it adds particular force to the many similar *proofs!* of transmutation, but because we wish to give the advocates of that doctrine every chance of demonstrating by variety of experiment, the truth or fallacy of their system. Have any of our readers noticed the fact stated by H. of the oat-root surviving the winter? It is new to us, and may be of some practical importance.

Hoof Ail?

MESSRS EDITORS—I thank you for your article in your last paper, in answer to my inquiry respecting the origin and remedy of foot rot in sheep. I have another to propose quite as interesting to farmers as the above. I raised the last spring some 18 calves, a part Durham, and well fed. Some weeks since one was taken lame and died in less than 24 hours; mortification succeeded, and on examination, the blood on the limb affected coagulating and extending into the body quite to the vitals; four have already died in quick succession of the same disease. Now if you will give us the causes and remedy, and if it will communicate to larger stock, and how, or if contagious at all, you will confer a lasting favor on the public.

Yours very respectfully, JOS. H. MERRICK.

Franklin, Del. co., N. Y., Oct. 13, 1841.

Will some of our correspondents who have seen this disease, or are acquainted with a remedy for similar complaints, favor us with their opinion on its nature, cause and remedy? We believe in many cases where a complaint having a like fatal termination has prevailed, it has been considered as the foot ail and been treated as such. Will Mr. Merrick ascertain, if possible, whether ergot was to be found on the grasses where his calves fed? If June grass was plenty in the fields, it is probable such was the case, and a clue to the nature of the disease may be thus gained.

Imported Stock.

CATTLE.—The ship Birmingham from Liverpool, at New-York on the 23d Sept., brought out six head of Improved Short Horn Durhams, four of which were for E. P. PRENTICE, Esq. of this city, and have been added to his already extensive herd at Mount Hope Farm, on the west bank of the Hudson, about a mile below Albany. Who the other two animals were for, we have not learned. Those for Mr. Prentice consist of four in-calf cows and heifers, viz:

"Moss Rose," roan, four years old.
"Violanta," red and white, three years old.
"Easterville," roan, two years old.
"Catherine," spotted, two years old.

These beautiful animals were sent out by J. Whitaker, Esq. of Burley-Otley, to whom Mr. P. sent an order, unlimited as to price, for the four best cows which could be procured, and those who have seen them think they do credit to Mr. Whitaker's taste and judgment, though they have suffered, two of them severely, from a long and boistrous sea voyage. Mr. Prentice deserves great credit for the public spirit and liberality he has manifested, not only in the importation of these animals, which have cost him $2,000, but also for his previous importations of Improved Short Horns and South Down and Leicester Sheep, so many of which, with their progeny, grace the lawns and pastures of Mount Hope. The lovers of fine stock, in passing through town, should not fail to visit Mr. Prentice's farm, where they will find a herd of improved cattle and sheep, not excelled in beauty and numbers, probably in the Northern States.

We learn also that our friend Judge VAN BERGEN of Coxsackie, Greene co., one of the best farmers on the Hudson, received, by the last London packet ship, an Improved Short Horn Durham Cow, celebrated for her milking properties.

SOUTH DOWN SHEEP.—Our readers will be gratified to learn that our esteemed friend and correspondent A. B. ALLEN, Esq. of Buffalo, came home in the London packet ship Hendrick Hudson, Capt. Morgan, which arrived at New-York, Oct. 17, from a three month's agricultural tour through the different counties of England. For a notice of his visit, the results of his investigations, and a description of the stock he has purchased, the reader is referred to his communication on another page. We may mention here, however, that he brought with him in the Hendrick Hudson, one South Down buck and three ewes for Mr. Rotch of Butternuts, a buck and two ewes for Mr. Stevenson, United States minister to England, and a buck and two ewes, all of the same breed, for Bishop Meade of Virginia. These sheep are from the celebrated flock of Mr. Jonas Webb of Babraham, who took *all* the prizes for South Down bucks, awarded by the Royal Agricultural Society at its last meeting in Liverpool, amounting to 90 sovereigns, ($436.)

Swine.—In addition to the extensive lot of Berkshires heretofore sent home by Mr. Allen, amounting to over forty, Mr. A. brought with him several of the Kennilworth and Yorkshire breeds, which grow to the weight of 1000 to 1600 pounds, for a description of which the reader is referred to Mr. A.'s letter.

Premium Animals and Implements.

The portraits of Mr. Prentice's bull and cow, which received premiums at Syracuse, have heretofore been published in the Cultivator—the former at page 133, current vol. and the latter as a heifer at page 173 of vol. 7. Portraits of Messrs. Corning & Sotham's cow Matchless, and of one of their Cotswold Bucks, were also published in the last volume of the Cultivator. We publish in this paper, handsomely executed cuts of one of the premium Plows and one of the Drills, and it is our intention hereafter to give views of those prize animals and implements, both at the State Fair and at the American Institute, of which correct drawings can be procured.

Sugar from Indian Corn.

When Col. Taylor of Virginia, pronounced Indian corn to be "meat, meal, and manure," he should have added, as he might in strict truth, it was also oil and sugar. We have ourselves seen barrels of the purest oil, for lamps or other uses that was made from corn, and every one has been aware that molasses was another of its products. A short time since we laid before the public an inquiry from the Hon. H. L. Ellsworth of Washington, as to the mode of making molasses from corn, and we have the pleasure of furnishing from a letter read at a meeting of the New-Castle (Delaware) Agricultural Society, from William Webb, Esq. of Wilmington, the process which has been adopted by him, and which has been eminently successful, as the beautiful samples of sugar as well as molasses exhibited, clearly demonstrated. Mr. Webb says:

> "The manner of raising the corn and making the sugar, is as follows:—the corn is planted in rows 2 1-2 feet apart, and the stalks are left to stand in the row 3 inches one from another; it is then cultivated in the usual manner. Some time in August, or as soon as the stalk shows a disposition to form grain, the ears must be taken off; this operation must be carefully attended to, as upon *it* entirely depends success. After this, there is nothing more to do until the crop is ready to be taken up, which will generally happen in September; the stalks are then cut up at the root, stripped of their leaves, and taken to the mill where the juice is pressed out between iron rollers, in the way usually employed with the sugar cane. Lime water, about the consistency of thin cream, is then added with the juice, one spoonful to the gallon; it is left to settle one hour, and then poured into boilers, which are covered until the liquid approaches the boiling point, when the scum must be taken off. It is then boiled down as rapidly as possible, taking off the scum as it rises. As the juice approaches the state of syrup, it is necessary to slacken the fire to avoid burning. The boiling is generally completed, when six quarts are reduced to one; it is then poured into coolers or moulds and set aside to crystalize. When this process is gone through, the sugar is to be separated from the molasses, and the operation is finished. The process here detailed, gives the quality of sugar you see in the samples. If required, it can be afterwards refined as other sugar. The use of animal charcoal, and the employment of steam in the process of evaporation, as is common in the manufacture of beet sugar, would, I am confident, produce white sugar at one operation. From what is known on the subject, I fully believe that an acre of good ground treated as above described, will yield at least 1,000 lbs. of sugar—probably more. The value of the fodder taken from the stalks, and of the stalks themselves, after passing through the mill, will be more than an equivalent for the whole expense of cultivation and keeping the ground up. The fodder produced in this way is much superior to that usually made, from its containing a greater quantity of saccharine matter."

We consider the experiments made by Mr. Webb as most important, and doubt not the country will find cause for gratification at the success of his efforts to produce sugar from corn. The process is remarkably simple, the fixtures cannot be expensive, and the difficulties which have hitherto attended and prevented the making of sugar from the beet in this country, do not appear in the case of corn to exist. The foreign substances in beet juice render its conversion to sugar an intricate and delicate process; while there seems to be no more obstacles in the way of making sugar from the corn than from the juice of the sugar cane or the maple. From some cause, the analyis of beets in this country, has not shown the quantity of sugar or saccharine matter that the French or German beets produce; while from the fact that if there is one plant more strictly American than another, Indian corn is that one, we may expect that it will be produced in greater perfection here than in any other part of the world. The value of the fodder produced will not be lost sight of in any estimate of the profits which are to result from the cultivation of corn for the manufacture of sugar.

The exhibition of the New-Castle Society, where the letter from which our extracts are made was read, went off with the most gratifying success. There was a a fine show of Durham, Devon and Ayrshire cattle, fine horses, improved sheep and pigs, "with numerous agricultural implements, from the all important plow and complete seeding machine down to the simplest hoe." Several distinguished farmers from other states were present, among whom were Mr. Robinson of Indiana, and Mr. Bement of New-York. There can be no question that such exhibitions are attracting much more notice than formerly, and their beneficial effects on the public will be proportionably extended.

Facts Relating to India.

A friend of ours in the South, has furnished us with a mass of facts derived from various authentic sources, relating to the rapid development of the resources of British India, its commerce, and the necessary bearing which they must have on the trade and agriculture of the United States, particularly the southern portion of it. That in time a vast agricultural and commercial power will exist in India, appears to us very certain. A race of men is growing up there, the result of a connection between the English military and civil servants of the East India Company service, and the natives, possessing in a great degree the talent and energy of the former, and the adaptation to the climate of the latter; and this race will eventually sway the destiny of that immense region. At the present moment England is endeavoring by every means in her power to promote the agricultural interests of that country, as it is there only in all her colonial possessions, she can hope to find the raw material she now receives from the United States, or the market for her manufactured products our country now furnishes. Every step therefore, she takes in India is interesting to us, for as a matter of course and of perfect right, England will prefer the products of her own territories and colonies to those of another and foreign nation. That England would gladly dispense with our cotton and our rice, our tobacco and our flour, could her population at home, her cotton spinners at Manchester, and iron manufacturers at Birmingham, draw their supplies of these articles from her own territory, or her colonies, there can be no question; and it well becomes the American farmer and planter, as well as statesman, to closely watch the progress she is making to the accomplishment of her designs. In some of them she may fail at first, but where the disposition and ability are both present, partial failures will only lead to a surer success in the end. The India government may not realize *all* they expected at once from their effort to introduce American varieties of cotton, and our modes of production and fitting for market, yet a great step has been gained; our cottons are there, our machines are there, and our citizens are teaching our methods of production and preparation; and it would be strange indeed, if in a country so admirably adapted to cotton as India, and where it has been cultivated from time immemorial, the power and influence of Britain should not give a new impulse, when exerted in earnest. In making our selections and condensations from the facts furnished by our correspondent, we shall begin with rice.

It is well known that rice is a most important article of food, not only in the East Indies, where a mixture of boiled rice and melted butter called Ghee, is the principal food of the natives, but also in the West India Islands, where the supply has hitherto been mostly derived from the United States. Since the extensive cultivation of rice for export has been commenced in India, large quantities are delivered in the British West Indies from Calcutta. In 1838, Calcutta exported to Mauritius and Bourbon, 151,923,696 lbs. worth $4,557,710, or double the amount we annually export. In 1836, 66,000 bags of cleaned rice were imported into Liverpool from the East Indies, and only 450 casks of Carolina. In 1839, 97,000 of East India rice, and none of Carolina. In 1840, a considerable quantity of uncleaned Carolina rice, (paddy) was entered at Liverpool, and there was a corresponding falling off in the East India importation. There can be no question that India is abundantly able to compete with the United States in producing rice as well as cotton. The valleys of the Ganges, Irawaddy, and the other numerous rivers of India have been from time immemorial the great rice fields of India, and the quantity that might be produced is immense. Dr. Roxburg states "that he never knew or heard of an Indian farmer manuring in the smallest degree a rice field; yet *these fields* have probably for thousands of years, continued to yield annually a large crop of rice, on an average of thirty to sixty fold; even eighty to a hundred have been known." The production of rice, is, at this time, rapidly increasing, and the best American machines for cleaning are now in use on the Ganges.

The astonishing increase of the importation of East India articles of produce into Great Britain, and the necessary increase of production in that region, may be inferred from a few facts. In 1831, the importation of sugar was 60,000 cwts; in 1836, 152,163 cwts; in 1840, 600,000 cwts; and the present year it is expected to be over 1,800,000 cwts. Cotton has increased in the same rapid ratio. The importation of India cotton in 1839, was 47,233,959 lbs.; in 1840, 76,703,295 lbs.; or almost doubling in two years. Of Coffee, the importation into Britain from India in 1834, was 3,000,000 of lbs. and in 1840, 15,000,000. England exports at the present time to India about 25 millions worth of her manufactures annually; to the United States she sends nearly 50 millions. An able writer in the Journal of Commerce, who signs himself a "South Carolinian," gives the following as the causes which have produced this result:

> "1st. From the consolidation of the British power in the conquered provinces, preventing the native chiefs from warring on each other; thus securing to the people peace—the first element of a nation's prosperity.
>
> "2d. The abolition of the trading charter of the East India company, and the modification of their political powers.
>
> "3d. The spread of education and christianity.
>
> "4th. The reduction in England of the duties on East India produce; such as sugar, cotton, rice, &c.
>
> "5th. The stimulus given to the cultivation of the above articles by the high prices in England and on the continent; the introduction of steam power on the rivers of the east; the investment of large amounts by English merchants and agriculturists; and the increased facilities of intercourse between the East Indies and Europe.
>
> "6th. The exertions of the East India company to improve the quantity and quality of Indian cotton by introducing American gins and seeds, by granting premiums, and by establishing numerous agricultural societies in each of the presidencies.
>
> "7th. The establishment of the British India Society, which was instituted for the express purpose of inquiring into the oppressions of the East India company's government; for reducing the enormous salaries of the company's officers; for the abolition of the iniquitous land tax, which is one of the chief causes that has kept the agriculture and commerce of the country in such a depressed state, and the abolition of the salt and other heavy internal duties and taxes."

These combined causes have produced already, numerous reforms and improvements in the social, political and agricultural condition of India, and there is reason to believe that the influences now acting will continue to increase, and be more and more felt in the imports and exports, the warehouses and the products of Europe and the United States. There is little reason to question that the agriculture of the Mississippi valley is to be brought in conflict with that of the Ganges; that the cotton, tobacco, rice, and sugar, of our southern states is to find formidable rivals in the markets of Europe with the same articles grown in Asia, and this fact should be kept constantly in view by those who are interested in the success of American agriculture and home manufactures. Distances in these days are becoming as nothing; steam has triumphed over space, and that population will maintain the supremacy in agriculture and commerce, which ranks the highest in intellectual power, moral tone, and social freedom.

Fair of the American Institute.

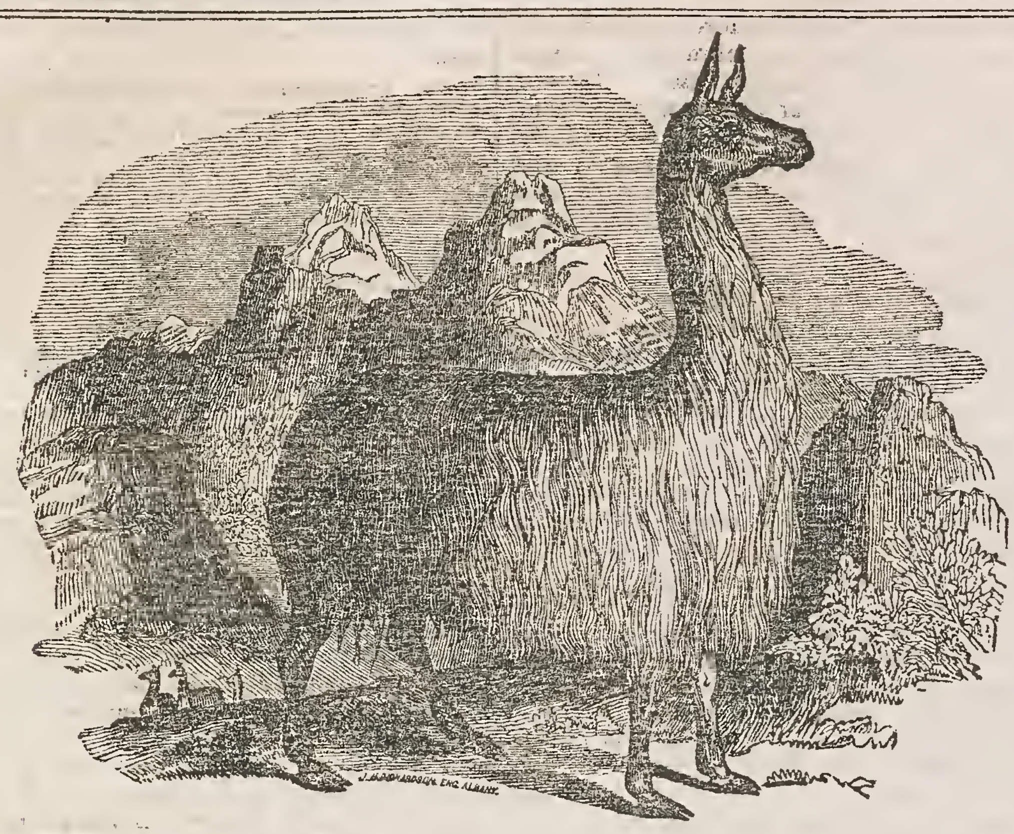
The Fair of that noble association, the American Institute at New-York, commenced, agreeable to notice, on the 11th of October, and attracted the attention and attendance of multitudes until its final close on the 25th. The arrangement of the vast number of beautiful and useful articles, although commenced early, was not completed until near the close of the week, when the spacious halls of Niblo's Gardens exhibited a scene which excited the admiration of all. The implements displayed were apparently innumerable; every spectator found much to interest and instruct. The agriculturist was gratified at the fine specimens of farm products, the improved implements, and the proofs that met him every where of the importance deservedly attached to his pursuits; the manufacturers looked with delight on the evidences of the high state of perfection to which skill and enterprise has advanced the manufacturing arts among us; and the friends of domestic industry rejoiced in the proofs seen on every hand that labor is not unknown or lightly esteemed in the home of the American farmer and mechanic. There can scarcely be an article named, either as ornamental or useful, that had not its representative at the Fair; and as the living tide of spectators day after day swept through the halls with these specimens of American industry, a feeling of regret would arise in the breast of the patriot, that foreign nations should tax us so heavily for what we are so abundantly able to provide for our selves.

The show of animals took place near Portsmouth street, and although there were some little defects in the arrangement, the show was fine and the animals on the ground were beautiful. A great number of horses were exhibited, among which Messenger, the splendid bay horse that took the first prize at the State Fair at Syracuse, attracted much notice. There was a number of very fine bulls and cows on the ground, and one, the property of Mr. Townsend, a beautiful milch cow, producing 35 quarts of milk per day, elicited much admiration. At no former exhibition has the display of swine equaled the present. There were some few imported hogs; and as usual the Berkshire and Chinese were most numerous and the greatest favorites.

The official report of so much of the proceedings as relates to the plowing match, award of premiums on stock, agricultural implements, &c. will be given in our next, it not having come to hand when this paper was sent to press.

Large Crops.

It will be seen by reference to the notice of the Fairs of Oneida and Cayuga counties, in another part of this paper, that the premium crops of Indian corn in those counties, were 144, 121, 97, 84 and 83 bushels per acre, the largest being raised by our friend Osborn of Cayuga, whose oat crop of 1839, (130 bushels to the acre,) has never to our knowledge been beaten; we rather think, however, that Mr. Ingell of Oswego, judging from his last year's crop, will bear off the prize for the largest crop of Indian corn. Who will compete with these gentlemen for the premiums offered by the State Society for the best field crops?



Alpaca or Peruvian Sheep.—[Fig. 84.]

THIS animal, which from its great resemblance to the Camel, was classed by Linnæus, in the *Camelidæ*, is the Lama of Peru and Chili. There are according to Cuvier, three species of the animal; the Guanico, the Paco, and the Vicuna. It is the Paco or Alpaca which is represented above, and which from the peculiar qualities of its long silky hair or wool, has obtained the name of Peruvian sheep. It is a hardy animal, being used for beasts of burden in the mountainous regions of Peru, being able carry from 150 to 200 lbs. over those mountain passes, some ten or fifteen miles in a day. Its foot adapts it to a mountain region, and being gifted with a thick skin and a fine fleece, and never perspiring like the common sheep, it is capable of enduring a great degree of cold, and resists damp or rain better than the hardiest races of the common sheep. The Alpaca wool is whiter, brighter, not being colored with the animal secretions as common wool, is straighter, stronger, and softer, small in fibre, pliable and elastic, more resembling silk than wool, and producing a fabric of a texture between silk and common sheep's wool. In consequence of this animal possessing such valuable properties, both in flesh, and in wool, a great effort is now making to introduce it extensively into the more elevated districts of England and Scotland, as it is thought it will be more valuable in every respect, and save the annual expense of about two millions of dollars, which it is calculated is now expended in oil, tar, butter, &c. for smearing sheep and saving them from the effects of wet and cold in these same districts. There are at present from 90 to 100 Alpacas in Great Britain, and it is expected quite a number will be introduced the present year, through the exertions of Messrs. Dawson and Atkins, who exhibited several at the meeting of the British Association at Liverpool. From a memoir printed for the Nat. History Society of Liverpool, by Mr. Walton, we gather the following facts:—"The Alpaca sheep breed in the third year, the period of gestation is seven months, have one at a birth, attain the height of 3½ or 4 feet, and usually live ten or eleven years. In Peru, they are mostly shorn every third year, about April, when the wool is about 8 inches long; it usually grows three inches in a year, but if shorn yearly grows six or eight inches, and the fleece weighs from six to eight pounds. A male Alpaca shorn three years ago had a coat from eighteen to twenty inches long; and instances are known of Alpaca wool attaining the extraordinary length of thirty inches. The weight of a full grown carcass is about 250 lbs. and the meat is of the finest quality, being fully equal to venison." The Society above named, recommend the Alpaca, "as a breeding stock not likely to interfere with sheep pasturage, and as being calculated to supply the manufacturer with another raw material of our own growth, applicable by its fine quality and glossiness to the purposes of silk; and thus not interfering with either the growers of British wool, or worsted spinners, and woolen manufacturers." Considerable quantities of Alpaca wool are imported into England, where it is much of it spun, taken to France, and made into the finest chashmere shawls. It is also extensively mixed with the finer worsted goods, and in many cases passes for silk. The best camlets and moreens have more or less of it in their texture.

We allude to this subject here, because we wish to ask, why the Alpaca, if it possesses the qualities ascribed to it, both as productive of food and clothing, might not be successfully introduced into the United States? It is perfectly hardy, its food is the coarsest grass, and it thrives where a common sheep would starve, its flesh is excellent, and its fine fleece; is useful for many purposes to which our Saxon or Merino wools, from their shortness and the difficulty of making them perfectly white, are inapplicable. There are large tracts of country both in New-England and New-York, not indeed too elevated for sheep, but which there is little doubt would be found perfectly adapted to the Alpaca. We hope some of the enterprizing Americans engaged in the South American trade will make an effort to transport some of these valuable animals to this country. Just before the French occupied Spain, a number of the Lamas, embracing the three species, were sent from Peru and Chili across the continent to Buenos Ayres, and thence shipped to Cadiz. They fell into the hands of the French, and Bory St. Vincent, who was then with the French army, made accurate drawings of them, and paid much attention to their habits, for several years. It was found that the fleece of the Alpa-Vicunia, (produced by a cross between a Vicunia and an Alpaca,) has a much greater length than any other variety, and is several times heavier. In the journey and voyage from Peru and Chili across the continent and ocean, they were fed with potatoes, maize, or corn, and hay. As soon, however, as the supply of potatoes was exhausted, and they were confined to dry food alone, constipation came on so violently, that medical aid was required, and several died during the transit.

NEW PUBLICATIONS.

Journal of the Royal Agricultural Society.

Vol. 2, part II. *London.*

THIS is a valuable publication, devoted to the publishing the Prize Essays on the various topics of Agriculture proposed by the Royal Society. It is issued occasionally, in numbers of some 200 pages each. There are several good papers in the present number, one of which is "On the Specific Identity of the fungi producing Rust and Mildew; by J. S. Henslow." This paper is illustrated with an engraving representing this fungus in its several states, and proving very conclusively that the red matter called rust on wheat, is only the spores of the mildew plant *Pucinia graminis*, at an early period of its growth; the fungi assuming a darker hue, and a somewhat different form, at a later period. This fact of identity is of some practical importance, since the farmer has only one instead of two enemies to attack, and will therefore be more likely to devise some method of ensuring success.

In some remarks on the blight supposed to be produced in wheat by the berberry, Mr. Henslow seems to admit that there is some connection between the blight and the plant, though he says he has "met with no evidence which can explain the nature of this relation." Mr. Pussy, President of the Royal Society, in a note to this article describes a case in which a berberry hedge having frequently blighted wheat, it was grubbed up, and while this process was going on, one of the largest of the bushes was removed and placed in the middle of the wheat field. "At reaping, it was found that the straw and grain for two or three yards around was evidently injured by mildew." As a set off to this, we may mention here the experiment made by Col. Hecox of Skaneateles, when a berberry bush was planted out early in a wheat field, grew and flourished, without producing the least effect on the wheat as was witnessed by many. The fact that the mildew of wheat and that of the berberry are two distinct plants, as we have shown by engravings at p. 120, vol. 7th of the Cultivator, is sufficient to do away this impression that the berberry is more injurious than any other bush of equal size.

Sillimans' Journal of Science and Arts.

THE leading paper of this excellent quarterly for October, is the "First anniversary address before the Association of American Geologists, at their second anual meeting in Philadelphia, by Prof. Edward Hitchcock." It is a rapid and lucid review of the progress of geological science, and its present state in this country; with numerous illustrations of its connection with agriculture, religion and the natural sciences. There is also an able paper on the fossil Infusoria, (rock meal of Sweden) by Prof. Bailey of West Point. The astonishing fact, that vast masses of our hardest rocks, and large bodies of earth, are nothing but the shells of microscopic animals, is fully shown. There is also an interesting account of the progress of steam navigation in the Pacific; and remarks on the connection of the Atlantic and Pacific by a cut acros the Isthmus of Panama. There are besides a great number of papers on various subjects of science, with copious bibliographical notices, &c. &c. New-Haven Ct. Messrs. Silliman, Editors. Terms $6.00 per annum.

Blacklock's Treatise on Sheep.

FOR the re-publication of this standard English work on sheep, we are indebted to those enterprising publishers, Wiley & Putnam of New-York. Blacklock's Treatise on Sheep, is one which contains more valuable information respecting the sheep, than any other work extant. It is illustrated by a series of good engravings, representing the different kinds of sheep; the processes of washing and shearing; the structure and growth of the wool; the diseases of the animal, such as foot rot, and hydatids, with sections of the foot, head, &c. There is scarce a subject of importance connected with this animal, that is not here fully discussed, and the whole is compressed into a cheap and portable volume. Messrs. Wiley & Putnam deserve not only much credit for their selections, but also for the fine style in which they are getting out their books intended for the use of the farmer. Every man who keeps sheep should have a copy of Blacklock.

North American Review, for Oct. 1841.

THIS is a capital number of this capital work, as a glance at its table of contents will show. The subjects of the papers are as follows:—Moschele's Life of Beethoven; Early History of Ohio; The Navy; Rural Cemeteries; Relations with England; Dr. Harris's Memorials of Oglethorp; Stephen's Incidents in Central America; Wright's Translation of La Fontaine; Critical Notices, &c. The article on Ohio, is the one which to us is the most interesting in the number; and in truth the history of that state is a study for the agriculturist, the political economist, and the statesman. Here is a territory with a million and a half of inhabitants, with astonishing resources of nearly all kinds, a soil producing annually some 15 or 20 million bushels of wheat, and 30 or 40 million bushels of corn, and yet the time when its soil was only trod by savages is in the recollection of many. The growth of an empire is here seen from the greenness of youth to powerful manhood; and of the many events sketched in the Review, and the works at the head of the article, there are many who can say, "this I saw, and part of that I was." The papers on the Navy, and on our Relations with England, are ably written, and will attract attention at the present time. The views are in general just, and the matters in dispute are touched in a clear and forcible manner. There is a spice of old Fannueil Hall in the papers, which proves that the spirit of '76 is not yet extinct. The review of Stephens is most favorable; indeed it could not well be otherwise, for Stephens is the beau ideal of a traveller. By the way, we are glad to learn that he and his former companion are off to Central America again, to complete the exploration and survey, and perhaps removal of some of the most striking of these monuments of olden time. Boston, Munroe & Co.

Essay on Steam Plowing---Practical Essay on Milking.

WE have received from the respected author, WILLIAM BLURTON, of Field Hall, Utoxeter, England, two small pamphlets, the titles of which are given above. Mr. Blurton is a decided advocate for the use of the steam plow, and the Essay is devoted to proving its practibility and its feasibility. If his arguments and statements are well founded, there would seem little room for doubt, that at no distant period the steam plow will be found indispensable on large farms. We have long believed that if the steam-plow ever comes into use, it will be invented by a Yankee, and first used on the prairies of the great west.

The Essay on Milking is chiefly devoted to the subject of draining the udder of the cow by means of the "syphon and can," invented by the author, as well as showing the nature of the causes that produce "holding up of the milk," in many cows. The importance of great care and regularity in the milking is strongly enforced, particularly in securing the whole value of the "drippings" or "strippings," as the last milk drawn from the cow is called. We have always been afraid of machinery for drawing off cow's milk, since we knew a few years since several cows who had their udders destroyed by inflammation, resulting from attempts (which were for a time successful and promised much) to draw off milk by inserting tubes in the teats, instead of forcing out the milk by the hand in the ordinary way. Mr. B's apparatus may be better than the one we saw tried; but after all, we believe the soft hand of the dairy maid is the best apparatus for extracting milk. Mr. Blurton considers the "holding up of milk," to result from over fullness of the udder, which causes consequent partial inflammation and retention. We do not doubt this is sometimes the case, but some cows hold up their milk at times when it could not result from rich and nutritious food, and the consequent secretion of extra quantities of milk, and in a manner which proves to us that it is a voluntary act, and depending on the volition of the animal. The engravings which accompany the work are well executed, particularly the one representing a section of the udder. Of the facts contained in these Essays we may hereafter avail ourselves.

ORIGINAL COMMUNICATIONS.

The Hessian Fly.

Messrs. Gaylord & Tucker—I thought the question in relation to the propagation of the Hessian fly had been settled more than 20 years ago, until I observed in your last number of the Cultivator, it is still open, in some parts of the country; I therefore send you an extract from the American Farmer, edited by J. S. Skinner in Baltimore, vol. 5, p. 241, October, 1823. In this extract, a former publication is referred to, which will be found in the 1st vol. of the same periodical, p. 296, and the communication dated October, 1817. Yours respectfully,

JOHN H. COCKE.

Bremo, Fluvanna Co. Va. Aug. 18, 1841.

EXTRACT.

To the Editor of the American Farmer—I send you herein, the blades of wheat with the eggs of the Hessian fly upon them. They are too minute to be examined satisfactorily without the aid of a magnifying glass, though they are discoverable by a good naked eye.

After keeping some blades of wheat three days, wrapt in a paper in my pocket, and finding the eggs were still discernible, (although the blades are much withered, and some of the eggs missing;) I hope the fresh ones enclosed this morning may reach you in such preservation as to enable you in future to recognize the eggs in your own fields.

I have observed for seven years past, about the 10th of October, in this part of Virginia, the eggs are every where to be found upon the volunteer, and early sown wheat—they remain in this state from six to ten days, when they hatch into very minute worms, and immediately descend to the tender parts of the plant, enveloped by the blade near the root, where for a few days at this season, they may be seen in this minute magot form, which soon changes into the chrysalis—at first of a clear transparent white, which as it enlarges, shows a spot in the middle, and finally assumes a flaxseed color and size.

I have been thus particular, although I published this account of the Hessian fly several years ago, as subsequent observations, more particularly, excited by Dr. Say's account of this insect, in his communication to the Philadelphia Society for the Promotion of the Natural Sciences, have fully satisfied me that that learned and distinguished naturalist, has fallen into an error in relation to the propagation of this destructive insect.

It may be said that these eggs may be the deposit of some other fly; but I have uniformly found them when the well known Hessian flies, are seen to make their first appearance in the fall, and *immediately* preceding the fatal influence of this enemy to our wheat crops. I have seen the worms descending from the deserted shell of the egg towards the stalk of the plant, and upon stripping down the blade, I have discovered a worm of the *same appearence*, attached to the tender stalk of the wheat near the root, and finally in the course of successive examinations, I found these worms after a few days disappearing and in their place, the white transparent chrysalis.

By giving the foregoing a place in your valuable paper it may possibly lead to some further discoveries of greater value to the community than the mere *modus propagandi* in this hitherto unassailable enemy, to the most valuable of our agricultural products. Yours, &c. &c. J. H. COCKE.

The Woburns.

In my last, I mentioned that I should shortly have some Woburn and Berkshire hogs fed by some disinterested person by measure. After the experiments made by the two Mr. Barclays, and between Mr. Fanning and myself, had resulted so favorably to the Woburns, the advocates of the black Berkshires contended that although the Woburns had gained most, that they consumed more. To test this matter, I made a proposition in the Kentucky Farmer, to have some of each breed put into the hands of some disinterested gentleman, who should feed them all alike, and report the result. This proposition was taken by Mr. Wm. R. Duncan and Mr. James F. Taylor. The time was determined by Mr. Taylor. I wished to have them fed at least thirty days. I also made a proposition in the Kentucky Farmer, more than a year ago, to have a parcel of pigs raised and treated alike by some disinterested person. This proposition has never been accepted in Kentucky. A gentleman of Ohio, proposes to accept of it, if none of the Kentuckians should.

An accident happened to Mr. Duncan's sow "Caroline Scott," so that she was not brought. Mr. Taylor brought his black Berkshire sow "Belinda," over two years old. I brought my Woburn sow Patience, not quite thirteen months old, and my Woburn sow Courtenay, over three years old. They were put into the hands of Mr. James Weathers and were all fed in separate stalls, and were attended to by him personally. We had two objects in view; first, to see which would consume most food; and the second, which would gain most upon the food consumed.

The result has been as favorable as the warmest advocates of the Woburns could have wished. Patience was *proved* to be the smallest eater, and under very unfavorable circumstances gained as much as the Berkshire, whilst Courtenay, upon the same quantity of food, gained in ten days nine pounds the most. Below you have Mr. Weather's statement.

SAMUEL D. MARTIN.

Colbyville, (Ky.) Sept. 1841.

A trial between the Black Berkshires and Woburns, fed by measure, by James Weathers, Jr. *at the request of* Dr. Martin *and* James F. Taylor of *Clarke county*, Ky.

(A COPY.)

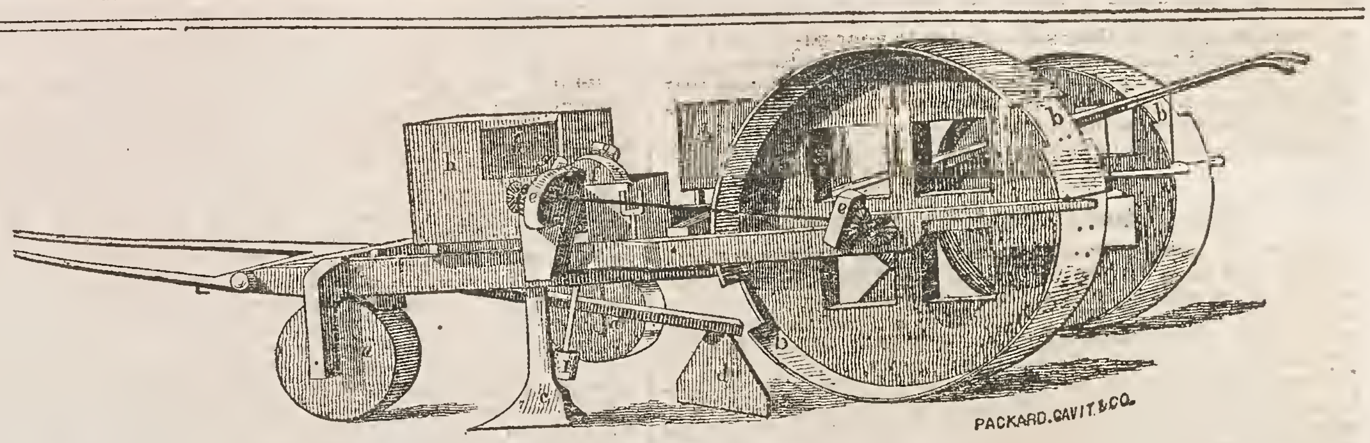
"There were put under my care, on the 13th August, by Dr. Martin and Jas. F. Taylor, two Woburn and one Berkshire sows, for the purpose of being fed; and I received directions to give each one five pounds of corn a day, and to increase the quantity until I should find what quantity the smallest eater would consume. On that evening, I gave to each one of them two and a half pounds of corn, and the next day five pounds each, and on the 15th, nearly six pounds to each. One of the Woburns (Patience,) failed to eat all of her allowance, and the next day was very lame, (I suppose slightly foundered,) and their food was again reduced to five pounds each per day, until the 20th, when (Patience having recovered,) it was gradually increased so as to give each one fifty-two pounds of corn in the ten days, when they were weighed, and the following is the result:

Mr. Taylor's Black Berkshire Belinda, gained	21 lbs.
Dr. Martin's Woburn Patience, gained	21 lbs.
Dr. Martin's Woburn Courtenay, gained	30 lbs.

JAMES WEATHERS, Jr."

Clarke County, Ky. Aug. 23, 1841.

I notice a piece over the signature of James Jones, headed "Dr. Martin's pig beaten," and the weight of a pig is given at four months old, that had eat six gallons of [buttermilk] milk a day!! (save a little for family use.) Mr. Jones is informed that Dr. Martin's pigs were *purposely kept back from growing*, until they were four months old, at which time the Doctor commenced full feeding. Although six gallons of milk a day is the greatest consumption by a pig, ever heard of, Dr. M. hopes Mr. Jones will report his weights until his pig reaches eight months and seven days, which was the last time the Dr.'s pigs were weighed. But only think of a pig using 48 lbs. of milk a day!! Small eaters!! A few cows would be necessary to feed many such pigs. M.



Old's Corn Planter—[Fig. 85.]

Messrs. Gaylord & Tucker—I have for about two years been engaged in getting up a machine, under the broad name of Corn Planter and Seed Sower: which has been secured by letters Patent; and although awarded the Scott's Legacy Premium, ($20,) by the Franklin Institute at Philadelphia, I was not satisfied that it had attained to its highest state of perfection. I have therefore, instead of introducing it to the public at large, confined it to narrow limits, and made it my untiring object by day and by night, by actual experiment and deep study, to bring it to its greatest perfection. How far I have succeeded, the reports of the late Fair of the State Agricultural Society of New-York, at Syracuse, and of the American Institute at New-York, will satisfy the public mind, better than my own attestations.

The above cut is a representation of my double corn planter, which plants two rows at once, and makes the rows both ways, to be drawn by a horse. Similar letters refer to similar parts.

I have also machines for planting one row of corn, horse power, which may be arranged to drop the corn any distance apart, from a continued drill, to hills of five feet or more. It will also drop two or more kinds of seed in the same row, at given points, and may be applied to dropping the fine manure in the hill with the seed. The same principle applies to the hand drills, for sowing or planting the seeds for the various root crops, &c. I have also a plan for sowing wheat in drills or broad cast, which will apply to all grains and grass seed, together with the fine manures. I have appointed J. Scott & Co., 21 Cortland-street, New-York, agents to manufacture and sell the above described machines, where they can be seen at any time. All orders from any part of the United States, post paid, directed to them, will be promptly attended to. Those wishing to obtain machines for the coming spring, will do well to order them soon. I intend myself, Providence permitting, to travel through the western and southern states this fall and coming winter, to introduce the above articles where they may be wanted.

Editors of agricultural papers generally, and all papers friendly to agricultural improvements, are invited to give the above such notice as they may think practicable. They will also confer a favor to the subscriber by sending him a copy containing their quotations and remarks, directed to his residence.

Marlborough, Vt. CALVIN OLDS.

Traveling Memoranda—No. 5.

Cincinnati, O., August 27, 1841.

Editors of Cultivator—My last was written from "Prospect Hill," the name of Judge Beaty's farm—a name that, to eastern people, who build their houses upon a bare hill, so as to be seen of the world, would appear very inappropriate, for the prospect does not extend beyond his own farm. And here let me remark that a traveler upon the great thoroughfares of this state, never sees the best part of Kentucky. The best houses are located back from the road, and the way of approach to them is generally through one of the woodland pastures that add such great beauty to Kentucky scenery; and it is no uncommon thing that the only approach to a large plantation lies through one or two other plantations. The inhabitants preferring private to public roads, and not seeming to view it as any serious inconvenience that they have to pass a dozen gates between the mansion and the public road. But their gates are such as that too numerous class who have been "putting up the bars" all their lives, without getting the gap stopped, might examine and pattern after with profit.

Judge Beaty's name has lately become well known as a writer of several essays upon Kentucky agriculture, and a letter upon the profits of the hemp culture upon his own farm. The Judge also keeps 4 or 500 fine wool sheep, and which appeared in very good condition, and what appeared very singular to me, he takes no trouble whatever to prevent breeding in-and-in, and stoutly maintains that the importance of constantly crossing is entirely overrated. Although I could not defend my theory by example, of the deleterious effects of breeding in and in, yet I could not become a convert to the Judge's theory.

One thing I learned from the long experience of the Judge and many others, that the hemp crop, although such a heavy one, does not exhaust the soil. He also thinks that water rotting may be profitably adopted in many places.

Having spent just such a time as agricultural brethren should always spend together, my friend ordered his carriage to the door early on Monday morning, and took me into Maysville, six miles, in time to take the morning boat for Cincinnati, which is about 60 miles below. Although this is "the river of beauty," it is now so sunk below the level of the rich bottom lands upon its banks, that we were more interested in viewing our remarkable proximity to the bottom of the stream, than looking at the farms along the shore, except those which are elevated upon the sides of the ranges of high hills that every where hem in the valley of almost all the great western streams. It may be interesting to some, that I should say that the Ohio varies 60 feet, from low to high water. The bottom lands are very broad and level, and in the great flood of 1832, were covered in many places from hill to hill, producing such devastation and distress as only can be known to the "dwellers upon the mighty waters." This great and flourishing city of the west, is built upon the "first and second bottom," the upper level being some 60 feet higher than the first, which was found by the flood of 1832 to be several feet too low, for the whole of its broad surface was completely submerged, so that large steamers traversed the most populous and business streets. Having formerly been a resident here, when I first came to the west, I was enabled after an absence of a dozen years, to realize the magic like change that is so rapidly going on throughout the Great West. I wish I could truly say that it was in all cases a change that brought a great increase of human happiness in its train. But until men cease to look for wealth and happiness in connection only, and for honor and respectability only in towns and cities, we must expect to see crime and degradation as the accompaniments of what we are prone to call "great improvements."

But amid all the change that I see here, I find one "that can, that will, that must," produce an increase of happiness—the blessed and blessing giving spirit of temperance has hovered over this spot. The fruits of the visit of this lovely goddess are visible here, as they are every where that the inhabitants of city, town, country, or farm, encourage her to alight as she flies over our country. As another evidence of improvement, allow me to say in connection with this subject, that although only a few years have elapsed since fashion *dictated* that every gentleman in this region should keep his sideboard loaded with liquor, yet during my visit to Kentucky and this vicinity, I have not, in one single instance, seen such a thing, and in only one instance have I been solicited to take a glass of wine, which, as the host did not partake of himself, went the round of our circle and from the room untouched.

But enough of moralizing—now to business. Early in the morning after my arrival in Cincinnati, I made near my distant acquaintance with my friends Affleck and Foster, the editor and publisher of a very neat monthly journal in pamphlet form, devoted to the pleasing task of elevating the character and standing of the cultivators of the American soil, and directly afterwards, I received an invitation which I accepted from Mr. Wm. Neff, to take a seat in his carriage, and in company with Mr. Affleck, visit his farm about seven miles out, on the turnpike leading towards Indiana. Mr. Neff is a gentleman of fortune, retired from the business of a merchant, and has taken this very pleasant method of amusing himself by doing good to the cause of agricultural improvement in every branch of it that he undertakes.

Here I found a very extensive and beautiful stock of Short Horns, which the great drouth that prevails hereabouts has brought into the stable for feed, as Mr. Neff has determined for the purpose of getting them more generally introduced into common use through the country, to offer the whole lot at auction a few days hence, on a long credit, and is, therefore, obliged to feed them, to keep them in a fit condition for sale. He also has a very fine lot of hogs, of the Berkshire and Irish Grazier breeds. Mr. Neff is an extensive pork packer, and although he prefers the Berkshire for his own use, yet thinks that among a people that make pork, as Pindar did his razors, to sell, without regard to quality, that a larger breed would be more profitable.

Mr. Neff is also a successful cultivator of the grape, though by no means to so great an extent as Mr. Longworth of this city, who is probably one of the largest vintners in the Union.

I saw on Mr. Neff's farm a specimen of hedge, of the Osage Orange, that for beauty, and probably will also be for usefulness, before any other specimen of hedge that I have ever seen in this country. As soon as this is sufficiently grown and proved, Mr. Neff will give some account of it that will be useful to others. After spending a delightful day, we rode into town fully impressed with the truth of the saying, that

> "God made the country, and man made the town;"

or in other words, that the beauty, comforts, and enjoyments of a country life are far superior to those of the town.

The 25th I spent in that very busy occupation of seeing every thing, but more particularly in examining the great extension of the city, and great increase of manufacturing establishments, all of which indicate an improved state of agriculture, for we must constantly bear in mind that that is the foundation stone of all commercial and manufacturing prosperity.

If your limits would permit, I would give you a long chapter upon the subject of the pork business alone.

Hog killing, and pork packing, and bacon smoking, is carried on here to an extent almost surpassing belief. I am sorry to say that all those engaged in it the last year are likely to suffer great loss by the depression of prices. And the farmer is destined to suffer this year, as the depression will now affect the article in his hands. A gentleman well acquainted and well informed in the business, thinks that pork will not nett the farmer this fall more than 1 1-2 or 2 cents a pound. I also visited the markets here, as I look upon them as affording a pretty fair index of the surrounding country. I need not have been told that the country had suffered for want of rain—the vegetable productions, particularly potatoes, showed that. Peaches, which I have often seen sold in this market for 12 cents a bushel, are now few and far between at one-fourth that sum a piece and as poor as they are dear at that. Total destruction of the germ of this fruit took place last winter, throughout the west.

Apples are also very poor this season. Speaking of fruits and vegetables, reminds me of a new enemy of man which has made its appearance this summer in some parts of Kentucky in great quantities. It is a black, or in some, black with lead colored stripes, bug or fly, about half or three-quarters of an inch long and said by those acquainted to belong to the cantharides family, which is very destructive upon potato tops and many other green and tender plants.

Last evening I was called upon by a well known friend of agriculture, Mr. John J. Mahard, with a most cordial invitation to ride with him to his farm about seven miles N. E. from the city, where I found probably the largest and best stock of Berkshire hogs in Ohio. Mr. M. personally superintends his farm and breeding stock, and also his pork packing and shipping house in the city. I was highly pleased with him and his family, and his stock and farm, and would gladly have spent another day under his hospitable roof, but having already engaged my passage in the fast mail for Baltimore this day at 11 o'clock, I was compelled, as I have often been of late, to forego the pleasure of a more lengthy visit where I was made to feel that I was welcome—welcome too, not as a friend or personal acquaintance, but one who has, I am bound to believe, become favorably known by name, to many of the readers of the Cultivator, as a friend to agriculture.

The river is too low to admit of steamers ascending to Wheeling, and, therefore, in a few hours I shall be on my way through the great and fertile state of Ohio, right sorry that time will not allow me to take notes by the way. Anxiety to reach Washington during the present session of Congress, will also prevent me from adopting a slower mode of locomotion, and passing through Pennsylvania, and accepting the public invitation which I have just seen in the August number of the Cultivator, to visit Mr. Wm. P. Kinzer, and whom I now thus publicly and cordially thank and assure that if it ever comes in my way to become personally acquainted with him, I shall not neglect it. And although it is not in my way of business to "deliver lectures on agriculture," or to "prepare myself," except upon the spur of the moment, for anything, yet I hope when we do meet, that my Pennsylvania friend will find that my conversational powers are not entirely lacking.

And now, Messrs. Editors, I have only time to say, that I shall continue to furnish my "memoranda," as I progress along my tour, which you must administer to your readers in "broken doses," taking great care not to produce a surfeit. And I wish you to give early notice to all who are determined to follow my notes through my journey, that they may make early preparation to renew their subscription to your paper, as I am fully persuaded that I shall find so much matter to interest me, that I shall be wholly unable to crowd it into a compass that will allow you to get it into the present volume, without crowding out some more useful and valuable matter.

I remain your's and your readers' old acquaintance and friend,
SOLON ROBINSON.

Mr. Allen's Visit to England.

Msssrs. Gaylord & Tucker—Being now on my way home to Buffalo, and knowing the anxiety of my friends to learn the success of my agricultural expedition to England, I avail myself of a few moments of leisure to state the general result. In swine I went into a thorough and minute examination from the different species of the China, the wild boar of Asia, and from the forests of Germany, specimens of which I found in the Zoological Gardens and on the estates of the noblemen and gentlemen in different parts of the country. I also examined all the original breeds of England still left of any consideration, and the various crosses and improvements that have been made on them by importations from abroad. I also saw specimens of the Italian, Spanish, French, German and Russian breeds; then Scotch, Irish and Welch, with crosses too numerous to mention. And the result of the whole is, that the Berkshires, as brought to this country by Mr. Hawes, and such as I have heretofore and now imported, for the general purposes of the farmer, are, upon the whole, the very best animals in the world. There are some kinds of swine that beat them as to size; and others, perhaps, in little minor points. But what I wish to be understood as asserting is, that the Berkshire unites more good qualities in him for general purposes than anything within my knowledge; and in coming to this conclusion, I stake my reputation as a breeder and my judgment as a man; and although I may be called an interested party, I may be permitted to also add without prejudice, and after a long, laborious, strict, and, I sincerely trust, an impartial investigation.

Berkshires in England are spreading very rapidly, and are also now taken to Scotland, Ireland and other parts of the world. The name, consequently, as with us, has become very popular; and all sorts of impositions are there practiced as well as here, with grades and every imaginable breed. But the real true animal in shape, color and quality, is precisely such as Mr. Hawes first imported here, saving one exception; and that is, a pig will now and then be cast after the model and color of the original breed, as figured in Lowe's Illustrations, viz. sandy or buff with waves or spots of black, and also black with some spots or waves of white; but the fancy of the people inclining to those more black, or a dark, rich, plumb color, just flecked with a little white, the lighter colored and buff ones have been constantly thrown out, till they breed with now and then a stray pig, as I have so often before explained in the pages of the Cultivator. For my part, I rather fancy a slight buff with the black, and I found the largest hogs in the county so marked, after the old original. Windsor Castle has a buff spot on one fore leg, besides a slight flecking of the same on other parts of him; and I noticed that more or less of his stock was thus marked.

The old breed has become nearly extinct, a few specimens only remaining; and these so degenerated in size that they are not now so large even as the present improved race—not comparing at all with Windsor Castle. All assured me that he was the largest animal that had been bred in the county for 20 years; and in the last No. of the Cultivator you have rather under than overstated his dimensions. I know from what I saw of the weights of inferior sized Berkshires fatting in England, that he may be made to easily attain 800 pounds. Added to this great size, he is fine in his points, a most excellent conformation, and what is rather remarkable, of soft thin hair and skin. I took unwearied pains with all my other selections; and though I could find none else quite as large as Windsor Castle, they perhaps had a trifle more of fineness of point and fashion.

In regard to the size of hogs, breeders and pork packers in England take the same ground as I informed the public in last July's Cultivator, that they had in Cincinnati, the greatest pork mart in America, and upon precisely the same principles; and it would be a waste of time for me to add another word here on the subject. Large animals have consequently become very scarce in Berkshire, and exceedingly difficult to find. I personally perambulated all Berkshire and the neighboring counties, and also employed agents who are dealers in pigs, each one of whom annually buys thousands, and knows every man's breeding in the country, to assist me; and I sent over by the London packet ships Mediator and Wellington, and am to receive next season stock from all the different families bred there that are worth possessing. These I shall keep apart in breeding at home; and thus, I trust, save the necessity of further importations for twenty years to come. Stock of all kinds is very high in England now. Pork and mutton sell readily in market at 6½d. to 7½d. sterling; equal to 13 and 14 cents per pound of our money.

White, light spotted, black, blue, gray, and all sorts of colored pigs may occasionally be seen in Berkshire county; but the people there would scout the idea of their being called by their name; they would consider it an imposition, and I might almost add, an insult. And, to my numerous questions, what do you call them? They would give me some specific name, or say, "we do'nt know, *they are not our sort.*" I do hope now for henceforth and for ever to hear no more about white and other Berkshires than as here described for perhaps the hundredth time as the true and genuine breed, as improved by the Siamese cross. I have full notes of all these things; the discussion of which alone would occupy a long article, which I must defer to some more convenient period.

Failing to find Berkshires as large as I anticipated when leaving home, I immediately set to work with my agents for some other breed; and after a volume of inquiries, and traversing half the kingdom, I found the Kenilworths the very largest breed of swine at present existing in Great Britain. The owner of the sire of one pair of the pigs I purchased, asserted that he would weigh, full fatted, 1,700 lbs.; but I think his maximum would not overgo 1,300 lbs. He stood 4 feet high, was proportionably long, with no bristles but thin hair, and really possessed a fineness of points that absolutely surprised me in so large an animal. Indeed, in general shape and conformation he nearly approached the Berkshire. His color was pure white. The size of the other three pigs was not quite so large, and a trifle coarser, while the sows were still less; but this I was informed was always the case with this breed. I do hope that my friends now will be satisfied; for they have at last in these, a large hog, and, above all, a WHITE one. But if these are not big enough, I shall quite despair, and recommend the importation of a rhinoceros that I saw flourishing along side of an elephant, hardly superior to him in size, at the Zoological Garden of Regent's Park in London. He was upwards of 4 feet across the buttocks, and might probably weigh some three or four tons.

As I shall not have any of the Kenilworth breed of pigs for sale short of a year, I propose crossing the males upon the large white Yorkshire, and also with a few of my Berkshires. I think the produce of either will be of great size and excellent quality; and as the number of sows to be stinted in December to farrow to a Kenilworth boar in the spring will be in accordance with the orders of my friends for this cross, they will please to let me know their wishes on this head as quick as possible; for they may be assured, that even with this produce, they may safely compete for gain of flesh, in a given space of time, with Woburns, or any other breed that gentlemen may happen to have on hand for the purpose of a banter.

Nothing can be superior to the South Down sheep that I brought over for Mr. Rotch of Otsego county, this state, and our late minister at the court of St. James, Mr. Stevenson, and Bishop Meade of Virginia. The sire of Mr. R.'s buck won the first prize, 30 sovereigns, as the best of his age, at the Royal agricultural show at Liverpool in July, and was let to the Duke of Newcastle for this season only for 100 guineas. He was considered as near perfection as it is possible for a sheep to be; and I may add that the son I chose is no disgrace to his sire. Though only 6 months old, he weighed when brought on board ship at London 152 pounds. Mr. Stevenson's and Bishop Meade's, about 18 months old, weighed respectively 254 and 248 pounds. And the breeder of these superb animals, Mr. Jonas Webb of Babraham, killed a wether last Christmas that weighed, dressed with the head on, 200 pounds. The bucks of this flock usually shear from 10 to 11½ pounds; and I need not add another word to the readers of the Cultivator as to the superiority of South Down mutton, and the hardiness and good constitution of the animals making it.

Accompanying the sheep for Mr. Rotch, was the most beautiful shepherd's dog that I ever saw; and of a breed so good, that it requires no instruction to break them into the management and care of flocks. I also brought over for Mr. R. some of the large Dorking fowls, that carry an extra toe to their heels, and sometimes attain the great weight, when fatted, of 8 lbs. To these I added a few pheasants, the beautiful game bird of England, and a cross from which on the common barn fowl produced the celebrated game cock breed.

Of Short Horns, I brought nothing, for fear of the disease so prevalent throughout horned stock in England, and because there is but one man's herd there that can improve our own; and his best I cannot have till another year. It really pains me to see any more Durhams of ordinary quality imported into our country. The expense of shipping is enormous; and, after all, they are now so plenty in America that they can be bought for half or two-thirds the price abroad.; and throwing two or three stocks out there, New-York, Ohio, and Kentucky alone, might show successfully against all England. This is my deliberate judgment after a very careful examination of the best Short Horns in that country. Ayrshires we can make here by the thousand, by crossing Durham bulls on our best native milkers. The Scotch black cattle without horns make the best beef in England; and he is a capital hardy animal, and probably pays the grazier a better profit than any other; but he is *black*, which do'nt happen to be a *popular* color, so that there is no use in talking of him. Herefords you have already pretty well discussed. The Sussex and South Devons are scarcely inferior to them in size, and of a beautiful blood like symmetry of form that excites universal admiration.

For horses, England ought to come to us. She has nothing that can compare with our famous trotters; and our Dutch Pennsylvania wagon horses are far preferable, in my estimation, to her boasted great cart horses. Our climate and soil, especially in the primitive regions, is much superior to that of England to produce this noble animal in perfection; and we have only to pay a little more attention to this department of stock to soon become large exporters.

There are many other things, especially of seeds, methods of cultivation, and the condition of the people of England, that I would gladly touch upon, but I find my sheet already full and must forbear; and to conclude, I hailed England with delight, and left it with deep regret. It is a charming country, bating its everlasting rain and coal smoke. And the American finds so much in his associations and remembrances there, that after all it is the country that he visits abroad with the most interest and profit. I deprived myself of many a sleep and meal in order to see and learn the more during this short sojourn abroad; and instead of three months, I only wished my stay could have been prolonged to as many years.

I am, as ever, sincerely yours,
Albany, October 27, 1841. A. B. ALLEN.

The Short Horns as Milkers.

Messrs. Gaylord & Tucker—In the June No. of the Cultivator there appeared an article, signed Lewis F. Allen, in which the opinion was advanced, that the improved Short Horns were the stock best adapted for New-England dairies.

The ability with which this article is written, and the source from which it comes, ensures it great weight with your readers. But as this opinion is contrary to that of most agriculturists in this neighborhood, (the vicinity of Boston) I have been in hopes of seeing an answer to it in your paper by some one more familiar with this subject than myself.

That this stock is the best suited to the rich pastures and fertile lands of New-York and the western states appears to be generally admitted. Are they equally well suited to the thin soils and scanty pastures of New-England?

In the fear of saying too much for his favorites, Mr. A. has given them less praise in some respects than we should readily concede to them. He compares them with our average native cows; we are in the habit of comparing them with our good dairy cows. The quantity of milk given by the Short Horns as compared with our average native cows is greater than Mr. Allen asserts. The quality of the milk is considered by us generally as inferior to that of the common cows of the country. Much of it would not, I think, sell readily as milk. This is contrary to Mr. A.'s experience with his Short Horns; and there are (certainly among the grade cows) many exceptions to it here:

Writers are too apt to forget that the most important question, and what we really want to know is, what stock or stocks will give us the best and cheapest milk, butter, cheese and beef; and not what stock will give us the most per capitem. If it costs three times as much to raise and to keep an improved Short Horn in our climate and on our soil as one of the native breed, although it gives twice the butter and cheese and twice the beef, it may be a poor stock for us.

No one here I think would be inclined to accept the wager offered by Mr. Allen at the end of his communication; for we do not contend that ten or twenty cows, which should be a fair average of the native breed of New-England, would give as much milk, butter and cheese as ten or twenty cows of a breed of nearly twice their size when both lots had as much nutritive food as they could eat. That, our cows seldom have all the year round.

Mr. A. refers to British publications to prove the superiority of the Short Horns. Following his example, I will quote the British Husbandry and Low, as the best British authorities I know of on this subject. In British Husbandry, ch. 36, on milch cows, it is said, "the breed most in esteem with the London cow keepers who sell the milk without making butter or cheese, is of the old Yorkshire stock, or a cross between the Teeswater and Holderness, as producing the greatest quantity; for they are in that case soiled in the house, and of course provided with an abundance of cut grass, brewers' grains, and succulent roots; but when grazed, they require very good pasture, and are not generally considered to produce milk of a rich quality. But the breed which of all others appears to be gaining ground throughout the United Kingdom for abundant produce upon ordinary pasture is the Ayrshire kyloe."

David Low in his Elements of Practical Agriculture says, "by long attention to the characters that indicate a disposition to yield milk, the breed of Ayrshire has become greatly more esteemed for the dairy than other animals much superior to them in size and feeding qualities."

I hope to see this subject more thoroughly discussed in your journal by Mr. Allen and others, who, like him, speak forcibly what they sincerely believe. A Young Farmer.

Vicinity of Boston, Sept. 23, 1841.

Corn Culture.

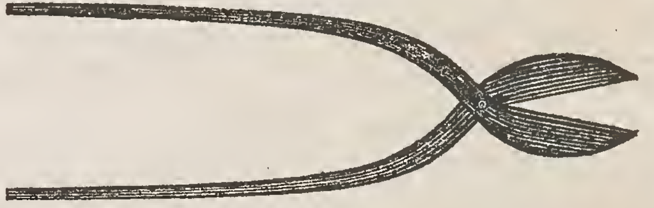
Messrs. Gaylord & Tucker—In sending you the following account of my corn crop for 1841, I do not aspire to compete with any of your numerous correspondents; but simply to inform some of your readers what may be done in the way of raising corn up in the hilly state of "*Varmount.*"

I send you an account of the expense and profits of four acres. The soil sandy loam; three of the four acres planted to corn and potatoes the previous year; the other sward ground; 118 loads of unfermented manure spread evenly over the ground, and plowed before it had time to evaporate by drying; planted upon the furrow; hills three feet by two and a half apart. In planting, put from five to seven kernels in a hill, which coming up, was thinned so as to leave from three to five stalks in a hill. Hoed three times. In cultivating used the harrow instead of the cultivator, and followed the approved mode of making very little hill, if any, leaving the ground as even as possible. The crop was somewhat injured by the drouth, which has materially lessened the corn crop all through this section of the country. Now for the account.

Dr.	
To 118 loads manure, 30 cents per load,	$35 40
Expense of hauling on land,	10 50
3 days plowing, man, team and board,	4 50
8 days planting, and board, 75 cents per day,	6 00
8 days weeding, " "	6 00
6 days second time hoeing, "	4 50
6 days third time hoeing, "	4 50
27 days husking, and housing corn and stalks,	20 25
1 day digging potatoes,	75
Interest on land at $100 per acre,	24 00
Five days cutting up and shocking,	3 75
	$120 15
Cr.	
To 273 bushels of good corn, $1 per bushel,	$273 00
40 bushels of potatoes, 20 cents per bushel,	8 00
Corn stalks, thought by good judges to be equal to 4 tons of good hay—say 3 tons $10 per ton—the going price,	30 00
	$311 00
Deduct expenses of culture, &c.	120 15
	$190 85

Which gives a nett profit of $47. 71 per acre.

You may think the price of corn too high. I prized it at what it is now worth in this section of the country. Very respectfully,
EPHRAIM G. HULETT.
Wallingford, Vt. Oct. 8, 1841.



Canada Thistles—Canada Thistle Forceps.

Messrs. Gaylord & Tucker—I have perused with increasing interest, each number of the invaluable Cultivator, since its consolidation; and have noticed many communications on the destruction of this accursed and pestiferous plant—*the Canada Thistle.* I fully concur with the modes which are there spoken of, to destroy this pest of our land which is so rapidly spreading and springing up in new places, on almost every farm every spring; and which has completely overrun a vast number of our most productive and wheat-growing fields. The increase of the Canada thistle for the last ten years, has been great; and if it continues to spread in the same ratio, for the ten subsequent years, it will cover whole farms, and even townships.

Borne on the "wings of the wind," in a clear day, we may see countless numbers of its seed, many hundreds of feet in the air; and whose fates can decree on whose soil they will lodge and vegetate? In the highways, and on every piece of land as soon as it is cleared, they shoot forth and choke every thing about them; and in the highways especially, they are permitted to ripen, and then the seed is hurled by every breeze of wind, into the air, and scattered over the adjacent fields, or wherever it may chance to be carried. Will any one pretend to deny that this is a great wrong? We think not. But how is it to be obviated? I answer, there must be something done to *oblige* all who suffer them to come to maturity, to cut them down, if nothing more, before they blossom. Now, until *this is done*, we may expect nothing else than this—to have them to handle amongst all crops. But they may be entirely destroyed, if the right course is only pursued! and the extermination of them from our land, *demands*, and ought to *secure*, the first attention of every farmer.

I am much gratified to see that a few are becoming awakened to this important business; and I hope the time is not far distant, when each and every one will be thoroughly *aroused* to the work; and when there shall be scarcely a patch left, to torment the rising generation.

The Canada thistle is a perennial plant, and will thrive well on any soil where there is not a superabundance of water; and it will come to maturity long before grain or grass, which may be growing on the same ground. Therefore, it will not do to let both grow, until both are ripe, if we wish to destroy them; but they should be mowed, before they blossom, when it is not convenient to use the plow. But in fields where there is not grain, they should be plowed, commencing in the spring, and keep them down until the hot and dry weather, when two or three times plowing will completely eradicate them, and destroy them root and branch.

To cut them with a hoe and salt them is a very good way, but plowing them is far more effectual, and consumes less time and labor. We have succeeded in destroying many large patches, simply by plowing them three times in hot weather, when there is scarcely any moisture in the ground. And we have destroyed many by the application of the pomace of apples, applied about two inches thick (one inch is sufficient) which proves the *most effectual* of any way or thing that I know of. It will destroy any weed to which it is applied, and even elder bushes, thorns, &c. But among the various modes, there is one, which I am sorry to say, is known to but few throughout the United States; and that is, of pulling them with the *forceps;* of which, every farmer should have two or three pair. They are easily made—the cost is comparatively nothing—a man of small mechanical genius, will make a pair in an hour and a half—and when they are finished, they are worth about eighteen pence.

The design of these is to pull thistles where there are but few, as in grain, when a hoe could not be used without destroying much grain. In soft ground, we have pulled them with roots eighteen inches long and upwards; and faster than they could have been cut up with any instrument; and by going over the ground twice, as there will always some come up after the first pulling, we have destroyed very many. These, like all other implements, which belong to the farm, should be made in the winter, when business is not urgent, so as to be ready when they may be wanted. Therefore, I present to you a cut, and the dimensions of a pair which I made, and which kind is used extensively in this vicinity.

The whole length is two feet and a half, cut out of inch and a half plank, with the grain running lengthwise of the crook, in order to prevent their splitting off. The length of the jaws four inches, and an inch and a half thick. They are very nearly like the blacksmith's tongs. Half of the thickness of the handles is taken off as far as the jaw. Where they cross, they are secured by an iron bolt one quarter of an inch in diameter, with a nut to fasten it. They should be made of good timber, and of a natural crook, if it can be found. These forceps will be found to be of great use in pulling thistles out of oats and spring wheat, in the former part of the season, when the soil is well saturated with water; and at any season of the year, they will be found to be of greater use, than either the hoe or sythe. Farmers, try them; and satisfy yourselves, and wait the result.

Tompkins Co. N. Y. Sept. 1841. ORSON CARDIN.

Breeding Cattle.

Messrs. Editors—The advice given in the Cultivator for August, to a subscriber in East Windsor, (Ct.) concerning the improvement of stock, I fear will not be altogether such as he may require, if he calculates to do much at the business. It is this, that if the pedigree of the stock which he obtains to begin with is good, there is little danger that the stock from such will prove inferior.

The better the pedigree of an animal, the less likely their descendants will be to be inferior, I think every person who has paid any attention to the business will readily allow, but that the art of breeding consists in selecting such to breed from, I think no one, having such experience, will pretend. Breeding of cattle is supposed to be an art; but if selecting by pedigree was the only thing necessary, then it would not be an art, for any person acquainted with doing business could do it without any experience at all in the business. It is not very uncommon to see people attempt to do it on that principle, but whenever it has been done within my observation, only a few generations would show that something else was wanting, even to keep up theirgood qualities, and much more to improve them.

It is believed by many, that the art of breeding cattle has not been attained to an eminent degree by but few, and that those few have been supposed to take great pains to keep it a secret, that they might monopolize the business. I have frequently heard the celebrated English breeder Bakewell accused of being very cautious about divulging the secret, and I believe it yet remains a mystery how the celebrated breeder Mr. Colling improved the Durham cattle, so as to bring them to such a wonderful degree of perfection as he did. It is possible that the art of breeding cattle so as to keep them improving cannot be communicated any more readily than that of chemistry or astronomy, and that it has not yet been brought much nearer to perfection than those sciences have been. It is very evident that a person to be a good and skilful cattle breeder, must know what form and size, as well as all other requisite qualities, cattle ought to possess, in order to adapt them to the particular location which they are intended, as I believe no one pretends to think that there is any particular breed or size that are well adapted to all climates and situations. A barren, sterile country would not be a suitable place to rear the large Durham cattle, but it is possible there is no breed of cattle that are better adapted to a mild climate, where the land is rich, and every thing grows luxuriantly.

If the breeder understands what qualities he wants his cattle to possess, the next thing is to rear them of such a fashion, and to do that effectually he ought to be able, by the appearance of a very young animal, to judge what it will be when it arrives at maturity, and this I believe is the most essential and the most difficult part of the art, and the want of which is the most common cause of a failure. If that was well understood, no breeder would suffer any animal which had not the requisite qualities when young to be kept to propagate their race.

It may be said that the character of some breeds of cattle have been of so long standing that it cannot easily be altered for the better, which would be on the same principle as the idea that they will not grow worse if the pedigree is attended to; both I think are founded in error; for we know that the descendants of animals of the best pedigree are not all alike; and if so, then by selecting only the best, if we are skilful, we may in a few generations make them better in many points than their progenitors.

If the above supposition is correct, then it is evident that nothing short of experience, with close attention, will enable any person to become a competent breeder.

A Friend to Good Stock.

Canandaigua, August 11, 1841.

White Daisies Again.

Messrs. Editors—In answer to the inquiry of "Commentator," I would state that I presume the white daisy of his place, which he calls cammomile daisy, is the same which makes good hay and pasture here, and that it will do the same there, if he and his neighbors can divest themselves of their prejudice against it, and treat it as a friend and not an enemy.

No man can have a worse opinion of daisies than I had from my childhood, till I was more than forty years old; but for more than fifteen years they have grown in my pastures and meadows unmolested, (except when greedily eaten by my cows, horses and sheep,) and now I would as soon part with any grass I have as with them.

I have lately conversed with several of our best farmers on the subject, and they are all of my opinion. Lest it should be thought by those where I am not known, that I keep my cattle very poor, and starve them to eat daises, I can assure them it is not so; but I mean to keep my milch cows so that they are at all times fit for the butchers; and as evidence that I do, they killed one for me last week, that had nothing but what she got in the summer pastures with the other milch cows, and was milked twice a day till six weeks ago, and better and fatter grass fed beef I never saw; and the daisies, although plenty in June, have been eaten by the cows closer than the other grass.

These daisies have a round blossom, from the size of a half dollar to a dollar, the leaves of the blow white and single; that part containing the seed, yellow—one blossom on the end of an erect stalk, from two to three feet high; sometimes, however, branching out for more blows, each on the end of a stem, and single. The flower stem has a few scattering narrow leaves on it. The other part of the daisy grows round the stem, and does not rise but a few inches from the ground—in blossom here the latter part of June.

If this is the same "*pest*" which Commentator complains of, and spreads with such "rapidity," he and his neighbors can easily make a trial of it, and if they do it in faith, and thoroughly, I have no doubt that they will not find it a noli me tangere, or "touch me not," as they have been used to consider it. On this subject, it is not theory but experience with me, and I can have no possible motive to deceive. I said it was good hay for cattle and sheep, and I think equally good for horses; for my daisy-hay, being the handiest in the barn, I have fed my horse on it since haying, and never had a horse eat hay cleaner or do better than he has. CALVIN BUTLER.

Plymouth, Conn. Sept. 16. 1841.

Transmutation.

Messrs. Editors—I beg leave to trouble you once more respecting wheat turning to chess. Your communication from Garret Bergen of Brooklyn, says that wheat sown near the barn where it is pastured off, will turn to chess. Now if Mr. Bergen will plow up a piece of land this fall, fallow it next season thoroughly, say plow and harrow as often as any thing grows green upon it, and I will send him a barrel of seed wheat in time to sow it, and he may give the fowls the usual range over it, and should it produce chess, he shall have the seed for nothing, (only the freight,) and should he not get chess, he is to pay me double price. It is to be by such experiments, that the point is to be settled. A controversy in the old Genesee Farmer, was entirely the cause of my finding out that wheat would not turn to chess. I picked five bushels of seed by hand, sowed it on a patch that had been in potatoes two years in succession, and made no doubt but that I should get some chess, but I could not even find one stalk. Then and not till then, did I believe that wheat could be raised without chess. I have some fields near my barns that have been fallow and wheat alternately for many years; one for twenty years, with the exception of one year only. And near the barns, the wheat is eat both fall and spring by fowls. My wife had six daughters, and has five now; and she generally has about ten geese to every daughter; and the way they eat off the wheat when they get in, *aint slow*. Mr. Bergen's long experience cannot make me believe that wheat will turn to chess. I thought ten years ago that I had all the experience in raising wheat that could be needed, but I find I can still learn. I have heard it said, and by good farmers, that the reason there is always chess in that which is stubbled in, (that is, wheat sown after a wheat crop,) is, that the heads left on the ground, produce the chess; that is said here by excellent farmers. Now this season I planted heads of wheat when entire, in four different fields which are sown with wheat, and stuck in stakes so that the places will be known at harvest. Should they produce chess, I will let you know. If Mr. Bergen will prepare his land and write me by mail, the seed wheat will be sent him, if I live.

Yours respectfully, JOHN JOHNSTON.

Foot Rot in Sheep.

I see in your Oct. No. J. H. M. of Delaware County, asks for information to cure foot rot in sheep. Your answers may answer for England, where sheep are worth probably 5 times what they are here, and labor one-half cheaper, and the cure not probably any better than the following:—Take 1 lb. of blue vitriol, 1 ounce of alum, pulverize them as fine as flour, mix with one table spoonful of honey and hog's lard enough to make a salve; then pare the feet thoroughly, leaving on no loose hoof, and rub the salve on the sore. I frequently put in a little tar in place of the honey, as the only use of the honey is to make the salve adhere to the sore. The whole flock ought to be examined every week or fortnight; and all that are affected put in a field by themselves, after dressing; but if the flock is large, and many lame, it will be impossible to keep them cured on the same land, as the ground becomes dirty, and they catch again from that; one dressing will generally effect a cure, but others will be getting lame. If many are lame when the cure is first attempted, the only way is to pare the feet of every sheep thin and put some of the salve betwixt the hoofs of every one; because if one is overlooked, with the smallest particle of infection, there will be many more lame in a week. When there is any infection, there is generally a moisture between the hoofs, with an enlargement of the heels, and more heat than common. Yet I think the surest way to detect those that are diseased, is by the offensive smell. If this can be of any service to J. H. M., he is very welcome to it; but he must attend to them very faithfully if he ever gets them sound, (I mean keep them sound,) on the same land. Giving them a run on fallow land, is of great benefit, and will almost effect a cure, if not very bad.

Near Geneva, Ontario County. JOHN JOHNSTON.

Manufacture of Urate.

Messrs. Gaylord & Tucker—In an article on the manufacture of manure, in your Cultivator for October, the question is asked, "does the lime used in making alkaline vegetable powder from urine prevent the escape of the ammonia?"

I presume caustic lime, or fresh burnt, is used; in which case, instead of preventing the escape of the ammonia, it facilitates its escape. Ammonia, as found in urine, is in the state of a subcarbonate, and when mixed with caustic lime, the lime combines with its carbonic gas, and the ammonia immediately becomes volatile and will readily escape.

If caustic lime be a necessary ingredient in making vegetative powder, its use can only be necessary to liberate pure volatile ammonia from the salts with which it is combined when in the state of urine. Plaster of paris is a sulphate of lime, having little affinity for carbonates or subcarbonates of ammonia; but when caustic ammonia is presented to it, a portion of the sulphuric acid of the sulphate of lime will combine with the ammonia, and leave the lime, forming a sulphate of ammonia and a subcarbonate of lime. Hence the use of lime in the composition of vegetative powder.

I have never been practically engaged in making urates; but it appears probable that more ammonia than is furnished by twenty gallons of urine might be made to combine with 500 pounds of plaster, by using more caustic lime. This, however, can only be proved by direct experiment; as it is a well known law in chemical action, that when a combination of an acid and an alkali has to be decomposed by another alkali, having a greater affinity for the acid than that already in combination, a given portion will readily combine with the new alkali offered, but that double the power will be required to decompose a second portion.

Your correspondent may easily try if by using more caustic lime he can produce more sulphate of ammonia; but as all the articles are cheap, and all beneficial to most soils, it will be of little intrinsic value should he succeed.

Other salts beneficial to vegetation will be liberated by using quick lime in making the vegetable powder. Urine contains sulphate of potash, sulphate of soda, phosphate of soda, muriate of soda, &c. amounting in the aggregate to fifteen per cent; and nearly all these valuable products will be made available by caustic lime. WM. PARTRIDGE.

New-York, Oct. 18*th*, 1841.

The Crops in Virginia.

Messrs. Gaylord & Tucker—Our wheat crop in this region is very inferior. Many fields were not cut; and much of the balance so sorry as to render it a debateable question whether it were worth cutting; the product averaging not more than one-fourth of what was expected at sowing time, and much of that not merchantable. The crops of 1840 and 41, with us, were the most decided failures that have occurred during the present century; owing, in part, to the Hessian fly and chinch bug, but mainly to the rust. Rye, almost a total failure; very little of it cut. This grain, though never grown evenly, was formerly the most certain crop we raised; but for years has been getting more uncertain; nobody knows why. The oats are not more than half a crop; and the grass, to which we pay too little attention, being mostly on the branch flats, was greatly injured by a heavy rain in June; and in consequence, hay and sheaf oats have sold at a dollar a hundred since July; a higher price than before known at the same season of the year. The corn crop, though good in some places, is rather below an average. The quantity of tobacco is large, but being generally late, is not expected to be fine. Altogether, the prospects of our agriculturists are not flattering.

Lynchburg, Oct. 23, 1841. MICAJAH DAVIS, Jr.

Ayrshire Cattle.

Messrs. Gaylord & Tucker—I send you per first packet for Albany, three portraits of my thorough bred, full blooded Ayrshire cow, Swinley, imported by me from Scotland in 1839. She was six years old, in May last. She gave me a calf on the 31st of March last, was milked three days regularly, previous to dropping her calf, and had drawn from her in that time from 45 to 50 quarts. Commenced setting her milk for butter, on the 1st day of April. The calf was not allowed to touch a teat, but was fed on the mother's new milk for 9 days; after that on skimmed milk. Quantity of butter made from Swinley in April, was 43 and 6-16 lbs. In May, 42 and 4-16 lbs. (In this month there was a falling off in her milk.) In June, the quantity of butter was 44 and 7-16 lbs. In July and August, her milk was not kept separate from other cows. On the 7th of April, her milk for that day, weighed 43 and 9-16 lbs. On the 2d inst. commenced weighing her milk and making butter from it; in four days it averaged 25 8-16 lbs., and made just 5 lbs. of butter.

My pasture has been very poor and short during the season, owing to dry weather, and too much stock for the quantity of pasture. From the time Swinley was turned out to grass, up to this date, she has had, by measure, two quarts of Indian meal regularly every day.

She will be exhibited at the annual show at Bridgewater, on the 29th inst., together with other blood, half blood and native stock. Respectfully yours, GEO. RANDALL.

New Bedford, Sept. 9, 1841.

Sun Dials.

That the use of the sun dial should become common, with enlightened farmers and intelligent gentlemen of other professions, is not surprising; it is but an exhibition of that improved taste and refinement which is about to characterize the cultivators of American soil. Long since, while engaged at the study of astronomy, when at school, I became particularly interested in dialling, (the principles of which are founded wholly on astronomy,) and studied Emerson's Treatise on that branch of science. I have since accustomed myself to the use of them, and would be as willing to dispense with either watch or clock. Although there are a variety of kinds more complicated, yet those best adapted, are the Vertical, the Horizontal, and the Equatorial dial. The quarter, half, and hour arcs of the two former are most correctly calculated or ascertained by spherical trigonometry, while the latter, which I prefer to any other dial, requires *no calculation*; for the Equatorial dial, the hour circles are laid off fifteen degrees each, and the halves and quarters in proportion. The dial plate to form with the plane of the pedestal, an angle equal to the compliment of the lattitude of the place, i. e. here in latitude 40° the angle is 50°. The Equatorial dial has two faces—for the six months ending on the 21st March, the sun shines on the under face, then during the equinoxes, or while the sun crosses the equator, there is no shadow on either face, when in a few days its shadow will be distinct on the upper face, to continue six months, or until the autumnal equinox. I do not agree, that "the way of setting a sun dial," as stated by your manufacturer, Mr. Moore, of Kensington, Connecticut, "is the most convenient and best." For its simplicity and novelty I recommend the Equatorial dial, which any carpenter or cabinet maker, with the above instructions, can make, or Mr. Moore either; the face may be painted white and the hour arcs or lines black; the style or gnomen to be covered with silver leaf, and a circle between the style and the lines or arcs, to be covered with gold leaf, to resist the effects of the atmosphere; to be made simply out of good pine plank or may be engraven on brass; thus made, they are very durable, cheap, and handsome. When the dial is prepared, a pedestal of convenient height, and neatly turned out of yellow pine, nine or ten inches square, may be permanently erected in a conspicuous place, in the garden or court-yard, to be put up perpendicular and well secured, the bottom to be set in lime to prevent decay. This done, you next want a correct meridian, without which your dial will be untrue and valueless. On the top of the pedestal, completely level, take a center, then with a compass, describe several concentric circles, then place a thick short wire perpendicularly in the center, and observe in the forenoon, when the extremity of the shadow reaches the circumference of each circle, and mark each point; then in the afternoon, make the same observations and mark the points; this done, bissect the arcs of each circle; then with a rule, draw a line from the center, through the points, in the bissected arcs and you have a meridian sufficiently correct for any purpose; it is already a twelve o'clock dial; the sun dial may then be nailed, or screwed down, upon the meridian, and you have a correct time-keeper, on which you may always *rely* for apparent time. The best time to draw the meridian, is at the period of the equinoxes, when the days and nights are equal, there being then least change in the declination of the sun.

W. PENN KINZER.

Spring Lawn Farm, Pequea, Oct. 11, 1841.

Large Pig.

Messrs. Editors—In perusing your July number, I noticed an account of the weight of Woburn and Berkshire pigs, with the request for similar communications. Hoxie & Kissam, foundry men in this village, own a sow, said to be Chinese with a cross of the Liecestershire—her shape and appearance show a preponderance in favor of the Chinese. She is of middling size. One of her pigs (by a Berkshire boar,) weighs as follows:

At the age of 3 months (precisely)………… 105 lbs.
At the age of 4 " " ………… 150 "

Allegan, Mich. Sept. 27, 1841. J. G. KELLOGG.

Correspondence.

Rev. Eliphalet Nott, D. D.

Dear Sir—The undersigned were, by a unanimous vote of the state agricultural society, appointed a committee to wait upon and tender you the thanks of the society for the very able and eloquent address delivered by you last evening before said society, and to request a copy for publication.

This most agreeable duty we intended to have discharged in person, but were prevented by your early return home.

We have the honor to be, with great respect, your friends and obedient servants,

H. BALDWIN,
M. STIRLING,
ISRAEL SMITH.

Syracuse, Sept. 30*th*, 1841.

Gentlemen—I was absent when your favor came to hand, which must be my apology for not answering it sooner. The address in question was not prepared for the occasion; and indeed, to a considerable extent, was not prepared at all. If it were worthy of publishing it would be difficult to furnish a copy of it, and quite impossible at present, as I am unavoidably otherwise occupied.

Thankful that what was said has in any degree met your approbation; regretting that it was not more worthy of that approbation, and wishing you every success in the noble enterprise in which you are engaged,

I am, gentlemen, very respectfully yours,

Union College, Schenectady, Oct. 10*th*, 1841. E. NOTT

New-Jersey Marl.

Messrs. Gaylord & Tucker—A correspondent in the ninth number of the Cultivator, from Maryland, wishes some information touching New-Jersey Marl. I will endeavor to satisfy you both on that subject, as briefly as possible, hoping, however, that some other person may take upon himself the undertaking, whose acquaintance and knowledge is extensive, and whose graphic pen is more fertile in delineation than mine. Presuming that I may be able to present some facts not wholly uninteresting, encourages me to proceed, although, for the want of uniform materials, I shall be unable to satisfy Mr. Boyle of the easiest and best modes of digging Marl, consequently my remarks can be only congruously with our practices. My whereabouts is near the center of Burlington county, a county abounding with marl, and, through its agency, has attained a high state of productiveness. This substance is used as a general manure on all occasions by those farmers who can obtain it conveniently, and the great quantities that are annually raised and scattered broad-cast over our grass and grain fields, attest its importance and usefulness, while its fertilizing effects are daily seen among the growing crops. With the object of elucidating the subject, I will methodically arrange my remarks under appropriate heads, and speak first, of the methods employed in digging and hauling, the usual depth of the pits below the surface, how it is raised from the pits, etc.; secondly, the mode of application; thirdly, geological formation of the marl region; and, lastly, analysis of greensand or marl, as furnished by Professor Rodgers, State Geologist.

The methods employed in digging, etc., must necessarily with the farmer, depend on the season and his crops. Digging, however, is carried on at all seasons of the year, although it is obviously improper, for the reason that in the winter and spring the inclemency of the weather and fullness of the springs, retards and exposes the operators. The proper period for digging, and which is generally adopted, is immedietely after harvest, in the month of August. Experience has abundantly proven, that early in autumn, there is less water percolating through the marl, it is drier and digs easier, a greater quantity can be raised within a given period of time, and the pits carried to a much greater depth, than at any other season of the year. Another evil to be encountered in sinking pits when the springs are full, is the falling in of the walls, caving. Each farmer who is so fortunate as to be the owner of marl beds, or who can purchase them, endeavors to have as much raised as will supply his wants for a twelvemonth. The digging is performed with small No. 1 semi-concave shovels, shaped by the smiths in the neighborhood; this peculiar form, it is said facilitates the digging, penetrating the marl easier, and overcomes the adhesion of the marl to the implement, which usually occurs with the common shovel. The secret of the operation no doubt lies in the peculiar form and shape of the instrument, the blade being straight and not dished, inclined a little backwards from a straight line running through the handle. A slight movement of the shovel, with the operator in the pits, upwards, readily frees it from the marl, while the upward throw with the common shovel, in consequence of its bowl or dished like form, diverts it from a straight course and causes it to crumble. The pits are generally sunken along side-hills of ravines, or near the brinks of running streams, and their depths depend upon various circumstances. From four to eight feet is the usual depth the pits are carried in the marl, yet, under some peculiar management, they have been carried down from fifteen to twenty feet; but these instances are very unfrequent. As a general rule, one which should be observed in all cases, they never should be carried farther into the marl, than the corresponding covering of earth. Where the excavations are made for new pits, the waste earth to fill the old ones. This avoids waste land, thwarts the danger of animals getting into them, to say nothing of the slovenly appearance which they present, and by a slight sprinkling of the marl over them, they are easily converted into grass. Whoever has an eye to his true interest, will never leave his marl pits open, a practice, I am sorry to say, has too many followers. The size of the pits depends upon the number of workmen employed, but seldom less than two are allowed, nor more than four to work one out, while one or more stands on a platform level with the surface of the marl, to throw it back as it is cast out. The amount estimated for one person to dig in this manner per day, is from five to ten tons, and the cost of digging is graded by the localities and time of operation. Ingenuity has not yet discovered nor art invented any other modes by which marl is raised, other than manual labor, although I do not imagine that the day is far off, when they will bring to our assistance, aid by which physical power will be more or less superseded.

Hauling is performed at all times throughout the year, especially by those who have to cart some considerable distance, but others generally adopt the winter months as affording more leisure and facility in its direct application, as our meadow lands can be better approached then by the team, than at any other time. Many are in the practice of casting it into heaps, should the land prove too soft to drive over loaded, and when it will permit to scatter it broad-cast. This is more expensive, yet, nevertheless, is much adopted. Winter, then, may be said to be the season for carting or hauling marl. It is sold by the ton where raised, (one bushel weighing one hundred pounds,) the price varying from twenty-five to thirty-five cents.

The modes of its application to the crops or soil are numerous and no uniform system is followed; each one is governed by his caprice or fancy. It is applied to corn when planted or in its early growth; to potatoes in the hill or row, before planting or after, (but generally covered with them;) to winter grain; in short with those farmers who have abundance of it, it is a "panacea," good for all kinds of crops. Apply it as best suits your convenience, you cannot use it amiss, which is saying a great deal, yet needs no qualification; but neglect not to use it. Peradventure you may think I claim too much for it. Try it. Since the introduction of Lime among us, (thanks to the genius of improvement,) many of our sandy loams, by a top dressing of the two together, have approximated in yield to the best wheat lands of Penn. It is spread broad-cast (marl and lime) over fallow, at the rate of five tons of the former to thirty bushels of the latter per acre. Marl alone is applied at the rate of ten to twenty tons per acre. Experience has demonstrated that the combination is one of great usefulness; that the efficacy of the one contributes to the speedy action of the other; that the noxious agents contained in the clayey marl, when brought in contact with lime are rendered inert to vegetation, but more properly speaking, by mutual affinities converted into efficacious substances. Pasture lands, whether meadow or upland, that have afforded but a scanty herbage, are astonishingly benefited by a slight application of marl; but the more general method of aplying it, is to spread it broad-cast over a grass sward following a winter crop. Its most decided effects I am inclined to believe are on a clover ley; and so powerful are its fertilizing powers, that when scattered over those melancholy fields, so sterile as to produce only a stunted growth of wild weeds, a luxuriant crop of white clover follows.

Geological formation. Whoever has traversed the marl regions, discovers at once the want of uniformity. It comprises, strictly speaking, several subordinate beds, all belonging, however, to two principal varieties. These tertiary beds are composed of layers of clay, containing fossil shells, and other organic remains, of sand containing oyster shells. "The cretaceous or greensand series, comprises beds of blue clay, which contain leaves, parts of trees, lignite, amber, and other vegetable products, a brown coarse ferruginous sandstone and conglomerate, crowning the tops of low hills; a yellow ferruginous sand, sometimes cemented into soft rock, and sometimes occurring as loose sand, containing numerous cast-off shells; a yellowish fossileferous limestone, often silicous; and the greensand marl beds, consisting of beds of dark clay of the same, mingled with greensand; of the greensand almost alone in a pulverulent state." This lower bed of greensand is properly the purest and best marl; the ferruginous sand or rock, (called iron ore,) coats the beds and varies much in its density and thickness. The clayey stratum or veins running through the marl, constitutes near fifty per cent of its whole bulk, and which gives to it its adhesiveness. This may be taken as the maximum per centage throughout the region, deduced from several analyses made; for instance, a specimen of marl near Middletown, Monmouth county, gave but forty-six per cent of greensand; another from Squankum, which marl heretofore has been deemed the best, gave but forty-eight per cent, while that taken from Mansington Hill, Salem county, gave eighty-eight per cent.

Chemical composition of marl, as found in this vicinity, Professor Rodgers says, affords in 100 parts,

Greensand,	82·60
Clay,	10·40
Quartz sand,	7·00
	100·00

And the analysis of greensand gives in 100 parts the following results:

Silica,	50·75
Alumina,	6·50
Protoxide of iron,	22·14
Potash,	12·96
Water,	7·50
	99·85

"Besides the aluminous and silicious matters here recorded as usually present with the greensand in the general mass, there occurs occasionally several other substances, which, though comparatively minute in quantity, are possessed of active properties. Some of these materials are deleterious, while some are undoubtedly beneficial in their action upon vegetation. They are *sulphate of iron, sulphate of alumina, sulphate of lime, sulphate of magnesia, carbonate of lime,* and also *phosphate of iron.*" These salts are derived principally from constituents found in the clayey stratum. Sulphuret of iron is found abundantly in the clay, and by the action of atmosphere and moisture upon this salt, the sulphate is formed; sulphate of alumina arises from the union of sulphuric acid produced by the action with the argillaceous earths; sulphate of lime and magnesia occurs from a combination of the same acid with lime and magnesia, that is sometimes found interspersed in minute particles through the greensand. Carbonate of lime undoubtedly arises from the fossils and other organic remains found embedded in the clay, as well as the phosphate of iron, by the action of phosphoric acid upon the same organic substances.

Professor Rodgers says, "the total thickness of the greensand formation, estimating it from the bottom of the lowermost layers, abounding in the green granular mineral to the overlaying yellow ferruginous sand or the limestone bed, when this is present, may be stated approximately at about one hundred feet." In some places the relative depth is not more than thirty feet.

I take great pleasure in transcribing Professor Rodgers' remarks and observations entire, on the "Economical Relations of Greensand Formation." Those who have not profited by his judicious observations on this subject, will readily perceive the rationale of his reasonings, the wherefore of its turning vegetation in partial drouths, when applied to corn or clover sward, and cannot fail to perceive the vast importance the two minerals exert when applied to the wants of husbandry.

"Abundant evidence might be adduced to prove that the true fertilizing principle in marl is not *lime* but *potash*. The analyses which have been made, give us in several cases no lime at all, and when a small proportion of lime is present in the green granular mineral, it is in a combined state, chemically united with other ingredients, and not traceable to the organic remains, which are in many of these instances not present in the stratum. Besides, the quantity of shelly matter, even where the shells are plentiful, is so disproportionately small, and the matter of the shells often so firm and unsusceptible of that easy disintegration necessary to form a calcareous marl, adapted to act speedily upon the crop, that the striking effects witnessed from the marl, can in no wise be attributed to the trivial amount of lime which the shells may occasionally furnish to the land. Nevertheless, as some feeble beneficial effects may possibly arise from this source, it may be of service to the agriculturist, in choosing between different fossiliferous marls, to attend to the nature of the particular fossils, and the state of more or less decomposition or change in which they are found. It must be borne in mind, that a large portion of the visible marl stratum is immediately overspread by a very porous layer of yellow ferruginous sand, and that this introduces to it a perpetual supply of water, furnished with great regularity as from an immense filter. From the upper or ferruginous sand it must descend, charged often with a considerable amount of the oxide of iron, as may be seen in the abundant ocherous sediment which it almost always deposits as it issues from the surface or upper part of the marl. It is ready, therefore, to precipitate this oxide of iron upon any substance capable of displacing it from the water, and meeting with the more soluble carbonate of lime of the shells, an interchange of materials arises, and the calcareous matter of the shells is dissolved and carried away, while the oxide of iron takes its place. Hence we often see the shells of a dark yellow or brown color, and, upon inspection, they are found to consist less of carbonate of lime than oxide of iron. In such cases they are to be regarded wholly inert upon the soil, as in fact so much useless matter, occupying the place of a far more serviceable substance, the greensand or marl. But this is not the only change which seems to have been effected in the foreign materials of the marl by this unceasing infiltration of water. I have before alluded to the peculiar composition of the overlaying dark blue astringent clay, and to the fact that it frequently contains a sensible quantity of the sulphate of iron or copperas, and that both this clay and its astringent impregnations are very often mingled through the granular marl itself. Now the water from either must dissolve in its passage a considerable quantity of the copperas, (an easily soluble substance,) and when there are shells or calcareous fossils, it must carry with it a portion of the carbonate of lime derived from them. These two substances coming together in a state of solution, a chemical reaction of course ensues; both the sulphate of iron and carbonate of lime are decomposed by the mutual affinities of their ingredients, and the result is a precipitation of the oxide of iron of the former, and a combination of the sulphuric acid and the lime to form sulphate of lime or gypsum. That such is the fact is apparent from our finding in many cases a sensible amount of gypsum, either in the earthy state or in minute crystals intermixed with the marl, and from our observing besides, that when gypsum is in greatest plenty, we can most generally discover a strong sulphurous odor, an evidence upon grounds before explained, of the existence of sulphuret of iron, undergoing a conversion into the sulphate of iron. It will suggest itself to every one, that the existence even if in small quantities, of so potent a stimulant to vegetation as gypsum, must have a powerful influence in modifying the useful properties of the marl containing it; yet it must not be inferred from this, that the efficacy of the greensand is owing to the gypsum, which I have shown to be frequently present. The comparative inertness of plaster upon the sandy soils of parts of the region where the marl has been applied, as in several places near Salem, is a fact in itself sufficient to overthrow this notion, even if it were not true that very many marls which do not contain gypsum in any shape, are endowed with the highest fertilizing powers."

The same writer further observes: "From the description of this stratum already presented, it appears that the action of this astringent mass upon the crop is decidedly pernicious, when the material is employed in any amount beyond the most stinted doses; and the cause of its poisonous property would seem, judging from the chemical analyses made, and from other evidences possessed, namely, the copperas and sulphate of alumina. Copperas, though a neutral salt, is well known to chemists to exert an acid reaction, and hence we are not to be amazed that a clay containing it in obvious quantities should burn, or more strictly speaking, poison the vegetation. Knowing as we do the deleterious properties of the clay, a few simple correctives suggest themselves, and such as any one wishing to use this substance as a substitute for marl may adopt."

The correctives here alluded to, are, in the first place, to cast it into flat shallow heaps after digging, that the rains may carry away the copperas, it being soluble in water; and in the second place that mixture of caustic lime in proportion of one bushel of lime to every hundred bushels of the substance, and that in this admixture the sulphuret of iron is converted into an oxide, and precipitated by the liberation of the sulphuric acid, which chemically unites with the lime and forms gypsum; in the third place to form a compost with the various matters of the farm and barn yard. J. N. KEELER.

Mulberry Farm, N. J.

Management of Bees--No. 6.

(*Continued from page* 151.)

But another method of renewing the combs of a hive of bees by the use of the subtended bee hive, may be recommended with considerable confidence, as experiment has already shown. This hive, according to Reaumur, was invented by Jaques D. E. Gelieu, a gentleman of Newchatel; but according to Nutt, a late English writer, it was previously invented and patented to John Gedde, about the year 1675. This hive, no doubt, has been variously modified. I have used it, and seen it in use, in a great variety of forms, and yet it is a poor hive, and must always remain so, until the principles of ventilating hives are better understood. Nutt uses 14 pages of his book, octavo, in urging reasons argumentative against its use. M. D. E. Gelieu, a modern French writer, will not use it, even in honor of his father who invented it, and wrote two volumes in its praise, and on the management of bees. But, after all that has been said and written against this hive, it is believed that it is now so constructed as to render it one of the best, *if not the very best* hive in the world. It is indeed true, that it costs too much; but when it is considered that a hive that is well made and well housed will last an age, the objection will not weigh much with those who are able to make, or purchase them. Some late improvements made on this hive I think will remove all objections that have been urged against it except the expense, which many who keep bees, feel unable to incur. As this hive is made in three sections, 15 inches square and seven and a half inches high each, including the top board, the distance of travel for the bees to get into the upper sections from the entrance is much shorter than in any of the old plans that I have seen. Moreover, as there are twelve two inch holes and eight one inch ones, through the top-board, near the sides, all around each section, the bees are not materially impeded in passing by each other and finding their way from one section to another, and as these apertures are so abundant, ventilation is most easily graduated, while at the same time, a perfect uniformity of heat diffuses itself through the whole hive. There should be a ventilator on one side of each section covered on the inside with wire screen to keep the bees from entering it which, will be otherwise described in the bottom board, and a window with a door or slide to cover it may be made on the other, to observe the state of the bees. These three sections are made by a workman, perfectly exact and square, and set on the canal bottom board. This bottom board is made of plank at least two inches thick, sixteen inches wide, and two feet long. From the inside of the hive's bottom, which should be near one end, the plank is worked out in a quadruple inclined plane down to some less than an inch, like the hopper to a grist mill; in the center a hole is bored with a three inch center bit, and a tin tube made to fill the hole two inches long, which is inserted therein from below, with six half inch holes at equal distances near its lower edge. This tube is confined in the center of the bottom board by nails directly under the center of the hive, and projects an inch or more below the under side of the bottom board, and is lined on its inside with wire gauze to prevent the entrance of any insect from without. A cap is made like the cover to a butter box to fit on the outside, with half inch holes in its rim corresponding with those in the projecting tube, so that when it is put on, it is made adjustable, and ventilation most easily graduated by turning the cap a little. A canal or gutter is made in the top of the front part of the bottom board, six inches wide, one inch deep, and covered with a board fitted in so as to form a tunnel one-fourth of an inch high, planed off level on top. As the bees alight in the canal and enter the tunnel, they are about half way to the center of the bottom of the hive before they are in it. This entrance may be contracted if found too wide, by fitting in a billet of wood, and have room only for passing bees in proportion to their number at work. It is a sovereign remedy against robbers, from bees of other hives. The advantages of this bottom board with the principles of ventilation here adopted by the adjustable caps, must be determined principally by future experiment. I constructed this bottom board in 1832, but used a sheet iron slide in the center for a ventilator. This did not prevent the entrance of the moths, and it was laid aside. In 1834 or 5, I constructed a wire screen bottom board, but this let in too much cold air, so as to chill the young broods, and that was laid aside except for temporary purposes; since which I have used the suspended bottom board with very good success. Last spring, however, I determined, and succeeded in obtaining, a patent on this principle of ventilation, and went into a course of experiments with several of these bottom boards, all made on the same principle, but varying in the power of ventilation and width of the canal, some without the adjustable caps, and others with; all of which were new hives, new swarms, and new bottom boards, and all stand in a row together in the apiary. And here it is proper to remark that every hive that is placed on the canal bottom is infested with moths, more or less, except those which are ventilated by the adjustable caps; these are not annoyed in the least; and, with my present views, I feel confident that with scrupulous good management, no moth will ever enter and deposit her eggs in the interior of the hive, where this bottom board and adjustable cap is used with skill, and the apiary is not treated with neglect. In the use of these ventilators the effluvia escapes through the wire gauze, and attracts the miller to those places where she surely cannot enter. Moreover, the tunnel to the canal extends so far into the hive that the entrance is kept warm at that place, and the bees will keep a strong guard there to prevent intruders, as well the robbers of bees from other hives, as moths, until the weather is too cold for the millers to fly; and further, if in chilly nights the miller does enter the tunnel, the general atmosphere cannot dissipate her effluvia at that place, and she is driven out by a strong guard.

If the subtended hive is used, and my system adopted, the third or top section is used only as a chamber for boxes, &c. The third year, early in the spring, this section, which has been used as a chamber two seasons is placed underneath, next to the bottom board; this raises the hive of bees by this shift, so that the section which was in the middle is now on the top. Now draw a fine wire through so as to divide off the top section; empty it of its contents, and use it as a chamber. This prevents the necessity of pruning the combs in the ordinary way; for the bees fill down the section next the bottom board with new combs, and enables them to replenish their stock by raising their young, in cells not more than two years old. The caustic nature of lime is so unfriendly to life in most insects, a coat of lime paste should be laid on so as to fill up any space betwixt sections as well as bottom boards, and all cracks and open places; and no moth's eggs will ever hatch there.

Respectfully, JOHN M. WEEKS.

Comments on the Sept. No. of the Cultivator.

Messrs. Gaylord & Tucker—The first article that attracted my attention was Lord Western's letter about his Merino sheep, in which he states, that by suffering two wethers to remain three years without being shorn, the fleece of one *did actually* weigh 28 pounds, and of the other, *would* weigh 30 lbs., as his Lordship guessed. Now, to say not a word of the marvellous in this statement, I beg leave to ask, what was the loss and gain of this experiment? The gain, "I guess," would be, only the wonderment elicited among all the quid-nuncs and marvel-lovers of his agricultural brethren, while the certain loss, if the sheep lived, would be the whole interest of the money for which the fleeces would sell, if sheared annually as usual; besides incurring the not improbable risk of losing both principal and interest, should the sheep die, which surely ought to be estimated at something, if they were kept for such a period without their yielding any thing in the form of profit, but manure. Although it is not probable that any of our farmers will be tempted to follow this English Lord's example with *their* sheep, for they have but little fancy for such suspended and precarious profits; still I have deemed his experiment deserving of this brief notice. To make it worthy of imitation, he should have proved, that the 28 lbs. of wool exceeded the aggregate amount of three such fleeces as the slaughtered wether would have produced annually; and, moreover, that this excess would more than compensate, not only the certain loss of interest, but the possible loss of principal by the death of the sheep.

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The next article is headed "*Fattening Animals,*" and for this there are four rules given. In regard to the two first of these, there are, I think, some points yet undetermined, and some differences of opinion, even among the most experienced feeders. For instance, although all probably will admit, that "*the food should be so prepared that its nutritive properties may be all made available to the use of the animal, and not only so, but appropriated with the least possible expenditure of muscular energy,*" yet, when we come to inquire, *what is this preparation?* we get different answers from different persons, and all of them with equal claims to our regard on the score of experience. Some contend, as I understand the author of the rule does, that the best preparation is to cook their food. Others maintain, that this violates the first rule, which requires, that "*all the nutritive properties of the food should be made available to the use of the animal;*" whereas, cooking destroys at least some portion of them, besides being unnatural. Again, the author of these rules seems to assert, that all their food, if fed raw, should be previously cut up. On the contrary, many contend that the risk of choking, where the animals are thus fed, is so considerable as to exceed the advantage, especially when the extra labor of slicing is taken into the estimate. With respect to sheep, we know that in England, where sheep husbandry is probably better understood than in any other country in the world, it is the general practice to hurdle them on their turnep-fields, that they may feed themselves, and thereby save, not only the expense of digging and slicing their roots, but also the expense of carting out their manure, if fed under a fixed shelter. It is true, that in fattening their sheep for market, more food is given to them in addition to roots: but whether the slicing of the latter be any advantage, is a matter which may be pronounced at least doubtful.

The first rule concludes with the following declaration:—"*All food should be given to a fattening animal in such a state, that as little time and labor as possible on the part of the animal, may be required in eating.*" Now, if the most important point in fattening an animal, be to do it in the shortest possible time, then this assertion may be correct. But if the preservation of its health, and the good flavor of their flesh, after they are killed for use, be still more important, then the correctness of the rule may well be denied. For all medical writers on the subject of diet, concur in the opinion, that the more slowly and thoroughly human beings masticate their food, the better they will digest it, and the more perfectly it will answer all the purposes for which it is taken. And why this should not be the case with brutes also, it will not be easy to prove, especially with all that ruminate. That it *is* the case,—not only with them, but also with hogs, all I think, will agree, who have ever tried the difference between beef and mutton fattened with grass and grain, while running at large, and that which is called stall-fed; and the difference between the flesh of hogs fattened in sties, and those which are made fat without being confined in pens, until two or three weeks before they are killed. If profit alone be our object in fattening animals, then, indeed, some time and expense may be saved by adopting the first rule with some qualification.

The second rule requires, that "*from the time the fattening process commences, until the animal is slaughtered, he should never be without food.*" If I remember right, this requisition is opposed to the opinions expressed in different volumes of your own paper, by several of your correspondents, who write like experienced men. It is true, they agree that fattening animals should be fed regularly, and as often as they manifest an inclination for food. But they object to its constantly lying by them, which it must do, if they are "*never to be without food;*" because they are apt, when this is the case, to gorge themselves, and thereby retard, instead of hastening, the fattening process.

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Under the head of "Work for the Month," you recommend September, from the 12th to the 20th, as the best time for sowing wheat. This, I presume, has been found to suit your latitude. But as far south as about 38°, I have never known nor heard of a single crop, for many years past, that was not greatly injured by the Hessian fly, if sown earlier than some time in October.

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To your excellent article entitled "*Agricultural Capital,*" permit me to add two other items to your enumeration. Although in applying to them the term "*capital,*" it may be thought that I give it a more comprehensive meaning, than is usually attached to it; I will venture to take this liberty. These items are, *good character* and *good education,* in which last I include, not only genuine agricultural science, to guide and govern agricultural practice, but all other knowledge which will contribute to make us better and wiser men,—better and more useful citizens,—better qualified, in every way, to promote not only our own, but other's welfare and happiness. Such might be the yeomanry of our yet happy country, for *their* profession unquestionaby gives them vast advantages over all others towards making such attainments; and all they have to do in order to realize them, is, to cultivate their minds with the some care and assiduity which the best and most intelligent of them cultivate their fields.

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Your article on Botts suggests to me what I have often heard said by persons of great experience in raising horses. It is, that during the season when the bott-fly prevails, you should daily examine your horses and colts, and never suffer any of the numerous nits which they deposit on them, to remain a minute after you discover them. Do this for your horses' limbs and bodies, and you will never need any remedy for killing botts in their stomachs.

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In regard to Mr. John William's marvellous wheat, I would, most respectfully, recommend, that instead of "California," he should hereafter substitute the term, "*Brobdingnag*" that strange country once visited by that famous traveler, Captain Lemuel Gulliver, who found every thing therein on the gigantic scale, from the people "*as tall as an ordinary spire-steeple,*" down even to insects, the common house-flies being "*as big as a Dunstable Lark,*" and wasps "*as large as partridges.*"

Mr. Williams, I see, states that some of the heads of his Brobdingnag wheat, (as I beg leave to call it,) which he raised the present year, produced two hundred and four grains each. The largest head I ever measured was rather more than five inches—but I will say five. It was of the kind called blue stem, and contained, as well as I can recollect, only seventy grains, which is nearly double the average quantity of our ordinary wheat, in the southern states. Therefore, Mr. W.'s Brobdingnag head, if it grows at all like other wheat, must have been—either within a very small fraction of fifteen inches long, or must have been nearly three times larger in circumference than the head I counted, to hold the number of chambers necessary to contain these 204 grains. Mr. W. farther says, "*It may be considered a reasonable estimate, that in a good soil, each kernel sown, will produce* 1,000 *grains.*" Well, therefore, may the proprietors of this most stupendous wheat ask, for single heads, the very moderate price of one dollar each, since the grains of only one head sown, as Mr. W. suggests, would produce in twelve months, 204,000 grains, which would yield at the asking price, (and he may safely calculate upon finding gulls enough among our brethren to give it.) the very comfortable, snug, little return of one thousand dollars for one! Hence it is demonstrable, that to sow California or Brobdingnag wheat, at a dollar per head, of 204 grains each, should it yield as well for others as for Mr. Williams, would throw into the back ground, at a sightless distance, even the wildest of the numerous speculations which has ever yet humbugged our money-loving, most gullible country.

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Mr. Solomon W. Jewett's communication on "The Management of Meadow and Pasture lands," deserves the attentive perusal of all our brethren—both for his facts and opinions. Among the latter, however, there is one in regard to which there are many who differ from him. He says.—"*Horses will, in a few years, destroy a good pasture, by cutting up the sward; they return no manure to the soil that is of any benefit to the herbage.*" The first clause of the sentence is generally believed to be true; but it depends on the particular breed of horses raised, whether this "*cutting up*" be not amply repaid. Again, cattle cut up pasture more than horses, for *their* hoofs are divided into two parts, each having a sharp point, which necessarily cuts more than the round, solid hoof of the horse, as may easily be seen by examining the pastures in which both kinds of stock run together. Moreover, if the horse manure dropt in their pastures be "*of no benefit to the herbage,*" the manure of cattle must be still more worthless, since it has often been proved by accurate analysis to be weaker.

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Mr. J. C. Mather's article on "*Lime,*" furnishes a fit occasion to suggest what all our brethren, I believe, deem a great desideratum among us. That is, for some one to make a series of experiments to ascertain the best and the greatest quantity of this substance which can be beneficially applied to land. This is still a matter altogether undetermined, although lime has been used to improve land for many centuries past. Dr. Wm. Darlington, who is highly distinguished both as an agriculturist and botanist, says, in a letter to the late Judge Buel, that in Pennsylvania the quantity generally applied varies from 20 to 100 bushels, according to the quality of the land, the richest requiring the most lime. Judge Buel himself, in his "Farmer's Companion," states the maximum and minimum at 120 and 50. On the other hand, the English writers, of whom I shall quote only James Anderson, the distinguished author of "Essays relating to Agriculture and Rural Affairs," and of several other performances, recommends far greater quantities. The extract which I am about to give, is from his essay "on quick lime as a cement and as a manure," than which I have never read a more learned, comprehensive, and at the same time practical treatise on the subject. It is published at the end of "Marshall's Gardening." In speaking of lime as a manure, he says: "It is common to hear those, who have had little experience of it as a manure, recommend very great caution, lest too great a quantity be employed, for fear of *burning the soil,* as they express it. This idea of *burning* has been evidently adopted, from what has been experienced by applying caustic lime to animals or vegetables, in large quantities, as it often corrodes and shrivels them up, and produces other effects which greatly resemble those of fire. But it cannot produce any such effects, unless there are vegetables growing upon the soil at the time. In that case, the vegetables might, indeed, be corroded by the lime, if rain should fall immediately after it was spread, when newly slaked; but as it loses this fiery corrosive power in a few days after it is spread, nothing of that kind can be expected to happen to the *soil.* Accordingly, we never hear of crops being burnt up by too great a quantity of lime, in those countries where it has long been used as a common manure, although it is there often employed in much larger quantities than in any other places where it is more rare.

"I myself have had the experience of lime in all proportions from one hundred to above seven hundred bushels to the acre, upon a great variety of soils; and have always found that its effect in promoting the fertility of the soil, has been in proportion to the quantity employed, other circumstances being alike.

"The expense in most cases prevents farmers from employing this manure in greater quantities than those above mentioned; but accidental circumstances clearly show, that if it were applied in much larger quantities, the effect would only be to promote the luxuriance of the crop in a higher degree.

"A gentleman of my acquaintance, in whose veracity I perfectly confide, happening to be from home when a large field was limed; and having no occasion for the whole quantity of lime that had been brought for that purpose and laid down in one corner of the field, his servants, without driving it away, mixed what remained with the soil, although the lime lay there about four inches thick over the whole surface. The effect was, that for many years afterwards, the grain in that place, was so immoderately luxuriant, that it fell over and rotted before it came to the ear. After many years this luxuriance abated a little, so as to allow the grain to ripen; but it was there always much more luxuriant than in any other part of the field.

"An accidental experiment, nearly similar to this, fell under my own observation. It happened that the servants of another farmer laid, by mistake, a few heaps of lime upon a grass field that he did not intend should be broken up at the time. The mistake was soon discovered, and no more lime was laid down at that place, and the few heaps, (about a bushel in each,) were allowed to lie neglected, without being spread. The field was pastured upon for seven or eight years after that, before it was converted into tillage; and the heaps were by that time become so flat, and so far sunk into the ground, that they could hardly be discovered.

"Before it was plowed up, the whole of the field was limed, and this part equally with the rest; nor were the old heaps touched till the plow went through them in tilling the field, when the lime was then turned up, with only a very small mixture of soil. The consequence was, that at every one of these heaps, a tuft of corn sprung up with such luxuriance as to be entirely rotted before harvest; and for many years afterwards these tufts could be distinguished from the other parts of the field, at a very great distance, like so many buttons on a coat."

The above facts appear to me perfectly conclusive as to the effects of lime in England, and why it should not act nearly or quite in the same way in the United States, will not, I think, be easy to prove.

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In L. F. A.'s brief article, headed "*Imported Berkshires,*" there is a single sentence which would make an excellent theme for a whole volume; it is truly "*multum in parvo,*" and I therefore beg leave to repeat it, in the hope that he or some other of your numerous correspondents will give us, at least an essay, on a subject so deeply interesting to us all. In speaking of the far greater attention paid by English agriculturists, than by those of the United States, to every thing connected with their profession, he justly remarks, that "when *mind* is thus applied to the development of *matter* in agriculture—as unhappily for our true interest it is not—*then* shall we witness equal success and improvement; and *then* will the land-holder take his true position in wealth and influence with the other professions of our country." But alas! although this all-important truth is perfectly obvious to the dullest understanding, and has been again and again, presented to us in almost every variety of aspect that language could give it, most of us appear as utterly insensible of it, as if we had neither intellects to comprehend, nor souls to feel how deeply it concerns our whole brotherhood always to regard husbandry both as a science and an art, if we would ever attain that rank and estimation in society to which we have a perfectly just claim; one too, which all would admit, if we would only seek it as we ought to do. Commentator.

Cutting up Corn.

Msssrs. Gaylord & Tucker—It has been the practice of most farmers for a few years past, to cut up their corn at the bottom, and stack it in the field. But I find there is a difference in the mode of doing it; now I will give you and your readers the manner in which we do it. Two of us take five rows, and commence cutting; when we get an armfull, we set it up on the middle row, around a hill which is left standing, to make the stack, never laying it down at all; when the stack is made of sufficient size, we take a band of straw, turn the tops down, and bind around it, and it is done. We are convinced that we can cut up a field of corn in this way in less time than we can in topping, binding and stacking it in the old way. Where we cut it up and lay it down in bundles, and then have to go and bind them, and draw them together to stack, we have found it to be an ugly and tedious job; besides it takes about double the time and labor to do it. As to the economy of cutting up corn, I think there are few farmers that will question that point; the abundance of cattle fodder which is saved, is enough to induce any farmer to do it; besides this, we have the ground clear for the spring crop. I know there are some farmers who object to this manner of curing corn, on the ground that corn gets ripe better when topped than when cut up at the bottom. Now as to that I think that the majority of farmers will bear me out in saying that corn cut up at the bottom will ripen better, be sounder and heavier corn than in any other way in which it can be cured.

Talking, a short time since, with a practical farmer and gardener of this place, (Leman Stone, Esq.) he said, "that corn may be cut up a great deal earlier in the season than most people think," for he says "as quick as the kernel begins to grow hard in the center, it will do to cut up, and then the stalk which is green will retain the juice, which is carried to the ear, and both the ear and the stalk are preserved in a much better condition than when the stalk is left to dry up before it is cut up." If you or any of your correspondents have a better way of cutting up corn than this, I wish you would give it to us through the columns of the Cultivator. Yours with respect,

Derby, Conn. Sept. 25, 1841. LEVI DURAND.

The South Downs.

Messrs. Editors—I have frequently seen noticed in the Cultivator, importations of different breeds of the English sheep, among which the South Downs appear to be finding some favor with your New-York farmers and breeders. The amount invested in sheep in the Green Mountain State, at the present time, is perhaps double, if not treble, to that of neat cattle; consequently wool and mutton are among the first great commodities of our state. The breed of sheep in the west part of the state, so far as I am acquainted, is principally a cross between the Spanish Merino and native sheep, approaching, in many places, very near to full blood Merino. The Saxony sheep have also been introduced and crossed to some extent with our grade Merinoes, but without that success, I think, which is necessary to warrant further experiment. They are decidedly too tender a sheep for our latitude and present encouragement for growing fine wool. Our high blooded Merino wethers possess too small a carcass for profitable feeding, and the quality of the mutton is considered by some to be inferior to that of the native sheep.

I have had some thoughts of late of attempting to introduce some South Downs into this vicinity, if I could become convinced that a cross with our present breed would add to the interest of growing wool and mutton in Vermont. Notwithstanding our distance of 180 miles from Brighton, the business of feeding and driving fat sheep to that market forms no inconsiderable item in sheep husbandry.

It would be very interesting to me, and I think to a large portion of your Vermont readers, would you, or some of your readers who are well acquainted with the different breeds of sheep, and the relative value of wool and mutton, answer some or all of the following queries:

What is the value of South Down wool, compared with American Merino?

Is the wool of sufficient fineness to manufacture into such cloths as take a lead in demand in the American markets?

What amount of wool per head would a flock of 100 yield, if kept together on common ordinary keep?

How does the yearling's fleece compare in weight with two, three, and four year old sheep?

Do they incline to fatten easily?

At what age can the wethers be most profitably fitted for the stall, in places as distant from market as Vermont?

How does the mutton compare in quality with other varieties of sheep, and what its weight?

How will the pelts compare in value with the Merinos slaughtered in November or December?

Are they *more* or *less* subject to scab or foot-rot than other sheep?

What is the present value of South Down bucks and ewes, in the vicinity of Albany? J. N. SMITH.

Chimney Point, Vt., September 25, 1841.

☞We shall be gratified to receive answers to all or any of the above inquiries, and we doubt not some of our readers will be able to furnish satisfactory replies.—Eds.

The New-York Market.

MONTHLY REPORT FOR OCTOBER.

(*Prepared for* THE CULTIVATOR.)

ASHES.—During the early part of the month there was a very active business in Pots. The demand for export exceeded the receipts, and gradually advancing rates were demanded and obtained. The arrivals from the interior were not heavy; and the market improved to $6·75, when some considerable parcels were received from Canada, which supplied the orders on the market; and since, the demand has materially decreased. The receipts are now to a fair extent with a rather limited inquiry, at $6·25 @ $6·37 1-2, mostly at the higher rate. Pearls have remained dull during the month at $6·00; the sales being principally for home use. The rate is now $5·75, with limited sales. The advices by the Columbia have had no effect upon the market; and there is at present but little prospect of any improvement.

COTTON.—In this important staple, there was during the first two weeks of the month, a depressed feeling; and holders being rather anxious to sell, a slight decline was submitted to. The sales were not extensive, but the stock in the market was materially decreased by shipment from first hands. The stock is now very light, which, with the reception of advices from England, is rather more favorable than we have of late received, and has given much firmness to the market; and prices may be quoted at 1-2 to 3c. ℔ lb. higher than the lowest point of the season. This improvement is principally to be ascribed to the small stock here on sale. Of new cotton, about 2,500 bales have been received, most of which has been sold. The quality of the new crop so far as received, is not very good. The demand was good for some time previous to the arrival of the Columbia, but the firmness of holders has since checked sales. The following are the quotations compared with the 1st of the month:

	1st Oct.	24th Oct.
Upland and Florida,····	7 1-2 @ 10c.	8 @ 10 1-2c.
Mobile,················	8 @ 10 1-2c.	8 1-2 @ 11 1-2c.
New-Orleans,··········	7 1-2 @ 11c.	8 @ 11 1-4c.

FEATHERS.—Western live geese are selling at 38c. per lb. cash, with a fair demand.

FLOUR AND MEAL.—The anticipations which were entertained of a short harvest in England, and thereby opening an extensive vent for our bread stuffs, having been dissipated by later advices of a nearly average crop, say about six sevenths, the market for flour fell off rapidly until it touched as low or a lower point than before the speculative feeling commenced. During the decline, buyers, especially for shipment and eastern ports, came into the market very sparingly, looking for still lower prices; and in consequence, the stock accumulated by fresh arrivals from the interior, until it became very large, almost unprecedentedly so for the season. The large receivers continued comparatively firm, but some were found to sell; and a few sales of fair Genesee were reported as low as $5·37 1-2 @ $5·50. The millers having stopped grinding for a week, and having made an arrangement to make another stop from the 15th to the 27th, the receipts have become light, and the market having regained a healthy appearance, buyers have come in freely both for home consumption and shipment. The sales now exceed considerably the daily receipts, and the stock in store is becoming reduced, but is however, yet large. The rates for Genesee and Ohio have gradually improved to $6·00 @ $6·12 1-2, and the market evinces no appearance of receding at present. The receipts of Ohio are proportionably less than Genesee, and the rates are about the same. The market is nearly bare of Michigan and Troy, both of which bring $5·94 @ $6·00. Southern flour being in fewer hands, has not fluctuated to the same extent. The demand has been inactive, but within a few days has materially improved. The supplies of Howard street have been very light. Holders have been very firm at $6·00 for Georgetown and Howard street, and are to-day demanding $6·25 @ $6·37 1-2, and $6·50 is asked for Brandywine. Jersey Corn Meal is selling at $3·25, Brandywine, $3·37 1-2 in bbls., and $15·00 in hhds. Rye flour $3·50.

GRAIN.—Nearly every description of grain has declined during the month. Wheat has arrived in considerable quantities, and has fallen off from $1·45 to $1·18c. The market is now bare with considerable inquiry. The last parcel sold was Virginia, which was taken on arrival, at 125c. for milling. A good lot of Genesee would probably bring an advance on this rate. The receipts of southern corn were very large in the early part of the month, and the sale declined to 63c. ℔ bushel, running measure. The low price of whiskey checked purchases on the part of distillers, and the demand from the east was very small; consequently the stock accumulated. This has worked off, and the market is now bare of southern. The last sales were at 65 @ 66c. measure. Jersey is selling 68 @ 70c. Northern, 70 @ 71c. Ohio 63 @ 66c. all measure. The demand is now animated, and the market has an improving appearance, with but a light supply. North River rye has been for some time past steady at 65c. at the boat, 66 @ 68c. delivered. The receipts have not been large, and at those rates which are a considerable decline from our last month's report, sales are easily effected. New barley has made its appearance pretty freely. The first parcel sold early in the month at 68 3-4c. The article, however, has remained very heavy, and sales have since been made to some extent at 59 @ 60c. To-day, two parcels sold at 63 @ 66c. The market has been poorly supplied with southern oats, but the arrival of northern have been equal to the demand, and the price has fluctuated between 49 @ 51c. The stock is now quite fair, with a good demand at 49 @ 49 1-2c. Black eyed peas are plenty, and the demand is limited. The last sale was made at $1·20 ℔ bushel.

PROVISIONS.—The market for Beef and Pork has become very heavy, but has probably reached its lowest point of depression. Our immense stock of Pork has been somewhat reduced, but is still large, probably 45,000 bbls., and the rates are extremely low. The demand for export is limited. The exports from the 1st to the 20th were only 3,150 bbls. The sales of Ohio Pork are at $7 @ $7·25 for Mess, and $9·25 @ $9·50 for Prime. Dutchess county $8·62 1-2 @ $10·00, and State $8 @ $8·12 1-2 @ $9·50. At these rates, the market is quite dull. The receipts of new Beef are yet but limited, and holders are firm at $7·75 @ $8·00 for Mess, and $4·75 @ $5·00 for Prime. For old Beef, the rates are $4 @ $7. As in pork, the amount of transactions is limited to the actual wants of the trade. The exports to the 20th were only 799 bbls. Lard is in fair demand at 7 @ 8c. Dressed hogs are selling freely at 5c. Pickled hams 5c. for old, and 7c. for new. Smoked hams 5 @ 8c. There is a brisk demand for butter, and good parcels find a ready market at 19 @ 22c. Shipping qualities command 10 @ 12c., good common, 14 @ 16c. The supplies are not very large, and the market indicates a disposition to improve, and unless large quantities arrive, the rates will no doubt advance materially. Cheese is also not very plenty, and is in good request at 6 @ 6 1-2c. in casks, and 7 @ 8c. in boxes.

RICE.—The stock has become almost unprecedentedly light, and holders are demanding and obtaining higher prices. Small lots of the old stock are selling at $4·00, and of the new, at $4·25 @ 37 1-2c. The transactions are confined to the immediate wants of the trade.

TOBACCO.—There is very little activity in the market at private sale; and prices during the month, have declined nearly 1c. ℔ lb. The feeling is still heavy, and the stock accumulating. The quotations are Richmond and Petersburg 4 @ 8c. North Carolina, 4 @ 6c.; Kentucky, 5 @ 10c.. Manufactured, No. 1, 12 @ 15c.; No. 2, 10 @ 11c.; No. 3, 8 @ 10c. 32 lumps, 16 @ 20c.; Ladies Twist, 16 @ 20c.; Cavendish, 10 @ 40c. There appears to be no reason to anticipate any improvement at present, either in demand or prices. The inspection of Virginia to 30th Sept. amounts to 51,994 hhds., against 58,034 hhds. last year. The stock is 8,719 hhds. against 13,829 hhds. last year. The quotations given above are entirely nominal.

WOOL.—There has been for the last month a fair amount of transactions in this staple, and the demand continues to be quite good. Prices have become settled, and will probably undergo no material change. Since our last report, prices in the country have declined slightly. We quote this month, American Saxony, 45 @ 48c.; Full-blood Merino, 40 @ 45c.; half-blood to full, 33 @ 38c.; common to half-blood, 25 @ 30c.; superfine pulled, 36 @ 40c.; No. 1, 34 @ 36c.; No. 2, 25 @ 28c.

TALLOW.—The demand is good, and all the receipts are taken. The stock held by the butchers is very large, and they are only selling in small lots. We quote City rendered, 9c.; grass fed, 9 @ 9 1-2c.; sheep, 8 @ 8 3-4c. The supplies are not very heavy.

CATTLE.—The supplies of Beeves have been rather large during the month, and the market has been heavy. On the three market days there have been 3,900 offered, and 3,550 sold. On the last market day 1,800 were offered, including 500, left over from the previous market. There was a good attendance of buyers, and the drovers having submitted to a reduction, 1,550 were sold at $4 @ $6·50, averaging $5·50 ℔ 100 lbs. Of Cows and Calves, 50 were at market; 35 were sold $25 @ $40 each; which has been about the rates of the month. 2,800 sheep and lambs were offered and all sold at $1·50 @ $4, for sheep, and $1·25 @ $2·50 for lambs. The rate for Hay has ruled 87 1-2 @ 112c. by the load, during the month. The supply is but moderate.

Premiums on Butter, Cheese and Field Crops.

IT will be seen, by reference to the proceedings of the Executive Committee of the N. Y. S. Ag. Society, in another part of this paper, that the list of premiums heretofore offered for butter, cheese, and field crops, and which are to be awarded at the annual meeting of the Society, to be held in this city on the 18th and 19th days of January next, have been considerably increased. We particularly invite the attention of our dairymen to the subject; and as the premiums are open to all, we may hope that the liberal scale on which they are got up, may induce an active and honorable competition. Those who bring their butter and cheese will doubtless have an opportunity of disposing of it to the best advantage, even should they not happen to receive a premium.

2d Exhibition of the Maryland S. Ag. Society.

THIS meeting took place at Ellicott's Mills, on the 15th and 16th of Sept. We learn from the American Farmer, that although the exhibition was very respectable, yet owing to the unfavorable location of the place of meeting, it fell short of the expectations of many. The exhibition of swine was most imposing, and the Marylanders are in a fair way to possess some of the finest stocks of hogs in the United States. Old Kentuck will find it necessary to look well to its laurels. A fine lot of South Downs were exhibited by Dr. Thomas, but these were the only lot on the ground. Some beautiful Short Horns and Devons were exhibited, but judging from the report, Otsego, Onondaga, Cayuga, or Ontario in our own State, would exceed the State Society of Maryland in this respect. The display of agricultural implements was of the most interesting kind, and has rarely been exceeded in this country. Some of these, which were comparatively new inventions, were much admired, and sales were made, and orders to a considerable extent were given on the ground. The address was by the President of the Society, Gen. EMORY, and we should be happy to lay the whole of it before our readers could we find space for it; but his remarks on the improvement made in domestic animals within the last sixty years, or since the time of Bakewell, are so just and worthy the consideration of all, that we extract a few sentences from this part:

> "It is very strange, but it is nevertheless a fact, that there are some practical farmers, who, (losing sight of earlier maturity, greater aptitude to fat, and superiority in the quality of the meat,) deny that the improved breeds of English animals are any better for our purposes than the old stock found upon our estates some 30 or 40 years ago. I feel able to speak from some experience on this subject, and to say that the ox or the wether averages now on my farm at least twice the weight they did 40 years ago; and the meat being of much better quality, they will sell for nearly three times the prices they sold for at that time. But in proof of the gross error of such opinion, I will offer you far better testimony than that of my own experience.
>
> "By the estimate of Dr. Davenant, made in the year 1710, the average weight of black cattle, (so called because most of them were then black,) was only 370 lbs., that of the calf, 50 lbs., and those of sheep and lambs taken promiscuously, 28 lbs.
>
> "Mr. McCulloch in his Dictionary of Commerce, a book having the accuracy of a law book, makes an estimate 120 years afterwards in the same (Smithfield) market, and puts the weight of cattle at 550 lbs., sheep at 50 lbs., and calves at 105 lbs.
>
> "Mr. Youatt, who has still more recently prepared a most valuable book on cattle, estimates the present average to be 656 lbs. for cattle, 90 lbs. for sheep and lambs, and 144 lbs. for calves; being about double the weight of those animals as estimated by Davenant 130 years before."

In this country the increase has not been as rapid as in England, but with the infusion of improved blood in our herds, and a better system of breeding in operation, the effects are already extensively felt here, as the increased averages of the Boston, New-York, and Philadelphia markets demonstrate, an increase within 20 years, estimated at from 12 to 20 per cent. Never was there a more heterodox opinion advanced, than that we should in effect go back to the point from which Bakewell started some sixty years since in improving our stock, which would be the case should we, for our old domestic breeds, reject the English improved ones.

Notices to Correspondents, &c.

COMMUNICATIONS have come to hand, during the past month, from S. D. Martin, Solon Robinson, J. G. Kellogg, C. Butler, A Young Farmer, L. Durand, J. N. Smith, A Real Friend to Agriculture, A. V. D., E. G. Hulett, George Randall, W. H. Sotham, (since withdrawn,) E. Comstock, A. G. Carll, C. Hoffman, J. H. Merrick, L. A. M., W. P. Kinzer, J. Johnston, Wm. Partridge, B. P. Johnson, D. G. Weems, C. Olds, S. Moore, H. S. R., Commentator, A. B. Allen, Wm. Jennison, N. N. D., M. Davis, Jr., A Breeder of Horses and a Subscriber to the Cultivator.

CORRECTIONS.—In the article headed "Farmers, cut your Fodder," in the last Cultivator, instead of "Gibson's," read Gilson's Patent, and the signature should have been Richmond Fisk, instead of Richard.

MESSRS. EDITORS—I regret to have to ask you to be at the trouble to correct a slight error in my letter in the last Cultivator, in which, instead of reading "they will be sufficiently correct for 150 or 200 miles north of this latitude," it should have been, "north or south of this latitude." S. MOORE.

Acknowledgments.

Since our last notice, we have received

From GEO. RANDALL, Esq. New-Bedford, a lithographic print of his Ayrshire cow "Swinley."

From RUGGLES, NOURSE & MASON, the extensive manufacturers of Plows and other Agricultural Implements at Worcester, Mass., one of their superior and highly finished plows, which has been forwarded to Otisco, to be tested by Mr. Gaylord on his farm.

From MOOERS & SLATER, Ithaca, N. Y. one of their premium Side Hill Plows, an engraving of which is given in this paper.

From H. M. GAYLORD, Esq. Otisco, two barrels of Apples, among which are fine specimens of the Newtown, Striped and Jersey Pippins, Swaars, Russets, Secknofurthers, Winter Sweets, Red Sweets, and the Parson's Apple. Mr. G. says—"The Parson's Apple I think you will pronounce a superior one. It will be a yellowish white when fit for eating, which will be from November to February. The original tree stands in the orchard of J. Parsons, Esq. The Winter Sweets are original with us. The fruit will be of a rich yellow hue when fit for use, which will be in December. For sauce (preserves) it is the best fruit we have."

From WILLIAM KENRICK, Esq. a copy of the 3d edition of his New American Orchardist, just issued from the press of Otis, Broaders & Co. Boston.

From JOHN HANNAM, Esq. North Deighton, England, the Leeds Intelligencer, containing the proceedings of the Wetherby Agricultural Society, at their late Show and Fair.

From AMOS DEAN, Esq. Albany, a copy of his Address before the Young Men's State Association.

From E. P. LANGDON, Esq. Cincinnati, the Annual Report of the Condition of the Common Schools of that city.

From DAYTON & SAXTON, booksellers, New-York, "The Young Choir, or School Singing Book, by Wm. B. Bradbury and C. W. Sanders."

From GOULD BLACKMAN, Stratford, Conn., (per H. C. Tomlinson,) an ear of White Flint Corn, measuring fourteen inches in length.

Advertisements.

So many and such urgent applications have been made to us to admit advertisements of stock, agricultural implements, fruit trees, &c. into the Cultivator, that we have (in part to avoid the necessity of giving what should be inserted as advertisements as communications) concluded to give all such advertisements *one* insertion; believing that while we shall thus oblige the dealers in such articles, we shall at the same time confer a favor on our readers, as it must be a matter of interest for them to know where they can procure improved seeds, implements, stock, &c. to the best advantage. ☞ Terms of advertising, $2 per square of 12 lines.

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STEAM-PRESS OF C. VAN BENTHUYSEN.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

Our Next Volume.

THE present number closes the 8th volume of the CULTIVATOR, and we shall commence the 9th on the 1st of January next. It would be idle to deny that we have not been gratified at the extensive circulation the Cultivator has received,—(a circulation unequaled by any agricultural journal in this, and we believe, in any other country,)—and with the general expression of approbation which our labors in the cause of an improved husbandry have called forth from those best qualified to judge, the farmers of our wide-spread country. We shall commence our new volume under peculiarly favorable auspices. Our list of valuable correspondents has been greatly augmented the present year, and our arrangements for foreign correspondence and publications are now so perfect that we shall receive as soon as published, nearly or quite all the agricultural journals or works of interest, from the Old World. The course and character of the Cultivator is so well understood, that it is only necessary to say that every effort will be made by the conductors to fully sustain the high reputation the work has already acquired for usefulness, as well as excellence of mechanical execution. The numerous illustrations will be continued; and such arrangements have been made as will give additional facilities for increasing the value of this important feature of the Cultivator.

To those numerous friends and correspondents, who have furnished such a mass of most important and useful facts for our paper the past year, we tender our most grateful acknowledgments. They have the satisfaction of knowing that their papers have passed into the hands of more than twenty thousand of the most able theoretical and practical farmers of the United States, and exercised a proportionate influence on the public mind. We cannot doubt they will still feel a pleasure in lending their aid to disseminate agricultural information, by furnishing such facts, farm reports, notices of crops,—improved implements,—valuable breeds of cattle, sheep or other animals,—and all such other matter as shall assist in elevating the character, improving the condition, and increasing the knowledge of the American farmer.

Our sincere thanks are also due to the many friends of agriculture, editors of the public press, postmasters, professional men, and others, who have aided us, and, as we hope, benefited the farmer by bringing our work to the notice of their friends, and procuring and forwarding names as subscribers to the Cultivator. That aid we trust will be still continued,—and all favors of the kind will be reciprocated by us as far as is in our power.

☞ The Index, Title page, &c. to the present volume will be sent to all our subscribers in the course of the next fortnight.

A Word to Our Subscribers.

AT the suggestion of some of our friends, who think many of our subscribers would be greatly accommodated by such a course, we have concluded to send the next volume of the Cultivator to all our present subscribers, instead of waiting for them to renew their subscriptions as heretofore, except in cases where a discontinuance may be ordered; and, as we hope to part with but few of those who have accompanied us the past year, we would respectfully request such of our present subscribers as may find it convenient, on taking this number from the post-office, at once to hand over their dollar, either to the postmaster, who will forward it to us, or to such agents of the paper as may be most convenient. Subscribers may also confer a favor on their farming friends who do not receive such a paper, as well as on us, if they show them a copy of our Journal and procure their subscriptions.

English Correspondence.

THE readers of the Cultivator will remember the account we gave in the August No. of the current volume of some interesting experiments made by JOHN HANNAM, Esq. of North Deighton, Yorkshire, on the early harvesting of wheat, showing the decided advantages of such a practice. We have the pleasure now of laying before our readers some extracts from a letter received from that gentlemen, dated the 6th of October, from which it appears he has continued or repeated his experiments the present year with the same results; and the reasons he gives for the practice we think are such as will commend themselves to the attention of our farmers:

"If I have been slow in replying to your kind communication, I beg you will attribute it not more to a pressure of many avocations than to a desire to return something more useful or interesting than mere sounding words; and this, I think, I shall do, when I tell you that I have, according to my promise in the Quarterly Journal, carried on my experiments on reaping wheat, on a much more comprehensive scale than I did last year. Though unable to state to you the particular results, from the fact of each variety being in stack, (where I intend them to remain till after Christmas,) I may venture to say that the sample cut *raw* (or a fortnight before it was ripe) will be the best. This opinion I now give not on the strength of my last year's experiments, but from a more practical and direct evidence, having thrashed a sheaf of each variety, for the purpose of exhibiting the samples, at the annual meeting of our Wetherby Agricultural Society, at which time they were viewed by thousands, whose unanimous opinion was in favor of the raw—an opinion confirmed by the judges, who awarded me a premium of £1, with a *high commendation of the raw sample.*"[*]

"I am happy to be able to say that the harvest is now over in this part of the conntry, and that it has been a very favorable one for those who were as stirring as they ought to be. A fortnight's rain (which has only afforded the late farmers an opportunity of securing their crops a few days ago) has injured some little wheat, and much barley and oats. Where this has happened, in my opinion, the farmer has no one to blame but himself. Too frequently do we see him wasting his time at the beginning of harvest, by waiting till his corn is dead ripe, to the detriment of his crops, and to the great risk of bad weather coming on. This I have seen in many cases this year, and had I a season to point out, to corroborate my former remarks on the value of the *time* we gain by beginning our wheat harvest early, I could not find one that would do it so well as the present one—nor could I find a better illustration of the *greater chance of securing the crop,* which I stated in my paper on reaping wheat, was afforded by cutting early, than is afforded in this immediate neighborhood. Thus on a certain farm in this neighborhood, the wheat (which was rather backward) was cut in a raw state—the first result of which was, that it was safely housed before the wheat on some farms in the vicinity was reaped. But this was only the 'beginning of the end,' (to use a Gallicism.) The wheat cutting being over early, the barley and oats were cut down, and consequently secured in a much shorter time than they would if the wheat had been left to get ripe; more especially as this wheat was not so forward in ripeness as some in the neighborhood;—in fact the whole of the 'white corn' on this farm was secured in fine condition, before the rainy weather began, while upon many farms, where the corn was in an equally forward condition, some wheat and much of the spring corn has been damaged. Such would have been the case upon this farm, if the fine weather at the beginning of the harvest had not been made use of.

"If it be said, and it has been in my hearing, that it 'happened so,' and that the 'latter end of harvest *might have been* finer weather than the beginning;' then would I beg to urge that in such an event the reaping might have been delayed; for if the *weather is unfavorable for early reaping, we can wait till the grain is ripe,* in hopes of a better late harvest, but where we have fine weather at the beginning, and we do not use it, we have afterwards no *dernier resort,* no alternative, but to take the weather as it may come. And for this, as one reason, I say, when the weather is fine for early cutting—*e. g.* this year—'make hay while the sun shines;' for fine weather is too valuable to be wasted anywhere, but in a climate so fickle as our own, we ought especially to 'seize the moments as they fly.' And such is my estimate of the value of this promptitude, that it is my firm opinion that by adopting it more generally, and by an equally prompt method, *sowing* our wheat before the season gets so far advanced, it is in our power to lessen materially the risk of harvest, and to guard, in a great measure, against that damage from bad weather, which, when it does happen to the crop, is a *loss not only to the farmer but to the whole community.*"

Highland Agricultural Society.

IN the New Farmer's Journal, and in a supplement to the Mark Lane Express, we find full accounts of the Annual Meeting and Show of the Highland Agricultural Society of Scotland, which, in the magnitude of its operations, the number of its premiums, the amount bestowed, and the influence exerted, was long the most active society in the world, and is even now second only to the Royal Agricultural Society of England. It was held at Berwick in the last week of September, and as usual drew together an immence concourse of the best and most public spirited farmers and land-owners of Scotland. More than 1,000 animals were present for exhibition, among which were about eighty Short Horns of the most beautiful kinds. Forty Short Horn bulls were offered for premiums in the several ages, and twenty-one were entered for the first preminm, which was £100. The weather, much of the time, was very unfavorable, but the arrangements were so perfect as in a great degree to obviate this inconvenience. We find that at these meetings of the Highland Society, as well as those of the Royal English one, the price of admission to the yards, exhibition of implements, &c., is fixed at a certain rate, and a very large part of the funds of the societies are derived from this source.

The good which this noble society has effected in Scotland is incalculable. It may in fact be said to have revolutionized the character of Scottish Agriculture, and increased the products of the soil in the aggregate more than two-fold. The best animals of the best breeds; the best agricultural implements, and the most perfect systems of husbandry have succeeded the worst of each kind, that were to be found in Great Britain. Long may it continue to flourish, and its usefulness to increase and extend.

"Virtue, like fire, turns all things into itself; our actions and our friendships are tinctured with it, and whatever it touches becomes amiable."

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[*] In an interesting report of the "Wetherby Agricultural Show," which we find in the "Leeds Intelligeneer," is the following notice of Mr. Hannam's experiments the present year: "Mr. John Hannam of North Deighton, Wetherby, a Corresponding Member of the New-York State Agricultural Society, exhibited four samples of thrashed wheat which had been cut in one field at Deighton, at different periods of the present year; the three first at intervals of a week each, and the last a fortnight after the third sample. The experiment had demonstrated to the satisfaction of all who viewed the different samples, that the third sample, which was cut in what is called the raw state, a fortnight before the grain was ripe, was by far the most superior. And not only is the grain better, but the straw is stated to be nearly twenty per cent superior to that which is suffered to grow till fully ripe. Mr. Hannam made similar experiments last year, which are recorded in the Quarterly Journal of Agriculture of the Highland Society of Scotland for June, 1841; in the Farmer's Magazine for July, 1841; and the New-York Cultivator for August, 1841. The judges awarded £1 for these samples." Mr. Hannam also received the premium of £5 for the best hunter, there being eighteen entries against him.

NEW PUBLICATIONS.

The New American Orchardist

Or an account of the most valuable varieties of Fruit, of all climates, adapted to cultivation in the United States; with their History, modes of culture, management, uses, &c. With an Appendix on Vegetables, Ornamental Trees, Shrubs and Flowers, the Agricultural resources of America, and on Silk, &c. By William Kenrick. *Third edition, enlarged and improved. Boston: Otis, Broaders & Co.* 1841.

Some seven miles from Boston lie the heights of Nonantum, celebrated at a very early day in the history of New-England, and the place where the first Indian church and congregation, under the Apostle of the Indians, Mr. Elliot, used to assemble. It is now more celebrated for the beautiful prospect from its summit, unequaled perhaps in New-England; but still better known as the residence of the Kenricks, William and John, and their beautiful and extensive gardens and nurseries. Their farms consist of from 70 to 90 acres each; that of the first lying on the western slope of Nonantum, and of this the nurseries occupy some thirty acres; while the other, called Nonantum Dale, lies in the valley, and the nurseries here embrace a great variety of fruits, flowering shrubs, &c. most interesting to the orchardist, or the lover of the beautiful. It is probable that a greater variety of forest trees, fruit trees, flowering trees, shrubs, &c. can be found in these gardens and nurseries than at any other establishment in the country, one or two only excepted; and the business done by them, as evinced by their annual sales, must be very satisfactory.

William Kenrick, the elder of the brothers, is the author of the book, the full title of which is given above; and we have stated the above facts for the purpose of showing that he is not unacquainted with the subject of which he treats; but that his ample experience, and facilities for observation, entitle him to speak with confidence. This third edition is merely said to be enlarged and improved, but any one who will take the trouble of comparing it with the former editions, will see from the quantity of valuable matter added, and the superior arrangement, as well as the greater clearness of the descriptions, that the work is essentially a new one.

Embracing, as the volume now does, an introductory dissertation on the growth, management, propagation, transplanting, diseases, and general culture of fruit trees; ample lists and descriptions of all the most valuable apples, pears, plums, peaches, cherries, &c. known in this country, with many of the most celebrated ones abroad; a catalogue of the vegetables suitable for the garden, and the best mode of culture; and a descriptive catalogue of the choicest ornamental trees, shrubs, and flowers, it may be considered one of the most complete works of the kind, and one which should be in the hands of every man who owns an orchard or a garden.

The getting up of this edition is very good, and we are glad to say that in this matter American publishers are making great advances, and we believe at the same time consulting their own interests in so doing. We would, however, hint to Mr. Kenrick, that if he will, in his next edition, give colored engravings of some of the most celebrated fruits and flowers in the style of McIntosh's London Orchardist, he would add greatly to its value and attractions. We know of no work extant on the subject of the orchard, which we can so cheerfully recommend to the farmer, and the lover of good fruit, as this edition of the American Orchardist.

Prof. Hitchcock's Elementary Geology.

We do not know when we have taken up an elementary work on any science, and examined it with more pleasure than this one of Prof. Hitchcock; or laid one down with a more perfect conviction of its adaptation to the purposes contemplated by the writer. Geology has assumed the rank of a science, second in its importance and results to few; it is so intimately interwoven with most of the great questions of natural, and we may add moral philosophy, that a knowledge of its principles, and what it proposes to teach, and the manner in which it teaches is necessary to all. To the farmer, geology is peculiarly interesting. The soil he cultivates, the earth he treads upon, the rocks he piles for fences or bores for water, are all the result of the changes with which geology has to do; and even the plants and trees now growing, or which man wishes to cultivate, are greatly influenced by the revolutions and mutations which the crust of the earth has undergone. Fears have been entertained that geology would be found in conflict with revelation, but the progress of the science has shown these fears were without foundation, and that the truths which geology reveals, like those of astronomy, add to the evidence already existing of the divine origin of the Bible. The numerous cuts and engravings which illustrate the volume, particularly the Paleontological Chart, and the sectional profiles, greatly add to its value as an elementary work, rendering what might otherwise be difficult to understand, plain to the student. The researches and discoveries of Prof. Agassiz, on the effect of glaciers and icebergs in modifying the surface of the globe and in raising those banks of rocks, sand, gravel, &c. so common, have enabled Prof. Hitchcock to add to this, his second edition, a most valuable chapter on these topics. To the various instances of these *moraines* which he has noticed in our country, it has occurred to us that he has omitted one which may be referred to this source, but which has hitherto been an inexplicable enigma so far as its formation is concerned; we mean the Ridge Road on the south of Lake Ontario, We have long entertained the opinion, that in the action of ice and icebergs, a cause for the polish of the surface rocks on so large a portion of our country, where that surface is shown, as well as the grooves or striæ which mark them, are to be found more satisfactory than any other which has been assigned. Prof. Hitchcock's geological survey of Massachusetts, both in its scientific and economical aspect, was performed with such ability as to rank him among the first of American Geologists; and the present work will not be likely to lower him in the respect of the learned or the good. Dayton & Saxton, publishers, New York.

Quarterly Journal of Ag.—Edinburgh, Sept. 1841.

This Journal holds about the same place in Agriculture, that the Edinburgh Review, and Blackwood's Magazine do in their departments of Literature. The papers are able and varied, and the facts and experiments detailed, numerous, and well calculated to interest and instruct. The first paper in the present issue is a continuation of the Review of Liebig. It is on the whole quite commendatory, though the writer finds it necessary to dissent occasionally from the theories of the learned German. Prof. Johnson's notices of the English Agricultural writers of the 16th and 17th centuries are continued, and the numerous extracts he gives in this number from Mascal, Googe, and Markham, the three writers noticed, are at once curious and instructive. In the midst of directions in Agriculture, founded on correct principles and practice, will be found opinions and recommendations the most revolting to common sense, founded on the superstitions and ignorance of the times. Thus Mascal, in his remarks on the diseases of animals, gives ample directions for determining the "difference between a horse bewitched, and other soreness," and the treatment recommended is enough to make a more patient man than Dean Swift, "thankful that he was not a horse." The work of Googe embraces gardening as well as field husbandry, and his list of garden vegetables embrace most of those cultivated at the present day, with the exception of potatoes which then (1614) were unknown. His directions as to the time of the moon in which seeds are to be sown are very particular, and he decides that the best time of all, is when "the moon is aloft and not set." The following extract from Mascal (1600) will show what absurdities passed current at that time:

"It is most true that in the high mountains of Spain, which lie towards the occident seas, many jennets and young mares have colts without the covering of the horse." This is at least equal to the doctrines of spontaneous generation and transmutation, so common at the present day. Markham, in the "English Huswife," printed in 1615, has a remark, the good sense of which ought to outweigh some of the absurdities of his cotemporaries or his own; for he maintains that "an ignorance of domestic affairs, and culinary matters, should operate as a bar to marriage, because, indeed, in that condition a woman can but half perform her marriage vow, for she may love and obey, but she cannot cherish, serve, and keep him, with that true duty which is ever expected." Dr. Duncan has another paper on the insects injurious to vegetables and animals; and there are many articles of practical utility.

Short and Simple Letter from a Conservative Bee Keeper.

Here is a little publication of 24 pages, which contains a mass of common sense, practical information on the subject of the bee and its treatment, with which every person who keeps bees should be fully acquainted. The books of Messrs. Weeks and Affleck, valuable as they are, have not rendered this "Letter" useless, as it enters into some practical details, particularly the driving of bees and uniting of swarms, more fully than either of them. We are glad to find the writer contending strenuously against the killing of bees for the sake of their honey, a practice as useless as it is cruel and impolitic. There are a number of engravings illustrating the plans of hives, implements for smoking out or stupefying the bees, plans for ventilation, &c., which render the subjects treated more easy of understanding than they could be without them. We recommend this work to all bee keepers. Boston: Charles P. Bosson, publisher. Price 12½ cents.

Application of Clay to Soils.

It is well known that the greatest benefit has been derived from the application of clay to sandy lands, it giving a tenacity and capability of retaining moisture which does not naturally belong to such soils. In England the practice of burning clays is much practiced and with excellent effect, although the rationale of its operation has been very differently explained by those who have written on its use. Some have supposed that the greater capacity for moisture was the sole cause; some that it contained salts of potash or animal matter; some attributed it to lime, making it a marl; but it seems to have been reserved for Professor Liebig to give the true solution.

He attributes its value to the power which clay, particularly when burned, possesses of absorbing and retaining ammonia, in the form of a carbonate, for the use of plants. He says, "Gypsum and some varieties of alumina, pipe clay for instance, emit so much ammonia, when moistened with caustic potash, that even after they have been exposed for two days, litmus paper held over them becomes blue. Soils, therefore, which contain oxides of iron and burned clay must absorb ammonia, an action which is favored by their porous condition; they further prevent the escape of ammonia once absorbed, by their chemical properties. The ammonia absorbed by the clay or ferruginous oxides is seperated by every shower of rain and conveyed in solution to the soil."

Is it not possible that the blue or green clay or marl of New-Jersey, and the Atlantic coast generally, which is so very valuable as a fertilizer, owes its power to the ammonia it contains, or is capable of absorbing from the atmosphere? It contains potash, and is or has been evidently rich in animal matter, as the remains in it at the present time prove; and if it should be found to abound in ammonia, or to absorb it readily, its fertilizing power would be fully accounted for, and additional encouragement would be afforded to the preparation and use of such substances. It would be well for all those who have such clays on their lands, or indeed beds of any kind, to test their qualities, and ascertain how far they can be made available, either in the burnt or unburnt state.

Correspondence, Inquiries, &c.

Agricultural Schools.

We hope the friends of agricultural improvement will not lose sight of the establishment of agricultural schools, as we believe there are few things that would place the farming interest on a surer footing, or more essentially benefit the nation, than such schools. Where it is not convenient to found such institutions, or the funds are not forthcoming, professorships of agriculture might be attached to our colleges or universaties, where a series of lectures on the subject should be given annually, as is at present done in the English, and many of the German universities. In this important service such men as Liebig, Daubeny, Johnson, &c. are employed, and the aid they render to the cause of agriculture cannot be easily appreciated. On the subject of agricultural schools we make the following extract from a correspondent in Sumpter county, Alabama:

"Before the farmers can properly see their own interest, their prejudices will have to be uprooted; and it is much to be doubted whether this can be effected until agricultural schools are scattered through the country. Then, and not till then, can the absurd feeling, too common among all classes against improvements be done away, and agriculture elevated to its proper position. That the other trades and professions think it no crime to extort from the ignorance or apathy of the farmers in a few years, fortunes which it would take him a life time to accumulate, though aided by capital and toil, is a fact evident to every observing mind. This state of things calls loudly for reform; it must be corrected. Agricultural Schools are the panacea for these and similar evils; let them be unceasingly urged before the public through the advocacy of the agricultural journals; and though the present age may not be greatly affected by them, the time will come when the truth will produce its effect, and the honest laborer go forth to the fields with a robust constitution, and a mind clad in an armor able to resist all the delusions of interested and unprincipled men. Then this earth, which is now a source of dread and profitless toil to him, would be to him a book from which to draw treasures of wealth; and the field, not of stupid, but enticing toil. Every page of nature, as he labored on, would be to him a volume of instruction; and whether in his mental wanderings he traveled upon the earth, in the vegetable kingdom, among the clouds and storms, or among the starry heavens, every thing he met would afford to him themes of pleasure, and new evidence of a beneficent and controling Creator. To the spread of intelligence among farmers we look with interest; and to agricultural schools and agricultural journals the country must look for the desired consummation."

Plum Tree Blight—Inquiry.

Messrs. Editors—In some remarks you made not long since on the subject of the black blight, which is so rapidly destroying our plum trees, you pointed out the months in which the insects that cause the blight are the most active, as the proper time for cutting off the branches, and by burning them, freeing the orchard or fruit garden from their presence. Your remarks seem to have been made on the supposition that the parent insect was active but a short time, that but one crop of eggs was deposited in a season, and of course but one production of grubs took place; and that if the branches infested were cut off at this particular time, the evil would be arrested. I wish to ask whether it is not possible that more than one deposition of eggs takes place, or that the branches are repeatedly punctured at different times during the summer? Is it known what insect it is that produces the mischief? And finally, can you tell us what trees are liable to be attacked?

Inquirer.

It *was* our opinion, as Inquirer supposes, that the danger of the tree suffering from the attack of the blight insect was limited to a short period, and that like many other depredators, the annual deposit of eggs made, the insect perished, and no successors during the same season were to be apprehended. In that case, if the infected branches were destroyed, the disease would be eradicated, and the liability to further attack greatly lessened. But further examinations made during the past summer have convinced us that either successive depositions of eggs take place, or that the larvæ remain, in some instances, the entire season in the infected branch. We have found them in the plum tree from June till the last of September. At this late period, in a single infected branch, we found no less than five larvæ or grubs, and where trees were much diseased they were quite numerous. It is plain, therefore, that nothing short of eradicating the excrescences or swellings whenever they appear, or during the entire season, can ensure the destruction of the insect. With regard to the insect inself: we believe it is not decided to which of the numerous class of depredating insects this destructive one belongs. As the branches must be punctured for the reception of the ova, it is very probable it is a Sirex, or one of those provided with a borer for that purpose. It is hoped this uncertainty as to the parent insect and its habits will not long exist, and the attention of American entomologists should the more particularly be directed to it, as it does not seem to be known in Europe. The trees liable to attack seem to be thus far exclusively such as when wounded produce gum. This seems to be necessary, both for the food of the larvæ, and for the formation of those excrescences, within which they live while in that state. The plum tree is first attacked, but when these are destroyed, the cherry follows, and we have seen fine plantations of this tree wholly destroyed. All the cherries do not, however, appear equally liable to its attacks, and the same remark may be made of plums. We have a tree of the white magnum bonum, or egg plum, a graft on a white plum stock, and which this season bore a fine crop of fruit. Not a single excrescence has been detected on this tree, though on each side of it, for two or three years past, the common white plum has been loaded with them, and much injured. We have not, until the present season, seen the peach tree injured, but as wounds of this tree produce gum, there was no reason to suppose it would escape. In examining some seedling peach trees, we found one that was transplanted last fall, and very near where a diseased plum tree was standing, was covered with gum which had exuded from its stem and branches, and on scraping this off it was found to proceed from a series of punctured places, evidently produced by the same insect that was destroying the plum tree. Some of the small limbs had the same swellings that characterize infected plum branches, but no excrescences, or discoloration had ensued. It seems certain, then, the same insect will attack the plum, cherry, and peach; the first in preference, but the others when that cannot be found, or has been destroyed. Thorough and prompt excision of all damaged branches holds out, thus far, the only reasonable prospect of saving these valuable trees from destruction, whenever this destructive insect makes its appearance.

Making Wine.

We are under the necessity of omitting that part of our correspondent's paper that relates to the general principles which regulate fermented liquors, especially as they have been treated by Liebig in his Organic Chemistry in a very full and satisfactory manner, and to which those who wish to investigate the subject will do well to refer. After remarking that all kinds of fruit do not contain the same kind of acidity; that in the grape, gooseberry, mulberry, and a few others, the *tartaric* acid is found; the *malic* in apples, currants, &c., the *citric* in lemons, &c., and that most vegetable productions, whether grains, fruits, or roots, will produce wine of some kind, our correspondent proceeds to the making of wine from currants, that being the fruit most commonly used, next to the grape, for this purpose:

"The following is a receipt for making currant wine, which, as far as my knowledge extends, is that in common use: 'Take any quantity of currants, express the juice, and to every gallon of it add an equal portion of water, (or as some advise a double portion,) and to every gallon of *this mixture* add three and a half pounds of sugar; dissolve the sugar, and put in a cask to ferment; reserve enough to fill up as it works over the bung, and when the fermentation ceases, add one-half pint of brandy to each gallon, and close the cask.' These are the usual directions followed by the makers of currant wine; but they will not produce wine, but in its place we shall have the sweet cordial like beverage I have described in the first part of this paper. Does the error lie in the quantity of the ingredients? By no means; it is in the process. The excess of acid in the fruit requires all the sugar to correct it; and again the combination of the juice and sugar demands as much water as is ordered, to bring the mass to a working mixture. But the quantity of sugar is great and requires a thorough incorporation, by frequent stirring and a lengthened exposure to the atmosphere, to promote fermentation and convert it into wine. This is not the work of a day, nor can the change take place in a close vessel; instead, therefore, of pouring the liquor into a cask or barrel, let it remain in an open tub, or vat, and be well stirred three or four times a day, till the most active part of the fermentation is over, which will take from five to ten days, according to the warmth of the weather, and that of the place in which the operation is conducted. A cool dark cellar is the best; cool that the action may not be unduly accelerated, and dark to avoid the filth of flies and other insects. When the liquor is covered with a clean foam, tinged only by the color of the fruit, and when, on being stirred, it ceases to make much hissing, and when the taste of the liquor has changed from its original fruity flavor to that of wine, pour it into the cask which should be filled, and a surplus retained to replenish the vessel as it works over in the further process of fermentation, and the formation of gases. When again the vessel remains full, and no longer gives forth any sign of fermentation, drive home the bung, still, however, leaving the small hole slightly closed with a peg, to give vent to such air as may continue to be generated for some days longer, when the cask may be completely stoppered and the wine left to itself. In the ensuing spring it should be drawn carefully from the lees into another cask for use; but no brandy should be added, as wine made in this way will keep any length of time in a good tight cask. If your readers will do me the favor to conduct their vinous operations according to these directions, they may rely on being well pleased with the result. They will each year have an article similar in body and flavor, and as different from the produce in the old way as can be imagined. I have been a laborer in this vineyard for many years with uniform success.

THE SCHOOLMASTER ABROAD."

Growth of Trees.

D. G. WEEMS of A. A. county, Maryland, has furnished us with the following experiment made by him on the annual growth of trees:

"Some three years since, I took the circumference of some 200 trees, mostly black oaks, and marked upon them their size in inches. The soil on which they stood was a light colored stiff clay, about fifteen feet above tide water. Although I shall not attempt to reduce my experiments to a scientific form, but merely state facts, and leave the result to the reader, I hope they will aid some more competent person in a full investigation of the matter. The measurement, increase, &c. of twenty trees here given, will represent the grove fairly, and three years should test the experiment sufficiently.

Kind of Tree.	*Measure in Inches.*	*Annual Increase.*
1 black oak,	160*	2
1 "	123	1-2
1 "	89*	1 3-4
1 "	67	1 1-2
1 "	66	1
1 "	63	1-2
1 "	54	1
1 "	49	1-2
1 "	40	1
1 "	35	0
1 "	30	1-2
1 white oak,	143	0
1 "	49	1-2
1 "	44	1
1 gum,	76	1-2
1 "	21	1
1 black walnut,	55	1 3-4
1 wild cherry,	55	3-4
1 red cedar,	22	1-2

"It will be seen that the annual average growth of these twenty trees is less than one inch, or 17-20ths of an inch. I next measured six trees that were fallen in the same wood, ascertained their circumference in inches, and their age by the rings or circles in the tree, thereby finding the probable age of those standing, their yearly growth, and the capability of the soil to grow timber. The results on these six trees were as follows:

1 oak,	74 inches	circumference,	counted 57	circles.
1 "	72 "	"	57	"
1 "	67 "	"	53	"
1 "	64 "	"	56	"
1 "	54 "	"	56	"
1 "	51 "	"	46	"

"The average annual growth of these trees appears to be one inch and one-sixth of an inch. I then found by examination that these trees had acquired in their central part one-half of their whole diameter, in one-third of their whole number of years, thus proving that trees, when young, growing in a wood, make their annular circles of greater thickness than they do after they have towered high. I then measured two trees standing on the south side of this grove: one black oak 102 inches and 60 circles; one do. 80 inches and 55 circles. In these trees the circles averaged about the same number to the foot, from the heart to the bark, in every portion of the stump; thus showing the advantages of sun and air to vegetation. I now measured two isolated trees standing on a higher soil, but still on clay: one oak 120 inches, 86 circles; one do. 108 inches, 43 circles, averaging nearly two inches a year; and the same results were obtained in the measure of some fruit and forest trees planted out some ten years since: thus proving that trees flourish better and are more thrifty when not crowded, and the roots and branches have room to spread."

We shall be glad to receive the promised article on the culture of tobacco.

Sagacity of the Dog.

A correspondent at Cuddebackville, gives the following instance of the sagacity and attachment of the dog, which occurred a few years since in Delaware county, N. Y.:

"A boy in sliding down hill was carried into the river, and conveyed by the current some distance below into a deep eddy. The eddy was frozen over with a thick body of ice. A number of neighbors collected and searched several days for the body, until, I think, the third day; being about to give up the search, one of them (Gen. Gregory) observed that a dog belonging to the same family with the boy had been almost constantly on the ice, and was always seen to lie down in a particular spot, and suggested it might be best to cut an opening in that place. It was done, and in a depth of four feet of water the body was found. Now, when we consider the depth of the water, and the thickness and nature of the ice, (18 inches and very opaque,) the question naturally presents itself, by what sense did the dog discover the body of the child? It would be difficult to believe that any odor emanating from the body in that situation, could pass directly upwards through a current of four feet of water and eighteen inches of ice. The opacity of the latter would forbid the idea that it could have been discovered through the ice; and I can only conceive that the knowledge was derived from some sense in these animals of which we have little conception.

H. V. K."

The Agricultural Art.

We have received from the author, ARTHUR ST. JOHN, an essay with the above title, from which we make the following extract, which is all our limits will permit:

"The pursuit of improvement is not visionary or trivial, but has been sanctioned by the voice of time. It is far from being a speculation or a dream. The art of agriculture, well named the 'parent art,' is coeval with human civilization. So long as men roamed hither and yonder—living in tents and removing wherever some green spot induced a stay, and had no fixed habitation, they were barbarians: but when they chose a place for a dwelling, and scattered a few grains of wheat for the purpose of harvesting, and procuring means of subsistence, they had made a step in the march of civilization. The oldest and the best Book assures us that the three first men were a gardener, a plowman, and a grazier; if it be sneeringly objected that the second was a murderer, let the reply be, that when he became such, he turned a builder. The art of agriculture will survive all sneering. It has received the commendation of the past, and as a celebrated writer has wittily remarked, 'if heraldry were guided by reason, a plow in a field arable would be the most noble and ancient arms.' It is an art which can exist with the exclusion of all others. It has been compared to speech, without which society would be a dismal chaotic jumble; the other arts are the mere figures and tropes, in fact, only ornaments."

Bloody Murrain.

THE following is in reply to an inquiry respecting this disease among cattle, its nature and cure, at page 143 of the Cultivator, by WM. F. WRIGHT. The writer thinks his experience in the treatment of diseased animals in Europe and in this country, enables him to speak on the subject with confidence. We do not vouch for the correctness of his theory or practice:

"The bloody murrain is no other disease than what is called in Europe, and in Pennsylvania, the *red water;* but before any animal will die of this, it must have been ill for some weeks, perhaps two months with the same. The cure is this: Take one quart of blood from the animal by bleeding. Give it every four hours one ounce of salt petre in water. The feed for the beast must be young grass or cabbage leaves. If there is no passage, you must give every two hours a clyster made as follows,—three handsful of oats boiled in water, three drams of salt petre, and one and a half ounces of linseed oil, mixed when milkwarm and used. If no better on the third day, take again one quart of blood. When the movement of the bowels is difficult, and the dung is mixed with blood, it has assumed the form which we call the *black blood,* but which is nothing more than the red water in its latest and most aggravated form, generally ending in death. The salt marsh where Mr. Wright's cows have grazed is the very place to get this disease, and as proof of this, I refer to the experiments which thousands have made, (and which every one may make,) showing that cattle from a high, dry country never suffer from this complaint. If Mr. Wright will keep his cows from this marsh, and not feed them with hay made in such places, I will warrant his cows safe from this disease.

St. Lewis co. Mo. CHARLES HOFFMAN."

AMONG those who contributed largely to the success of lthe late Fair of the State Agricultural Society at Syracuse, as well as that of the American Institute at New-York, none rendered more efficient aid than our friend and correspondent ALEX. WALSH, Esq. of Lansingburgh, whose numerous contributions to the puplic press, mostly under the signature of "A. of the North," aided essentially in exciting that spirit which drew such multitudes and gave such eclat to those Fairs. As the premiums for Butter, Cheese, and Field Crops, (for which see last number of the Cultivator) are not to be awarded till the annual meeting, to be held in this city on the 18th January next, we publish the following for the purpose of calling particular attention to those premiums, for which we trust there will be a spirited competition.

Washington and Rensselaer County Butter.

The efforts that have hitherto been made for the improvement of the different branches of agricultural industry, it is to be feared, have not been extended to the manufacture of butter. The whole civilized and demi-barbarous portion of the globe have been ransacked to procure the best breeds of horses, cattle, sheep and hogs; art and ingenuity have been nearly exhausted in bringing out the best plows, and other farming utensils ; the finest growing regions of the earth have been explored to procure the best grapes and plants, all of which have contributed largely to the improvement of the several departments of agricultural labor. But the manufacture of butter, an article that enters so directly into the composition of a good breakfast, is permitted to drag along the old fashioned way, with hardly an attempt at improvement. This is rendered somewhat inexplicable, when we reflect how simple the rules are for making perfect butter. It is in fact

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* These trees grew on the margin of the wood.

"A liberal art that costs no pains
Of study, industry or brains."

The cream should be kept in a dry, cool place where no bad air nor bad odor is permitted to enter. After the process of churning, *all* the milk and superfluous matter should be pressed out ; then, with half the usual quantity of salt applied, pack it down *solid* in heart-ash tubs or firkins for commercial uses, or stone jars for more immediate uses. A British critic has remarked "that it was his belief that if a premium of a thousand dollars was offered for the best translation of the Greek Bible, it would be taken by a Yankee, who, till the offer was made, had never seen a word of Greek in his life ; that he would commence learning the language immediately, to qualify himself for the undertaking, and would finish the whole work quicker than any other person, and bear off the premium." We take the spirit of the above to be true, as applying to our national character ; and we hold it to be true, that the art of manufacturing good butter is as easily acquired, as that of translating Greek ; and as there is no premium offered for the latter performance, it behoves the fair wives and daughters of Washington and Rensselaer to secrue the premiums offered for the former.

We are gratified to learn that the State Agricultural Society has determined to reward the butter makers if the result of their labors should merit it, and we entreat all those who engage in that pursuit in these counties, to strive for supremacy in that art. If they but make the effort, we feel assured they will succeed. There is no lack of verdant pastures in these counties, and none of stock, and shall we say there is a lack of enterprise? Never! It wants but the proper attention towards that pursuit. If there were no other inducement, certainty of better prices for a good article, is sufficient to excite a little extra effort in the manufacture of the article. Let it be no longer said that Orange and Dutchess bear away the palm in quality and prices. They possess nothing in soil or climate, in stock nor enterprise, that is not possesed in Washington and Rensselaer.

Reasons for engaging in the Silk Culture.

We give another paper, from the same source, setting forth eighteen reasons why the people of the United States, especially the farmers, should engage in the business of silk growing :

1. Because silk forms the heaviest item in the catalogue of our importations.
2. Because we possess the means of doing it to better advantage than any other nation.
3. Because the necessary skill is easily acquired, and no nation ever possessed better talents to acquire it.
4. Because the nation is under heavy embarrassments on account of excessive importations, and no other means are so sure of success in providing the necessary relief.
5. Because it can be effectually engaged in by all classes of people, requiring little or no capital.
6. Because we have more spare land than any other nation, and much well suited to the growth of the mulberry, which is worn out for other purposes.
7. Because we are already well stocked with the mulberry trees, which will be lost to the nation if not used for that purpose.
8. Because a stock of silk worms may be obtained the first year, equal to what could be reared of any other live stock in a great portion of a lifetime.
9. Becuase raw silk or cocoons are always surer of sale than almost any other commodity.
10. Because it is a very certain crop.
11. Because a pound of silk worth six dollars can be grown in less time than a pound of wool worth 50 cts.
12. Because it will cost no more to transport a pound of silk to market worth six dollars, than a pound of bread-stuff or pork worth six or eight cents.
13. Because the labor of growing a crop of silk requires only six or seven weeks, while that of almost any farming crop requires more than as many months.
14. Because most of the labor will be performed by women, children or invalids—who, though willing, are unable to perform other profitable labor.
15. Because there are hundreds if not thousands of skillful silk manufacturers in the country who are unable to find regular employment for want of raw silk.
16. Because the growing and manufacture of silk has never failed to be a source of wealth to any nation which embarked in it.
17. Because the Legislature of our State, having observed and duly weighed all the foregoing reasons, have wisely offered a liberal bounty for its encouragement.
18. Because the American Institute with a liberality which speaks volumes to its everlasting credit, has offered, for the encouragement of literature as well as this most eminent branch of industry, a premium of fifty dollars and a gold medal for the best treatise thereon, and a like medal for the best silk reel.

The person who would not be stimulated to exertion by such reasons and liberal offers of reward must be sordid indeed. A. OF THE NORTH.

Inquiry—Ayrshire Cows.

MESSRS. EDITORS—I have paid some attention to the subject of improvement of cattle ; as shown in the discussions which have been carried on in your journal, and some of the papers of the country, and I had supposed that the Ayrshire cows, so celebrated for their milking qualities, were like the Short Horns and Devons, a distinct race ; and it was with some surprise I noticed the following sentence in Mr. Allen's last letter in your paper :—"*Ayrshires we can make here by the thousand, by crossing Durham bulls on our best native cows.*" You would oblige me, and perhaps others, by stating whether this opinion of Mr. Allen's is sustained by the best English authorities on cattle. A NOVICE."

The best authorities on the origin of the English breeds of cattle are Low and Youatt. On this subject the first has the following remarks—"This breed, deriving its name from Ayrshire, extends to the adjoining counties Lanark, Dumfries, Renfrew, Dumbarton and elsewhere. It manifests certain points of resemblance to varieties of the Short Horn breed ; but all its essential characters of form connect it with the Alderney. The resemblance is so great that a Jersey cow might sometimes be mistaken for an Ayrshire one. The cows of the district of Dunlop, are said to have been the first celebrated for yielding milk ; and tradition asserts that the cows of that district were crossed by Alderney bulls. This then may be inferred to be the true origin of the dairy breed of Ayrshire ; but it is probable that males of the Holderness, or other Short Horn varieties have also been introduced, and given certain characters to the native stock, though at what time such intermixtures took place, or how far they affected the character of the existing stock, is unknown."

Mr. Youatt says, "These cattle, from which, by crosses with the native breed, the present improved Ayrshires arose, were first introduced on Lord Marchmont's estates in Berwickshire ;" and he quotes Mr. Robertson in his *Rural Recollections*, as saying, "from what particular part of the country they came, there appears no evidence. My own conjecture is, that they are either of the Holderness breed, or derived from it ; judging from the varied color, or, from somewhat better evidence, the small head, and slender neck, in which they bear a striking resemblance to them."

Rawlin, in his "Complete Cow-doctor," of 1794, says,—"They have another breed called the Dunlop cows, which are allowed to be the best race for yielding milk in great Britain or Ireland, not only for large quantities, but also for richness of quality. It is said to be a mixture, by bulls from the Island of Alderney, with their own cows."

Mr. Youatt says,—"It requires but one moment's inspection of the animals, to convince us that this supposition [the origin from the Alderney cross] is altogether erroneous."

It will thus be seen that Low and Rawlin derive their origin from the Alderney cross ; Robertson from the Holderness ; and Youatt inclines to the last supposition. It may be naturally inferred that the question of their origin is a matter of obscurity ; and as the Holderness is the name of one of the unimproved varieties of the Short Horns, (although according to Youatt one of the worst,) it is not impossible, if we admit this remote Short Horn origin of the Ayrshires, that Mr. Allen's method of producing them would not succeed admirably. On the contrary, if the Ayrshires have an Alderney origin, Mr. Allen's cross would fail. Perhaps, however, Mr. Allen did not intend to assert that the cross proposed by him would give positive Ayrshires, but only a breed possessing all their essential and most valuable qualities. We have ourselves little doubt, since the evidence meets us at every turn wherever the Improved Short Horns have been introduced, that the cross proposed by Mr. Allen of Short Horn bulls, with the best native cows, would give a breed possessing in a great degree the qualities of good milkers, hardihood in keeping, and aptitude to fatten, although it might be improper to term them Ayrshires.

Wheat Statistics.

THE Rochester Evening Post, a paper that may be pronounced one of the best authorities in the western part of the State, in matters relating to the products, &c. of that section, in some late remarks on the falling off of the wheat crop of 1841, makes the following statement :

"The Rochester and Batavia railroad transported to Rochester in 1840, up to Nov. 1st, no less than 378,000 bushels of wheat ; up to the same date in 1841, only 78,000 ; leaving the serious deficit this year of 300,000 bushels. By the same road there was received at Rochester, in 1840, 32,800 barrels of flour, which at five bushels to the barrel amounts to 164,000 bushels of wheat ; the present year only 14,000 barrels, equal to 70,000 bushels of wheat ; showing a deficit of flour equal to 94,000 bushels of wheat ; which added to the deficit of wheat first mentioned, shows an aggregate deficit equal to 394,000 bushels of wheat from that quarter alone!"

This is a most extraordinary falling off (even admitting, as is probable, that more of the Genesee and Livingston wheat and flour found its way to the Genesee Valley Canal than it did last year,) in the marketing of a single product on a road of only thirty miles in length ; and we agree with the editor of the E. P. that the deficit of wheat marketed in this case, may be considered only a sample of the falling off in the wheat sold in Western New-York generally.

Crushed Bones—Mode of Action.

THE cause of the fertilizing effects of crushed bones or bone dust, does not seem to be satisfactorily ascertained, and while in practice all agree as to their efficacy, the "why and wherefore" is still a matter of uncertainty. Johnston in his agricultural lectures gives the following as the constituents of bones and the relative proportion :

"Dry bones contain about two-thirds of their weight of earthy matter, the other third consisting chiefly of animal matter, resembling glue. Of the earthy matter, five-sixths consist of phosphates of lime and magnesia ; and the rest chiefly carbonate of lime. Thus a ton of bone dust will contain—

Animal matter, or gelatine,	746 lbs.
Phosphate of lime,	1,245 "
Carbonate of lime,	249 "
	2,240 lbs.

Sprengel, a German writer and chemist of the highest authority, maintains that the phosphates are the principal fertilizing ingredients in bones, and in this opinion Chaptal in the main concurs. To this fact Sprengel attributes their not being as efficient in the north of Germany, as in Britain, the soil of the former country containing naturally a greater supply of the phosphates than the latter. Mr. Johnston, however, without positively deciding that the efficiency is owing to the animal matter, gives the following facts derived from practice, as in accordance with that opinion :

"1. In the Doncaster Report, bone dust is said to be most efficacious on calcareous soils,—for in the presence of lime, all organic matter more rapidly decomposes.

"2. That horn shavings are a more powerful manure than bones,—since horn contains only one or two per cent of earthy matter, (the remainder being animal matter or gelatine.)

"3. That before the introduction of crushed bones, the ashes of burned bones had been long employed to a small extent in agriculture, but have since fallen almost entirely into disuse.

"4. That old sheep skins cut up and laid in turnep drills have been found to raise as good a crop of roots, and after crop of corn, as the remainder of the field that was manured with bones.

"5. That according to Liebig, "40 lbs. of bone dust are sufficient to supply three crops of wheat, clover, potatoes, turneps, &c. with phosphates," while a ton and a half of bones, containing from 1200 to 1800 lbs. of phosphates is the quantity usually applied to an acre."

Bone dust or crushed bones has not been used to any considerable extent hitherto in the United States, but their use as a fertilizer is on the increase, and the great quantities that might be provided of this manure should it prove as valuable here as abroad, renders it desirable that those who have experimented with it should lay the results before the public. If the piles of bones that accumulate in cities until they become nuisances, can be converted by the simple process of crushing into the most powerful of fertilizers, it is proper that the attention of farmers should be directed to their saving, preparation, and use.

Large Vegetables.

MAMMOTH vegetables may, in general, be considered rather the result of accident than otherwise, and such is the light in which they have hitherto been viewed. When, however, as in the last and present year, they are common, it is not unreasonable to attribute them to improved varieties, and more care and skill in cultivation. To show what has been done this year, we make a few extracts from papers now before us :

"Mr. Joel Townsend of Lorrain county, had in exhibition yesterday a Persian squash that weighed 165 pounds, and measured six feet and nine inches in circumference."—*Cleveland Mercury.*

"The largest sweet potato we have seen this season was presented to us on Wednesday last, by Mr. B. C. Blincoe—it weighs four and a half pounds, is twelve and a half inches in circumference, and eleven and a half inches in length."—*Kentucky Gazette.*

"On the farm of the Rev. J. Van Tassel, in Maumee, Ohio, a watermelon vine, sprung from a single seed during the past summer, bore twenty-eight melons that averaged eighteen lbs. each. Five hundred and four pounds of melons from a single seed. Fact and no mistake."—*Bost. Cour.*

"We received a present of peaches a few days since from the farm of W. H. Davis, Esq. one of which measured ten and a half inches in circumference, and three and a half inches from the stem through, with the peeling off. They are preserved in brandy, and we hope to enjoy them at our leisure on some future day."—*Elizabeth City (N. C.) Star.*

"Mr. D. White of Perquimans county, gathered this season from his patch ten watermelons which weighed respectively 26 1-4, 26 1-2, 27 1-4, 27 1-2, 28 1-4, 29 1-2, 30, 32, 33, and 37 1-2 pounds—making an aggregate of 297 1-2 pounds. The largest measured three feet one and a half inches."—*Elizabeth City (N. C.) Star.*

We have noticed also many instances in the papers of the day of beets, squashes, &c. The squashes have ranged from 100 pounds to 207 pounds, which we think is the largest.

We also take pleasure in this place in acknowledging the receipt from Mr. L. Hotchkiss of Amber, Onondaga county, of a splendid beet, measuring 15¾ inches in length, 23¼ inches in circumference, and weighing 14 pounds closely trimmed. It is a very smooth handsome root for one of such great size.

The reports of the various agricultural societies prove most conclusively, that the past season has been most propitious for all plants and crops not liable to be injured by drouth ; and in many districts the want of water has not been felt at all. The high temperature has been most favorable to all plants of the squash and melon tribes, and to fruit in general, but the potato and ruta baga have suffered from it.

Profits of Farming.

We believe there are many farmers who take an incorrect view of the business of farming as far as its profits are concerned. They seem to suppose that what is sold from the farm, is alone to be accounted as profit, while no note is taken of what goes to the support of the family, or is invested in improvements on the farm. To give an instance, we will refer to a conversation had with a farmer a few days since, a man worth some six or eight thousand dollars, industrious and thriving; but who complained that he was only able to raise in cash from his farm only some three or four hundred dollars annually. As a contrast he mentioned a friend of his who had about the same amount in funds that he himself had in real estate, and he seemed to consider the interest his friend received as a clear profit on his capital, and that money so invested gave more income than a farm would. We knew our farmer had a large family, and suspecting he had overlooked the cost of providing for them in his estimate of what he received from his farm, inquired how much he thought he should have left in cash after maintaining such a family as his from the sum his friend received as interest? He hesitated a moment and answered, not any thing; his receipts would barely foot the bill of my family expenses for one year; in truth he has little or nothing left, after supporting his own.

So we doubt not it often is with the farmer. That which he and his family eat, drink, and wear, that which goes to make them comfortable and respectable, because it is the product of the farm, the gift of a kind Providence, and the result of their own toil, is frequently overlooked by him in his estimate of the profit and loss of farming, and nothing is counted but the cash which remains after all expenses and outgoes are provided for. This is not treating the farm fairly. In one case the farm is capital, in the other the capital is in the funds. That which goes to the support of the family is as much the product of capital in one case as the other, and in both cases should be considered as the profit; and if the farmer, after the maintenance of his family, and defraying the expenses of labor, improving his farm, &c. has some three or four hundred dollars left to purchase more land, and dispose of as he pleases, while his friend the fundholder has little or nothing left, it surely cannot be reasonably inferred that the farmer's profits are least. Aye, but the farmer has to work for his profits, while the other lives at his ease. True, and here we suspect lies the great difficulty, and it is an evil that should be corrected at once. The objection implies that it is disgraceful, unhealthy, or unprofitable to labor, suppositions entirely erroneous. It cannot be disgraceful to labor in a country where every man is the architect of his own fortune, and makes or mars his condition for life; it is not unhealthy, as the experience of the whole world proves; and as to profit, where can be found a class of men more prosperous, and accumulating wealth faster than American farmers? Before the farmer concludes there is no profit in farming, let him look at the whole ground, and we think a different conclusion will be reached!

The Silk Business for 1841.

The past season seems to have been very auspicious to silk growers, the worms having in general been far more healthy than in 1840, and the consequent loss and discouragement from that source obviated. In some instances, from want of sufficient ventilation, or proper food, partial losses have been occasioned, but in some instances the prompt use of lime as recommended by the French, and communicated by Mr. Smith to the American public, has checked the diseases thus produced, and saved the crop. Many too have hatched more worms than the foliage on hand could supply, and the worms partly starved, made poor and imperfect cocoons. But all these difficulties will be overcome by experience, and every thing now indicates the success of this new and important branch of native production and manufacture. To the middle and southern States, particularly, the silk business will form an important source of wealth, as the mulberry grows there with less care and attention than farther north; but the experience of the past season as well as that of former years, proves that the mulberry may be grown and silk made to great advantage as far north as the 43d degree of latitude. Time only seems to be wanting to make the silk crop, like that of wheat or corn, a part of every man's farming operations; and we think it may be relied on that if the silk culture ever becomes an important item in our domestic products it will be the result of individual energy and effort, and not be in any degree owing to the action of the great Silk Societies that have promised so much and performed so little.

To show what has been done, we make a few extracts from papers now before us, and it will be seen that they are of the most encouraging nature:

Mr. Campbell of Williamson Co., Tenn., writes to the Editor of the Agriculturist—"After giving away enough of my silk worms, about the third moulting, to make, as I suppose, about fifteen bushels of cocoons, I have gathered 34 bushels of cocoons out of the two houses you saw me feeding in. I counted half a bushel, and there were 2,900 in it, requiring 5,800 to the bushel. My worms were healthy throughout, but from their crowded situation, many of them were small, and consequently made imperfect cocoons. I am of the opinion I would have made more silk with half the number of worms."

Mr. Morris of Burlington, N. J., the patentee of the improved silk frames, has fed a great number of worms the past season and with the best success, which he attributes in a great measure to the use of his frames for feeding, an opinion strengthened by the favorable opinion of others who have used them. His first crop gave about 50 bushels of cocoons, and he says in the Silk Record, a valuable work which he publishes, "one bushel of peanuts has been reeled, and afforded the unfailing average product of good peanut cocoons, 20 ounces of fine silk."

Dr. T. White, a gentleman thoroughly acquainted with the silk culture in the country, in a letter dated at Washington, says—"The silk feeders this year are every where successful. In Kentucky, Indiana, and Ohio, there will be several thousand bushels of cocoons raised this season. There is abundantly more silk made this year than all the workmen in the United States can make up."

The following extract of a letter to the Agriculturist, from Mr. Fox, who superintends one of the most successful silk factories in the West, that of Mt. Pleasant, Ohio, thus describes the operations at that place; "We have weighed off 300 lbs., and have hatched out 600,000, and have no doubt by the time we have done feeding, we shall not fall short of one million. In the year 1839, I never got more than 14 ounces to the bushel; in 1840, I got 15 ounces, and this year can average 19 ounces of fine reeled silk to the bushel from the white and gray mammoth; the peanut I expect from 20 to 21 ounces. Hitherto our reelers could not average more than 8 ounces a day, ten hours; this season they are reeling from 15 to 17 ounces, six or eight fibres to the thread."

We might multiply such extracts, but these, with what we hear and see of the progress of the silk culture among us at the North, will show that the production has taken a deep, and we trust a firm hold in the country. If it succeeds, we shall no longer see half a million of specie shipped monthly to pay a foreign nation for silk, because that nation refuses to exchange it for any of the productions of our soil, or our manufactures. Markets for cocoons, and manufactories for the use of the raw material, will doubtless spring up, as the supply and demand increases. The purchase of the cocoons, and the preparation of the raw material at our State Prisons, will, we think, open a source of employment for many of the convicts, not liable to the objections so strongly and justly urged against the manner in which they are now occupied; and at the same time furnish a convenient market for the silk crop of a large portion of this State.

State of the Laboring Classes in Europe.

It seems to be an indisputable fact, however difficult it may be to account for it, that the condition of a large part of the poorer and laboring classes in all the principal countries of Europe is becoming more and more deplorable. This is particularly the case in large cities and manufacturing towns, and while these overgrown cities are adding to their wealth, and expending immense sums on fountains, squares, and articles of luxury, the poorer classes are gradually starving. When we remember that the capital of the working classes lies in the vigor of their muscles, the gradual decrease in the consumption of meat and substantial food among these classes of laborers and manufacturers, must be looked upon as a sure proof of the facts above stated. The *Journal des Debats* has published some papers illustrating this subject, from which the following is extracted, relating more particularly to Paris, but more or less applicable to all the cities of Europe:

"From 1819 to 1829, the annual consumption of Paris was 76,000 oxen of 360 killogrammes each; from 1829 to 1839, it was not 70,000 oxen of 325 killogrammes, though the population had increased one sixth. In 1825, 830,000 inhabitants of Paris consumed 46 1-2 millions of killogrammes of butcher's meat. In 1838, 920,000 consumed only 44 3-4 millions of killogrammes. In 1789, Lavoiser estimated that the Parisians consumed 75 killogrammes per head in the year; now they consume 48 1-2. The consumption of wine, the other great source of strength to the working population, is also greatly diminished. It is not one half of what it was in 1809."

When, in addition to such statements as these, we take into consideration the facts, that no inconsiderable portion of the manufacturing population of Great Britain are at the present moment on the verge of actual starvation; that the continued increase in the prices of food in general and meat in particular, is daily rendering their acquisition by the poor more and more impossible; and that notwithstanding the prodigious advances made in agriculture and the vastly increased production of Britain and Europe, food for the mass is becoming more scarce, the conclusion is unavoidable that the mistaken regulations of man have interfered with that beautiful ordinance of Providence, which provides for every one who is willing to till and cultivate the soil. It is idle and incorrect to say, that in these places where this acknowledged distress exists, the population are overrunning the means of subsistence, as the means of subsistence are ample, and within their reach as it were, but they are forbidden to reach out the hand to partake. There must be something fundamentally wrong, where labor will not furnish bread, and where, while the few are rioting in abundance, the many are in want of the commonest means of subsistence. For the idle, or the spendthrift, we have little sympathy; they are transgressors of the original law which requires labor, exertion of some sort, to earn our daily bread, but whenever the situation of any country becomes such that the laborer, the real producer starves it is clear a state of things exist, in which patient suffering ceases to be a virtue, and passive obedience to power becomes a crime.

Guano, the Peruvian Manure.

The rocky coast and islets that exist in the desert district between Peru and Chili, are the great resort of millions of sea birds, gulls, &c. and their manure which has been accumulating for ages now forms masses of great thickness, and which is constantly increasing. As these birds feed principally on fish, and other marine matters, the *guano*, as the manure of these deposits is called, contains large qantities of phosphates of lime, ammonia, and other products of animal matter, and as it rarely rains on this coast, the masses have not undergone the bleaching or draining they would have done in other places. Thus constituted, this substance is one of the most active of manures; and has for a long time been used by the Peruvians in the culture of corn. A writer in a foreign journal says in passing on horseback along the coast he frequently saw the natives driving an ass or two into the interior, with a package of this guano on each side, and when asked how they used it they said they put a *pinch* of it in each hill of corn at the time of planting. A number of ship loads of this native *poudrette* have been carried to England where it commands a high price as a fertilizer, and present indications denote that the importation of the article will hereafter be extensive. The English farmer understands his true interests, when he extends his expenses for manures. From the United States he collects ashes, bones, &c. from the Meditterranean crude nitre, soda, &c. and now he has opened the mines of Guano, on the shores of the far Pacific, all of which are used for fertilizing the soil, while the same substancese, not less needed where procured, are mostly neglected.

Canker Worm and the Elm Tree.

We find in the Northampton Democrat, an interesting letter on the subject of the elm and the canker worm, from Dr. A. S. Munson of New Haven, in answer to one addressed by Thomas Ritchie, Esq. of Richmond, Va., to T. Shepherd, Esq. of Northampton, making some inquiries as to the elm in the New England cities and villages, and the best means of preventing the canker worm or destroying it, as this pest of the elm and the apple has appeared as far south as Virginia, according to Mr. Ritche.

Mr. Ritchie calls his elms the Dutch Elm, but Dr. Munson shows they are the *Ulmus Americanus* or American elm, and not the Dutch or English elm, very few of these trees having yet been introduced into this country. Dr. Munson states, we believe correctly, "that the American elm common in our cities and villages, the *fulva* or slippery elm; the *alata* or cork-bark elm; the *racemosa* and *nemoralis*, are the only known American species." The common American or white elm, varies much in appearance according to soil, exposure, &c., which has caused some observers to suppose they were different species. Dr. M. states that the celebrated Pittsfield elm is the *Ulmus nemoralis* or river elm, and we have seen most magnificent specimens of this tree growing in the forests of central New York.

As a preventive of the worm, Dr. Munson is decidedly in favor of the lead circular troughs, since the period of the attack of the canker worm is so extended, that ordinary precautions are of little use, and permanent safeguards become necessary to prevent the ascent of the female moth for the purpose of depositing its eggs on the tree. Fortunately for the grower of trees, while the male moth has wings, the female has none, but is obliged to crawl up the tree, and any thing that intercepts her progress saves the tree from defoliation. Dr. M. states that he has known plowing in August, after the larva had left the tree for the earth, prevent the attack of the worm, the larva being most probably arrested by the operation while in the pupa state. It seems indeed probable from the known effects of late plowing on other insects, that an exposure in this way would destroy many of them. Dr. M. states a fact new to us, that the slippery elm is never attacked by the canker worm; but the Dr. adds —"the only objection to it as a shade tree, is its liability to be deprived of its bark by boys who are very fond of chewing it. I have engrafted it into the common elm that it might thus escape their notice." So it is in this country, we save nothing, and destroy every thing. Boys that will destroy an ornamental tree for the sake of chewing the bark, should be made to chew a cud peeled from the raw hide of the *Bos Americana*. We whittle down our fences and school houses; we whittle down our halls of justice and our churches; and in default of other things, we whittle down our ornamental trees. We have no patience with such vandalism.

To prevent Weevil in Wheat.—The heat of the sun is the best remedy against the weevil in wheat. If the grain remains out several weeks after cutting, in small shocks, it is not likely weevils will trouble it after it is thrashed and put up. If the grain be sunned two or three times in the summer, and exposed to the cold as often in winter, it is not likely to be troubled by this pestiferous insect.—*Tenn. Agriculturist.*

Premium Crops.

The Washington Co. Ag. Society, awarded premiums as follows, at its late Fair in Salem:

To Job Eldridge of Easton, on corn, $6.00. 179 bush. of ears, common eight rowed, per acre, raised on greensward broken up in April, without manure, seed rolled in plaster.

To Amos A. Egleston of Greenwich, on corn, $4. 125½ bushels Dutton, per acre, on greensward, with 20 loads barn yard manure before breaking up, and plastered once after the corn was up. Value of the crop after deducting expenses of cultivating, $31.61 per acre.

To Amos A. Egleston, on oats, $4, 48½ bushels per acre, English, weighing over 40 lbs. per bushel; soil sandy loam, in corn last year, and 20 loads of manure then applied, none since; sowed 3 bushels per acre. Nett profit $23.05.

To Peleg Sherman, of Greenwich, on potatoes, $5. 806⅔ bushels per acre,* by estimation, French pink eyes and Leopards; raised on land manured and in grass last year, oats the year previous; seed sliced, one eye on a piece, two pieces in a hill, with plaster.

To Phineas B. Whelden of Greenwhich, on peas, $4, 30 bushels per acre; soil slate and loam, in corn last year, stalks stacked and foddered on the land.

To John A. McNeil of Greenwich, on winter wheat $6, 29 bushels per acre, on pasture land, broken up in July; harrowed, replowed, and sown in September; 1¼ bushels seed per acre; 1 bushel plaster in June, and the same in September.

To Alexander Cherry of Greenwich, on winter wheat $4, 21½ bushels per acre, weighing 64 lbs. per bushel; on newly cleared gravelly land; ½ bushel of lime per acre before sowing; subsequently 1 bushel plaster, and a like quantity in the spring.

To Calvin Skinner of Cambridge, on flax, $4, 300 lbs. of lint and 12 bushels of seed per acre. Nett profit $32.

The Wayne Co. Ag. Society awarded its first premium of $5, to Samuel Hecox, it being for 80½ bushels of yellow shelled corn to an acre.

Second premium of $3, to Daniel Kenyon, for 82 bushels white shelled corn per acre.

First premium of $5, to Daniel Kenyon, for half an acre of potatoes, yield 109½ bushels.

Second premium of $3, for half an acre of potatoes, yield 102¼ bushels.

The Oneida Co. Ag. Society awarded premiums on field crops as follows:

To Elisha Pettibone of Vernon, best acre of winter wheat, 37¼ bushels, samples exhibited of the very best quality, $15. Julius Curtiss, Westmoreland, best acre of corn 84 bushels, 36 lbs. $15—the corn was excellent from sample. Elisha Shaw, Rome, 2d best acre corn, 83 bushels, 16 lbs. very good corn, $8; Nathaniel S. Wright, Vernon, best acre of oats, 61 bushels 3 pecks, $15; Jay Pettibone, Vernon, best acre of barley, 50 bushels 5 lbs. $10. Benj. P. Johnson, Rome, best half acre potatoes, (Silver Lake) quality and quantity considered, 106 bushels, $10. James Phinney, Vernon, best half acre, quantity alone, 192 bushels, $10.

To Lyman Stoddard, Westmoreland, 2d best half acre, as to quantity, 178 bushels, $5.

To Benj. P. Johnson, Rome, best half acre ruta baga, 213 bushels, $10.

The officers regretted that they were obliged to exclude the crops of corn of Stephen Scott of Lee, which yielded 97 bushels and 40 lbs. to the acre, and the crops of oats of Elizer C. Burton of Lee, which yielded 84 bushels 20 lbs. per acre.

These crops were not measured in the presence of the Town Committee as required by the regulations of the Society; and justice to the members of the Society demand a strict compliance with the regulations adopted, although the officers are satisfied that the above measurement was correct as to the quantity, the same being affirmed by the affidavit of the producer.

The Committee on Field Crops, of the *Washtenaw Ag. Society*, Michigan, state, that "Mr. John W. Van Cleve of Ypsilanti, has raised the present year, from a field of four acres, 168 bushels of wheat by measure, and by weight, 182 bushels, overrunning 5 lbs. per bushel. But was not communicated in time to be entitled to a premium, agreeable to the regulations of the Society, but this fact shows wheat can be raised even to 45 bushels per acre on most of the lands of this county."

The Cayuga Co. Ag. Society awarded to Joseph F. Osburn, the first premium of $8, for the best crop of corn, presented by specimens, both in quality of seed and quantity produced, which is 144 bushels 11 lbs. to the acre.

The second premium of $5, for quantity, (121 bushels 15 lbs. to the acre) was awarded to Jas. Sherman of Springport. The seed we conceive not of the best kind.

The Genesee Ag. Society awarded premiums to H. Brainard, best acre of corn, 97 bushels—best acre of potatoes, 400 bushels—best three acres of spring wheat, 27 bushels per acre. Mr. Brainard had no competitor.

The Monroe Co. Ag. Society awarded premiums for field crops, as follows:

Wheat—To James Beatty, Esq. of Greece, the first premium $10—quantity 53 29-60 bushels to the acre. George Sheffer, Esq. Wheatland, 2d do. $7—40 do. Samuel Shadbolt, Esq. Chili, 3d do. $5—35½ do.

Corn.—Robert D. Marlin, Chili, first premium, $7—quantity 94 bushels to the acre. Ebenezer Gooding, Henrietta, 2d do. $5—90 do. L. B. Langworthy, 3d do. $3—80 1-32 do.

Potatoes.—Owen McGuire, Greece, first premium, $5—quantity 340 bushels to the acre. George Sheffer, Wheatland. 2d do. $3—312 do. Samuel Davison, Greece, 3d do. $2—280 do.

Roots.—F. P. Root, Sweeden, first premium, on ruta baga, $5—quantity, 1200 bushels to the acre. George Sheffer, first premium on mangle wurtzel, $5—1000 do. Do. do: sugar beet, $5—1160 do.

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* This crop excites our surprise more than any one we have heard of, since the famous corn crop of Kentucky, which was said to have yielded 200 bushels per acre. Were the requisite certificates given that Mr. Sherman's potatoes were *correctly* "estimate !?"

Agricultural Fairs of 1841.

NEVER have these Farmers' Holidays been so numerous, so well attended, or conducted with so much spirit and success, as in the present year. The old societies, those which have existed for years, seem to have received new life and vigor; and the new ones, which have everywhere sprung up, will soon overtake, should they proceed as they now promise, their predecessors, in usefulness. Men of all classes appear to be recovering their senses, and at last coming to the conclusion that, from the soil, and by the sweat of the brow, the prosperity of the nation must be built up. The earth does not deal in promises to pay, but where value received, in the shape of labor is deposited, her rate of exchange is most liberal and satisfactory. A dollar will always remain a dollar, call it three or five as we may, as in times past we have done; but to make it three or five, the additional value must be given by labor, by positive industry, not by mere promises. The increase of industry, the greater reliance on labor, is one of the most cheering indications the Fairs of 1841 furnish. Men may get rich by accident, but where wealth is thus suddenly acquired by the individual, there is no accession to the general mass; what the one gains in this case, is taken from that of the many; the general welfare, or the prosperity of the whole, is checked in most of these cases, rather than advanced. There is no royal road to wealth, or even to competence; patient, perserving industry is the only sure method of securing the comforts or the luxuries of life, and the man who loves his country will rejoice at every indication that honest labor is assuming its proper place in public estimation; that the strife is hereafter to be, not who shall blow the most splendid bubbles, but who shall contribute most by their industry to the common stock of national prosperity. Such is the happy condition of things in the United States, that the well informed man, who minds his own business, can, with the ordinary blessing of Providence, scarcely fail of a competence. We say *well informed*, for the man, whatever may be his pursuits, who does not keep himself well informed as to the state of the business he is in, whatever may be his efforts, can scarcely hope for ultimate success, since his labors must of necessity be ill-directed, and instead of leading the advance, his whole life may be spent in a fruitless struggle to merely follow. In no pursuit is this fact more conspicuous than in those of the Farmer or Mechanic, and the Fairs of the present season have furnished the most abundant evidence that the prosperity of men or districts in these pursuits, is in accordance with the information within their reach.

It has been a subject of regret with us that we are unable to give more fully the proceedings of the numerous Agricultural Societies in our country, with their several Shows and Fairs, but it would require more space than the ample and closely filled pages of the Cultivator, to contain a tithe of them; and while we tender our acknowledgments to the kind friends who have furished reports, addresses, &c. they will pardon us if we are only able merely to allude to some of the many.

New-England Agricultural Societies.

Now, as heretofore, the farmers of New-England have, in many respects, borne away the palm from all their competitors. There is a spirit and a perseverance among the sons of the Pilgrims worthy of a more general imitation,—a spirit and perseverance which ensures success, whatever may be the pursuit or the nature of the opposing obstacle. With a soil and climate far less fertile and propitious than that of some other sections of the Union, the results of the productive industry of the men of New-England equal that of any other portion, and in some respects exceed them. More variable, and embracing more sources of profit, the industry of the Eastern States more rarely fails of its reward, than that of those sections where the productive labor is limited to fewer articles. In corn, cattle, sheep, swine, and articles of domestic industry these States can show crops, animals and articles that are with difficulty rivaled in any quarter. In working cattle, the farmers of New-England are without rivals; this the recent fairs most clearly demonstrate. We give a single instance, and an honorable one it is, of this fact. The county of Middlesex, (Ct.) held its *first* fair and show at Middletown, in October last. Several of the towns of that small county exhibited nearly 100 pairs of working cattle each; and the train from South Farms was over 100, and that from Durham 150 yoke. These immense trains of beautiful cattle, numbering nearly 400 pair in the whole, came upon the ground attached to vehicles loaded with the various productions of the soil, orchards and gardens, with numerous articles of domestic industry, rich flowers, and fairer women. We might, too, cite the fairs and shows of old Plymouth, the ever interesting one of Worcester, those of Kennebec, and Concord, as cases in point; but those who have had the pleasure of attending one of the fairs of Old Berkshire, and witnessed the plowing match, and the working cattle of that exhibition, will need no further evidence, that on these points the New-Englanders are ununrivaled.

The Fair and Cattle Show of the Berkshire Ag. society was held as usual at Pittsfield, on the 6th and 7th of October, and conducted in that spirited and energetic manner, which has given such deserved celebrity to the Fairs of Old Berkshire. The Berkshire plowing match, which has always been the great point of attraction with the spectators of this fair, (as they will be with all others, when well conducted,) went off with more than ordinary interest, twenty teams being entered, and the performance both as to time and execution being eminently satisfactory. Never has the exhibition of domestic manufactures, or agricultural implements been finer, and the farmers of this beautiful portion of New-England's hills and valleys, showed by their deeds and the deeds of their wives and daughters, that the spirit of '76 and of independence was still strong and active. A large number of cattle were on the ground as competitors for the premiums, and the show of animals was fine. The Hereford bull "Snowball," owned by C. N. Bement, was presented to the Society by Mr. BEMENT, after a discretionary premium of ten dollars, had been awarded him by the Society. We take pleasure in annually noticing the report of this Society. There is an earnestness in their proceedings, which speaks well for their further progress, and renders them an example worthy of imitation.

At New-Haven, in Ct. the Fair and Show this year far exceeded all former exhibitions of the kind, and evinced that the farmers of that fine section of country are not unmindful of their true interest. There are some beautiful gardens in and about the City of Elms, which contributed much to the interest of the exhibition, as they had before done to the pleasure and profit of the owners. Other cities would do well to take New-Haven for an example in more than one respect; and if they would plant their streets with trees, and expend their surplus wealth in gardens, they would do more for themselves, vastly more than they have yet done. Some 300 pairs of working oxen were brought into the city in long trains from the neighboring towns, and the display of animals was fine. The astonishing numbers of fat cattle, working oxen, milch cows, sheep and swine, which the fairs of New-England have this year called out, would seem to show that the intelligent farmers of those States have anticipated the opinion of Mr. Webster, as given in his agricultural speech at Worcester at the late fair, "that New-England ought to be devoted to the raising of stock, and to the profits of beef and the dairy." This opinion was enforced by the fact, "that all grain growing countries were poor, and impoverished in their soil; while the stock raising and wool growing countries were more flourishing, and with a constantly improving soil." New-England, however, cannot and ought not to renounce the growing of corn, and we are inclined to think a proper division of labor, and a better rotation of crops, would enable her to add materially to her production of grain, while her stock of animals was at the same time increased. But it is evident that the Eastern States must rely more on the sources pointed out by Mr. W. for their farming profits than on their grain crops, corn excepted. All the shows have called out swine which showed how much the breeds have been improved within a few years, and demonstrated most satisfactorily that good hogs, and fat hogs, are not, as some contend, entirely dependant on the capacity of the corn crib. Every farmer who fattens a dozen pigs a year, may save from ten to twenty dollars in the expense of making the same weight of pork, by a choice of animals to feed, independent of the pleasure which the owner of a pen of fine, thriving quiet pigs must feel, when compared with the squealing, restless, all-devouring breeds of the olden time. We observe that at most of the Eastern Fairs, pigs of the Berkshire, Woburn, Leicester, and McKay breeds were shown, but the fine proportions of the Berkshires seemed to obtain for them, with few exceptions, the preference. We have observed that most of the heavy fat cattle shown at the fairs of this year have been crosses of the Short Horns, (the pure blood animals being as yet too valuable to be slaughtered,) and this fact shows the influence which has been already produced in giving a greater weight and tendency to fatten to the cross over the native stock. The effect of the Hereford cross on the stock of the country is yet to be seen; but we cannot doubt that for working or fattening animals it will be most beneficial. Of fat oxen, however, the three yoke exhibited at the State Fair at Syracuse have, as yet, borne away the palm, and it is very problematical whether six animals of greater weight can be elsewhere produced in the States.

Fair of the American Institute.

The great Mechanics' Fairs of this country, the present year, have been those of Boston and New-York. That of Rochester was most interesting, as exhibiting what can be done in a country that but a few years since was a wilderness. The fair at New-York, however, embracing as it did, *all* the branches of productive industry, must be considered as having exceeded all others. That it should have failed in some respects is not to be wondered at, since it was so successful in so many, and the greatest failure must be considered as existing in the paucity of numbers of the blood stock exhibited, when compared with some other shows. The object of the Institute is a noble one, and it has already done much for the cause of domestic industry and home production; it is destined, we think, to do much more. The addresses before it have always been of a high order, and although the gentleman selected (Reverdy Johnson of Baltimore) disappointed the association, the address of the Rev. Mr. Choules was not an inferior substitute. It was rich in every species of excellence. We make the following extracts from the report given in Greely's Tribune:

"Mr. Choules dilated on the great benefits realized from the circulation of agricultural periodicals. He once undertook to tell, in passing through a town, what farmers took agricultural papers, from the appearance of their farms, and missed but once in thirteen times. The whole country is enriched by those papers. I almost envy the claims of Judge Buel on national gratitude.

"I was lately in the company of a son of a bank president—a young man accomplished in his way—who inquired what *neat cattle* meant, and how many years it took *wheat* to come to maturity. I earnestly believe that agricultural papers, generally circulated in our cities, would be productive of the greatest benefit.

"I wish we could create a general passion for gardening and horticulture. We want more beauty about our houses—more to attach us to our homes. The scenes of our childhood are the memories of our future years. Let our dwellings be beautified with plants and flowers. Flowers are, in the language of a late cultivator, 'the play things of childhood, and the ornaments of the grave;—they raise smiling looks to man, and grateful ones to God.'"

We do not think it possible to state in more forcible language the great defects existing in the education of a part of our young men and women, than is done in the second paragraph we have quoted from Mr. C. If the shameful ignorance here described was only that of an individual it would not be so surprising, but it is obvious to every one that this individual represents a large class among our most *fashionable* gentlemen and ladies,—a class, too, which, more than all others, are profuse in their sneers at the honest man or woman who lives and thrives by personal industry. We have no patience with such miscalled *gentlemen and ladies;* their ignorance and airs are alike intolerable and without excuse, and the sooner they are like Nebuchadnezzar turned out to grass, or sent to take lessons from nature in the open fields, the better it will be for them and for the country.

We agree with Mr. C. and with nearly every intelligent traveler who has visited Europe, or rather England, that in only one respect are we in advance of our transatlantic farming friends. Our farm horses are, as a body, better than theirs; and in their most improved breeds for farm labor, they have nothing superior to the Morgan horse of Vermont, or the Conestoga horse of Pennsylvania. We believe that ere long the same remarks will be true of our best breeds of cattle, sheep and swine; certainly they will be if the breeders of these animals here use proper care and skill, as our stock of imported animals is so complete that we have in our hands every element of success.

Premiums Awarded by the Institute.

HORSES.

Stallions.—To Nathaniel A. Cooper, for the best stud horse, (Messenger,) a gold medal or silver cup of the value of $15.

To Spencer C. Smith, Warren Co., N. J., for the 2d best stud horse, (Top Gallant, Jr.,) a silver medal.

To Dr. John A. Poole, New-Brunswick, N. J., for the 3d best stud horse (Raritan,) a diploma.

Brood Mares.—James A. Hamilton, Dobbs' Ferry, N.Y., for the best brood mare (Janette,) a gold medal or silver cup of the value of $15.

To John H. Coster, New-York, for the 2d best brood mare (Gulnare,) a silver medal.

To Dr. John A. Poole, New-Brunswick, N. J., for the 3d best brood mare (Medora,) a diploma.

Colts.—To Charles M. Hall, Harlem, N. Y., for the best colt, not exceeding two years old (Matchem,) a silver cup of the value of $8.

To John H. Coster, New-York, for the 2d best colt, a diploma.

SWINE.

To Wm. Salisbury, Leeds, for the best full blood Berkshire sow, a silver cup of the value of $8.

To Henry Hudson, for the 2d best Berkshire sow, a diploma.

To Wm. Salisbury, Leeds, for the best Berkshire boar, a silver cup of the value of $8.

To Benjamin Jackson, New-York, for the best shoat, a silver medal.

To Henry A. Field, New-York, for a sow and 10 pigs, Berkshire breed, a diploma

NEAT CATTLE.

To Dr. John A. Poole, New-Brunswick, N. J., for the best bull (Bernard,) a gold medal or silver cup.

To John M'D. McIntyre, for the 2d best bull (Consul,) a silver medal.

To Charles M. Hall, Harlem, N.Y., for the 3d best bull (Young Dishley,) a diploma.

Bulls between one and three years.—To William Pirnie, Westchester co., N. Y., for the best bull (Young Wallace,) a silver cup.

To Dr. John A. Poole, New-Brunswick, N. J., for the 2d best bull (Carter,) a silver medal.

Cows between three and seven years.—To Henry Whitney, New Haven, Connecticut, for the best cow (Strawberry,) a silver cup.

To Thomas Addis Emmett, New-York, for the 2d best cow (White Lily,) a silver medal.

To William Pirnie, Westchester co., N. Y., for the 3d best cow (Fanny,) a diploma.

To Dr. John A. Poole, New-Brunswick, N. J. for the best heifer (Eliza,) a silver medal.

To James De Wolf, Throgg's Neck, Westchester co., N. Y., for the 2d best heifer (Lucy,) a diploma.

Calves.—To Dr. John A. Poole, New-Brunswick, N. J., for the best calf (Franklin,) a silver cup.

To Stephen Van Rensselaer, Albany, N. Y., for the 2d best calf (Emma,) a diploma.

To John A. Poole, New-Brunswick, N. J., for a three months old calf, a diploma.

To Nelson Washbun, for Devon bull and Devon heifers, excellent specimens of full bloods, a silver medal.

To Wm. R. Townsend, New-Haven, Conn., for a pair of Durham oxen, live weight 5245 lbs., a silver cup.

SHEEP.

To H. N. Washbun, Butternuts, Otsego co., N. Y., for the best specimen of South Down ewes, a silver cup.

To Samuel Waite, Orange co., N. Y., for the best specimen of South Down bucks, a silver cup.

To Charles M. Hall, Harlem, N. Y., for the best specimen of Bakewell bucks, a silver cup.

To Messrs. Corning & Sotham, Albany, N. Y., for the best specimen of Cotswold bucks, a silver cup.

To George Wilson, Westchester co., N. Y., for the best specimen of Lincolnshire bucks, a silver medal.

To Franeis Rotch, Butternuts, Otsego co., N. Y., for a South Down wether of great beauty and merit, a diploma.

To Stephen Brown, Westchester co., N. Y., for superior specimens of Bakewell fat ewes, a silver medal.

AGRICULTURAL IMPLEMENTS AND MACHINERY.

J. Scott & Co., 21 Courtland-street, N. Y., for the best assortment of agricultural labor-saving machines. Gold medal.

Justus Slater, (Barnaby & Mooer's patent,) Ithaca, N. Y., for the best plow. Gold medal.

Minor & Horton, Peekskill, N. Y., for the second best plow. Silver medal.

Abel Greenleaf, Williamsburgh, L. I., for the best straw cutter. Silver medal.

Martin Armstrong, Williamsburgh, L. I, for the second best straw cutter. Diploma.

Gideon Freeborn, 183 Front-street, for the best corn sheller. Diploma.

John Mayher, Front-street, for the second best corn sheller. Diploma.

George Page, Baltimore, Md., for the best corn planter. Silver medal.

Calvin Olds, Marlborough, Vt., for the second best corn planter. Diploma.

H. Baldwin, Washington, Conn., for the best clover seed mill. (Silver medal awarded last year.) Diploma.

Joseph Ross, Boundbrook, N. J., for a combined clover seed and thrashing machine. Silver medal.

William A. Crowell, Lime Rock, Conn., for the best churn. Diploma.

Jordan L. Mott, Water-street, for the best agricultural boiler. (Silver medal awarded last year.) Diploma.

Solon Robinson, Lake county, Indiana, for a vegetable steamer, (simple and cheap.) Silver medal.

Josiah Platt, Bridgeport, Conn., for the best mill for grinding feed. Diploma.

Isaac Scott & Co., 21 Courtland-street, for the second best mill for grinding feed. Diploma.

D. H. Southworth, Newburg, N. Y., and Charles Dowden, Speedwell, N. J., for excellent smut machines, no difference being susceptible to the judges. A diploma, certifying a gold medal before awarded to Southworth, and a gold medal to Dowden.

D. A. Webster, 20 Bowery, N. Y., for a thrashing machine, (elastic beaters.) (Silver medal before awarded.) Diploma.

John Fitchey, Newburg, N. Y., for a thrashing machine, (elastic bed.) Silver medal.

E. Townley, 175 Thompson-street, for excellent bee hives. (Silver medal before awarded.) Diploma.

John Sholl, Houston-street, for a rustic bee hive. (Silver medel before awarded.) Diploma.

John Searle, Franklin, Merrimack co. N. H., for a new method of constructing bee houses and bee hives. Diploma.

B. Swift, Dutchess co. N. Y., for a vegetable cutter. Diploma.

Mark Poole, 100 Orchard-street, for an excellent garden engine. Silver medal.

Jonathan Reed, 76 Barclay-street, for a horse-power reaping machine. Silver medal.

H. Branch, Fulton-street, Brooklyn, for a corn cultivator. Silver medal.

D. K. Minor, 120 Nassau-street, for a barrow drill. Diploma.

Daniel Markhams, Burlington, N. Y., for a portable fence. Diploma.

Martin Armstrong, Williamsburgh, for a horse-power straw cutting machine. Diploma.

J. B. Vail, Columbia county, N. Y., for a specimen of hay pressing. Diploma.

AGRICULTURAL PRODUCTIONS, &c.

Johanis J. Lott, Flatlands, Kings county, L. I., for the best field of corn—yield 114 bushels 2 quarts per acre. Silver cup.

John Sehenek, Bushwick, L. I., for the second best field of corn—yield 112 bushels 16 quarts per acre. Diploma.

George Chesterman, Harlem, N. Y., for the best specimen of Long Island white corn. Diploma.

J. G. Bell, New-York, for the second best specimen of white corn. Diploma.

E. Holbrook, Hyde Park, N. Y., for the best bushel of wheat. A set of the Cultivator.

James Turner, Albany, N. Y., for a superior specimen of wheat. Silver medal.

Richard Andrews, Rockland county, for the best bushel of rye. A set of the Cultivator.

William Hughes, Gowanus, L. I., for the best bushel of oats. Silver medal.

Stephen Yates, St. Johnsville, Montgomery co. N. Y., for the best specimens of cheese. Gold medal.

B. W. Plumb, 3 Front-street, for the second best specimen of cheese. Silver medal.

B. W. Plumb, 3 Front-street, for specimen of pine apple cheese. Diploma.

Coe, Hubbel & Co., Winchester, Conn., for specimens of cheese. Diploma.

William Webb, Wilmington, Del, for specimens of sugar made from corn stalks. Diploma.

Dr. R. M. Bolles, Harris' Island, Conn., for the best specimens of seedling potatoes, (Bolles' seedling.) Copy of Bridgeman's Gardener's Assistant.

Thomas Bridgeman, Broadway, for the best Practical Treatise on Fruit and Garden Vegetables, "Bridgeman's Gardener's Assistant." Gold medal.

A. Hoffy, Philadelphia, Pa., for an excellent Treatise on the Fruits of the United States. Silver medal.

Alexander Walsh, Lansingburgh, N. Y., for the best design for an Ornamental Garden, with explanations. Gold medal.

D. L. Farnham, 247 Water-street, for the best metal fountain. Gold medal.

RAW AND MANUFACTURED SILK.

Mrs. M. Everson and Mrs. H. Lee, Ithaca, Tompkins county, N. Y., for the best specimen of raw silk. Gold medal.

Wm. O. Norcross, Munson, Mass., for the second best specimen of raw silk. Silver medal.

Jeoffry Hutchinson, Suffolk county, L. I., for a handsome specimen of raw silk. Silver medal.

Mrs. M. Everson and Mrs. H. Lee, Ithaca, Tompkins county, N. Y., for the best specimen of large peanut cocoons. Silver medal.

Edmund Morris, Burlington, N. J., for the second best specimen of peanut cocoons. Diploma.

Wm. H. Jones, Manehester, Conn., for the best specimen of sewing silk. Silver medal.

Mathias Price, Newark, N. J., for handsome specimens of floss silk, cleansed silk, and spun silk hose. Diploma.

John McRae, 109 Canal-street, for the best specimens of manufactured silk, (shawls, cord and braid.) Silver medal.

B. S. Yates, 73 Bleecker-street, for specimens of silk handkerchiefs, silk for dresses, cords and tassels. Silver medal.

SILK REELS, MACHINERY, &c.

Thomas White, Nashville, Tennessee, for the best domestic silk machine. Gold medal.

Aaron Clarke, Greenwich, Conn., for the best silk reel for domestic use. (Silver medal awarded last year.) Diploma.

Samuel Blydenburgh, 13 Vandewater-street, for the second best silk reek, (having several excellent qualities.) Silver medal.

Wm. H. Jones, Manehester, Conn., for the best silk reel for a manufactory. (It dispenses with re-reeling.) Silver medal.

Reports of Viewing Committees.

We have always found that the reports of the viewing committees on farms, and the state of agriculture generally, if made in the right manner, have excited as much interest in the local or county societies, as any part of the proceedings. In some societies this season we find this has been omitted, no committees having been appointed, and no reports having been made, an omission which should not occur another year. One of the best papers presented to any society the present year, one calculated to do much good, and which might profitably be made exemplar in many other counties, is the report of the Jefferson County Viewing Committee, as made to the County Agricultural Society. When a few able farmers, and experienced observing men, traverse a county, and visit farms, dairies, &c. for the express purpose of comparison, they more readily recognize improvements, or more certainly detect errors, than men who have no such object in view. Their observations and their recommendations have deservedly great weight on all subjects connected with agriculture, and every farmer who takes an interest and pride in his profession will be pleased to receive a visit, and profit by the suggestions of such men. It has occurred to us that in large counties, town committees for ascertaining the quantities of grain, roots, &c. grown, when it was intended to offer such for premiums, might be appointed, as their reports could not conflict, and would probably bring out a greater number of farmers as claimants for premiums than is now done. Some of the reports of committees made to societies this year have very properly noticed the subject of large and small farms. We scarcely could name any error among farmers so common, or so pernicious, as the anxiety for large farms. We have no doubt that if all the farms of this State of 100 acres and over were divided, and the manure and labor given to the whole, applied to one-half, that the products and profits would be greater than they now are; and the only way to make great farms pay as well as small ones, is to employ the same proportion of capital in labor and manure, a thing rarely or never done in this country. If the man who has a hundred acres of land here, would divide it with his son, instead of sending the latter to encounter the dangers and privations of a new region that he may have more land, we presume both would, in most cases, be benefited by such an arrangement. The man who has brought his small farm to the highest point of fertility, will usually be able to find other acres near, that may be advantageously submitted to a similar process.

Mr. Howland's Address.

One of the most interesting addresses we have this year read or heard, is the one by H. Howland, before the Cayuga Society at Auburn. We alluded to it in our last number, but refer to it again in this place for the purpose of recommending it to the attention of our readers, who will find it on another page of this number. It is local, concise, direct. The sketch of the early history of that county is valuable; (those who wish for more ample details of the matters to which Mr. H. alludes, will do well to consult O'Reilly's "Rochester;") the statistics of the county, important to an understanding of the resources of that section, and his remarks on the agriculture and course of farming pursued, or most advisable, plain and just. There is in the paragraph addressed to young men much that we wish those who are just entering upon the active business of life, would ponder upon carefully. The advice is that of truth and soberness, and sooner or later will be acknowledged as such.

Cuyahoga Agricultural Society.

The Cleveland, Ohio, Cattle Show and Fair attracted a great number of farmers and others, and despite the stormy and disagreeable weather, excited much interest in that flourishing section of the country. There was a very handsome exhibition of horses, cattle, sheep and swine; and a manifest improvement in native stock over that of former exhibitions was visible. Some fine fat cattle, rarely equalled in the markets of Philadelphia or New-York, were shown, and beautiful Durhams from Cuyahoga, Lorrain and Summit counties. Owing to the unfavorable weather, the plowing match was poorly attended, and the in-door exhibition of manufactures, agricultural implements, fruits, flowers, &c. became the great point of attraction and interest. The address of J. W. Allen, Esq. was rich in its illustrations, facts, and peculiarly happy in arrangement. There was an evident determination manifested by those who attended the fair to go ahead, and by the experience annually gained, correct the errors into which such associations are liable to fall. Ohio is a noble State, and the rapid advances she is making in the improvement of her stock, and in agriculture generally, would seem to border on the marvelous, were it not accounted for by the well know energy and spirit of the American people.

Genesee Agricultural Society.

The exhibition and fair of the Genesee Agricultural Society was held at Alexander on the 13th and 14th of October. In cattle and horses, the show was fine; but in sheep and hogs, and mechanical and agricultural productions, there was a marked falling off from last year. As usual, the plowing match was the most exciting part of the exhibition, and quite a number of teams were entered for competition. The quantity of land was one-eighth of an acre each, and the plowing was done in from 12 min. 10 sec. to 16 min. 20 sec. This must be considered quick plowing, and the work in general was very well done. We are sorry to learn from the President of the society, T. C. Peters, Esq. that Old Genesee, one of the richest farming counties in the State, and with some 7,000 farmers, did not raise by membership, or contributions, enough to draw from the State the sum to which they were entitled, into more than $60. But these minor matters will be corrected another year, defects in management will be gradually corrected, and the farmers of this beautiful and prosperous county place their society in the position to which it is entitled by its wealth and its locality.

Ag. and Hort. Society of Henrico, Va.

We find in the Richmond papers interesting accounts of the *second* meeting of the above society, (the *first* was held in May last, and noticed in the Cultivator,) which was held on the 20th and 21st days of October. The number of persons in attendance was very great, principally active and spirited cultivators of the soil; the exhibition received the encouragement and patronage of the patriotic ladies of Richmond and the vicinity; and the whole proceedings were characterized by that noble spirit of liberality and good feeling which marks the high-minded farmers of the Old Dominion. We rejoice in the success of this association, as we do of all similar ones, as we are convinced the example of the Henrico and Frederick County Societies will have a happy effect in arousing the spirit of the Virginia agriculturists, and directing their attention to that object of the first interest, the improvement of the soil and the methods of culture.

The meeting in May had for one of its principal objects the exhibition of stock of various kinds; and the October meeting was in the main devoted to hearing the reports of the farm viewing committees; an examination of horticultural products; and hearing an excellent address from the President of the society, the Rev. J. H. Turner. The reports from the viewing committee were, as we have always found such reports to be when well made, very interesting, as showing the different modes of managing farms, and the best methods of rendering them productive. It is gratifying to learn from the report of the executive committee that the finances of the society are in a flourishing condition. At the meeting in May, premiums to the amount of $205 were awarded; at the October meeting $375 were appropriated; and the treasurer's account exhibits a balance on hand of $445. We are pleased, too, to perceive that most of the farmers, whose premises were inspected by the committee for awarding premiums on farms, were subscribers to agricultural papers, among which the Cultivator occupies a prominent place. This is adding one more to the already numerous proofs existing, of the beneficial effects which such papers are exercising on the community.

The farm report made to the society by the President is a striking proof of the compatibility of a love of agricultural pursuits with a highly cultivated mind. His detail of the manner in which he brought a few sterile acres to such a state of productiveness as to enable him to add to the size of his farm as desired, may be read with profit, and if we can make room for it, shall transfer it to our pages hereafter. But the grand principle acted upon by him, has been forcibly sketched by himself in the following extract, which we make from his address delivered on the second day:

"The simple principle for which I contend is, that no man should have more land than he can manage to profitable advantage. According to this rule, some would lop off one-half, and others as much as nine-tenths, and I have no doubt the remainder would prove more profitable than the whole. These surplus lands are not mere dead capital—they are *living* capital, for they prey upon and consume our other profits. The proper rule to go by is this—*make what you have a garden spot*—a second Eden, and then you may venture to clear or buy more land."

The specimens of fruits, flowers and vegetable products were very numerous and fine; and the crops which received premiums were honorable to the men who cultivated them. They proved, too, that with proper skill in the treatment of their soils, Virginians need not emigrate to the far west to derive from their labor the necessaries or the luxuries of life.

We had promised ourselves liberal extracts from the address, but we find the space necessarily allotted to such notices is already much exceeded, and give only one more extract, which is not only forcibly expressed but eminently true: "A spirit of energy and enterprise has been enkindled by our society, which has called into action a degree of effort never known among us before. I feel myself warranted in saying, that many acres of land have been manured, and many barrels of corn, and many bushels of beets, turneps and potatoes raised, and many specimens of the domestic arts furnished—all of which have been called into existence in consequence of the powerful stimulus of our society. And this is the very thing we had in view in our association. We arouse every man to do the best he can for himself, and just in proportion as he succeeds in this we pay him in distinction and in money."

N. YORK COUNTY SOCIETIES.

Albany.—An agricultural society was organized in this county on the 23rd September last. The following officers were elected: Stephen Van Rensselaer, President; John McDonald McIntyre, Albany, John Haswell, Bethlehem, Oscar Tyler, Bern, Abraham Verplank, Coeymans, Caleb N. Bement, Guilderland, John A. Baker, New-Scotland, Amos Gray, Knox, Robert S. Lay, Westerlo, Peter S. Vandenbergh, Watervliet, David Conkling, Rensselaerville, Vice-Presidents; A. E. Brown, Albany, Treasurer; Thomas Hillhouse, Watervliet, Recording Sec.; Luther Tucker, Albany, Corresponding Secretary.

At the late Fair of the Cayuga Co. Ag. Society, John M. Sherwood of Auburn, was elected President; a Vice-President, and member of the Executive Committee was chosen for each town in the county; William Richardson, Auburn, Rec. Sec.; Wm. C. Beardsley, Auburn, Cor. Sec.; John B. Dill. Auburn, Treas.

Officers of the Clinton Co. Ag. Society:—William F. Haile, President; A. North, William Hedding, R. Keese, and S. Arnold, Vice-Presidents; G. M. Beckwith, Rec. Sec.; J. C. Platt, Cor. Sec.; J. Bailey, Treas.

Officers of the Dutchess Co. Ag. Society.—Henry Staats, Red-Hook, President; John Wilkinson, Union Vale, Thomas Swift, Amenia, and Stephen S. Thorn, Fishkill, Vice-Presidents; Obadiah Titus, Washington, and Edgar Sleight, Fishkill, Secs.; George Wilkinson, Poughkeepsie, Treas.

Greene Co. Ag. Society.—The following list of officers of this Society has been furnished us by A. Marks, Esq.:—Anthony Van Bergen, Coxsackie, President; William Salisbury, Leeds, Timothy J. Miller, Greenville, George Griffith, Athens, Christopher L. Kiersted, Durham, and Elisha Blackman, Cairo, Vice-Presidents; Almeron Marks, Durham, Rec. Sec'y; Richard Van Dyke, South Cairo, Cor. Sec'y; Cornelius Rouse, Catskill, Treas.

Officers of the Herkimer Co. Ag. Society:—Arphaxad Loomis, President; Samuel Look, Schuyler, Vice-President; Aaron Petrie, Little Falls, Sec.; Frederick P. Bellinger, Treas. Delegates to the State Ag. Society:—A. L. Hatch, Elias Fink, Timothy J. Campbell, John Ingersoll, Z. B. Wakeman, A. L. Fish, Aaron Petrie, John Markell, James Keith, Hiram English, E. Varney, H. Burrell, Samuel Look, George Springer, Peter Morgan, and R. Sandford.

Officers of the Lewis Co. Ag. Society:—Clemence Whitaker, President; Johnson Talcott, Carlos Hart, Charles D. Morse, Harrison Blodgett, Elias Gallup, and Alburn Foster, Vice-Presidents; Stephen Leonard, Cor. Sec.;' Charles Dayan, Rec. Sec.; Harvey Stephens, Treas.

Madison Co. Ag. Society.—An Agricultural Society was organized in this county on the 1st September last, and the following officers appointed:—J. D. Ledyard, Cazenovia, President; Elijah Morse, Eaton, H. G. Warner, Sullivan, J. H. Dunbar, Hamilton, Vice Presidents; A. Krumbhaar, Cazenovia, Cor. Sec'y.; A. S. Sloan, Eaton, Rec. Sec'y; Uriah Leland, Eaton, Treas.

Ontario Co. Ag. Society.—At the Annual Fair held at Canandaigua, on the 12th of October, the following officers were elected for the ensuing year:—John Greig, Canandaigua, President; Charles Godfrey, Seneca, Heman Chapin, East Bloomfield, Peter Mitchell, Manchester, Joseph Fellows, Geneva, Wm. Ottley, Phelps, and Joseph Garlinghouse, Richmond, Vice-Presidents; Wm. W. Gorham, Canandaigua, Rec. Sec.; Oliver Phelps, Canandaigua, Cor. Sec.; James D. Bemis, Canandaigua, Treas.

Orange.—A Society was organized in this county in September last, and the Fair was to have been held at Goshen, on the 17th November; but we have not received its proceedings or list of officers.

Queens Co. Ag. Society.—A Society was organized in this county, on the 9th Oct. as we learn by a letter from A. G. Carll, Esq. under favorable auspices. The following officers were appointed:—Effingham Lawrence, Flushing, President; Geo. D. Coles, Singleton Mitchell, Walter Bowne, Jr. T. B. Jackson, Geo. Nostrand, and Platt Willitts, Vice Presidents; Albert G. Carll, Jericho, Cor. Sec'y; John G. Lambson, Hempstead, Rec. Sec'y; D. E. Youngs, Treasurer, and D. W. Jones, R. W. Mott, Ezra Miller, T. H. Betts, John Johnson, and Israel Hewlett, managers.

Saratoga Co. Ag. Society.—At its annual meeting on the 6th October last, Howell Gardner of Greenfield, was elected President; Calvin Wheeler of Providence, 1st Vice President; Jacob Denton of Saratoga Springs, 2d Vice President; Hiram Howard of Milton, Treasurer; Archibald Smith of Ballston Spa, Cor. Sec'y; John A. Corey of Saratoga Springs, Rec. Sec'y: and an Executive Committee of two from each town was also appointed. An address was delivered by Hon. Samuel Young, a copy of which was requested for publication, and the President of the Society, E. C. Delavan, Samuel Young, James Thompson, Halsey Rogers, Edward Davis and A. Y. Lansing, were appointed delegates to the New-York State Agricultural Society for the ensuing year.

Schenectady Co. Ag. Society.—An Agricultural Society has been organized in this county, and the following officers were appointed:—William A. S. North, Duanesburgh, President; John I. De Graff, James Walker, Gerrit W. Veeder, Abraham Pearse, Theo. W. Sanders, James Smilie, James Ferguson, and Daniel D. Campbell, Vice Presidents; Archibald L. Linn, Schenectady, Cor. Sec'y; Alexander G. Fonda, Rec. Sec'y; William B. Walton, Treasurer.

Steuben Co. Ag. Society.—The Fair of this society was held at Bath, Nov. 10, and though the Society had been but recently organized, it exceeded in numbers and interest, the expectation of its friends, showing that the farmers of Steuben "participate in the general forward march of their brethren in all sections, to elevate their calling, and to make it in reputation what it is in fact, the most honorable and consistent occupation of man."

The following gentlemen were elected officers of the Washington Co. Ag. Society, at its anniversary meeting on the 12th October:—John Savage, Salem, President; William Baker, Fort Ann, Ahira Eldridge, White Creek, Reuben M. Norton, Cambridge, and John Baker, Granville, Vice-Presidents; John McDonald, Salem, Cor. Sec.; Asa Fitch, Jr. Salem, Rec. Sec.; Jesse S. Leigh, Argyle, Treas.

Great Crop of Oats.

In a late number of his Visitor, Gov. Hill gave an account of a fine oat crop he had raised the present year, described the process of cultivation, and invited any one who had grown a better crop to communicate it to the public. The four acres of Gov. Hill, gave 275 stooks of 12 bundles to a stook, and the thrashing of a part of the crop shows a yield of about 70 bushels per acre; handsome certainly, but as a west New-Yorker would say, "nothing extravagant." The playful challenge of Gov Hill, has called out a Vermont farmer, Drances June, who in the Vermont Chronicle has given an account of his oat crop on four acres, and the manner in which the Green Mountain Boy has used up the champion of the Granite State, is a caution to all oat growers. Mr. June says,—"Our lands were about under equal cultivation to begin with. In the season of 1839, my land was plowed up in the sward. In the month of May, 1840, it was plowed and thoroughly harrowed; then 20 loads of good manure were spread to the acre, and all plowed in to the depth of four inches, and harrowed down smooth. Then the four acres were planted to potatoes; and I harvested 977 bushels from the lot. In the spring of 1841, the land was plowed once, and I sowed 16 bushels of oats upon the four acres. The oats stood remarkably well; but few lodged, and the cause, I think was, that we had no rain to limber or burden the stalk after the oats began to fill. The piece was reaped and the oats bound in large bundles, so large that it was difficult in many instances to stook twelve bundles in a stook. I had them stooked in that manner for the sake of counting correctly, and the result was 588 stooks. If New-Hampshire has beat Vermont in oats this year, let us know it, and we will try them next season."

This is truly "prodigious," and if Mr. June's oats yield as much per stook as Gov. Hill's, it will be one of the heaviest, if not the very heaviest crop of oats on record, being at the rate of 147 bushels per acre! The greatest crop yet grown in the United States, was by our friend Osborne of Cayuga, of 130 bushels to the acre; and if on thrashing his crop, Mr. June should exceed Mr. Osborne, we opine the latter will try again. There is one statement in Mr. June's account which we wish our farmers when they come to sow oats next spring to remember, and that is the quantity of seed per acre, *four bushels*. A celebrated English farmer a few years since observed that, "the best method of sowing oats he knew was to scatter them with a shovel from a cart;" and our experience, as well as the statement of Mr. June, would go to show that the quantity of seed used for this crop is much oftener too small than too large. Vermont is one of the best states in the Union for spring crops, and if she has produced many crops like the above the wonder will cease at her being at the head of the states in the value per head of her productions; that state averaging 148 dollars, while the next highest is only 111 dollars, and the average of the whole not 80 dollars. We shall hope to have from Mr. June an account of the product after thrashing, as in the case of such crops nothing should be left for guessing or for doubts.

Grape vines in Winter.—There are few of the grapes requiring protection in the winter, that are worthy the attention, or will repay the care of the farmer, still some may have such vines, and for the benefit of those we would state that the Maine Cultivator recommends as a preservative from frost, a covering of hemlock boughs, as turning water better, and being more compact than straw, which is most generally used.

ORIGINAL COMMUNICATIONS.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

Comments on the Oct. No. of the Cultivator.

Messrs. Gaylord & Tucker—The first page of this number, indeed I may say almost every page, affords abundant evidence of the heart-cheering fact, that the desire to improve American husbandry is rapidly diffusing itself over our whole country; and all that is now wanting to enable American farmers soon to compete successfully with those of Europe, will be to give this desire a proper direction, and zealous, persevering encouragement. Your excellent paper has already done much in this truly patriotic work; and long, very long, do I hope, that it may continue its laudable efforts. These few prefatory remarks I could not deny myself the pleasure of uttering, since I venture to say, that none of your readers can have derived more entertainment from your Cultivator than I have, nor can many have received more information.

The first article that attracted my attention was the list of premiums offered by the American Institute. The managers have evidently taken it for granted, that all competitors will be actuated solely by the principle of honorable ambition, for nothing has been offered but gold medals. But there is not a man who has ever had any thing to do with an association or society which gives premiums for such objects, but must know, that the love of money is a stronger passion to address. The Highland Agricultural Society of Scotland, and the Royal Agricultural Society of England, have been well aware of this difference; and therefore, we find that a large portion of *their* premiums consist of cash. Would it not be well, then, if not only the American Institute, but our numerous agricultural societies, would follow their example? I have had many years' experience, not as a competitor for premiums, but a contributor towards them; and feel very confident that where five would compete for a gold medal, there would be at least ten competitors for its value in dollars and cents. In this respect, the nature of man cannot be much or effectually changed by any sort of institute, but that of moral and religious education.

Much is said in this number about the Hessian fly; but unless some of the individuals who write on the subject will point out some effectual way to prevent its ravages, practical farmers in general, will care not a straw by what entomological name it may be christened, nor to whom the honor may be awarded of ascertaining its true scientific title.

In a note to the article headed "Crops of 1841," you remark that "the quality of the wheat crop of 1841 has never been exceeded." This remark should have been limited to the states north of the Potomac, if not to those beyond the Susquehanna, since to the south of the former river, my information is, that the crop is below the average quality.

Under the head of "Proper Improvement of Land," you have cited one very remarkable case to prove how far beyond all common belief, its productiveness may be increased; and there are very few things with which your paper could be better filled than with details of similar cases, provided they were accompanied by detailed statements of the various modes of improvement. Nothing could well do our brethren more good, for no subject is more important to them; nor is there any scarcely of which they are more generally ignorant or careless.

Treatment of the Horse.

Your correspondent W. B. from North Carolina, expresses a wish "*to see some extended remarks on the best manner of treating work and traveling horses*;" and you ask some of your correspondents to reply to his inquiry. To do so fully would require a book or pamphlet of a considerable size. But the subject is highly important to all who own horses, and particularly to those, of whom there are many, who know little or nothing of their proper treatment; I will, therefore, offer a few remarks in the hope that some of your numerous correspondents who are better qualified than I am, may be tempted by my efforts to enlarge upon it. My observations will consist chiefly of directions condensed from two works published in England, under the supervision of the Society for the Diffusion of Useful Knowledge. The first is entitled "*The Horse*," and is by far the best treatise I have ever read in regard both to the theory and practice of the veterinary art; no farmer should be without it. The second was published only last year, and is called "*Outlines of Flemish Husbandry*." It contains many very useful directions as to the management of farm horses, the correctness of which, as well as of those in the Horse Book, none could fail to perceive, if I had room to present the reasons for them, together with the directions themselves.

To begin with the stable. This should be so constructed that its temperature during spring, summer, and fall, should be very nearly the same as that of the open air; and in winter, not more than 10 degrees above that of the external atmosphere. The size recommended as best, is (in the proportion for six horses) 40 feet long, 13 or 14 wide, and 12 feet high, if a loft is made to it, in which case there should be a plastered ceiling, to prevent the hay from being scented by the exhalations of the stalls and floor. The whole stable, especially the stalls, should be kept as clean as practicable, by frequently changing the beds and strewing plaster of Paris on those spots where the urine falls. This not only prevents its offensive odor, by combining with its ammonia, but thereby forms one of the most powerful of all the new manures yet discovered. The floor of the stalls should be sloped barely enough to drain off the urine not absorbed by the litter and plaster of Paris, since a level position for the horses' feet is the most natural, and consequently best for the muscles and sinews of their legs and ankles.

Light is quite as essential to the soundness of your horses' eyes, as pure air is to the health of his body. But it should be let in through glazed windows, and open gratings, which serve also as ventilators, under the eaves of the roof. No openings should be made, either under the mangers, or opposite, or just above the horses' heads, as partial streams of air often produce colds, with all their bad consequences in horses; especially if they are put up in such stables immediately after being much heated, and before they are rubbed dry. A glaring light, however, should always be avoided, since horses can neither rest, nor sleep, nor fatten so well in such light, as in that which is moderate.

Under the head of "*grooming*," it is recommended to treat farm horses differently from those kept for the saddle and carriage. The farm horse which is worked hard all day, and turned out at night, requires little more than to have the dust brushed off from his limbs, since the dandruff or scurf which is removed by the curry comb, is a provision of nature to defend him from the wind and the cold. But if generally stabled, then currying, brushing, and rubbing are necessary. These operations are indispensable to saddle and carriage horses; and should always be performed in the open air when the weather permits. They open the pores of the skin, aid in circulating the blood, in augmenting free, healthy, insensible prespiration, and serve instead of exercise, when that cannot be taken. Moreover, if regularly and carefully performed, with a plenty of good food in which two or three table-spoons full of brown sugar is occasionally mixed, they will secure that fine, glossy, dappled coat, to attain which, the health, and not unfrequently the life, of the horse is sacrificed, by keeping him covered up with blankets. Care should be taken in using both the curry-comb and brush, especially when new, not to apply them roughly, particularly to horses that have tender skins, and fine, thin hair. For all such, the curry-comb is hardly necessary, if they are well rubbed, and dressed with a soft brush and hair-cloth.

Horses which are constantly stabled, should be moderately exercised for two hours a day, when the weather permits, if you would keep them perfectly healthy. This, however, should depend somewhat on their age, as a young horse requires more exercise than an old one. But for neither should it be violent, when given for health; nor should the horse ever be put up until he is cool. The whip or spur should never be used for any fault but dullness or obstinacy, although it is very common to do it both for starting and stumbling, both of which are certainly aggravated by it, and thereby the rider punishes himself, in the end, much more than he does his horse. In fact, harsh, cruel treatment to horses, succeeds as badly as it does with children; and all who are so brutal and inhuman as to be guilty of it, deserve well to become its victims: neither whip nor spur would be bad remedies for *their* detestable tempers and habits.

It is common, immediately after hard working or traveling in hot weather, to wash horses all over, or to swim them in water much cooler than their skins or the atmosphere. This practice is very dangerous, often producing colds, fevers, and not unfrequently, fatal chronic complaints, unless the same exercise is speedily repeated. Even the partial application of very cold water to parts of the body, or the head, or the legs, when the horse is much heated, should be avoided; for his appearing to be gratified by it is no more a proof that it is good for him, than the manifest gratification of a sot in dram-drinking, after having been drunk, is proof that *he* is benefitted thereby. The poor horse which knows no better, experiences present relief, at the expense of future suffering that he is incapable of anticipating, or brute as he is, he would probably reject it. Rubbing in the shade and leading the horse about at intervals, constitute the proper treatment both for farm and other horses, when much distressed by severe work of any kind.

But all precautions to preserve the health and vigor of your horses will prove unavailable, unless you pay equal attention to the kind and quality of their food; the manner of feeding them, and also of giving them water.

To enable either farm or other horses to render the utmost service of which they are capable, they should be fed wholly on dry food, the grain and long forage to be old and sound, the first of which should be ground, and the latter chopped in all cases where practicable. For saddle and carriage horses under hard and constant usage, oats are better than Indian corn, and that is preferable to every other grain. The blades also, when well cured, are better than any other kind of long forage, as they contain more saccharine matter. When either farm or other horses are much heated, and great haste is indispensable, no other food should be given them than a small hand-full or two of old corn or oat-meal stirred into a few quarts of soft water, with a little salt dissolved in it. Before this is given, let their nostrils, inside and out, be cleansed by a sponge or rag wet with vinegar and water, if the former can be procured, if not, with water alone. After a very hard ride or travel in harness, the horse should be suffered to wallow, before any thing else is done to him, if time and weather permit, rather than to be led immediately into a stable to be cleaned and cooled.

Manger feeding with ground grain and chopped long forage, is now very generally preferred in England and Belgium, as well as by the best judges in our own country, to the old fashioned, most wasteful way of giving unground grain in mangers, and unchopped forage in racks. These last are disused every where, but in a few places for green grass; and in lieu of the rack, wide, deep mangers are adopted, with small iron or wooden bars fastened across them, to prevent the horses from throwing out their food. In England the most common food for farm horses consists of a mixture of bruised oats, beans, and chaff, in the proportion of eight pounds of oats, which are equal to about five quarts, (their oats being a few pounds heavier per bushel than ours,) two pounds of beans, with twenty of chaff. Thirty-five or six pounds of such food is the day's allowance for medium sized horses while at work, and forty pounds of it for large horses. Such is the common allowance during winter, when the horses are constantly stabled. But from the end of April to the end of July they are usually turned out at night, and the whole of rest days. Other kinds of food, however, are much used by small farmers, such as barley, unmerchantable wheat, beans, peas, sweedish turneps, carrots, and potatoes, with grasses of various kinds, but very little oats or rye. In Belgium the chief food of their farm horses consists of green clover in summer, and roots with cut straw in winter. A few oats are occasionally given, but not in so regular a manner as to give great muscular strength. They usually go to work as soon as it is light, continue at it until ten, then rest and feed until two or three o'clock, when they resume and continue their labor till six or seven. In harvest time they work from day-break until evening, resting only a few hours in the heat of the day. A pair of horses with one plow are allowed for every 40 acres of arable land, the whole of which, on an average, is plowed twice and harrowed three times; besides this they cart fodder and manure, and do the harvest work. Both in Belgium and England, they are moderately watered before and after feeding. When not worked, water is given them three times a day, and always of the softest kind, when it can be procured. In ordinary traveling also, a liberal supply of such water is strongly recommended to be given, a little at a time, which prevents excessive thirst, and the consequent drinking to excess. This is very dangerous, especially to a horse much heated, especially if the water be very cold.

In addition to the foregoing condensed remarks, taken chiefly from the two excellent works already mentioned, permit me now to offer such information as I have derived from others and from my own long experience as an owner of every kind of horse but the race-horse, in regard to the best mode of managing those most useful animals, in our own country. I will "begin, (as the saying is,) at the beginning."

Colts should always be weaned before the grass is generally gone, and should be put into some enclosure where they cannot hurt themselves. Their dams should be stabled for a few days, and milked if their bags swell much. These colts should never be stabled until broke, nor much after that before they are full grown. But they should have well covered shelters, open to the south, under which to protect themselves from bad weather. Plenty of good corn fodder or hay in winter, and grass when it comes, and as long as it lasts, will keep them whilst unbroke, in a healthy, growing condition, which is far better than keeping them very fat to force their growth beyond what is natural; for overgrown horses, like overgrown men, rarely, if ever, have hardihood, vigor, and activity in proportion to their size. In fact, very large horses are objectionable, for all purposes, except slow and heavy drafts. The gentling of colts should commence soon after they are foaled, and continue until they are backed. Frequent handling, occasional salting or feeding them out of your hand, and stroking their necks are all good practices. From two to three years old, they should be accustomed by degrees, to the saddle and bridle; a light snaffle is best. Thus treated, the breaking becomes so easy, that they will rarely play any tricks, and may be soon taught, even to stand fire, by shooting off a gun or pistol, for a few days, just as they commence eating. In a word, uniformly kind, gentle treatment by their master, will always make such good, docile, gentle horses, that they will often follow him, like his dog, and will manifest equal regard for his person.

All the general directions for the treatment of horses in England will suit quite as well for the horses of our own country. But the articles of food being somewhat different with us, I will now add a few remarks on that subject. In most of our states, the chief food for horses is Indian corn and the fodder thereof. Both are usually fed away in the most careless, extravagant, and wasteful manner—the corn being given in the ears, and the fodder in bundles, which are thrown untied into the horse-racks or on the ground. Much, then, is wasted by being trampled under foot, and so dirtied that the horse rejects it, whilst many of the grains of corn pass through his body undigested, and of course, render him no service whatever. He also loses all the benefit of the cobs, which he rarely eats when whole, although they make an excellent food, if ground up with the grain. This mode of feeding is much the most general, notwithstanding it has been indisputably proved by actual and numerous experiments, that to give the corn and cob ground together, which is called *cob-hominy*, and the fodder chopped in a cutting-box, not only saves more than enough to pay the extra expense of grinding and cutting, but actually keeps the horse in better condition than the same quantity of corn and fodder given in the usual way. Moreover, it is a cheaper food than any other of which grain, either whole or crushed, forms a part. Take oats for example, which are the most common, where corn is not used, and let us estimate the former at forty and the latter at sixty cents a bushel, which I think a fair general average in the states wherein corn is a staple crop. Now as only half the cob-hominy is grain, the mixture will cost only thirty cents a bushel, and is generally deemed fully equal in nutritive qualities to a bushel of oats. If these also be crushed, we must add about four cents to their cost, and the difference between the two kinds of ground food, (the chopped fodder being the same in both cases,) will be about 14 cents per bushel, in favor of cob-hominy. Suppose then, that one gallon, three times a day, is enough, as experience has proved it to be, for an ordinary sized horse, with eighteen or twenty bundles of fodder, the saving in one week, by feeding with cob-hominy, will be a fraction over thirty-six cents, or nearly nineteen dollars a year for each horse, which is the annual interest of rather more than $315. Yet not one in a hundred of us ever thinks of saving it! Few southern and western men who are "*well off*," (as the saying is,) keep less than three or four horses that do no farm work, and this they do at an additional yearly expense, when oats and unchopped fodder are their food, of 57 dollars for three, and 76 dollars for four horses, rather than be at the small trouble of having their fodder chopped, and their ears of corn ground into cob-hominy. Ten or twelve poor children might be annually schooled for that sum. For horses that are often hard ridden and rapidly traveled, oats are generally deemed better than corn, as less heating; but a greater quantity of them must be given, in the proportion of about one and a half gallons of oats to one of corn at each feed. Under such usage, green food should never be given if avoidable. But when the horse can rest for a few days some may be allowed him, in small quantities, by way of medicine. Any kind of grass that a horse will eat, may answer the purpose, but lucern and clover of the first cutting are deemed best—the second always salivates—an effect, by the way, for which no cause, I believe, has yet been discovered. Presupposing that a horse has a plenty of wholesome food and proper grooming, if you would give him a finer coat than these alone can produce, let half a pint of sound wheat or a small hand full of brown sugar be mixed with his food, about once in every six or eight days, for a few weeks, and the object will be attained far better than by blanketing, which always makes him more liable to take cold, when exposed to bad weather, as he sometimes must necessarily be. On long journeys, in hot weather, give your horse a double feed at night; in the morning travel 15 or 20 miles before you feed him again, then do it lightly and after he is perfectly cool. Give a few quarts of soft water both before and after his food, then resume your journey and go 15 or 20 miles farther. This will enable you to stop early every evening, without any night riding, and will give both yourself and your horse a long rest to recruit your strength. If your horse be sound, you may thus travel him hundreds of miles without danger of his failing.

Farm horses may be kept in good order at much less expense; for they may be fed, *when unemployed*, upon any of the roots which it is customary to give them in England. In addition to these, *we* have the pumpkin and its varieties, all of which are good food for horses, but the seeds should always be taken out, as they are powerfully diuretic. If such food be at first rejected, horses may soon be taught to eat it, by mixing a little salt with it, and offering them nothing else for a few days. To this should be added, as soon as they will eat such a mixture, from thirty to forty pounds of chopped provender, for every twenty-four hours, and this may be made either of well cured corn tops, blades, hay, wheat, oat, or rye straw, or chaff. Corn shucks, (which is the southern name for the covering of the ears,) answer well to mix when chopped up, with the roots or pumpkins; if they are salted as they are put up and kept dry. Another very good long forage peculiar to our country, consists of the various kinds of Indian pea-vines. These make excellent food for farm horses, if exposed to the sun until they are somewhat wilted, then stacked in alternate layers with the straw of either wheat, rye, or oats, and each layer sprinkled with salt, as they are stacked. Thus fed and protected from bad weather by warm shelters, open only to the south, and well covered with any kind of thatch, or corn tops or loose straw, farm horses may be kept healthy and in good order throughout the southern states, without their owners incurring the expense of wooden or brick stables for them. Stalls, however, should be made for them under the shelters, with divisions high and close enough to prevent their fighting, and in those they should be tied while eating. Their mangers or troughs should be wider and deeper, than when racks also are used, although *they* never should be, or lazy hostlers will be sure to avail themselves of them, if not closely watched. When put to constant farm work, horses should have only dry food, three times a day. It may consist either of bran, shorts, cob-hominy, ground rye, oats, broom corn, or oats mixed with chopped stuff in the proportions already mentioned—that is, about thirty-five pounds for horses of common size, and forty pounds for the largest. But after the grass is in plenty, and as long as it lasts, (if it does not salivate,) they may be turned out of nights and rest-days, although if your pastures are large, more time is lost every morning in catching them and getting ready for work, than would amply compensate, if spent in farm labor, for the expense of keeping them up, especially should you have any grass to give them a moderate quantity in lieu of a portion of their dry food. To fatten a horse rapidly, his fodder or hay should always be chopped and steamed, before it is mixed with the meal of either corn, oats, or rye, and as much should be given him, three times a day, as he will eat without leaving any. Give him also salt alone as often as he will eat it, and soft water at least thrice a day, but always with some meal of either of the above mentioned grains stirred up with it. A small quantity of ground Indian peas will add much to the nutritive properties of his food; and thus treated, with moderate daily exercise, in good weather, the process of fattening will soon be completed, provided the horse be in health at the commencement.

I fear that some of your readers perhaps, may deem the foregoing details relative to horses, more minute than they need be, and possibly may think me somewhat officious in giving them. But should they be disposed thus to condemn me, I must beg them to recollect before they pass sentence, that all I have written on the subject has been communicated at the request of yourselves and one of your correspondents. It is true that this request was made to your contributors *generally*, and therefore it was not *my special business* to comply with it. Still I have ventured to make the attempt, and should it bring me into any scrape, I hereby give you and your North-Carolina friend fair notice that I shall call upon you both lustily for help. If either of you should want farther information in regard to horses, let me strongly recommend to you "*The Horse Book*," for in addition to all that I have said, you will find a prescription for all their diseases, and directions for correcting every fault which can be corrected.

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I will now proceed with my comments on other articles in your October number; and the first I shall notice is the communication from your enterprising correspondent, G. W., of Richmond, Va. But it is only to beg that he will not fail to report to his brother farmers the final result of the highly interesting experiment which he is now making. If he succeeds, as I have no doubt he will, a manure of vast value, one too which is easily formed, will he added to those we already possess.

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In your extract from the Buffalo Commercial Advertiser, relative to the Italian Spring Wheat, made by Mr. Erastus Skinner, it is said that "*he prepares his land for yielding 56 bushels of wheat to the acre, by growing ruta baga, at a net profit of* $70.42 *an acre*." This is inconceivable without some explanation, for all who ever cultivated the ruta baga, know well that it is an exhausting crop, if taken off the land, and of course, that the more culture of it therein must lessen instead of increasing its productiveness.

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In the article signed A. M., and headed "*Protection against Drouth*," the author, (if I understand him,) maintains the opinion that frequent stirring the surface is rather a disadvantage; but in this he presupposes what will not necessarily happen, and this is, an exposure of a new surface every time the earth is stirred. In such supposition he is certainly wrong, if, instead of the plow, a well made single coulter be used: for this will stir the earth deeper than any plow, and yet leave the surface very nearly, if not quite the same as it was before the coultering. How often stirring, *he* would call *too frequent*, does not clearly appear, but I will venture to say, that in every kind of soil which is apt to bake and become hard, it should be frequent enough to prevent such effect.

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Your anonymous correspondent's notion about a National Agricultural School, "*favoring the aristocratic few*," seems to be rather an "ad captandum vulgus" bait, than a serious objection. And as to his suggestion that a better application of the Smithsonian Legacy would be to purchase "the back numbers of your Cultivator, or some equally valuable agricultural journal," for gratuitous distribution, I must move him to reconsider it, until he determines in his own mind, whether five hundred thousand men, or even five hundred of those who have been heretofore so self-conceited, or so niggardly as not already to have furnished themselves with any paper of the kind, would be prevailed upon to read one, even if it were offered to them as a present.

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I agree entirely with your correspondent, Mr. S. Stewart, in regard to what he calls "*crack articles*," about pet-calves of enormous size, or any other pets; and I verily think as he seems to do, that they occupy much more room in our agricultural papers than they deserve. Much better would it be for the interests of agriculture, if such writers would content themselves with making and communicating such accurate experiments as he has done, rather than so often to busy themselves in exciting the wonderment, and not unfrequently, the incredulity of your readers.

As Mr. Stewart seems fond of brevity in style, I will beg leave to recommend to him a new word which in three syllables expresses the whole business of planting, cultivating, and securing the potato crop. I picked it up some years ago in traveling through Connecticut, and was so struck with its multum in parvo character, that I forthwith added it to my vocabulary, and have used it ever since. This word is "*taturing*." I got it from a smart little fellow whom I was questioning about his education, as he drove me along in a carry-all. Upon asking him, if he went to school and when? he replied, "Yes, I go in winter time." "Well," said I, "what do you do during the rest of the year?" "Oh, sir," said he, "then I am out a taturing."

I earnestly hope Mr. Webster will adopt this word in the next edition of his excellent Dictionary, for I am very sure that the last edition contains not one which expresses more with the same number of letters. Yours with regard,

COMMENTATOR.

Wellington and Gore Agricultural Societies.

MESSRS. GAYLORD & TUCKER—The advantages of agricultural societies have become so well understood and so generally admitted, as to render it almost unnecessary to descant upon them; but I conceive that much of the interest which they have succeeded in awakening would again fall into a state of slumber, and many of their advantages be lost, if their proceedings were not published and disseminated: entertaining this idea, I shall feel much obliged if you will give insertion to the following account of the first exhibition of stock held by the agricultural society of the newly formed district of Wellington, which took place in this town on the 13th ultimo. It being generally known, that during the last few years, many importations of stock of various descriptions had been made from England by some of the spirited farmers of this neighborhood, it was anticipated that such an exhibition would take place as would not be easily equaled by any newly settled district in the Province, and I have much pleasure in stating that this anticipation was fully realized. The horses and mares were of much better quality than in my last communication to you I ventured to predict. The Short Horned cattle produced by Mr. Howitt were above all praise; rarely, indeed, have I, in any country, seen such a choice herd exhibited as the property of one man; none of them escaped admiration, but one four years old heifer created astonishment. A Devon cow, the property of Mr. Jackson, was much admired. The show of grade and Canadian cattle and working oxen was good. The Leicester and South Down rams were fine specimens of those crack breeds, but the Leicester ewes exhibited by Mr. Jackson were of surpassing excellence. The grade Leicesters exhibited by Messrs. Thompson, Budd and Spiers afforded ample evidence of the great improvement that may be effected by using Leicester rams to the common Canadian ewes. The show of hogs was strikingly good, but being myself deeply interested in the breed of those animals, it would, perhaps, be improper in me to make many comments; I may, however, be excused for saying that a Berkshire sow, the property of Mr. King, met with deserved admiration, as also did a sow of hers, which was got by an improved Yorkshire boar. You will, however, perceive by the subjoined list, that the premiums for the best boar and sow were awarded to Wamba and Purity, the property of J. and E. A. Harland.

On the day following the celebration at Guelph, I had the pleasure of attending an exhibition of stock by the agricultural society of the neighboring district of Gore, which was held at the flourishing village of Dundas; and I am happy in having an opportunity of publicly acknowledging my sense of the kind treatment and gratifying attention which I and my colleagues (acting as judges) received at the hands of the highly intelligent office-bearers of that society. The most prominent object in the show-yard was a Short Horned bull, (the property of John Wetenhall, Esq.) which appeared (to borrow the expression of an eminent breeder) to cover an acre of ground, and on examining him, his perfect symmetry was abundantly manifested, whilst a single grasp at his fine mellow hide, in which I could almost have folded myself, was sufficient to convince any one of his first rate feeding properties! He is certainly a superb animal, and will undoubtedly do much good in the neighborhood; indeed, from the large quantity of prime young stock which was exhibited, it was evident that the judicious breeders had not been slow to avail themselves of his services. Some fine Durham cows (bred by the Hon. Adam Ferguson from his imported stock) commanded great attention; one of them was purchased at a high price by my spirited and worthy neighbor, Mr. Howitt, who neglects no opportunity of adding to his already splendid stock. Some pretty specimens of Ayrshire cattle were exhibited and had their admirers. The show of sheep was rather small; a sprinkling of Leicesters was conspicuous amongst them—one ewe occupied much of my attention, her square form, beautiful fleece, prominent eyes, long thin ears, small muzzle, slender legs, and other prime qualities almost convinced me that she was descended from the flock of Sir Tatton Sykes of Yorkshire. The show of hogs was large; but the blood of the Alligators evidently flowed in the veins of most of them; I however, saw two good young pigs of a cross breed, and two others which it was easily to perceive were Berkshires; they were very pretty, but like all the Berkshires which it has hitherto been my fortune to meet with, rather small.

My letter has already reached a greater length than I intended that it should have done, but I cannot conclude it without offering my congratulations to you and your fellow-laborers of the Agricultural Press, upon the gratifying effects which your efforts to promote a better taste for the cultivation of the soil and the breeding of stock have produced and are producing. It is evident that improvements in both branches are progressing not only steadily but rapidly, and it is highly refreshing to hear in every quarter the denunciations against smut, chess, thistles, alligators, &c., which some people have already discovered may be got rid of by attention and good management; and the space which those noxious weeds, and certainly not innoxious brutes, have hitherto occupied, filled with plants and animals of a profitable description. With regard to book-read farmers, which it has long been the fashion to sneer at, I have to observe, that in the course of my experience, I do not remember having met with a good farmer that had an objection to add to his store of knowledge by reading an agricultural book or paper; and I never knew a slovenly or bad farmer that I did not think ought to have perused such works. As a proof that the Cultivator has at least no injurious effects upon its readers, I wish to call attention to the fact, that two-thirds of the winners of premiums at the show of cattle at this place are upon your list of subscribers, and the remainder are at least occasional readers.

I am, gent'n, your ob't serv't, J. HARLAND.

Guelph, Canada, Nov. 1, 1841.

List of Winners of Premiums at the Wellington District Agricultural Society's Cattle Show.

The best stallion for agricultural purposes—Mr. Parkinson's Young Mazeppa,	£2 10s.
The best and second best mare for do.—Mr. Jackson's Lucy,	2 10
Mr. Quarry's Darling,	1 5
The best filly foal—Mr. S. Owen's, by Prince Albert,	1 0
The best imported bull—Mr. Howitt's Comet, by Reformer,	2 10
The best imported cow—Mr. Howitt's Strawberry,	2 10
Bull, not being thorough bred—Mr. Armstrong's Brisk, by Adonis,	2 0
Cow, not being thorough bred—Mr. Parkinson's Fill Pail,	1 10
Two years old heifer, not thorough bred—Mr. Ambrose's Lovely, by Adonis,	1 0
One year old heifer, not thorough bred—Mr. Howitt's Miss Dyson,	1 0
The best and second best yoke of oxen—Mr. Tolton's,	2 10
Mr. Parker's,	1 5
Leicester ram—Mr. Broadfoot's, (bred by Mr. Jackson,)	2 0
Pair of imported Leicester ewes—Mr. Jackson's,	1 10
Imported South Down ram—Mr. Howitt's,	2 0
Pair of imported South Down ewes—Mr. Howitt's,	1 10
Three ewes, not being thorough bred—Mr. Thompson's,	1 0
Imported boar—Messrs. J. & E. A. Harland's Wamba,	2 0
Imported sow—Messrs. J. & E. A. Harland's Purity,	1 10
Sow, not being thorough bred—Mr. J. Horning's Susan,	1 0

Migration of the Swallow.

MESSRS. GAYLORD & TUCKER—In a communication from M. S. D. in the last Vol. of the Cultivator, under "Popular Errors," he says: "Another common error relates to the migration or hybernation of birds, particularly the barn swallow, or chimney swallow. It is supposed by many that these birds descend to the bottom of ponds, lakes, &c., in the mud of which they lie torpid during the winter, as it is well known the toad, frog and lizzard do, and as the bat does in caves or other dark recesses. These birds migrate, as their presence in the equatorial regions, during their absence from ours, conclusively proves; and the idea of their being torpid has been countenanced by the fact, that the flight of most migratory birds takes place during the night."

I have thought proper to state such facts as I have at hand respecting the migration of swallows. The barn swallow, I presume, seeks a warm clime in the fall, but the black martin and house swallow, at least a portion of them, would place me according to M. S. D. among the "popular errors" of the day.

The following accounts, which I take from Samuel Williams' History of Vermont, transpired, a part of them, in towns adjoining mine. He says: "The black martin (the swallow that builds their nests under the eaves of barns and houses) arrive the latest, and disappear the soonest of any of the swallows; but they do not seem to be properly birds of passage. At Danby the inhabitants report that some of them were taken out of a pond in that town some years ago; among the mud and roots of the pond-lily a man threw out several swallows enclosed in the mud, alive, but in a torpid state." He says, "that it has been doubted by some able naturalists whether it is possible for the swallow to live in such a situation; but I saw an instance which puts the possibility of the fact beyond a doubt. About the year 1760, two men were digging in the salt marsh at Cambridge, in Massachusetts on the banks of Charles river; about two feet below the surface of the ground, they dug up a swallow, wholly surrounded and covered with mud. The swallow was in a torpid state, but being held in their hands it revived in about half an hour. The place where this swallow was dug up was every day covered with salt water, at every high tide was four or five feet deep. This swallow was found in the month of February.

"The species called the chimney or house swallow has been found during the winter in hollow trees. At Middlebury there was a large hollow elm, called by the inhabitants the swallow-tree. From a man who lived for several years within twenty rods of it, I procured this information. He always thought the swallows tarried in the tree through the winter, and avoided cutting it down on that account. About the first of May the swallows came out in large numbers about the middle of the day and soon returned. As the weather grew warmer they came out in the morning with a loud noise and soon dispersed. About half an hour before sun-down they returned in millions, circulating two or three times round the tree, and then descending like a stream into a hole about sixty feet from the ground. In November, 1791, the top of this tree was blown down twenty feet below where the swallows entered. There has been no appearance of the swallows since.

"Another of these swallow-trees was at Bridport. The swallows were first observed to come out of the tree in the spring about the time the leaves first began to appear on the trees, and about the middle of September they were seen entering the tree for the last time.

"The following account from Nathan Rumsey, Esq. of Hubbardton, is more conclusive: 'Sometime in the month of March, A. D. 1786, when the snow was deep on the ground, I was making sugar in the town of Hubbardton with the assistance of some boys, who informed me that they had discovered a large number of birds flying out from a tree; I went to the tree and found that the birds were swallows of the chimney kind. For several days I observed the swallows going out and into a hollow of this large elm fifty or sixty feet from the ground. I chopped a hole in the tree, from whence I could see through to their place of entrance, and found that they extended from this hole, from fifty or sixty feet, near down to the ground, and appeared to be sticking to the tree as thick as they could be placed; a considerable part of them appeared to be in a torpid state.'"

In this town, (Weybridge,) about one and a half miles from my residence, a very large elm stood on a farm belonging to Samuel James,* Esq., which has been visited by the house swallow for many years. A little before sun-down I have seen immense numbers of them through the summer months directing their course towards this tree; they would form several circular motions, and then descend into the hole of this hollow tree, which was about the size of a barrel where the tree was broke off, about sixty-five feet from the ground, and bowed over to the east a few feet of the top. Mr. James says that he had frequently seen swallows about this tree going out and in about noonday in warm weather in the spring, but did not offer to go any great distance from the tree. And as warm weather advanced, they were seen by millions to rush out of this tree about half an hour before sun-rise, and after taking a circuitous motion, they would disperse in all directions. Through their breeding season they did not appear so plenty as they did in the spring and fall. About seven years since, some racoons had taken refuge in this tree about the first of September, and it was cut down.

Mr. James says he has no doubt but the swallows remained in this tree through the winter. He was present at the time it was cut, and states that the cavity, which was four feet diameter at the butt, was completely filled to the height of ten feet with dung, bones and feathers.

The idea that most birds migrate by night I very much doubt. The barn and chimney swallow, I know, cannot see as well as common barn fowls in the night. Birds, without collecting in flocks, may migrate through the day time without being noticed by the common observer. The crows for instance, may be seen about sun-down all going one direction through the season to roost, where they congregate in large numbers in some retired swamp, or thicket of evergreens, and early in the morning they disperse in all directions; and I dare say that many readers of this article have never noticed the fact, which they might do by slight observation.

As various opinions have been formed respecting the migration of birds, and especially the swallow, which, as has been stated, exist in a torpid state through the winter, the absurdity of which has been refuted by able naturalists; I hope, therefore, if *wrong* to be *righted*; and if other of your numerous readers can support me in the above facts, I shall hope to hear from them. S. W. JEWETT.

Salmagundi—No. 2.

I avail myself of an inclement day, Messrs. Editors, and have prepared a chapter corresponding with my caption. Permit me, although with some regret to myself, to refer again to

Lamb's Tails.

Not a very interesting subject truly, but made a little important by Mr. Bliss of Connecticut, in the October number. On a former occasion I remarked, in passing, as follows: "After this the tails are docked, and if you wish to save yourselves the trouble of tagging often during the year, cut them off as short as possible." My own experience has sanctioned this on the score of necessity and *humanity:* and I did not dream that any farmer having the character of tidiness, could attempt to controvert it. But Mr. Bliss, it seems, is *eccentric* enough—for that is the mildest term I can use—to advocate natural tails for sheep, and introduces flowing horse tails, and "handsome curled" pig's tails, by way of illustration and argument. A moment's reflection, I think, would have satisfied the gentleman that his comparisons are not apposite. The horse for instance, when well, never discharges excrement when in a lying posture; whereas the sheep will, whether ill or well; and hence, if the tail is left long, the excrement adheres, and if the weather is warm, it attracts the maggot fly; the rest must not be told. Is it not, therefore, an act of humanity to divest the animal of an appendage which is often the means of destroying its life? I could enforce this by the citation of abundance of facts, if I deemed it of sufficient importance. As to the question of *taste*, between long and short tails, in reference to sheep, Mr. Bliss would find himself in a lean minority were he to put the question to the great mass of farmers. Off with their tails—so much for nuisances—will, at all events, continue to be my motto.

Blacklock's Treatise on Sheep.

I anticipated your good advice, Messrs. Editors, and supplied myself some months since with a copy of this valuable work. I have read the whole of it with considerable attention, and most cheerfully accord with you in all that you have said in its praise. Youatt's History of Sheep is as correct a guide, and abounds with more minute and varied information. Both, however, should have a place in the library of every wool-grower. It is my present intention, in the next volume of the Cultivator, to draw largely from these standard works—in addition to my own experience in sheep husbandry, for the benefit of that numerous class of your subscribers, who either will not or cannot purchase either. I did not now intend to advert them, but to the queries propounded in the last number of the Cultivator, by Mr. J. N. Smith, on the subject of "South Downs," induced me to turn to these works and answer most of them in a general way. Blacklock says, "the South Down, like the Ryland, are from the delicacy of their constitutions, unadapted for bleak situations, but sufficiently hardy and active for a low country; their average weight is from 15 lbs. to 18 lbs. a quarter; that of the fleece, which is very short and *fine*, being from 2¼ to 3 lbs." Youatt says, "The average weight of the fleece of a South Down hill sheep was stated by Mr. Labbeck, in 1800, to be 2 lbs.; it is now increased to 3 lbs. The fleece of the low land sheep, that used to be 3 lbs. is now 3½, or even 4 lbs. This is the natural consequence of the different mode of feeding, and the larger size of the animal. The fibre is the six hundredth part of an inch in diameter; the Merino about seven hundred and forty, and the Saxony being but the eight hundred an fortieth part. The serrations are only 2080 to an inch; while in the Saxony wool 2720 were observed in the same space. This greater comparative bulk of the fibre, and paucity of serrations, will account for the harshness and want of felting property which have been considered as defects in this wool. The brittleness of the fibre is perhaps to be attributed chiefly to the soil." After speaking of some modifications of the fleece within a few years, he says—"the South Down sheep master justly repudiates the charge of its deterioration; *it has only changed its character;* it has become a good combing wool, instead of an inferior carding one." As regards crossing—"even the cross with the Leicesters was a failure, and the promised advantages to be derived from a cross with the Merinoes were delusive."

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* Brother to Dr. John and Edwin James, who formerly resided at Albany.

I will transcribe further from Blacklock, which will prove what the world in general already knows, that the South Down is an invaluabe sheep for mutton. "Their mutton is fine in the grain and of an excellent flavor. They are mostly found in in Sussex, on dry chalky downs producing short fine herbage, and arrive early at maturity, in which respect they are equal to the Cheviot, though inferior to them in quantity of tallow. Formerly they would not take on fat until four years old; now they are always at market when about two years of age, and many are killed before that period."

As regards being less subject to *scab* than Merinoes. I have no doubt of it, for the reason that the fleece is not as compact, and therefore admitting more freely the air which conduces to a healthy action of the skin. Whether less liable to foot-rot than other breeds, I am unable to decide; but am inclined to think not, as there cannot be any essential difference in the conformation of the hoof and adjacent parts; others perhaps, can speak with more certainty.

"Don't Sell your Ashes."

I have made a fair experiment with leached and unleached ashes during the present year, and found your remarks on the subject true to the letter; and shall take your advice, and hereafter not sell my ashes. The experiment was on a small scale it is true, but nevertheless sufficient. I measured about one square rod of elevated ground in one of my old meadows, staked it in order to know exactly the spot, and sowed about two quarts of leached ashes. The quantity of grass was increased certainly one-half, if not more. I also measured another piece of ground of similar size, in the same field, rather low and wet, and the soil evidently sour from the moss on the surface, and sowed one quart of *unleached* ashes; the increase of grass was similar to the above.

Like plaster, ashes act as a *stimulative manure*, and should never be parted with by any farmer, at least not for the paltry price of one shilling a bushel. L. A. MORRELL.

Lansing, Tompkins Co. 1841.

A Suggestion.

Messrs. Gaylord & Tucker—I much like the suggestion that was made some time since, that the Cultivator be furnished with the names of the officers of the various agricultural societies. I would amend the above suggestion by a request, that the names of all the officers of the various county societies be published, with the places of their residence, as it would furnish great facilities for interchange of opinions. I am led to make this request, as I wished to correspond with officers of the different societies, but was prevented from doing so for the reason, I did not know their post-offices; and on looking over the Cultivator and Genesee Farmer for this year, I could find only about twenty-five societies that had reported their organization at all, and only about one-half of that number have given the As there is a general wish to interchange views with each other, let one and all comply with the request, and I can assure you places of residence of their officers. Now this should not be so. that all will receive great benefit thereby. J. B. D.

Auburn, Nov. 16, 1841.

A Large Calf.

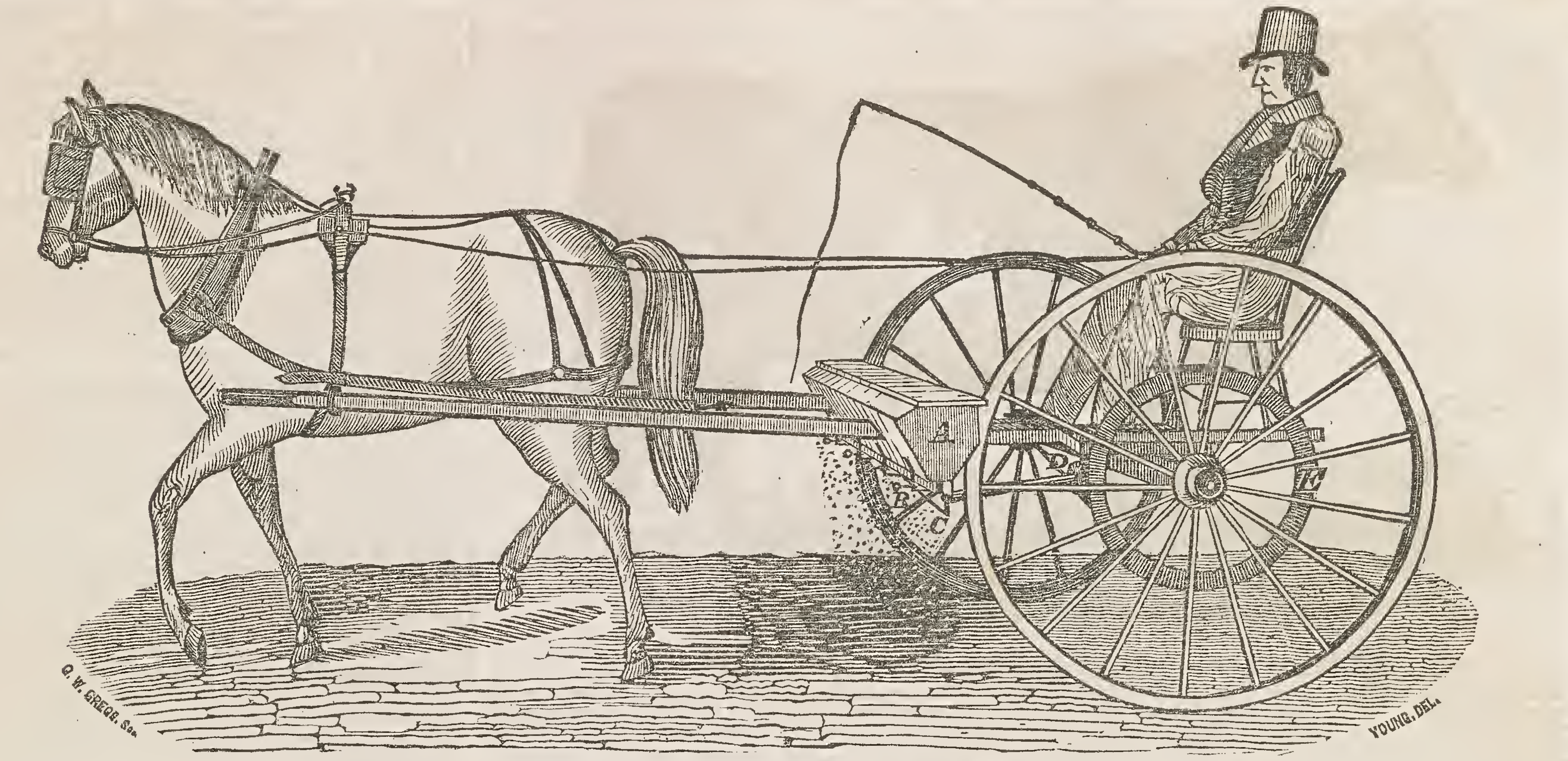
Messrs. Editors—Mr. Hendley Kissinger, a respectable farmer of Pike county, Missouri, has a bull calf which he raised in said county, of the Durham and Patton stock, which weighed, at the age of five months and nine days, five hundred and seventy-four pounds gross. Color, deep cherry red.

JAMES W. BOOTH.

Clarksville, Mo., October 18, 1841.

Quere.—A friend of mine inquires, whether there has ever been any trial of the comparative product of butter from fresh milk and that which has stood 24 or 48 hours? If the quantity is as great and the quality as good, I think the saving would be very great. A. V. D.

Clayton county, Iowa Territory, 1841



HATCH'S SOWING MACHINE—(Fig. 87.)

A machine, of which the above engraving gives a correct representation, designed for sowing grains of all kinds, grass seeds, plaster, &c., invented by Julius Hatch of Rochester, N. Y., was exhibited at the State Fair at Syracuse, and received a premium of $15, as the best machine for such purposes. From what we hear of it, from those who have used it, we are inclined to think, with the New Genesee Farmer, from which we transcribe the annexed description of it, that it will prove one of the most useful labor-saving machines that has recently been brought into use. It "consists of a pair of wheels of the size of ordinary carriage wheels; an axeltree 10 feet long, with a pair of shafts for the horse to draw by. Just in front of the wheels, and across the shafts is the hopper *A*, 10 feet long, and capable of holding 3 or 4 bushels of grain. At the bottom of the hopper is a slide or agitator one inch square, faced with iron and having teeth on the inside, by the motion of which the grain is shaken out. The width of the crevice, and the consequent discharge of the seed, can be increased or diminished by means of set screws, as shown at *B*. When the machine is in operation a rapid vibratory motion is given to the agitator by means of a small rod and crank *C*, attached to one end of a small shaft 15 inches long, on the other end of which is a pinion wheel *D*, with cogs or teeth meshing into the master wheel *E*. The master wheel is bolted on to the inside of the spokes.of the nigh wheel of the machine. It is 2 feet in diameter, and one revolution of it gives eight revolutions to the pinion wheel and shaft. On the top of the back part of the machine is a seat for the driver. A small cord is attached to the end of the pinion shaft, and reaches to the seat of the driver, by means of which he can readily put the machine out of gear, so as to stop the discharge of seed at any time when desired. The machine will sow all kinds of grain, grass seed and plaster, at any desired rate from 4 quarts to as many bushels per acre. It is easily managed, and not liable to get out of order. A man or a smart boy with a horse, can sow from twenty to twenty-five acres with it in a day.

"The inventor and proprietor of this machine has spent several years in testing and improving it, and he now introduces it to the public with the utmost assurance that it will fully meet the wants and expectations of the community. It is well known that *sowing* is one of the most difficult and laborious operations of the farmer, and one which but few men can perform properly. Hence arises the need of a machine like this—one that will perform the work correctly, expeditiously, and with ease. All who have used this machine, agree in declaring that it answers the purpose *exactly;* and if we are not mistaken, it will in a few years be as uncommon to see a farmer sowing grain by hand, as it now is to see one thrashing with a flail."

The machine is manufactured at Rochester, N. Y., by the patentee, who offers the rights for counties or states to enterprising mechanics on favorable terms. Letters to be addressed to Mr. Hatch, as above.

National Agricultural Society.

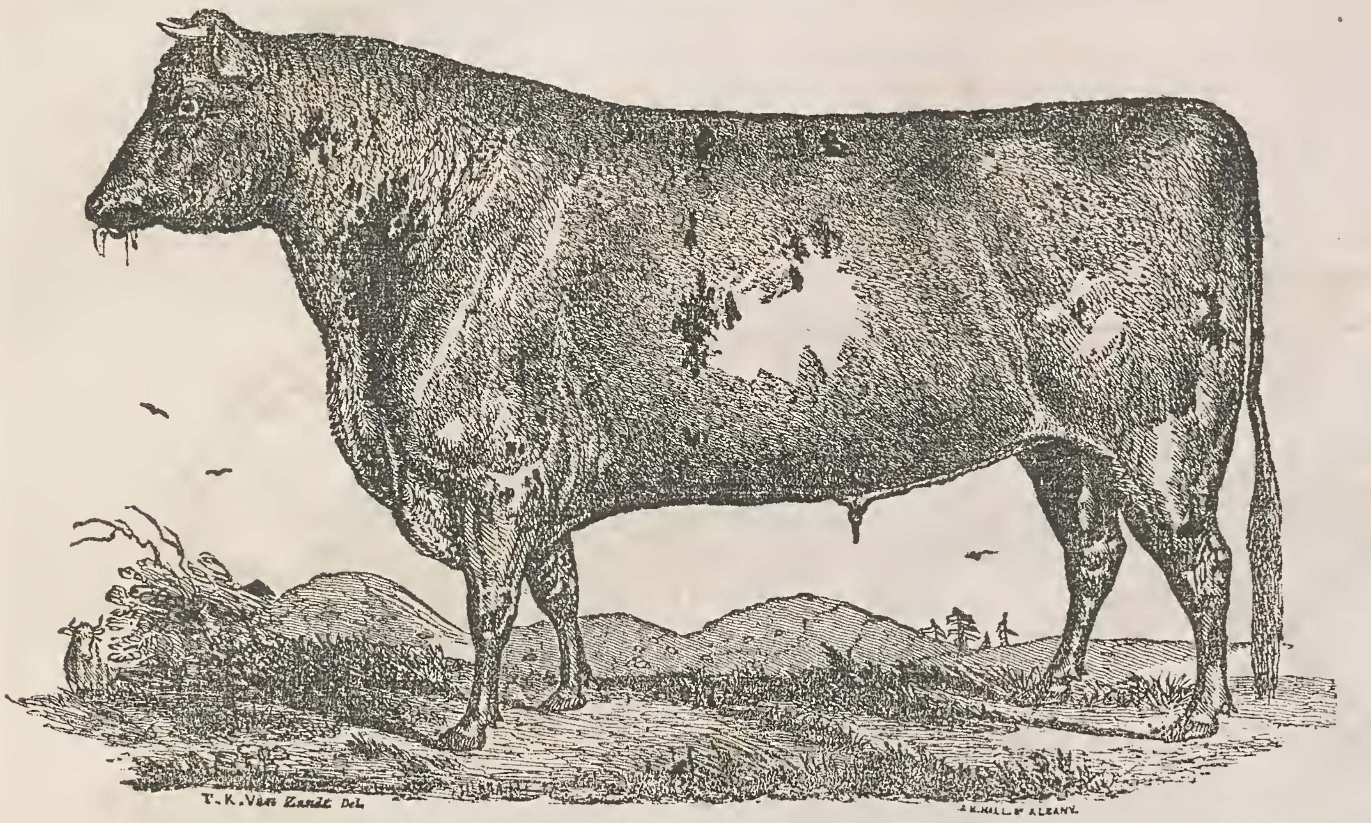
Messrs. Editors—I do not call the friends of a National Agricultural Society fools, neither do I wish to impute to them any notion they do not entertain; but I do believe they entertain the notion of establishing a National Agricultural Society, a National School, and a National Experimental Farm; and of petitioning Congress for the Smithsonian legacy to establish them. Now, Messrs. Editors, as to the Smithsonian legacy, I can see no reason why the farmers, as a class, have any more right to claim it than any other class. Mr. Garnett and others say the farmer ought to have it because there is no profession which requires a more general knowledge than agriculture. I think that the different professions, priests, lawyers and doctors, mechanics, artists, or manufacturers, might claim it for the same reasons. If I understand the Smithsonian legacy right, it was left to the government towards establishing a National University; that the philanthropic donor had no intention of bequeathing it to any particular class for their sole benefit; therefore, if the farmer should obtain it of Congress by log-rolling, lobbying, petitioning or any other means, it would be unjust, as much so as to obtain a half million of the revenue. My opinion is that government is constituted for the protection of all, for the favoring of none; therefore I cannot see what right government has to tax me to pay my neighbor a premium because he has reared a bigger bull calf than I have. Since I received the last number of the Cultivator, I have carefully perused all the communications of Messrs. Garnett, Robinson and Gordon, as well as your own, on the subject of a National Agricultural Society, and cannot conjure up in my brain any thing much different from what I did before. It is described as something from which great undefined blessings are to flow, and great honors are to be obtained, far exceeding the honors of congressmen. It is also said it will serve as a kind of bond to bind our grand confederacy together, although Mr. Garnett says, should the scheme be generally approved, members enough, and more than enough, will be found in the States most convenient to the place of meeting to constitute a numerous association. Well, suppose that this numerous association is collected at Washington, either from the remotest extremes of the grand confederacy, or from one or two of the adjoining States; what then? Why, an Agricultural School, with an Experimental Farm attached to it, is to be established. What is to be taught, or who are to be taught, at this school I know not; and as for one Experimental Farm for such a diversified soil and climate as there is in the United States, I cannot understand it. Friend Robinson thinks the scheme is like a complicated piece of machinery, very difficult to start, but of great use when started. Now I will admit it appears very complicated, and as he is comparing it to machinery, I must take the liberty of comparing it to one of our double geared thunder-shower saw-mills, that go to kill, whilst the shower lasts, but stops for the want of water when the shower is over. So it will be with this grand scheme. As long as government will furnish funds, and riches and honors can be held out as inducements, it will go, and no longer.

I will say no more on their scheme, but simply propose another, which is this: There shall be formed a great National Agricultural Society, composed of all the farmers in the United States and Territories. There shall be no president, vice-presidents, secretaries or treasurer to manage the affairs, but every member shall manage his own affairs. There shall be a great National Agricultural School, and every farm shall be an experimental farm attached to it; every member of this society shall have a premium in exact proportion to his skill and industry; that is, he shall have all he produces on his farm, and shall not be obliged to give his neighbor a part because he was more skillful than himself. It is recommended that every member of this society take the Cultivator, or some other good agricultural paper; and when any member makes any valuable discovery in the art of farming, he shall communicate it to his brother members through the medium of those papers. I well remember the saying of Dr. Franklin to Thomas Paine, that he who spits against the wind spits in his own face, when I say any thing against the fashionable agricultural societies of these days, but I do sincerely believe there is more humbugery about them than any real good. F. BURT.

Importance of Ag. Journals to the Farmer.

Messrs. Editors—I have been a constant reader of your Cultivator for the year that is past, and I am convinced it does produce the effect for which it was established—to improve the mind as well as the soil. Such publications infuse new life and energy into the farmer, and excite him to intelligent activity in his business. The time has past when agriculture was considered a low and vulgar calling; yet there are still some who call themselves farmers who refuse to take an agricultural paper, and the reason they give is, that they can plant corn and potatoes without reading; they don't believe in "book farming" at all. Now I contend that every farmer can afford to take an agricultural paper, and every farmer who refuses to take one is behind the age and blind to his own interest. In fact, the great reason why agriculture has been kept down so long, is, that the farmers themselves have been too negligent, they have been too ignorant, they have not read and informed themselves, they have acted as though they thought theirs was a low calling. If the occupation of the farmer is a degraded one, how is it that some of the greatest and ablest men this country has produced are or have been farmers? Such men for instance as Clay, Jackson, Webster, Van Buren, Hill, and the late Judge Buel, and many others that might be named, by their conduct prove they do not consider the calling of a farmer a disgrace. They are men who unite science with practice, and the results they give the public, for the benefit of their fellow-farmers. If a farmer has a liberal education, so much the better, if it gives him the means of greater influence. To be neat and thrifty farmers, we must be intelligent ones. Some farmers seem to labor under the great mistake they have done all that is required of them, when they have labored from week to week, and month to month, without giving one hour to mental improvement.

And now let me say to every farmer who does not take an agricultural paper, send in your subscription for some such journal at once, and my word for it, you will never be sorry you have done it. What farmer is there among us who would not like to spend an hour with such men as James M. Garnett, A. B. Allen, Solon Robinson, C. N. Bement, and many others? Yet the subscriber to the Cultivator meets these and a host of others, scarcely less celebrated, monthly, and enjoys the rich results of their skill, experience, and observation. The observation of Mr. Bement is doubtless correct, "that in traveling through the country he can tell whether a man reads an agricultural journal or not, by looking at his farm gates, out buildings, piggery," &c. Depend upon it, Messrs. Editors, there is something in the outside show which a farmer makes about his premises. It speaks the mind and the man. L. DURAND.


T. K. Van Zandt Del.

MR. BEMENT'S SHORT HORN BULL ASTORIA.—[Fig. 88.]

The subject of the above cut is the "Improved Durham Short Horned Bull" Astoria, bred by, and the property of, C. N. Bement, of Three Hills Farm, Albany. It was cut on wood by Mr. Hall, of this city, from a painting from life by T. R. Van Zandt, also of this city, a young artist of great promise, in the line of animal painting; and I avail myself of the present opportunity of recommending him to the notice of gentlemen who feel desirous of preserving their animals on *canvass*, and encouraging a modest, unassuming young artist, whose terms are moderate, and whose skill in delineation, is admitted by all who have seen his portraits.

The painting from which this was taken is acknowledged by all who have seen the animal, to be a good and faithful portrait and not flattered; but on transferring it to the block, the head has been diminished and placed a little too high, which, however, is not much exaggerated, when animated by the appearance of other cattle. The ham is also too full, the back too straight, and he is cut up too high in the flank.

It would not be proper for me to say much in favor of my own property; nor is it expected that any animal should be so perfect as to merit entire approval; but the owner would be perfectly satisfied to submit him to a comparison, taking him in all points, with any other bull of the same age, and reared under the same circumstances, having never been pampered or fed high on grain. He has no very extraordinary point to catch the eye, but is remarkably even and symmetrical.

Astoria, when painted, was two years and eleven months old, and measured at the time, from the center of his horns to the root of his tail, seven feet and three inches—girth around his heart, six feet and nine inches—around his flank, six feet seven inches—four feet seven inches high, and raised the beam with 1510 pounds in ordinary working condition. I am well aware that his measurement or weight is nothing extraordinary, unless his treatment and keeping is taken into consideration; for it is well known that by forcing with high feed, animals may be made to measure and weigh much more, and it is equally well known that animals so forced, particularly bulls, often become impotent and useless.

Although he is full and ripe in all his points, he is not yet in his prime; still he possesses the essentials of *good handling*—his skin being thin and elastic—his hair soft and silky. His color white, inclining to a cream, interspersed with dark red spots on his neck and body. He is deep in the fore quarter, as you will perceive by the portrait, well filled up behind the shoulders, a point sometimes deficient in animals of this breed—broad across the hips and loin—flank well let down—body round and ribs arching—legs neither too large or too small, but well proportioned. He has more vigor and stamina than any other bull I have ever owned; but after all, the best evidence of his value is in his stock, which he stamps with the same gay, upheaded appearance as himself; giving them small beautiful heads, with bright, full, and prominent eyes. I have now a yearling bull of his get, more promising than his sire was at the same age, and one bull and six heifer calves, sired by him, which are acknowledged by all who have seen them, to be very beautiful animals, possessing in an eminent degree that gay and lively appearance of their sire.

Pedigree.—Astoria was calved July 14, 1838, got by Ajax, (bred by Gen. S. Van Rensselaer, and got by Washington,) dam Delia, by Carlos, 1787,—g. dam Dulcibella, (bred by Mr. Whitaker,) by Frederick, 1060—g. g. dam Delicia by Major, 2252—g. g. g. dam by Comus 1862—g. g. g. g. dam by Marske 418—g. g. g. g. g. dam by Wetherell's ——.

This bull was exhibited at the late Fair of the N. Y. State Agricultural Society, in the first class, and received a premium of eight dollars, and excited great attention by the numerous visitors on the ground, and by many considered the best bull exhibited. C. N. BEMENT.

Means of Promoting a Knowledge of Meteorology.

[The communication from "B. S." has been a long time waiting for a place, and we are now only able to give a part of it. For some previous remarks on the subject, the reader is referred to Vol. 7, p. 97.]

The various sciences which have engaged the attention of mankind have been almost entirely originated by the efforts and discoveries of individuals, and by the same means, brought to various degrees of perfection and consequent usefulness, but where they have been made greatly or extensively useful, it has seldom been by unassisted individual exertion. Indeed it could hardly be expected that persons should exert the faculties of the mind, and of the body in some cases, to any great degree, with no other prospect of remuneration, than that of fame, or the gratification of their curiosity, neither of which, though in some cases they have effected, and may still effect much, can be expected to produce that energy, (much less as respects some of the sciences, especially this one,) that simultaneousness of action, so necessary to their successful prosecution. To what, therefore, shall we look for the means of producing the necessary co-operation and accuracy?

This may be best answered by referring to those sciences in which great and useful improvements have been effected, and inquiring into the means by which those improvements were brought about.

Astronomy had been cultivated from very remote antiquity, and by a great number of persons, some of wealth and power, but (even among such,) it was usually privately, or as a matter of curiosity, and not as a matter of necessity, or of great or general interest, to any great extent, and was cousequently pursued in quite a desultory manner; hence, though considerable progress was made, yet at the revival of learning in the 15th and 16th centuries it had attained but little of that practical accuracy so necessary to render efficient aid in the extended voyages that began to be undertaken. As commerce still increased, the want of greater certainty in ascertaining the place of a ship at sea, and especially of a method of determining the longitude, attracted the attention of various European governments, especially of Great Britain, and in the latter produced the Royal Observatory at Greenwich, and similar establishments in France and elsewhere. The benefits that have accrued to commerce from these, scarcely need comment here. Suffice it to say they are intimately connected with the rapid progress which it has made in modern times. And similar are the good effects of the patronage which the French government extended to chemistry, when, cut off from their accustomed supplies of saltpeter and sugar, by the naval ascendancy of Great Britain, they sought to produce them within their own territory, and by its aid, as is well known, completely succeeded. But, (among others which might be adduced,) we have in our own country an instance which is scarcely less conclusive; I allude to the geological survey, the benefits arising from which are so great, and beginning to be so well appreciated that the mention of them is deemed a good confirmation of the principle involved in the other instances just given, that though private investigations may do much, yet to bring about that perfection in sciences of public utility, which will enable them to give extensive or important aid in the arts, the more efficient aid of government must be given.

But what probability is there that governments will be induced to give aid and encouragement to this science?

Judging from past events we should say that when individuals by their private efforts give decisive evidence that the improvement and perfecting of meteorology would be really practicable and useful, governments would not be long in extending their aid, upon a due representation of the subject to them;—and though in a general way it may be said that a republican government is more reserved and shy of new schemes than others, yet the prompt and almost simultaneous action of most of our states upon the subject of geological surveys, is an abundant earnest of the encouragement which would be given to this science under suitable circumstances.

But notwithstanding the small advancement that has hitherto been made in meteorology, at least so far as refers to exhibiting decisive proof of its practical utility, (though it must be admitted that some facts of importance have been ascertained,) we have very encouraging evidence of a disposition to promote this science. The following is taken from a Philadelphia paper, July 6, 1839.

"*The cause of storms*, it appears, is beginning seriously to engage philosophical attention. Lord Glenelg, the Colonial Secretary of the British Government, has sent instructions to various agents of the government resident abroad, captains of posts, harbor-masters, and keepers of light-houses, to keep journals of the weather, on the principle of log-books of ships, to note the height of the barometer, and enter all meteorological observations worthy of notice. As the object in instituting these inquiries is the advancement of knowledge and science generally, the governors of the several British colonies are directed to consider how far it may be in their power to obtain useful information bearing on the subject from countries adjoining to their governments in the possession of foreign powers, or how far it may be useful to the study of meteorology, to exchange the observations made within their governments for those of other countries in the neighborhood."

Thus it appears that this greatest of the nations of the old world, after having obtained such lasting and beneficial results through the policy which has there been so well persevered in, of encouraging every science which there was reason to believe would be beneficial to society, is not disposed to abandon one which has been productive of so much good, not to itself alone, but, it is but just to say, to other nations, and particularly to ours. The plan adopted, also, appears highly judicious, particularly on account of the provision to obtain observations over so large a part of the habitable globe, as the widely separated dominions of the British Empire, and the proposed plan of exchanging observations with other governments will enable them to do; and not less valuable is the provision to obtain observations on the natural phenomena, which appear to have been but little attended to hitherto, but without which it appears to the writer, (and the opinion is corroborated by the example of the other natural sciences,) that results of practical utility to "the plowman, the mariner, and the fisherman," will not be obtained.

If such is the vigor with which the British government is about to prosecute this science, shall the United States, which have already reaped such advantages from sciences promoted by other nations, be backward in lending their aid in the promotion of this, in which another has so fairly led the way, and in which they as the second commercial nation on the globe, and still more so, on account of their vast and rapidly increasing agriculture, have such a deep interest? It affords me pleasure to say, that a disposition has already been evinced, in that quarter where it is most likely to effect the object in view, of aiding effectually the advancement of meteorology. The following paragraph, which is taken from another Philadelphia paper, dated July 11, 1840, will doubtless be gratifying to those who have not already been made acquainted with the information it contains, and who desire the promotion of this science.

"*Philosophical observations.*—Mr. Adams from a select committee, reported to the House this day, the following resolution:

"*Resolved*, That the sum of twenty thousand dollars ought to be appropriated for the establishment of five several stations, at suitable distances from each other, for making observations of terrestrial magnetism and meteorology, conformably to the invitation from the Royal Society of Great Britain, to the American Philosophical Society at Philadelphia, and other learned societies in the United States; and that the said sum should be placed under the direction and at the disposal of the Secretary of War, for the fulfillment of those purposes, he to account for the expenditures thus authorized, to the Treasury of the United States."

The foregoing paragraph which was a detached one, was not accompanied with any date, except the date of the newspaper, which of course cannot be the day mentioned in it; it is, however, to be inferred that the report was made during the last session of Congress; and it appears evident, (though I have no other information on that point, than what is contained in those two paragraphs,) that it was intended thereby to co-operate in the plan proposed by the British government, above mentioned. Be this as it may, the proposed measure, (for I have not heard that the resolution was adopted,) is a wise, and even liberal one, in this incipient stage of the science, and reflects much credit on its illustrious proposer, though doubtless incomparably small in proportion to the advantages which would accrue to the farmer and mariner, and indeed, in a greater or less degree, to almost every citizen, if this subject receives the attention which it merits. But lest, for the want of a proper degree of interest being manifested in the subject by those whom it most concerns, even the proposed aid should be withheld, let us, farmers especially, take the matter in hand individually, yet co-operatively, and there is but little doubt that by making observations on the weather, of the proper kind, in every part of our country, and duly comparing them, we shall be enabled to convince the most incredulous of the advantages of, ensure the aid of government in, and when that is obtained, greatly assist and hasten the accomplishment of its designs for the promotion of meteorology. B. S.

Montgomery county, Penn., Dec. 31, 1840.

Traveling Memoranda—No. 6.

Baltimore, Sep. 9, 1841.

Editors of Cultivator—Once more I am ready to make another memoranda for the perusal of the readers of the Cultivator. How I could dilate upon the subject of the great change that 40 years have wrought upon the face of Ohio. How the dense forest has given way before the hand of persevering industry, and laid open immense fields of the richest of soil to cultivation, and increase of wealth and happiness. But notwithstanding the splendid mansion now occupies the site of the lowly log cabin, I cannot believe that there is more real enjoyment within, than the owner used to feel while gathered around the broad blazing fire of the settler's new home. It is the contented and cheerful mind that finds enjoyment in whatever situation his lot may chance to be cast.

What a wild uncultivated waste was this fine region 40 years ago. Even 15 years since, how we used to toil along the muddy roads of Ohio, the stage often to the axles in the soft, wet soil, and the passengers not unfrequently called upon to lend the strength of Hercules to lift the vehicle into an upright position. Now the road from Cincinnati to Columbus is nearly all Macadamized, and from thence, or rather from Springfield to Wheeling, we roll in ease and comfort, at great speed, along the great National road that was designed to connect the east with the *far* west. As an evidence that the roads are not quite impassable, I have only to state that I took the "fast mail" at 11 o'clock on Friday at Cincinnati, and on Monday night I slept at the "relay house," nine miles from Baltimore, traveling by stage all the way, except the short distance from Frederick to the junction of the Washington City Road.

The passes of the almost impassable Alleghanies, have been made passable, and are daily passed by a host of passengers with great speed, if not great safety; for the truth is, that fear of accident does not seem to be a part of the composition of the drivers over these dangerous mountain roads, for they crack the whip and rattle down the long declivities much after the manner that we are all heedlessly rattling through the world. We are all sure to reach the end of the road, but not always "right side up with care."

It was with no small degree of interest that I looked upon these hills piled on hills. For 16 years I had been treading the fertile plains of the west, and in all that time had not seen an eminence worthy of the name of mountain. Here were old acquaintance that should never be forget. And here upon every little spot of level ground was perched the hut of a hardy mountaineer, as blythe, as happy and contented as him who could count his thousands of acres of far more fertile and feasible soil of the west. I could not but ask, "why do you toil here upon these rocks and hills?" and yet perhaps I should do wrong to urge them to give up situations, with which they are content, for the more promising plains that spread out invitingly and uncultivated away beyond the "beautiful river."

Of my doings at Washington in regard to the contemplated National Society, you are acquainted. Of the state of agricultural improvement around the capital of our country, I cannot speak encouragingly. In fact, to me, the quality of the soil presents a very forbidding aspect. By far the greatest portion of it looks to me as though it would cost more than it would come to, to put it into a good state of cultivation. The "skinning system" seems to have been thoroughly practiced here, where originally there was but little to skin, until the fertility has been so completely skinned from the soil, that I should think the present cultivators would find some difficulty in raising enough to keep their own skins full.

But there are some noble and spirited friends of agricultural improvement in and around Washington, among whom Mr. Ellsworth stands foremost. While I was there, he was engaged in an experiment of making a cheap machine for making a ditch and bank fence, of which the public will hereafter hear something. He is constant and unceasing in his efforts to promote the agricultural interest of the United States, and has partially succeeded in converting the Patent office into an agricultural bureau. He has purchased a few acres of the "vacant lots," which abound upon the original great plat of this *to be* great city, for the purpose of trying different kinds of seeds, and making experiments and illustrations in farming, for the benefit of the community. His plan of distributing seeds throughout the country has been of great advantage to the country, at small cost to the government. Every friend of the measure should feel it a duty to forward to him for distribution, a small quantity of every rare seed that he may possess. And I hope that every friend who attends the first meeting of the National Agricultural Society on the 15th Dec. next, will at least take his pockets full of such seeds as he may happen to possess, for the purpose of exchange.

Washington city, like a great many other great things in this great country, was begun on too great a scale. I judge from appearances, that the citizens are not strong advocates of "internal improvements," so far as their own corporation is concerned.

The public buildings are the great, I may say the only ornaments of Washington. To me the Patent office possesses the greatest interest. Independent of the models, nearly all of which that were burnt having been replaced, there is the great "Hall of Manufactures," in which it is designed to exhibit specimens of all kinds of manufactures of the United States, forming one of the most interesting collections in the country. It is also intended to exhibit specimens of every known kind of agricultural implement, from the earliest ages to this time; also a collection of all kinds of grains and seeds.

The Smithsonian collection of curiosities, and also that of the exploring expedition, together with the gallery of Indian portraits, are now exhibited in this building, forming in the whole, an extensive free museum.

From Washington to Baltimore, along the line of the railroad, the land is mostly miserably poor and uncultivated. It is surprising to see what a mass of human beings daily pass over this road. If half of our agricultural population pursued their calling with the earnestness that multitudes of men and women seem to pursue some ignus fatuus over stage route, rail-road and steam-boat route, they would accomplish wonders.

It was a lovely pleasant day that I arrived in this busy city, celebrated for its monuments and pretty women. The thriving appearance of Baltimore, indicates a thriving state of agriculture in the vicinity. Among the ornaments of the place I cannot omit to mention the beautiful and romantic resting-place for the dead, which I had an opportunity of visiting during a ride with Robert Sinclair, Jr., out to the nursery of his father at Clairmont, at which place I found *improvement* strongly developed. I also found a hearty welcome, and all the "trimmings," to make my visit interesting. Besides his flourishing nursery business, Mr. S. has a very snug cocoonery, which he finds quite profitable. Having made free use of lime upon his worms this season, he has found them quite healthy. Mr. Sinclair, Jr. has in the city one of the most extensive agricultural ware-houses, perhaps in the U. S. A large portion of the implements that he sells are manufactured under the same roof and in such a manner that he can warrant them good. From the polite attention bestowed upon me, a stranger, I am warranted in the conclusion that my agricultural friends who have occasion to send orders to this establishment for any kind of implements or seeds, will be done by as they would be done unto.

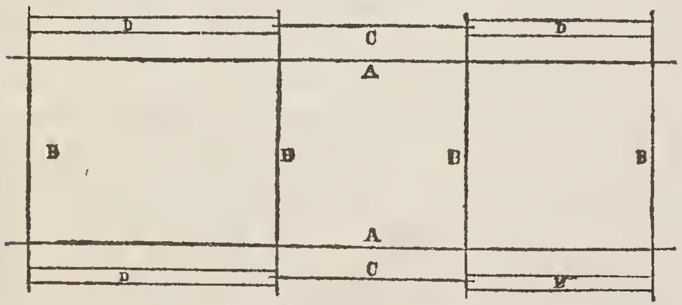
Another of the pleasant days of my life was that in which I made the acquaintance of Mr. Sands, the publisher of the American Farmer, the oldest agricultural paper in the Union. To him and his lovely family I am indebted for a very pleasant visit—such an one as thousands of the friends of agricultural improvement of the present day delight to interchange with one another. Mr. Sands, although grown up in a city, and I might say in a printing office, appears more like a plain unassuming farmer than anything else. He is not only an advocate, like nearly all the leading agriculturists, of temperance, but is also the publisher of a temperance paper. The principle circulation of the Farmer is at the south, and I earnestly hope will long continue to be commensurate with its and its worthy publisher's worth.

I also visited Mr. Hussey's manufactory of his celebrated and valuable reaping machine. This machine is beyond doubt a very useful implement for the farmer, particularly upon very smooth land, such, for instance, as the western prairies. There is, however, in the west a new harvesting machine that bids fair to do away with machines for reaping. It is a machine that actually gathers the grain out of the heads of the standing grain, as clean as it can be thrashed by a machine, leaving the straw standing in the field. I had seen the model of the machine at Chicago last spring, and most unexpectedly to-day I met with my friend Wright, editor of the Chicago Agriculturist, who informs me that the machine has been completed and used during the late harvest, and that it operates to perfection—with three horses, gathering from 10 to 15 acres of wheat a day.

Baltimore also boasts of another lately invented machine, that appears to me to be one that will prove of immense advantage to the community. This is "Page's Saw Mill." The saw is a circular one, and it may be driven by horse or any other power, and is so portable that a mill large enough to saw a log two feet through and twelve feet long, with all the apparatus can be put into a two horse wagon, and taken into the woods and with the assistance of two men, set up and set to work in less than two days, and with the power of the two horses. I dare not say how much lumber *it will* cut per day, but think that you will be satisfied with a thousand feet, although the patentee would not be. In fact, no invention has met my eye that seems better calculatd to be useful to the agricultural community than Page's portable saw mill.

Here as elsewhere wherever I go, I find an earnest spirit pervading all the friends of agricultural improvement, that speaks in cheering tones that our cause is in the ascendant.

To-morrow morning I shall again roll along toward new scenes, some of which I hope will prove sufficiently interesting to induce me again to communicate with you. Till then, accept the good wishes of SOLON ROBINSON.



Hay Rigging—(Fig. 89.)

Messrs Gaylord & Tucker—I have been a reader of the Cultivator from its origin. I have found in its columns a great deal to interest and instruct. It has been to me in many things, as a light that shineth in a dark place. I have in many things been enabled to profit by its instructions. I hail it as a welcome visitor every month. I have often thought of the obligation that rests alike on all, to contribute something to the general stock of knowledge, by communicating whatever we may possess on any profitable subject; but hitherto I have not discharged my duty in this respect, from the general reason that I had much rather be taught, than teach; and particularly from want of time to prepare an article such as would either interest or instruct others. Laying, however, these reasons aside for the present, I will offer through your paper, an answer to "A Subscriber's" inquiry relative to "Hay Rigging," (Cultivator for August, p. 134.)

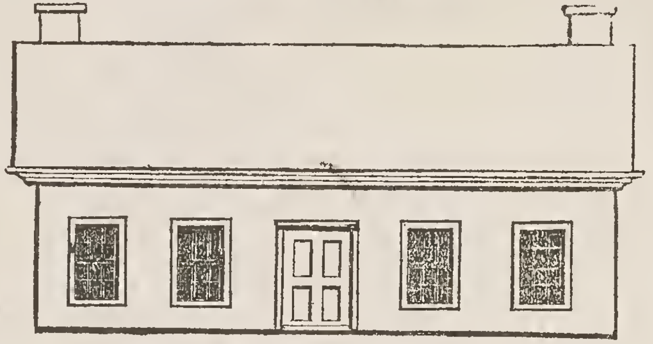
The above drawing is designed to represent a convenient article for hauling hay and grain upon. A, A, under rails 16 feet long, 4 by 3 inches square, of strong light timber; these are to lie upon the bolsters of the wagon on their narrow edge, so that they may have sufficient strength. B, B, B, B, four pieces, 4 by 3 inches square, and of length sufficient to extend 3 inches on each side past the rim of the wheels; they should be of strong light timber. These pieces are put across on top of the under rails, and sunk into them one inch. The first piece in front, say 2 inches from the end of the under rails, and the hinder piece in like manner. The distance between the front piece and second one, 4 feet 10 inches, and between the hinder one and the next forward one, 6 feet. No difference about the distance between the two middle pieces. D, D, D, D, are bows inserted into the ends of the cross pieces by auger holes bored obliquely through the ends of the cross pieces, 2 inches from the ends and 3 inches apart. These bows rise over the wheels and bear up the hay or grain off them; they should be about 2 inches in width and one in thickness. They ought to rise so high over the fore wheels as that the rolling of the bolster on sidling ground will not bring them down upon the wheels. These bows need no other fastening than simply to be slipped into the holes. C, C, two pieces 2 inches wide and 1 thick, resting on the ends of the two middle cross pieces to bear up the hay or grain in the vacancy between the bows. They are fastened on by a small auger hole and pin. The cross pieces are fastened to the under rails with iron bolts and screws. This renders it easy to take the frame apart and store it away when not required for use. It will be requisite to couple the wagon longer for this frame than for ordinary purposes. This has two advantages; it distributes the load equally between the fore and hind part of the wagon, and makes it less liable to upset. This frame will meet the wishes of *A Subscriber*.

On this sort of frame we haul in this country from 20 to 30 hundred pounds of hay, many miles, over the roughest road, when bound on with a good pole along in the middle of the load.

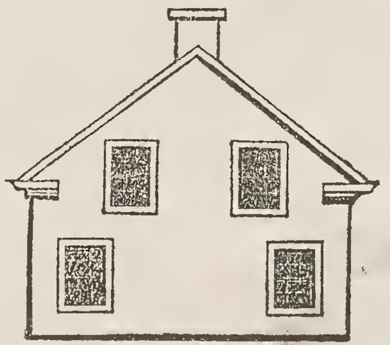
If the foregoing is not worthy a place in your paper, you can throw it aside as waste paper, and I shall not trouble you again.

Knox Co. East-Tennesee, August 27, 1841. A Reader.

Plan of a House.

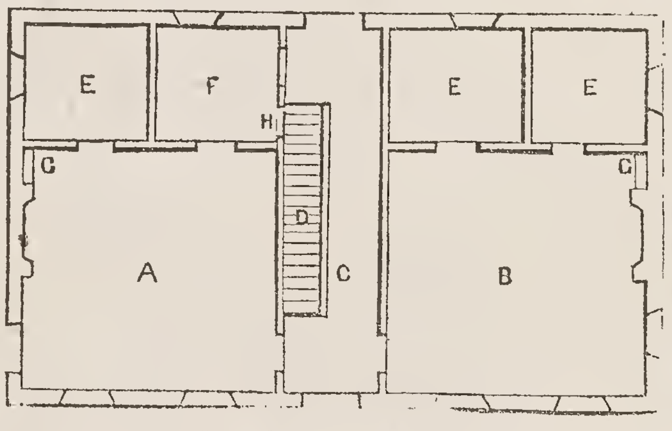


Front view—(Fig. 90.)



End view—(Fig. 91.)

Messrs. Editors—I send you a rough draft of a house, 42 feet by 25, one and a half stories high, which I think is both convenient and cheap. As farmers do not generally like to live up stairs, I think a story and a half house will suit a great many of them; the upper part can be finished with two or more rooms as best suits the proprietors. As Mr. W. Reed wished a plain, cheap, convenient house, the following plan may suit him. The cost of this house, like all others, will vary in price according to the country it is built in. It could be built in this section of country for about $700. I have contracted to build one of the following size on the ground, but two stories high, with a portico in front, for a farm house adjoining the village of Titusville, which will cost about ten or eleven hundred dollars. The kitchen chimney will start in the cellar and there can be a fire-place and oven for washing and baking in the cellar if it is required. The plan is original, and if you can put it in order for your paper, and think it will benefit any of your subscribers, it is at your service. J. R. S.



Ground plan—(Fig. 92.)

Fig. 92 is a ground plan of a house, 42 feet by 25.
A, kitchen, 16 feet by 18.
B, parlor, 16 feet by 18.
C, hall, 6 feet wide.
D, stairs.
E, E, E, hed rooms, 8 feet by 8 1-2.
F, buttery.
G, G, cupboards.
H, cellar door under hall stairs. J. R. S.

South West, Pa., July, 1841.

Letter from Kit Cornhill.

Misters Gaylord & Tucker—Fur a grate while I've bin thinkin to rite yu a lettur to let yu kno what a heep ov good yore Papur wur dooin fur us aul down in what we cauls the ainshant dominyun, but I wus sorter jubus I'de make sich a pore fist on it that yu coodent rede it. And I wus feerd too that yude laf at me, as I'me mity skant ov book larnin, which iz yet misrebel scace amung us—mo is the pitty—tho I'me glad to tel yu its gittin a leetel bettur here ov late—But tuthur da, thinks I to miself, fante hart never wun fare ladee—so I'de tri—By way ov beginin I mus tel yu that befo we tuck to reedin yore Papur we aul thort that book fokes like yu knode nuthin bout pracktekel mattur, but now weve larnt that yu knose a site mo than we duz, and so we ar gittin a sort ov a noshun that reedin yore Papur at spar times iz grate deel bettur than idelin about at stores and grog-traps, or guzlin licker at home and then sleepin mo than natur nedes. Anuthur good thing iz that reedin yore Papur puts us on reedin uthur things bout our biznis, & this givs us sum hed wurk to doo ov which we dun mity littel befo, & now we findes our hand wurk gose on aul the bettur & mo knoinly fur it. Evry now & then we setts sum on our boys or gals thats bin to skule to reedin ov nites to us & ther mammys, God bless em, & this makes us aul luve home & wun anuther a vast site bettur than when thar wuz no reedin amung us, & nuthin but mopein & yawnin & dozein, & ma be quorrelin arter our daze wurk was dun, or when it raned or snode too hard fur o ov dores wurk, oh, yuve no noshun how kumfurtibel time pases when we pore labrin fokes begins to git a leetel insite into the pleshur and proffit ov reedin good books—its liker meet & drink to a haf starvin man than enny thing else. But yu who always knode how to reed cant undurstand this—I wish yu coud, fur I'me shore twood doo yore harts good to think that yore Papur had helpt to bring so menny on us to sich a good condishun. Wunce evry munth it cums shore enuf to aul on us who takes it, & we goze to our postofficis, purtickler sich as luvs play bettur than wurk, as too menny on us duz to tel yu the truthe ov it, & speshelly bout lecshinneerin times, when sum gits mity drouthee & nose that them that wants ther votes wil be pushin about ther licker, purtendin aul the time they ar treatin us fur pure luv & frendship sake & not fur bribry & korrupshun, oh, no—not fur the wurld wood thay doo sich a skandalus thing—But we nose better, & so we winks at wun anuthur & swollers ther grog aul the same as tho we bleevd em. Then when yore Papur cums—arter a drink or so—we gits our postmaster or sum ov our kandidits or slangwhangers, who ken make shift to reed without spellin, to reed it to us—Then we that scribes fur it takes it home & shose to our children thats jest beginin to tauk yore mazin fine picturs ov hosses, kows, shepe & hogs, & twood make yu most split yore sides lafin to see how the littel things star & cro at em. But to be shore we has mity ofen to caul over the names on em & pints with our fingurs, speshelly at the hogs, befo the littel fellors seem to kno em, fur if the truthe mus be teld yore pictur hogs is no mo like our sharp nosd—long legid—slab sidid grunturs than chauks like chese—May be tis onely them sort ov critters that sum fokes that rites to yu sez wil git fat as mud eetin nuthin in the wurld but appels & rutes & sich truck—Now if this be so, I wish frum my hart we cood git sum ov em here, fur weve ofen did our best to fattin ourn with them sort ov things, but devil a bit ov fat cood we make gro on ther ribs enny mo than we cood on a hen's forid—Without we givs em a nashun site of Ingin corn its a gaun case with us fur poke fit to make baken. As fur yore kow picturs thars pruty much the same puzel to make our littel wuns kno them, & we shude have a mity pore chance to doo it at aul if it wuzent fur the hornes—fur our pore, dizmal, rickitty critters kommunly looks much liker skilletens than rale kows—speshelly bout March & April when they goze stagrin along in a krank sided sort ov way like so menny drunken men, & thar oners purtendin aul the time tis the holler haun instid ov the holler belly that makes em lap thar legs over frum side to side jest by way ov keepin them frum fallin doun flat, I spose becaze ther heds swime, pore things—And yit if yule bleeve me Misters, yu may ofen heer these same kow starvin gents bragin to wun anuthur about ther methuds & ther sistims as thay cauls ther dooins—jest as if thay knode aul about farmin & them sort of things—I'me not jokin wun bit gentelmen—but its enuf to make a dog laf—that it is—to lissen to em & see how knoin they looks in wun anuthurs faces—who but they so mity wize & up to teechin aul uthur fokes how to be farmers—its good as gwine to a play actin to se & heer em at sich sort ov tauk.

When I wuz ritin bout hogs thar wuz wun thing I furgot to menshun, which wuz that in reedin ov these nu fashun critturs that yore friends prase so much & insis that thay wil git rite fat on appels, rutes & sich sort ov stuf without evn a bit ov enny kind ov grane—sum on us coodent help suspishunin that sich norashuns cum mity nere what the salurs cauls long yarns & we cauls strechers—not that I myself is aultogethur wun of these suspishuners, bein satisfide that if wele bleeve nuthin that we duzent se & kno, wele have but a slim chance to doo wel ithur in this wurld or the nex—But betwene ourselves, I mus say that when enny fokes rite to yu what they never kno, is mity hard fur us clodhoppurs to undurstand & think tru, it wood always be a heep bettur to sine ther own proppur names, & ad the names ov sum witnisis too if thay cood git enny—I've jest sed that I wuzent aultogethur wun ov these suspishuners, but I red wun thing tuthur day that stagerd me mazinly—It wuz that sum fokes—I furgit ther names—in Kanetuck did make las yeer 200 bushels ov corn frum ounly wun aker ov lan—Now, when I fust red this I wuz dumfoundid fur sum time. Howsumdever, arter a while I gits out ov this fix, & I axis a frend that knos aul about rethmetic matturs to kalkilate how much corn this wood be to the square yarde—So he sums ups & tels me, moste 9 jils—Prodijus says I, & evn so sez he, fur we downe Olde Fejinne thinks we ar takin the rag off the bush if we ken squese out as menny as 3 jils, & evn then we is moste afeerd to tel it without witnisis—Stil I've heern say that nuthins onpossibil but fur a man to bite his own noze off, & tharfoor I'me not suar but 200 bushils & evn mo corn mite be made frum wun aker—but it shutes so fur e hed ov enny on us heerabouts that to make it jinrelly knowne in these parts yit a while, wood put us aul mizribly down in the mouth with our own littel crops. And wusser yit, we shood be so out ov hart nex corn plantin time, that we cood have no sich good stummack to our wurk as we mout have if we hadent heern of this grate Kanetuck crop, that beats aul natur. And now good Misturs Gaylord & Tucker if yu wil exkuze bad ritin & a grate site wus spelin, I'le bid yu both farwel, bein yore rale but stranjur frend,

Old Feginne, May 12, 1841. KIT CORNHILL.

Relief of Choked Cattle.

Messrs. Editors—Believing the fact is not generally understood, that ruta bagas seldom need cutting or slicing, I would state that for three years past, I have in no case cut them for any thing having good teeth. Sheep eat them decidedly better when fed whole, and cattle never choke on them. When I practiced cutting, scores of cattle were sometimes choked in a season; and here permit me to remark, that when such an accident occurs, I use a flexible rod about four feet long, three-fourths of an inch in diameter; wind a wad of tow, the size of a hen's egg, around the butt end; tie a rag tightly over it, grease it and push gently down the throat. To keep the mouth open take a piece of hard wood, one foot long, four inches wide, one inch thick, bring the ends to a point, bore a hole one and a half inches diameter through the center, push through the mouth, turn on the edge and pass the rod through the hole. I have never failed in any instance in thus giving effectual and permanent relief. With such an apparatus on hand, five minutes is sufficient to relieve the worst cases. Respectfully yours,

Whalen's Store, Nov. 15, 1841. SETH WHALEN.

The Horse—Inquiry.

Messrs. Gaylord & Tucker—I avail myself of the privilege which is so freely accorded to the agricultural community, to address an inquiry with regard to the Canadian breed of horses. I have seen Mr. George Barnard's seemingly undeniable proofs of their agency in producing the Morgan breed, which are almost unparalleled for endurance and speed. Cult. vol. 8, No. 10. What I wish to know is, whether a cross with one of them on the large Pennsylvania mares would not produce exactly the animal required, getting endurance, speed, style and action from the sire, and size, weight and strength from the dam, and also being free from that fault of the blood horse, which is technically termed having too much *day-light* under him. The introduction of the Arabian is the making of the race-horse, and why not the Canadian our work-horse?

I have proposed only one cross; I hope, however, persons practically experienced will communicate what they know, not only about this, but any other cross in which they may have been tried. These remarks are respectfully submitted to my fellow-subscribers in the hope of eliciting something on this important subject. WILLIAM R. OLDEN.

Rodman, Bucks co., Pa., Nov. 12, 1841.

Wheat Culture—Queries.

Messrs. Editors—I have noticed in almost every number of the Cultivator, something in relatiou to wheat and rye producing (or turning to) chess. But never until your Nov. number appeared, had I supposed it possible that *oats* would produce chess. Nor do I believe it now. I wish, however, to tell you what I do know, in regard to wheat producing chess. But in the first place allow me to state, that I am the individual who presented to Mr. Goodsell, (the then editor of the Genesee Farmer,) that famous head of wheat from which was growing *apparently* several grains of chess. I never was a believer in the transmutation of wheat to chess until that specimen was placed in my hands. It was a head accidentally discovered, in mowing away a load of wheat in the straw. But I have said enough of this. Now let me tell you, that this much I do know; I had a field of some ten acres of wheat, that came up and grew quite large before winter set in. In the couse of the winter I had occasion to sled a large quatity of timber from an adjoining wood, across this field. My neighbors told me that wherever I made my path across the field, there my wheat would be all chess. Not believing in the doctrine, I concluded to run the risk; but harvest time told the story, and it's this, and precisely as my friends told me. I had very little wheat but a most luxuriant growth of chess. But don't throw my communication under the table in disgust yet.

There is another fact, about a part of this same wheat field, which placed matters in a different light. I had procured one quart of a new variety of *spring wheat*, and wishing to give it a fair trial, I had reserved four square rods of ground from one side of this same field, intending to give it an early plowing (though it had been prepared alike with the rest,) and then sow on my spring wheat. But living or rather staying, in an old log house, I found to my regret, that before spring the rats had made way with every grain of it. The consequence was, the four square rods of ground remained without being plowed, or in any way cultivated; and although the sled path was not within twenty rods of this piece, and not a single grain of wheat or rye, *oats*, or auy other grain sown upon it, yet still I had from this same piece, *six large sheaves* or *bundles* of *chess* fully matured, and which when thrashed and cleaned, weighed to the bushel, only five pounds and fourteen ounces less than oats. I have noticed that many of your correspondents have clearly shown (at least in their opinion,) various ways in which wheat is made to produce chess. But how, I ask, (and the question is to such as believe in transmutation,) how came it about that this piece of ground which had not been sown with any kind of grain for five years, produced this crop of chess? Did it spring from nothing? or from seed that had lain deposited in the soil, (the result of former bad management,) and which only needed to be brought to light and heat, or near the surface, that it might vegetate? Another fact; a piece of timbered land, that I caused to be cleared in mid-winter, (lay adjoining an old neglected, though formerly cultivated field,) and on which, no grass or grain had ever grown, the next summer was covered with a rank growth of fire-weed, so called, interspersed with chess, but more particularly along the margin of the *old field;* did this fire-weed and chess spring from nothing? or from seed long since deposited? One more fact and I'll weary your patience no longer. Another field of two acres, was cleared of a very heavy growth of timber, without the least *under-brush*, and the next summer there started up a most luxuriant growth of the hazle bush intermixed with chess, as perfect as ever grew in any wheat field; now, agreeably to the doctrine of transmutation, the hazle and the chess, in this instance, must have grown from the mutilated stumps and roots of the various kinds of trees, most unceremoniously *browsed* off by the woodman's axe. I have seen nothing yet advanced that bears the semblance of *proof*, that wheat, rye, oats, or barley, can be made to produce the grain known as *chess*. W. WADSWORTH, Jr.

Berkshires and Woburns.

Messrs. Editors—Since my return home, I have had my attention called to Dr. Martin's article on the Woburn swine, page 148 of September No. of Cultivator, in which I see he claims a great superiority over the Berkshires in easiness of keep, by quoting a couple of sentences from a communication of mine in April No. page 67, under caption of "Manner of Feeding Stock in Ohio," in contradistinction to a trial made by him with his Woburn sow Marion.

Dr. Martin will permit me to say, to begin with, that I think his supposed triumph, if triumph it can be called, is both petty and disingenuous, and his argument the same. When he shall have taken twenty-two sows in the heat of summer, averaging the weight of those alluded to, roving about ad libitum in a twenty acre arid grass pasture to feed, instead of one animal closely confined in a pen, the experiment will look a little more equal. Again, he only states but the half of my communication upon feed.

If he will condescend to look at the article once more, he will see that I was arguing against the great loss in feeding whole corn instead of grinding it into meal, and he might have gone on with a little more fairness, and added the further part about ship-stuffs. Now these only cost in the ratio of four and a half to one of corn, and yet it is my opinion that they would have gone as far in the manner they were fed, to keep swine in *store* order, bushel for bushel, as did the corn. Stating the argument in this light, the Woburn would have been beaten; but Dr. M. does not say whether his corn was fed *whole*, or whether it was made up into mush; if the latter, he can't but know, that it will make a difference of at least fifty per cent.

As soon as my article appeared, my brother wrote to me in Ohio, stating that the amount, four bushels of corn per day for twenty-two swine, was *monstrous;* that I must have been mistaken in the quantity, and wished my attention to it. I thought I had entered the experiment of feeding upon my farm journal, but on searching now I cannot find it; but the head man, who has the care of the stock, asserts that it was only three bushels per day with the corn alone, and one-half a bushel with the ship-stuffs. He is a careful, candid man, and as he was one of the two that assisted in feeding it out, I have no doubt that he remembers better than I did, with so many other affairs upon my mind; but be this as it may, after making the assertion, *I am willing to abide by it*, mistake or no mistake. But Dr. Martin will have the goodness to make a similar experiment, on an equal number of Woburns, of equal weight to my Berkshires, in the month of August, and on dry, hard, old, whole corn. What led me to make this trial, was the seeing in the manure of my animals quite half of their food come out whole, and lie rotting upon the ground: my argument went to show, that there was great economy, at least with us here, in grinding the grain before feeding it.

But another trial that I made in keeping Berkshires was last March and to middle of April, in Ohio. Eleven head of sows, weighing from 303 to 384 pounds, averaging probably 350 pounds each, were kept without shelter in an open field, when no grass had started, by Mr. Joseph Sullivant of Columbus, for me. The direction to his man Cyrus, was at first to feed them one bushel per day; but on this it was soon found that they were gaining too rapidly for good breeding, when they were cut down to three-fourths of a bushel per day, and still on this it became apparent that they were getting too fat, and had not Mr. Mahard of Cincinnati, came up and purchased most of them, 14th April, I should have then cut them down to one-half a bushel per day, which, in the opinion of Mr. S and all who saw them fed, would have been amply sufficient to have kept them in good breeding order. The kernels of the Ohio corn being much larger and softer than ours at the north, I found that the swine ground it finer in eating, and more easily and thoroughly digested it than during the preceding August when fed at home; there would, of course, be the same, or perhaps a greater, difference in favor of Kentucky whole corn.

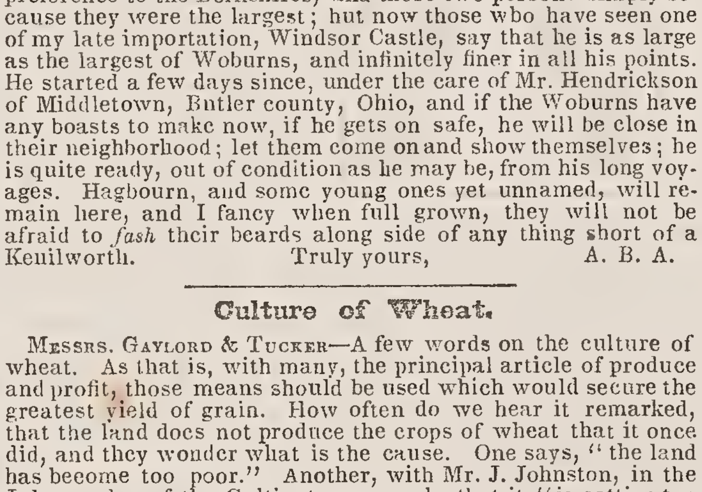
Allowing Dr. Martin's weight of 55 pounds to the bushel, this would have been just five pounds per day each, when fed one bushel. At three-fourths of this amount, it would have been three pounds twelve ounces each per day; and at one-half a bushel, two and a half pounds. Marion, a young eleven months Woburn sow, it seems eat a fraction over four pounds ten ounces per day, sheltered and close confined, which all know makes a great difference in favor of a less consumption of food. I am sorry that I cannot add the amount of gain of the above animals during this time. I only know their weight when sold, as we were obliged to weigh them before going on board canal boat for Portsmouth, to render the same to the collector on which to calculate the tolls.

As to all the other of Dr. Martin's experiments, Woburns *vs.* Berkshires, I will add, that I consider them as really too trifling to have been made that detail of in the agricultural papers that he has seen fit to do. His feeding against Mr. Fanning, of the Tennessee Agriculturist, was thus: Mr. F.'s pigs were from the first litter of rather a small *young* Berkshire, while Dr. Martin's was from a large *old* one, of course the latter had the advantage all in his favor, even supposing that the breeds had been the same; joined to this, he is a much more experienced feeder than Mr. F. which makes another wide difference. But it seems that Dr. M.'s Woburns have been easily beaten on his own principles, at least once this season; see late Nos. of the Cultivator; and Mr. George Hezlep of Ohio, gave me the weights of three pigs at eight months three days old, a cross of the Berkshires on the common hog of the country, that without any particular pains, weighed, respectively, 300, 312, and 318 pounds. Bernice, four days older, weighed 354 pounds, fed with all possible art, probably wheat bread and milk, and sugar, lard, fat, boiled mush, meat, &c. For the trial of feeding, gain of most pounds for their food, page 179 of November's Cultivator, detailed by Mr. Weathers, it seems there were two against one, and it might be about as fair as the poor miserable stunted Berkshire boar that Dr. Martin keeps, as I am told, and shows off against his great fat Woburns. Before this reaches the press, I shall probably have made a flying visit to Kentucky, when it is my intention to look over the Woburns, and if their advocates are desirous then of making a trial against the Berkshires, if I can get a few of my late imported ones safely on, they will find me quite ready to feed their stock and crosses on the Ohio hog, in any sort of fashion they may please, either weight against consumption of food, or weight against time. But for my own part, I am yet to learn what Woburns are. Those bred formerly on the Duke of Bedford's estate, have long since run out, and when in England, I saw more than twenty different kinds of hogs called by this name, and the same will be seen here in our own country, and by Dr. Martin's figures of his swine exhibited in the late Nos. of the Cultivator, they are just as various in shape and appearance as there are different animals represented. I have conversed with many persons from Ohio and Kentucky, who have repeatedly seen Dr. Martin's Woburns, and also kept them, and out of all, I only found two who advocated them in preference to the Berkshires, and these two persons simply because they were the largest; but now those who have seen one of my late importation, Windsor Castle, say that he is as large as the largest of Woburns, and infinitely finer in all his points. He started a few days since, under the care of Mr. Hendrickson of Middletown, Butler county, Ohio, and if the Woburns have any boasts to make now, if he gets on safe, he will be close in their neighborhood; let them come on and show themselves; he is quite ready, out of condition as he may be, from his long voyages. Hagbourn, and some young ones yet unnamed, will remain here, and I fancy when full grown, they will not be afraid to *fash* their beards along side of any thing short of a Kenilworth. Truly yours, A. B. A.

Culture of Wheat.

Messrs. Gaylord & Tucker—A few words on the culture of wheat. As that is, with many, the principal article of produce and profit, those means should be used which would secure the greatest yield of grain. How often do we hear it remarked, that the land does not produce the crops of wheat that it once did, and they wonder what is the cause. One says, "the land has become too poor." Another, with Mr. J. Johnston, in the July number of the Cultivator, remarks that it "is getting too rich for wheat," "the best of wheat land here is getting too much clover, barn-yard manure," &c. Now I am satisfied that they are both partly right. The land is, in too many instances, getting *too poor*, by a miserable system of farming, or rather by no system at all; the land is nearly worn out before any manure is thought of; one crop after another is taken away without the least idea of returning any thing to the soil; and after years of such culture, the farmer is surprised that the yield is not so great as formerly. Again, in one sense the land *is getting too rich for wheat.* By another but false system of farming, and by a misunderstanding of the true use of manures, a succession of crops is taken from the land, and clover, barn-yard manure, &c. bestowed liberally in return; by those means encouraging a large growth of straw, not considering that that which enters very materially into the formation of the berry, lime, and of which large quantities are removed with every crop of grain, is not returned to the soil. Evidently the only true system of manuring would be that which would return to the ground those substances which the growing crops absorb, in as nearly the same proportion they are removed as possible, and by those means returning the soil to the same state as when it brought the best crops.

A Farm Gate.



I herewith take the liberty to send a sketch of a gate, which I have had in use for several years, and which, although equally as simple, is yet in many points superior to many that I have seen. Its peculiar construction effectually prevents the settling of any part of it, and by its simple hangings, the gate itself can be speedily adjusted, should the post be moved by frost or otherwise. The slats and braces are made of ¾ inch stuff, 4 inches wide. The brace A, is let in on the face of the two end pieces in a dove-tail form, and nailed. The brace B, on the opposite side of the gate, is also let in its own thickness, but the ends are sawed square as dotted in the figure. The end pieces are 3 by 4 inch scantling, one 5 feet 4 inches and the other 8 feet long, and the space between the slats is as follows, beginning at the bottom—4, 4, 6, 8 and 10 inches, which will make the gate 5 feet high. The gate is hung by its bottom, being set into a piece of timber which is morticed into the posts just at the surface of the ground, and by its top being let through the piece C. The top of the post K, is made into a tenon 1½ inches thick, and the cross piece C, has a corresponding mortice of sufficient length to admit of the two wedges W, W, which are intended to raise or lower the gate. The latch is also of wood, of which a side view is given at 2, which shows the gate nearly shut. The end of the gate is intended to shut against the post, so that the latch which works loosely on the pin P, may play between the slats S, S. Its shape is such, that as the gate shuts, the lower one of the two slats raises the latch, until it is past the notch, when the upper one forces it down, thus always preventing the gate from flying open when suddenly slammed shut. This latch too, effectually prevents the gate from being opened by hogs or cattle. A. V. D.

Clayton county, Iowa Territory, 1841.

Importation of Cattle.

Messrs. Editors—I have read with some interest Mr. Allen's sketch of what he had done during his trip to England, given in the last number of the Cultivator, and wish to express my conviction of the general justness of his remarks on the subject of Short Horns and Horses. Of the first, he says, "of the Short Horns I brought nothing for fear of the disease so prevalent throughout England; and because there is but one man's herd there that can improve our own;" and of the second, he adds, "for horses, England ought to come to us. She has nothing that can compare with our famous trotters; and our Dutch Pennsylvania wagon horses are far preferable in my estimation, to her boasted cart horses."

It has been matter of surprise to me, that the subject of danger from the introduction of the disease which has been for two years so fatal to cattle in almost every part of Great Britain, by the importation of animals infected, has not been sooner brought before the agricultural public. I venture to assert, that should the epidemic appear here with the same fatality as there, the damage to the country would be estimated by millions of dollars. It was years in traversing Poland, the north of Germany, &c. before it found its way into France and Britain, and in the last of these countries it has been much more destructive than in the former. It appears, like the cholera, to have traveled westward, although the place of its origin is unknown. At the close of 1840, it seemed to have mostly passed from England, but still raged in Scotland and Ireland; but the London Veterinarian of September, a work of authority, now before me, says, "with regard to the epidemic among cattle, sheep, and pigs, we regret to say, that in many parts of the country it has appeared afresh, and is as virulent and infectious as before." Of the infectious nature of the disease, the instances given in the Veterinarian are perfectly conclusive, and the cause of its reappearance is thus stated: "A great number of Irish and Scotch cattle are brought into this country (England) twice a year—in the autumn for the strawyard, and in the spring for grazing purposes. These cattle arrive in large droves, and are sold to a great many farmers in small lots. There are very few of these droves among which some diseased cattle are not to be found; purchasers take these infected cattle, ignorant they are thus diseased, and the infection is thus communicated to whole herds. These droves have been the means of the disease spreading wider and more rapidly than all other causes put together."

The following extract from the circular prepared by Professor Sewall, at the request of the Royal Agricultural Society, on the nature of the epidemic, &c. will show the usual appearance of animals attacked. "The attack does not always commence in the same form, but ultimately terminates in a general disease of the same type and characters. In some animals it commences in the feet between the claws, and in others it appears to have begun in the mouth; in others stiffness in the legs of the animal is first perceived, as if treading upon thorns or briers; then follows a discharge of saliva from the mouth, and a champing of the lips, accompanied with blisters on the tongue, palate, and lips; the blisters peel off, loss of appetite, general debility, and not unfrequently death ensues."

From the description here given it would seem to have resembled the disease called the black tongue, which was so fatal among horses a number of years since, (and which by the way, according to the English journals prevailed extensively in that country in 1836,) but which did not here extend to other animals. A number of instances are reported, in which the meat of diseased animals has been sold with fatal effect to those who partook of it in England, thus proving that like some other diseases of animals, the glanders for example, it may be communicated or prove poisonous to the human subject. It has occurred to me that the case of mortality in calves, recorded by Mr. Merrick, at page 176, of the current volume of the Cultivator, does not vary essentially from the disease as it has appeared in Britain, according to the foreign journals. I may add that the disease developing itself so rapidly as to render it nearly impossible an infected animal should reach our shores without exhibiting the complaint unequivocally, will be our great safe guard so long as the frequent importation of animals contiues; and I will suggest that no new imported animal of any kind, cattle, sheep, or swine, as all these are attacked abroad, should be suffered to run with others, until a sufficient time has elapsed to prove his freedom from the prevailing epidemic.

The same danger from disease, does not exist in the importation of horses, as in that of cattle; but the necessity, for the sake of improvement, it is clear to all who have seen the best specimens of imported horses, or traveled abroad, does not have an existence. There cannot in England or Scotland, be found a breed of horses equal for both road and field labor to the Morgan horse of Vermont, or the Pennsylvania team horse. To be at the expense of importing is idle, when we have superior materials at home, which was not the case with our cattle, sheep, and swine. As to the race horse, I consider him out of the question. The less we have of them the better; and Prof. Lindly never uttered a more indisputable truth, than when he said that "if racing improved horses, it deteriorated man." There cannot be an instance pointed out in which a valuable breed, or even a valuable permanent cross has originated from the modern race horse proper. Their structure demonstrates their worthlessness for any thing but the turf, and there let them remain. In the United States, the horse wanted is one, of which a span will plow of turf land three-fourths, or an acre per day, or travel thirty miles a day with forty bushels of wheat; one possessing form, weight, wind, activity, and such we have already, and may multiply and improve at our pleasure. As a farmer, I have looked at the success of our importations of useful animals with pleasure, because I saw in them the foundation of immense agricultural improvement; but it is a peculiar trait of American character to overdo a good thing, and I am not certain we are not approaching that piont in our rage for importations. At any rate it may be well to pause and look about a little, count the cost and estimate the probable results. Occasional importations may be needed for the purpose of crossing; but we have breeds of all improved animals, of such widely different origin, that if our breeders understand their business, deterioration can hardly ensue; on the contrary they start on a high vantage ground, and if they fail, it must be through their own remissness. An Onondaga Farmer.

Address of Humphry Howland,

President of the Cayuga County Agricultural Society, at their Annual Fair, held at Auburn, Oct. 14, 1841.

My Brother Farmers an Fellow Citizens:—Agriculture is the most dignified vocation of man, for which we have the highest authority. Our primeval ancestor, after receiving the magnificent domain, the whole earth, was placed in Eden to dress it. Man left to himself would have lived on its spontaneous productions, or the chase, but he was to have the delightful occupation to till the soil. Nations in proportion to their civilization, advanced in agriculture. The King of Persia, every vernal festival, addressed the farmers to the following effect, "I am one of you; my subsistence and that of my people, rests on the labor of your hands." From Egypt the art passed to Greece. Some of the most distinguished Romans were versed in agriculture, among whom were Cato, Cicero and Cincinnatus. Virgil has left us a beautiful practical description of rural occupations. In England, Dr. Johnson has written at large on the subject, which Thomson and Bloomfield have glowingly described. Penn, who had seen much of men and things, expressed to his children that he preferred an income of £100 in the country to £1000 in the city. In our own country, Washington was the largest, best practical farmer of his day. Madison was a practical farmer on a large scale, for twenty years, and a president of an agricultural society. Mount Vernon, Quincy, Monticello, Hermitage, and the North Bend, were well cultivated by their illustrious proprietors.

In England formerly the Ox weighed less than 500 lbs. now more than 2000 lbs. Extensive progress has been made there in agriculture within half a century. Tull prompted it, Bakewell improved live stock, the persevering labors of Sinclair accomplished much, and above all on the establishment of a National Agricultural Society, a laudable emulation seized all ranks. That board brought forward a great number of new men whose names otherwise would not have been heard of. They were practical people; it made distant farmers acquainted, and increased one-fourth the comforts of life. Our County and State Agricultural Societies, if attended to, will make our march onward.

Cayuga County, which we have to cultivate, contains 697 square miles, with less than one square mile of waste land; nearly every other part is suitable for a garden. Lime stone, calcareous soil, a never failing indication of fertility, surface moderately variegated, undulating east and west. Poplar ridge rises 700 feet above the beautiful Cayuga lake of pure water stocked with trout, which in the middle is 700 feet deep. The surface is 370 feet above tide-water, so the bottom is 300 feet lower than the surface of the ocean. Thirty miles of the Cayuga does not freeze over, one winter in seven, and then only for a few hours. The Owasco lake lies within this county—well described in "Ensenore." We have large mines of Gypsum, on examination pronounced by Professor Vanuxem of the best quality, and salt springs from which are manufactured salt superior to that of Salina. Those minerals are of more value than mines of the precious metals. A climate salubrious and mild, in which the peach flourishes luxuriantly.

This county was the seat of the Cayuga nation and produced renowned chiefs. Those in modern times were Cornplanter, Fishcarrier, and the pathetic, eloquent Logan. This tribe was one of that remarkable confederation, or Six Nations, who conquered and held in subjection the aboriginees from the Atlantic to the Mississippi, and from the Gulf of Mexico to Hudson's Bay. What did it avail them? *Barbarism.* Had they occupied their mental and physical faculties in cultivating this beautiful country, *we should not have been here.* They are gone—not a trace of them remains. There are some ancient ruins indicating a previous people; a small one on a hill in this village, and a chain of them east and west near the trail of the Six Nations, and the present traveling ground of the states, by turnpike, canal and rail-road. This people, who, according to the tradition of the Six Nations, they drove out seventeen centuries ago, after a war of 100 years. So it seems we are the third race. If those had their faults, they also had their virtues—we will not only tread lightly on their ashes, but drop a tear as we pass. Let us remember this instructive precept, that like causes will produce like effects. What happened to those nationally, will happen individually to such of our descendants, as do not occupy their mental and physical powers, and the fair domain which they inherit. They will be wandering in a foreign land.

In 1779, Gen. Sullivan marched by the way of the Susquehannah to the head of Seneca lake. A detachment from his army passed through this county, drove the Indians to Canada, burned their wigwams and cornfields, from which some of the soldiers selected large ears of corn and carried them in their knapsacks to New-England; an advertisement in legible characters of this fertile country, which subsequently profited by it.

In 1784, the United States held a treaty with the Six Nations at Fort Stanwix; four of them had taken sides with Great Britain in the late war, and were considered a conquered people. Many were for confiscating their lands, but the humane feelings of Washington revolted at such a measure. But the hatchet was not entirely burried. Judge Benson, a commissioner for treating with the Indians, informed me, that there were remarkably well defined boundaries every where existing and understood between those tribes, except the month of Oswego river, the whole of which, with the fishery, the Oneidas claimed, and likewise so did the Onondagas. The comissioners observed to them, "How is this? you both claim the river." "Yes," they replied, "that has been a subject of difference between us for ages, but you purchased of us both and you will own it." The ten years following that treaty was full of stirring events relating to this country. Massachusetts directly sent out its agents to claim Western New-York, by their ancient charter. Persons in the lower part of this state, were negotiating with the Indians for a lease. In 1786, this state ceded to Massachusetts the property in the soil west of a meridian which was drawn through Seneca lake. In 1787, J. Livingston, Ryckman, and associates, obtained a lease from the six nations for 999 years, including a large portion of the western part of this state, which the legislature at their next session in effect declared void, as the constitution had prohibited individuals from purchasing lands from the Indians, a lease for that time being considered equivalent to a purchase in fee; but the Lessee Company, as they were styled, persisted and invited settlers.

Early in the spring of 1789, R. Franklin and a few others with their families set out from the disputed lands claimed by Connecticut in Pennsylvania. From the Susquehannah they traversed the forest to the head of Seneca lake, descended it in batteaux through the outlet into Cayuga; then up the lake to where the village of Aurora now stands. This was the first settlement by the white inhabitants in this county. It had been the site of an Indian town. They were followed the same year by Richardson and others, who settled north along the east side of the lake under the Lessee Company, and surveyed it into townships six miles square. This State also commenced surveying this county, laid off the Cayuga Reservation, on which those settlers had located, and appropriated the adjacent lands to be granted, one lot of a mile square to each soldier of their standing troops in the Revolution. This appeared well in theory, but in the sequel caused much litigation of titles, and only about one soldier in fifty retained and settled on their lands. The other soldiers sold their lots for about $25 each, which in their present improved state are worth from $30 to $60 per acre. In a year after the first settlers arrived, the Indians returned from Canada. Our affairs with them were in a most unhappy state. Gen. Harmer was defeated by the Indians about that time, north of the Ohio. They complained to our State government of the intrusion on their reservation. The Governor sent the Sheriff of Herkimer county with the posse comitatus, who burnt out those settlers in October, 1790. They then settled on the military lands, which progressed notwithstanding fear; as an Indian war, fierce and bloody, raged south of Lake Erie, at no great distance. In 1791, Gen. St. Clair and army were disastrously defeated by the Indians. All the sympathies of the Cayugas who had not been satisfied with the late treaty, were with their brethren of the west. Our pioneers endured many hardships and privations; often without meat and sometimes without bread; and when their little crops were gathered, were destitute of mills, the stump of a felled tree excavated served as a mortar, and was a substitute for the mill. They were united, rejoicing in the prosperity of each other. I see some here who can recollect this place when it only contained a cottage, built with clay and sticks, by J. Hardenburgh, and a log tavern by W. Bostwick. The cottage yet remains in Market-street, but enclosed in a new dress, is hardly recognized by its old acquaintance. The settlement progressed rapidly; a turnpike was made, and that grand work the Erie Canal, after a lapse of years, was commenced in 1817, by the enterprise of De Witt Clinton, and other distinguished men who are mostly gone; which in effect as to the cost of transportion has brought this county within 30 miles of tide water, and gave accelerating stimulus to agriculture. And lastly, was constructed by individual enterprise, the iron road.

The aggregate value of the articles arriving through all our canals at tide-water on the Hudson river in 1840, was $23,213,573, and there were the same year exported exclusively from Cayuga lake, first entered at Montezuma, $1,780,105, half of this flour and wheat; butter and lard, $153,000; Pork, $94,000; wool, $71,000; the balance in lumber and sundry articles. That from Cayuga lake alone is equal to one-twelfth of all the exports through all our canals, from Lake Champlain, Vermont, this State, Ohio, Michigan, and the far west.

The population of this county by the census of 1840, was 50,362, which is 72 persons to a square mile, now a denser population than Connecticut, and a capacity to sustain quadruple that number following their present occupations. Yet numerous emigrants scattered over the hills and plains of the west, have reluctantly gone forth from every neighborhood among us, not with a view to find a richer soil or more congenial climate, but to enlarge their borders, some of whom could say, "with my staff I passed over this Jordan, and now have I become two bands." A farmer having 100 acres with several children and grand-children, not having the capital to settle them here, sells his land for $50 per acre, purchases in the west for one and one-fourth dollars, settles his children, who after a lapse of years return strangers to revisit their native roof, and the graves of their ancient departed friends. There are in this county about 260 public schools in which are taught 14,721 scholars. Three flourishing academies. One Theological seminary, and the Regents of the University have granted a charter for a a college at this place. Such is the system of education which exalts society; and agriculture flourishes best where the people are best educated. The temperance societies have done much for the cause. Our harvests are now ingathered without alcohol, an article now hardly creditable to use.

In 1825, by the State census, the population of this State was 1,164,458. A meridian then drawn five mlies west of Canajoharie, would divide the inhabitants into about two equal portions. In 1840, the population was 2,534,135, and a meridian now drawn five miles east of Utica, would divide the inhabitants into two equal portions. That meridian is *traveling* west, and in a few years will probably rest in this village, entitling it to the capitol, an event to this county to be *anticipated*. When we take a retrospective view of what has been accomplished, we have every stimulating encouragement to *persevere* in improving this county, every part of which is rising into notice.

On the details of agriculture I shall be brief, because volumes would be required to describe it; nor do I profess to understand it, although I have given it much thought for many years, and have been trained to it from childhood. It is a living science, susceptible of improvement in every age. It is included in three *principal rules.* First, that the soil ought to be dry, or in other words, free from all superfluous moisture. Secondly, that it ought to be kept clean, in other words, free from noxious weeds. Thirdly, that it ought to be kept rich, or in other words, highly manured.

I am anxious to impress upon the society the importance of the first rule. Our county particularly requires it. Even our hill lands would be much benefited, the declivities and vales ameliorated by open ditches to conduct off the surplus water, and blind ditches, the water from the soil. This system is obtaining with good farmers, which will abundantly improve our rich soil and salubrious climate. The frost of winter performs an important operation by leaving the soil pulverized and spongy, easy of access to plants which send out tender roots to gather nutrition. But if there is early in the season a superabundance of water, it settles the soil down, an unfavorable compact mass. A considerable portion of each of a few succeeding years should be appropriated by every farmer for drainage, will prove an investment worth 20 per cent per annum. Although water is indispensable to vegetation, too much of it is as hurtful as too little. It is necessary to germination of the seed, to the decomposition of vegetable matter in the soil, to transmission of the food from the soil to the plant, to its circulation. But when water remains in the soil to excees, the vegetable matter remains insoluble, in consequence of the absence of heat and air.

The 2d rule, with regard to noxious weeds, I am sorry to have to acknowledge that the Canada thistle, St. Johns Wort, (Hypericum perforatum,) Red root, (Lithospermum Arvense,) &c. are invading our fields. Those weeds must be extirpated. Summer fallow particularly in dry seasons will destroy the Canada thistle, if when it makes the least appearance, or rather previous to its being expected plow it once in ten days for half a dozen times. If it cannot respire during that time in summer, it must die, and a remuneration for extra labor in the well prepared ground, will be reaped the next harvest. The free use of plaster will drive out St. Johns Wort and daisy with the usual rotation in crops.

For the 3d rule, we have inexhaustible materials in those invaluable minerals, plaster and lime stone. They should be more used; they will increase the quantity of hay and straw, the basis of manures; the sub-soil contains lime, it would be beneficial to loosen it up. Beds of marl 4 feet thick nearly pure, shells partially decayed, within 4 feet of the surface, underlay 10,000 acres along the Seneca river, which was formerly a part of Cayuga lake, now filled up. This marl will be extensively used. A good farmer will turn every attention towards enriching the soil.

As to the material for fencing, we are not as well provided. Locust trees should be planted along the borders of our numerous roads, which would require no land from our enclosures. They are ornamental, affording a cooling shade. The grass is sweet under the acacia, the timber enduring, and although the insect has severely attacked it for the last five years, I observe that most of the trees are gaining the ascendancy. They are not injured after they attain six inches diameter. And we may remember the *fact,* that hurtful insects only prevail a very few years at a time. They have their day, and disappear for a long interval of years, or forever. The borer has long since disappeared in the southern part of this state; no longer there injurious to the locust.

Wheat is our staple and most important product. It is found on analyzing to contain more saccharine matter, than southern wheat. We may expect a heavy crop, if we repeatedly plow deep, and manure with clover and plaster, or other material; sow as early as the first of September, or before, with 2½ bushels per acre; a less quantity of seed would cover the ground with plants, but offsets or suckers are not as vigorous as the parent stock, which will have a longer head. Seeds of all kinds should be skillfully selected.

Injurious fluctuations in prices may in some measure be *prevented,* or profitably available. When produce is at a low price, not a fair remuneration, farmers should not remit growing it, but persevere in keeping their past crops of wheat in various methods. If well stacked it will keep with trifling loss in good condition for three years, until a good market offers, which never has failed after a while to occur. This would also be found to be a public benefit to equalize prices.

Our *Cattle* want improving. Those superior animals lately introduced into this county, by J. M. Sherwood, are a valuable race, a public acquisition, and merit attention, as well as an eligible selection from our native stock. The Merino brought from Africa by the Moors into Spain, hence by Humphries to Connecticut, and in 1806 introduced into this county by J. Coe, and subsequent additions by others, is also a valuable acquisition. They are a healthy sheep, but require shelter in winter; indeed sheds are indispensable for all our cattle. And here let me speak a word for that useful animal the horse, and call your attention to building more sheds around your meeting-houses to protect him from the burning sun and pelting storm. In traveling through a country where we observe houses of worship in good order in every settlement, there agriculture flourishes.

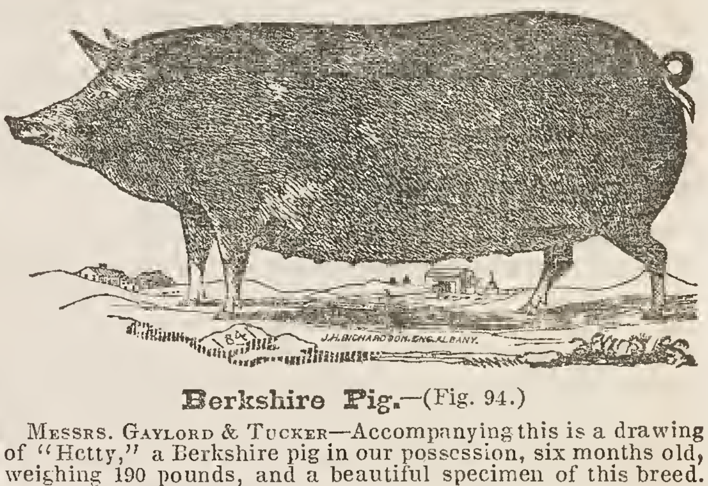
The Mechanic arts are the handmaids of agriculture. They have made rapid advances within a few years, and will continue to do so, by the aid of our system of education and machinery. They now rival older countries. All agree that we ought to *manufacture* the produce of our *own soil,* forest and mines, for *our own use.* All prosperous nations in Europe, prohibit by heavy duties the introduction of such articles as they can grow or manufacture. They will no doubt take care of themselves, and if we do not take care of ourselves, we shall come poorly off. If our government should, by countervailing duties protect American industry, every citizen would be benefited. Experience has abundantly proved, that domestic competition, machinery and skill, furnishes articles cheaper to the consumer than those from abroad.

Agricultural implements have been improved and others introduced within a few years. The threshing machine. For the cast iron plow, the public are much indebted to the ingenuity of the late Jethro Wood, of this county. The revolving horse rake, invented by a colored man, abridges the labor of haying one-fourth. No farmer should be without one. Farther improvements are wanting. A machine for spreading hay, and another for mowing and reaping, have been put in operation, which in time will succeed.

A word to my young friends. Do not crowd into the professions and trades; they are overdone. It has been supposed by those who have long observed the course of things, that to take 40 lads, divide them, all things considered, into two equal companies, place half of them in the professions and merchandise, the other half in agricultural pursuits; the result will be, after a lapse of years, the latter will have the greatest aggregate wealth, diffused among the whole; while perhaps a fourth of the former may make large acquisitions, the families of the other three-fourths may be found in rather straitened circumstances. It is the opinion of those who have long held situations favorable to such observations as to enable them to come to correct conclusions on this subject, that only one in four of the trading classes, perhaps from causes beyond their control, escape insolvency, or are successful in the professions. Is it not strange that young men are willing to enter into schemes where only one in four succeeds, while the farm is like the inexhaustible cruise of oil. We are directed to draw from the constantly productive earth, a bank which may be drawn upon at all times, and will not fail while seed time and harvest remains. It is the main spring that sets the whole machinery in motion. Therefore apply all your energies with increasing vigilance to rural pursuits. The brief period of youth is invaluable. Take each day into the account. It is barely sufficient to lay the superstructure of literary education, and habits of manual industry. The edifice must be raised by the assiduous attention of after years.

And here permit me to remind my female friends of the high responsibility resting upon them. On you devolves the care and training of the infant mind. That most important period for forming the habits and principles of the *man* is confided to your care and superintendance. Remember it is your duty as well as privilege to imbue the youthful mind with high toned morals and love of virtue.

And having sown the seed in the mellow soil, and done all, let us remember to look up to that benign Providence, who alone can bless the labors of the Husbandman.


J.H.RICHARDSON.ENG.ALBANY.

Berkshire Pig.—(Fig. 94.)

Messrs. Gaylord & Tucker—Accompanying this is a drawing of "Hetty," a Berkshire pig in our possession, six months old, weighing 190 pounds, and a beautiful specimen of this breed. She is from "Lady," (a portrait of which we will send you at some future time,) a sow from the piggery of A. B. Allen of Buffalo, a real lady of the hog kind, not very large, but very fine in all her points. I think that "Hetty," with Dr. Martin's scientific feeding, would nearly equal in size, and quite excell in beauty, his celebrated "Bernice." Her food has been cornmeal, with bran and soaked corn. W. & F SCOTT.

Maumee City, Ohio, Oct. 30, 1841.

Messrs. Gaylord & Tucker—I see it stated in the Cultivator, that the Hon. G. V. Sacket of Seneca Falls, bred my two year old bull that took the first prize at Syracuse. Now I think I bred him myself. I bought the mother, when a yearling, from Judge Sacket, and paid for her; the next season she had this calf, sired by a bull raised by Thomas Weddle, Esq., from his pure imported stock, and bought at his sale by Judge Sacket. Now if my bull was not bred by me, he could not be bred by the Judge, as the heifer I bought from him was in her mother's belly, *Silvia,* when he bought her from C. N. Bement, Esq. of or near your city. Yours respectfully, JOHN JOHNSTON,

Near Gevena, Nov. 9, 1841.

"Advancing Backwards."

A most singular controversy for the year of our Lord 1841, is at present going on in Great Britain. It is whether the great mass of the farmers and breeders of cattle shall be kept in ignorance, that a few men, called horse or cattle doctors, may be benefited. The Veterinarian, a magazine conducted with great ability by Messrs. Youatt, Dick, Percival, &c., the most celebrated veterinarians in that kingdom, has been in the habit, while describing the diseases of animals and the means of relieving them, of giving the symptoms, medicines, &c. in such terms and language as would be understood by every well informed man, and of course rendered their labors available to all. Their object has been to divest the treatment of sick or disabled animals of the mystery which interested farriers have long thrown around it; in short to do away the quackery which in that country, as well as this, is so common among cattle or horse doctors. This course has long given dissatisfaction, with the numerous practitioners in a small way all over the kingdom; since, as the farmer was enlightened in the nature of diseases and their remedies, their services in curing sick animals would be dispensed with. The breaking out of this feeling occurred when Prof. Sewell, of the London Veterinary College, at the request of the Royal Agricultural Society, drew up his account of the epidemic so fatal to cattle, sheep, and swine, in England for some three years past, with the best course of treatment and remedies, and circulated it in all quarters of the island. The dealers in quack specifics, nostrums, holy water, &c. and who were profiting largely by the credulity of the many, saw their craft was in danger, and raised the cry against the diffusion of such knowledge among the people; and strange to say, some from whom better things might have been expected, have joined in this crusade. The ground openly taken, as appears from the last number of the Veterinarian, "that if the people, the farmers, are taught to cure their own cattle, the veterinary practitioner must lose his fees, and be compelled to resort to labor or something else to live." To prevent this, an "Association" has been formed, the proceedings of which are to be published, but in such a way that none but the initiated will be benefited, or able to avail themselves of the remedies or means of cure proposed. We venture the prediction that this attempt to shut out light from the many will not succeed; if it does, all we have to say is, those who submit to such impositions, deserve the yoke.

Comparative value of Fuel.—Several years since Mr. Marcus Bull instituted a series of experiments, founded on those of Count Rumford, in regard to the quantity of heat given out, and the consequent value of the different kinds of fuel for economical purposes. The result of the whole was as follows:

Hickory,	4 cords	Soft maple,	7 1-5 "
White Oak,	4 3-4 "	Pitch pine,	9 1-7 "
Hard maple,	6 2-3 "	White pine,	9 1-5 "
Anthracite coal,	4 tons.		

Thus it seems four cords of hickory give out as much heat as 4 tons of coal, 6 3-4 cords of maple, or 9 1-5 cords of pine. A knowledge of these facts might aid those who purchase their fuel, in determining which is the cheapest for them, at any given time.

High Manuring.—That eminent farmer, E. Phinney of Massachusetts, says—"From no item of outlays can the farmer derive so complete, or so certain a profit, as from his expenditures for manure, to a certain extent. This has been most strikingly verified by some of our West Cambridge farmers. It is not uncommon among some of the farmers of that town, to put on their gardens one hundred dollars worth of manure to the acre; and in more cases than one, the gross sales of produce from ten acres under the plow have amounted to five thousand dollars in one season. This is the result of high manuring and the judicious cultivation of a soil, too, which is exceedingly poor and sandy."

Turnep Seed.—The growing of turnep seed is a business of much consequence in Great Britain, and great pains are taken to produce that of the best quality. Mr. Imrie of Ayrshire, a seedsman noted for the quality of his turnep seed, had this year 20 acres cultivated for turnep seed alone. Mr. Imrie's great improvement consists in drying the seed on the straw of the turnep, suspending the crop on ropes in the field until it is fully cured and fit for thrashing out. Seed so prepared does not injure in the storing, as it sometimes will when cured in the ordinary methods.

Wool in Australia.—Perhaps the records of any country do not furnish an instance of more rapid increase in the production of wool, than the original convict settlement of Australia. We say original convict settlements, because, though such at first, they are now the chosen point of emigration for multitudes in England, offering advantages which it is thought the Canadas do not possess, for successful agriculture. In 1807, the whole quatity of wool grown in Australia was only 345 lbs. In 1839, it had increased to 20,128,774, equal to one-fifth of the whole consumption of Great Britain. A large part of this wool was exported to England, and the trade in Australia wool is becoming rapidly of great consequence to both countries. We see too, that a large number of the finest improved stock sold at auction at the late Fairs in Britain, has been purchased for that region of our globe.

The New-York Market.

MONTHLY REPORT FOR NOVEMBER.

(*Prepared for* The Cultivator.)

ASHES.—At the close of the last and the commencement of the present month Pots were dull at $6·12½ @ $6·25, and Pearls at $5·75. The latter have been inactive throughout, but closed without change in price; the former declined to $6, with occasional sales at $6·12 1-2, and a moderate demand. At the close, however, more firmness was evinced in consequence of favorable advices from abroad, and considerable sales were made at $6 @ $6·12 1-2, mostly at the latter rate, at which they are still freely offered. Receipts from the commencement of the season to 19th November, 31,077 barrels of both kinds. Exports for October, 1,564 bls. Pots, and 300 bls. Pearls; do. in November to 17th instant, 1,041 bls. Pots, and 136 do. Pearls.

COTTON.—Holders during the month have submitted to a decline of about one-half a cent per pound with a fair business, though mostly for home use. The market closes heavy. We quote New-Orleans, 8 @ 12c.; Alabama, 8 @ 11 1-2c.; Florida, 7 1-2 @ 10c.; and Upland 7 1-2 @ 10 1-4c., though it may be remarked that occasionally small parcels are obtained at something under these rates. The last advices from abroad were not considered favorable.

FLOUR and MEAL.—In consequence of some foreign demands and the anticipation of a short supply for the winter, Flour has advanced since the commencement of the month about 62 1-2 cents per barrel, but closes very heavily at the enhanced rates. We now quote Genesee, $6·75; Ohio, $6·62 1-2 @ $6·75; Troy, $6·62 1-2 @ $6·68 3-4; Michigan, $6·56 1-4 @ 6·62 1-2; and Southern $6·62 1-2 @ $6·75. About 12,500 bbls. were exported from the 1st to the 17th, and we should think about 10,000 more are in process of being shipped. Rye flour is 50 @ 75 cts. higher, with a fair demand and very scarce. We now quote $4 @ $4·25, and Corn-meal $3·12 1-2 @ $3·25, which is the same as before reported.

GRAIN.—The supply of Wheat has been moderate, though about equal to the demand; consequently prices have not materially varied from those current at the beginning of the month. Upwards of 30,000 bushels Western via New-Orleans have been received and partly sold as follows: 2,000 for export at $1·40, and since 15,000 for milling, at $1·37 1-2. Southern brings $1·32 1-2. Rye has been scarce, and wanted for distilling for a considerable time past. We quote Northern 75 @ 77 cents, an advance since your last of 8 @ 10 cents; 2,500 bushels Odessa, in store a year, sold some time since at 68 1-2 cents. Barley has advanced from 59 @ 60 cents (at which a parcel sold on the 1st) to 75 cents, with considerable sales. Oats has varied from 49 1-2 @ 52 cents, closing at 51. There is no Southern or Jersey here. Corn has been quite uniform, but as the time for the receipt of *new* has arrived, has now become dull. Five hundred bushels *new* Northern brought 65 cents, weight at the boat, but that price could not probably be obtained for more. We quote *old* at 70 cents, and Southern 67 cents, both measure. Black-Eyed Peas continue plenty, and sell in lots at $1·12 1-2 cash.

HOPS.—The transactions have been very unimportant, and although there is some inquiry for export, we have heard of no important transactions for that purpose. Western, of which the stock is small, may be quoted at 16 cents, and Eastern 15c., with small sales of both descriptions.

LEATHER.—In consequence of the prevailing disposition to force Leather by auction, prices have receded 1 cent per pound since 1st November, during which time five public sales have taken place. Light may be quoted 21 @ 21 1-2, Middle 19 1-2 @ 20 1-2, Heavy 17 3-4 @ 18 1-2, Damaged 15 @ 16 1-2, and Poor damaged 9 @ 12 cents. Public sales for the 2nd and 16th December are announced.

PROVISIONS.—During the first part of the month Beef and Pork were extremely dull, especially the latter, which sold, perhaps, lower than at any time previous, but toward the close revived, and on Beef an advance of 50 cents @ $1 was obtained. We quote Mess, $7·50 @ $8·25; Prime, $4·50 @ 5·25. Mess Pork, $9·25 @ $10; and Prime $7 @ $8. Large sales of Lard have been made for export at 6 1-2 cents, may now be quoted 6 1-2 @ 8 cents. Prime Butter 20 cents. Western Dairy 15 @ 17, and Ordinary 10 @ 14 cents. New Hams sell at 9 1-2 cents. Shoulders 5 1-2 @ 6 cents. Bacon Sides and Dressed Hogs 4 cts. per pound.

RICE.—At the commencement of the month some *new* made its appearance at market, and small sales were made at $4 @ $4·12 1-2 ℘ 100 lbs., but towards the close, the stock being abundant, declined to $3·75, and the market unsettled in consequence of the large receipts. There have been very few sales for export.

SEEDS.—Timothy has advanced from $13·50 (the lowest point,) to $16, with sales, and although the article is out of season, we understand there is a large order in market which cannot be filled even at that rate. Clover has continued very scarce and prices have gradually advanced until Wednesday, when, owing to recent foreign advices, a sale of 40 tierces was made for export at 13c. Eighty bushels Canary to arrive coastwise, (not yet here,) brought $6, cash. There have been no receipts for a considerable time past.

TOBACCO.—Throughout the month has been very inactive, the demand being chiefly for home consumption, but towards the close there was a trifling inquiry for the Mediterranean and African markets without any change in prices. Foreign is plenty and dull.

WOOL.—The demand has been very small and confined principally to the dealers. A sale of Spanish was made by auction at 31 1-2 @ 47 1-2c. 4, 6 and 8 mos. We quote

Am. Saxony, fleece, lb.	— 48	@	— 50
American full blood Merino,	— 42	@	— 45
American half and three-quarter Merino,	— 35	@	— 37
American Native and one-quarter Merino,	— 25	@	— 30
Superfine, pulled,	— 36	@	— 40
No. 1. do.	— 34	@	— 36
No. 2. do.	— 25	@	— 28
South-American, washed,	— 8	@	— 10
South American, washed and picked,	— 16	@	— 18
South American, unwashed,	— 6	@	— 8
African,	— 7½	@	— 12½
Smyrna,	— 9	@	— 14
Mexican,	— 11¼	@	— 12½

CATTLE.—The supply of Beeves has been large, principally from this state, but including a considerable number from the south. The sales have ranged from $4 @ $6·75, $4·50 @ $6·75 closing heavily at $4 @ $6·50, average $5·25 ℘ 100 lbs. Sheep and Lambs have been plentiful and sold principally at $1·25 @ $4, closing at $1·25 @ $4·50 for sheep, and for lambs $1 @ $2·50 to $1 @ $2·25.

HAY—Has not been very plenty, but equal to the demand, and steady at 93¾c. @ $1·06¼ ℘ 100 lbs.

HIDES.—The stock is large for the season, dealers well supplied and the prices 1c. ℘ lb. lower than could have been realized one or two months since.

A Larger Beet still.—Master John Lansing, son of the Hon. R. Lansing, of Waterloo village, N. Y. raised this season, a blood beet measuring 2 feet 8 inches in circumference, and weighing 22 lbs. with the tops off.

N. Y. State Ag. Society.

The Annual Meeting of the New York State Agricultural Society will be held in the city of Albany on the 18th and 19th days of January next. The exhibition of Butter and Cheese, and specimens of Field Crops, will be held on the first day of the meeting.

The County Societies are requested to transmit the reports, required by the statute to be made to the Executive Committee of the State Society, to the care of the Recording Secretary, Albany, at as early a day as possible.

Dec. 1. LUTHER TUCKER, *Recording Secretary*

Notices to Correspondents, &c.

Communications have come to hand during the past month, from James M. Garnett, D. S. Howard, W. & F. Scott, Index, J. Harland, C.W. Kelly, J.W. Booth, L. A. Morrell, Farmer Hodge, F. Burt, John Johnston, J. F. Osborn, Tyler Fountain, R. N. Parkhill, A Floridian, Wm. Partridge, J. B. D., N. B. Moore, An "Onondaga Farmer," H. M. Gaylord, Seth Whalen, Wm. R. Olden, N. N. D., S. Robinson, S. W. Jewett, C. N. Bement, Garret Bergen, Pearl, Jacob Vreeland.

The inquiry of James Pierce, Esq. is answered in the advertisement of Mr. Mott, which will appear on the sheet with the Index. He has our thanks for his suggestions, though we do not feel authorized to comply with them.

Correction.—The communication of L. A. M., last number, page 175, for "soundness of the plan," read, "sacredness of the place."

Acknowledgments.

We have received during the past month,

From H. L. Ellsworth, Esq. Commissioner of Patent Office, an Appendix to the "Letters on the Wabash Valley," embracing several letters on improving prairie lands, from which we shall draw largely hereafter for the benefit of our readers.

From Jordon L. Mott, N. Y. one of his Patent Agricultural Furnaces, heretofore noticed in this paper, for which he has our thanks. (See notice on Advertising Sheet, which will accompany the Index.)

From Wiley & Putnam, N. Y. a copy of "The Poultry Yard," a Practical view of the best method of selecting, rearing, and breeding Domestic Fowls, by Peter Boswell, just republished by them from the second English edition.

From Dayton & Saxton, publishers N. Y., Bradford's handsome octavo vol. entitled, "American Antiquities and Researches into the Origin and History of the Red Race."

From their respective editors, "Professor Silliman's American Journal of Science and Arts"—"The North American Review"—The weekly numbers of the "New Farmer's Journal"—and the "Mark Lane Express," London.

From John Johnston, Esq. Geneva, "The Dumfries Courier" containing an account of the last meeting of the Highland Ag. Society.

From J. F. Osborn and Wm. Ingells, beautiful specimens of Indian corn.

From R. & E. Allen, Fayette county, Ky., a pamphlet containing the portraits and pedigrees of the Berkshire hogs, owned by them.

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STEAM-PRESS OF C. VAN BENTHUYSEN.

THE

CULTIVATOR,

A CONSOLIDATION OF

BUEL'S CULTIVATOR AND THE GENESEE FARMER,

DESIGNED TO

IMPROVE THE SOIL AND THE MIND,

AND TO

Elevate the Character and Standing of the Cultivators of the American Soil.

WILLIS GAYLORD and LUTHER TUCKER, Editors.

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THE CULTIVATOR.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

TO THE FRIENDS OF AGRICULTURE.

THE present number commences the Ninth volume of the Cultivator; and we are unwilling to omit this opportunity of expressing to our friends and the agricultural public generally, our deep sense of the kindness with which they have viewed our efforts to improve and advance our husbandry; of acknowledging our obligations for the liberal and unprecedented support our journal has received; and in particular, of thanking, most sincerely, our able and numerous list of contributors, for the many valuable articles that have given such varied interest to our past volumes. If a record of the opinions and practice of some three or four hundred of the most scientific and practical farmers of our country, on all the great topics connected with the agriculture of every part of it, can render a journal valuable to farmers, then may we believe that the Cultivator is not wholly unworthy of the commendation or the patronage it has received. To furnish a work that, in every respect, shall please every one, is what we can scarcely hope or expect; but we intend to publish a journal in which every one shall find something interesting and instructive; something to enable him to improve the soil and the mind; something that shall "elevate the standing and character of the American cultivators of the soil." We enter upon a new volume with increased means and renewed determinations to make the Cultivator more worthy of the distinguished favor with which it has been received. Our facilities for intelligence, important to the farmer, are rapidly spreading; the number of our contributors, at home and abroad, is constantly increasing; our means for multiplying and improving our illustrations, are greatly augmented; and while the general course and character of the paper will remain the same, no exertion on the part of the conductors will be spared to add to its value and usefulness.

To all who have aided us in obtaining subscribers for the Cultivator—to those contributors in every part of our country, who have forwarded to us the rich results of their experience—to those Postmasters in every section of the Union, who have forwarded us the names of subscribers, or cash—to those professional men who have aided us by their application of science to agriculture, in our pages—to those conductors of the public press, who have kindly noticed our journal, and thus brought it to the knowledge of their readers, our grateful acknowledgments are due; and to all these, and to all who take an interest in the great objects to which the Cultivator is devoted, we beg leave to proffer our congratulations, and to wish them a happy, thrice happy, New Year.

WE should be glad to engage the services of a few respectable and trustworthy men, as travelling agents for the Cultivator.

TO OUR SUBSCRIBERS.

AGREEABLY to the notice given last month, we forward this number of THE CULTIVATOR to all our old subscribers, except in cases where a discontinuance has been ordered. Those who do not wish to be considered subscribers to the Ninth volume, should immediately give notice to that effect to the Postmaster where they receive their paper, whose duty it will be to communicate it to us, free of expense; and those who wish the paper continued to them, and who have not yet paid for it, should, with as little delay as may be convenient, hand their dollar to the Postmaster, or the Agent, if there is one, in the vicinity where they reside.

TO POSTMASTERS AND AGENTS.

POSTMASTERS and Agents will be entitled to the commissions allowed by the terms of the paper, on all monies they may forward us, whether from new or old subscribers; and we shall be greatly obliged by any efforts they may be pleased to make in collecting monies or names for the ninth volume.

☞ Postmasters will particularly oblige the publisher, by giving prompt notice of any papers which should be discontinued, either from their not being called for, or from the inability of those to whom they are addressed to pay for them.

NEW-YORK STATE AGRICULTURAL SOCIETY.

THE annual meeting of the New-York State Agricultural Society will be held at the Lecture Room of the Young Men's Association, in the Exchange, in the city of Albany, on *Wednesday, the 19th of January*, 1842, at 10 o'clock, A. M. The annual Address, by the President of the Society, JOEL B. NOTT, Esq., will be delivered in the Assembly Chamber of the Capitol, on the evening of the same day.

On the day preceding the annual meeting, (Jan. 18,) the Exhibition of Butter and Cheese, together with samples of Field Crops, will be held in room No. 10, second floor of the Exchange, at which place must be deposited, before 9 o'clock, A. M., all parcels offered for premiums, together with the statements required by the regulations heretofore published; and at 10 o'clock, A. M., the several viewing committees will commence the performance of their duties. The following are the committees:

On Butter—Alex. Walsh and G. B. Richards of Rensselaer, Robert Denniston of Orange, M. D. Burnett of Onondaga, and J. M. Sherwood of Cayuga.

On Cheese—C. N. Bement and E. R. Satterlee of Albany, John Caldwell of Orange, Benj. P. Johnson of Oneida, and Samuel Perry, of New-York.

On Wheat, Rye, and Barley—Anthony Van Bergen of Greene, Rawson Harmon, jr. of Monroe, Orville Hungerford of Jefferson, William Parsons of Niagara, and William A. S. North, of Schenectady.

On Indian Corn, Oats, and Peas—Henry D. Grove and Henry Holmes of Washington, Howell Gardner of Saratoga, Pomeroy Jones of Oneida, and Joseph Hastings of Rensselaer.

On Root Crops—J. P. Beekman, of Columbia, Francis Rotch of Otsego, G. V. Saeket of Seneea, John Sanford of Onondaga, and L. B. Langworthy of Monroe.

The above named committees are requested to meet at the office of the Recording Secretary, (Cultivator office,) at 9 o'clock, A. M., on the 18th, at which time the Executive Committee will proceed to fill any vacancies which may occur.

LUTHER TUCKER, Rec. Sec'y.

☞ Editors throughout the state are requested to publish the above.

ALBANY CO. AGRICULTURAL SOCIETY.

THE annual meeting of the Albany Co. Agricultural Society will be held at the City Hall, in Albany, on Wednesday, the 12th of January, 1842, at 11 o'clock, A. M. A punctual attendance, not only of the members, but of all who wish to become members, is earnestly solicited.

THOS. HILLHOUSE,
Rec. Sec'y.

Dec. 25, 1841.

ACKNOWLEDGMENTS.

OUR thanks are due to those friends, from whom we have received, during the past month, the following:

To unknown friends, for copies of *Gen. Tallmadge's Address* before the American Institute, at its late Fair.

To WILLIAM KENRICK, Newton, Mass., for a copy of his *Descriptive Catalogue* of Select Fruits, Trees, Shrubs, Flowers, &c.

To ROBERT ALEXANDER, Esq., Hall Farm, Sherbroke, L. C., for a No. of the Edinburgh newspaper, "*The Witness*," containing an account of the Highland Society's Show of 1841, and a history of the Alpaca.

To CHESTER MOSES, Esq., of Marcellus, for a small parcel of his *Bakewell Potatoes*. We have tried them, and think them fully equal to the character he gives them, as a baking potatoe.

To their respective Editors, for regular files of the London weekly agricultural papers, *The New Farmers' Journal*, and *The Mark-Lane Express*.

To the publisher, D. O. PROUTY, Philadelphia, for the *Agricultural Almanac*, containing a variety of useful notes on farming and gardening.

To our friend at Thompson, Conn., for the Report of the R. I. Ag. Society, on Butter, of which we shall avail ourselves hereafter.

We have also received by the steamer Columbia, which arrived at Boston on the 21st Dec., *The Quarterly Journal of Agriculture*, for December, *The Veterinarian*, for Oct., Nov., and Dec., and Johnson's *Farmers' Encyclopedia*, Parts I., II., III., and IV.

GREAT YIELD OF CORN.

WE find in the "Union Agriculturist," a communication from Col. Joel Walker of Belvidere, Ill. giving an account of corn raised by him the past year. The kinds selected for the experiment were the Chinese Tree corn, 12 rowed; Yellow dent, 12 rowed; and N. Jersey, 8 do.

"The ground was highly manured at an expense of $3 per acre, lightly plowed and otherwise prepared in the ordinary manner. The seed was planted in hills four feet apart; number of kernels to the hill not remembered. The crop is harvested, and the result is as follows:

Chinese Tree Corn,	169 1-2	bushels	shelled,	to the acre.
Yellow Dent,......	170	"	"	"
New-Jersey, ...	99 3-4	"	"	""

To be sure there was no mistake, each parcel was measured twice; and as the editor of the Agriculturist has vouched for its accuracy, it may be considered one of the most enormous yields on record. Col. Walker also planted a small quantity of the Brown corn; and from its fine appearance and yield, expresses the opinion "that it will one day supercede every other variety." Such yields of corn as this, and some of those recorded in our December number, for which premiums were awarded by our county societies, will make Kit Cornhill, who in his communication in our last, "insinivated" his doubts of the reality of such crops, open his eyes wider than ever.

DOMESTIC FOWLS IN WINTER.

ONE of the greatest errors that prevails in the management of the domestic fowl, and one which must be destructive of all profit, is the common practice of leaving them to "shirk for themselves," during the winter months. There is no animal on the farm that better repays good keeping than the hen, and with it, there is none that affords so much profit on the capital employed. The hen should have a close warm roost, for there are few creatures that suffer more from the cold than fowls; they should have a box of gravel, sand, ashes, &c. for them to roll and dust themselves in, to prevent the attacks of those insects to which fowls are subject; they should have access to pulverized limestones or limestone gravel, as this will give material for shell, and contribute to the health of hens; they should have abundance or water, clean and pure, for few animals will drink more frequently or eagerly than hens, if water is within their reach; and no one need expect healthy fowls, or a plentiful supply of eggs, who does not pay strict attention to their supply of food. Indian corn, peas, buckwheat, oats, or barley, may be fed to fowls. Potatoes, steamed or boiled, are excellent food for them, but must be fed while warm, as fowls will not eat cold potatoe, unless driven to it by hunger. Fowls should have access to a warm yard in the sunny days of winter, as warmth is particularly invigorating to them. If confined for any time in a close ill ventilated room, they will become diseased and feeble, and will require extra attention to repair the evil generated.

European Agriculture.

STATE OF AGRICULTURE IN NORMANDY.

It is interesting to the farmer to know how the tiller of the soil in other parts of the world conducts his operations, what his course of crops and modes of culture are, what his implements and animals, and what his domestic and social condition is. With the intention of gratifying this laudable feeling, we shall give a few extracts on the agriculture of Normandy, a province of France, from a paper in the Quarterly Journal of Agriculture for June, 1841.

Normandy is a province of France, divided into five Departments, and containing about 2,700,000 inhabitants. It differs from most of the southern and eastern parts of France in many important particulars. "Instead of extensive tracts of tillage, without any visible subdivisions to make out the different ownerships, and without trees, except the formally trimmed ones on the road side, Normandy is a continued series of well timbered farms and fine forests of surpassing beauty, interspersed with corn fields of small extent, orchards and meadow or grazing land."

The soil in Normandy is considered the richest in France, in many places highly calcareous, and in general well adapted to cultivation. The farms average about sixteen acres each in extent, and are held under leases of the usual term of nine years. But about one-half of the farms are held by the proprietors; and these proprietors are in a majority of instances farmers of the lowest class, or those who take their own produce to market, and at home live as poor as it is possible to imagine. The following extract will show what the living of the French peasant is:

"Many of this class, (the small farmers) like common laborers, dine upon a few apples or pears, and a bit of bread, without the formality of sitting down at table, and are content with a drink of their own homemade miserable cider. It is not easy for an Englishman [or an American] to conceive how a man can work hard upon the washy diet so general in France. We have seen men cutting up wood for fuel, (which is hard work,) from morning till night, and in the severest winter season, without more nutritious food than indifferent fruit, and a little bread; the soup taken, perhaps, for supper at home, or for early breakfast, is, if possible, worse as a means of support, for it consists merely of cabbage and hot water, with a little grease or kitchen stuff; it distends the stomach with wind, and therefore is totally unsuited to a working man, who should have solid, not liquid diet."

Much cannot be said in favor of the Norman sheep husbandry, as there is little or no free range for them, and they are kept in small lots of three, four, or half a dozen, and usually tied by the legs together, even when they have lambs, a course incompatible with thrift, "and altogether a worse description of sheep cannot be imagined." Attempts are making to improve them by the introduction of the Leicester and South Down.

In the management of their cows and dairies the Normans do rather better, and the quality of their cream and butter cannot be surpassed. The cream alone is churned (not the milk as in some of the Dutch dairies,) and this operation is performed twice a week, so that the cream stands only a short time. A sweet grass pasture in summer, and sainfoin hay in the winter is considered the best for butter. Beets are sometimes given pretty freely in winter, but though this food increases the milk, it does not improve the butter, and with limited exceptions, neither beets, potatoes, or turneps are given to the cows that yield the best butter. It is found by experience that "the application of dung imparts in *spring time* valuable qualities to dairy pasturage, but the grasses in summer give, on dunged land, a rank flavor to butter."

The Norman dairymen insist that dairy houses should have a northern aspect at all times, as a south wind is prejudicial to milk; that cream should not be left in the milk room, as they mutually exert a pernicious effect on each other; that the floor should be flagged and washed in summer, to preserve coolness; that in the winter the milk should be strained into pans as soon as possible after milking, while in the summer the cooler it can be made, the better it is for the cream. Pans of common earthenware, are preferred to any others, having been found superior even to porcelain.

"The cream is skimmed twice a day generally, sometimes three times, and care is taken always not to leave it too long on the milk. Twenty-four hours, (sometimes forty-eight,) in summer elapse before the first creaming, and the cream is allowed to lie as short a time as possible before churning. By day the cows are turned out, and at night kept in stables and supplied with sainfoin hay, which is admirable for dairy purposes."

The breed of cows most common and the most esteemed in Normandy, resemble the Alderney, and as this province is adjacent to Alderney, Jersey, and Guernsey, as well as Brittany, there is little doubt of the identity of the Alderney and Norman breeds. The Agr. Association of Normandy have imported from England some fine Short Horn bulls and cows, with the intention of improving the stock of cattle. There is in Normandy a coarse hairy breed of cattle which are much used for the plow and cart, "and four or five of these bullocks or oxen, with three or two horses, make the teams which are extensively used in Normandy."

In the dairy districts the heifer calves are usually reared, while the bull calves are fattened for the market. In some places they are fattened on skim milk, and in others on new milk; and in some districts bread, converted into a kind of pap, is added to the milk to facilitate the process. The Norman hog is of the worst possible description as to form; but when fattened the flavor of the pork, particularly the bacon and hams, is good, and the meat firm.

Centuries ago, Normandy was the country from which the flower of European chivalry derived their best horses. The breed was then large, active and powerful; but although still active and hardy, it has degenerated in size so much, that the Norman horse is now one of the smallest of European breeds. Of this we have sufficient proof in the small size and hardy character of the French Canadian horse, which is in every respect a true Norman animal. They rarely attain fifteen hands in height, are short necked, have good fore legs, but frequently imperfect hind ones, but as a breed will go faster and do more work than their appearance would at first indicate. Attempts are making to improve the Norman horse by crosses with the best English blood, for the purpose of furnishing horses for the cavalry service; and one of the Government Haras, or stations for stallions provided by the government, is located at St. Lo. At De Pin, are kept 500 horses and mares. and at St. Lo, about 120 stallions.

The French government do for the provinces, what associations or individuals among us do for agriculture; it furnishes funds for agricultural societies, plowing matches, &c. and the latter are held by authority of the state. Not long since one was held in the commune of Augerville, for which 1,000 francs were appropriated by government, and the proceedings were as follows:

"The ground being marked out by stakes at equal distances, and five judges appointed, sixteen plows came upon the ground: of these, fourteen had a pair of horses each, one a pair of oxen, and one a single horse. Nine of these plows were of the Norman form. After having plowed a field which had no particular difficulties, the teams were removed to another full of heath and broom, and the competitors were allowed the use of an additional horse or bullock. Out of the sixteen which had plowed in the free and open field, only nine appeared on the second trial. In this unbroken and rough field many failures were soon apparent; some stopped short before they had well turned a furrow, seeing that the work was above the power of their cattle or their plows; others stood out longer but made very bad work, and two plows only overcame the difficulties under which the others failed. One of these was a new plow called the Grange plow, and the other the Dombasle plow, and to these two, and the one horse plows, the three prizes were awarded."

The Grange plow is described as having these advantages:—

"1st. It works of itself, not requiring the hand of a plowman either to enter the sock into the land, or to keep it in its true direction; a driver only is necessary.

2d. It can be set at any depth, and turns over the furrow slices at equal and regular depth.

3d. It moves as easily even on very sloping land as on a flat.

These effects are produced by a simple kind of mechanism, which can be applied at the expense of about twelve francs, to any common plow."

But the improved Dombasle plow is the general favoritte among the best French farmers. It is modelled from the Scotch plow of Small, but with the defects of that corrected, and is furnished with wheels, as is also the Grange plow.

There is in the paper alluded to a sketch of the system of farming adopted by M. du Moncel, near Cherbourg, on his farm of about 800 acres. M. M. makes potatoes the base of his system of culture, using the drill plow and horse hoe. He has tried turneps and carrots, but has rejected these for the potato, "since though the first roots are the most productive, the potato is twice as nutritive, (comparing equal bulks) besides its increased value as an article of human sustenance." * * * "After various experiments M. Moncel has determined on a course of eight years, divided into equal periods; in the first four years, he has successively potatoes, barley, clover, and wheat; in the second, buckwheat, colza, wheat, and oats." Of the artificial grasses he gives a preference to lucerne, though he has also vetches and red clover. His potatoes are a large yellow, early variety, a red, and a large white for swine. He has tried some twenty kinds, but experience proved these to be the best.

A small stream passes through the yard of M. Moncel, which is made to work machinery for thrashing and cleaning his grain; grinding his barley, wheat, and buckwheat; converting his straw into chaff; and slicing potatoes, carrots, &c. Thus without leaving the yard, the grain is reduced to flour and bran from the sheaf, and the straw cut for cattle. From this use of power, our farmers might take a useful hint, and in addition to the above operations, the same power might be made to saw the wood of a family, and crush the corn with the cob for the stock.

BEET SUGAR.

M. Chevalier has lately published at Paris, a valuable memoir on the present state of the beet sugar manufacture in Europe. From this it appears that in France there are 389 factories, making this year, ninety millions pounds of sugar. That Belgium produces sixteen millions; the German Union, thirty millions; and Austria the same; making in these countries a production of about one hundred and seventy milions of pounds. We do not learn the quantity of cane sugar imported into France; but Belgium imports sixteen millions; the German Union sixty millions, and Austria one hundred and ten millions. Great improvements have been made in the manufacture, and at the great manufactory of M. Dombasle ten per cent of fine sugar is easily obtained. But even this beet sugar is adulterated with potato sugar, and M. Chevalier asserts that it is more difficult to procure in Paris any quantity, however small, of pure cane sugar, than an ounce of genuine salt, or a glass of simple grape juice.

BOKKARA OR GIANT CLOVER.

At the meeting of the Yorkshire Agricultural Society, a premium was awarded to W. Stickney, for some of this clover, and of which he gave the following description: "The dried plant now exhibited is the growth of the year 1840, being the second year after sowing; it attained the height of fifteen and a half feet. The plant in blossom is of the present year's growth, (1841,) near ten feet high, and still advancing. The shorter plants are from seeds sown in May last, but did not vegetate until the beginning of June; they are therefore the growth of two months, and are now growing at the rate of something more than an inch in twenty-four hours; and it is supposed they are now in a proper state to be cut for soiling. If allowed to perfect its seed it is a biennial plant."

RICH MILK.

In a late number of the Farmer's Magazine is a communication from a Lancashire farmer, from which we take the following:—"I have a cow in my stock which has had five calves, two of which she has dropped since she came into my possession. She is now giving not less than 26 quarts of milk daily, and this appearing of superior richness, induced me to try what weight of butter her milk for seven days would give; the trial was completed yesterday, and the butter weighed 22 lbs. 3 1-2 ounces. I had a cow ten years ago which gave 20 lbs. 6 ounces in a week." This is, to say the least of it, equal to Col. Jaques' celebrated Cream Pot breed.

FLEMISH BARLEY.

At a late monthly meeting of the Royal English Agricultural Society, "the Rev. W. L. Rham, exhibited specimens of Flemish Winter Barley, of which 11 1-2 quarters per acre were reaped, near Ghent, in 1840." The quarter being eight bushels, the yield reaches the enormous amount of ninety-two bushels per acre. This barley was two rowed. Mr. Rham also presented specimens of another variety of Brabant barley of six rows, straw very long and thick, and which in productiveness fell not much short of the foregoing. This too was a winter barley, a kind not cultivated in the United States.

NEW METHOD OF WORKING FOUR HORSES.

At a late plowing match for experimenting on the qualities of various plows, held at Rozelle, by the Ayrshire Agricultural Association, it became necessary to use four horses, and to test the force exerted, two dynamometers were required. The report thus describes the manner in which this was accomplished:

"In treating of the draft of the horses, it may be useful to notice an expedient that was adopted to measure heavy implements requiring a draft of eighty stones, while the scale of the dynamometers individually extended only to seventy stones. The horses were yoked two and two to the ends of a runner chain, which was passed round an iron sheave [pulley wheel] attached to the plow's bridle. The hind pair of horses were yoked to the short end of the chain, while the foremost pair were yoked to the other end, lengthened out sufficiently to give freedom of action, and each pair drew by a set of common swingtrees, with a dynamometer attached to each set of trees. In this manner the two dynamometers were found to indicate, with all the precision that could be desired, that equal force was exerted by each pair of horses, the sum of the forces being the real draft of the implement. This method of yoking four horses, be it observed, is one of the best now employed. It is simple and effective, equalizing the draft to the whole four, in a manner as perfect as it is possible to approach."

The reasonableness of this statement will be at once apparent to every practical man, certainly to every teamster. Such know that when four horses are worked in the usual way, a much larger proportion of draft, in nine cases out of ten, is taken by one of the teams than by the other, and the ordinary mode of harnessing and working renders the equalization of draft impossible. This great desideratum is easily effected in the manner mentioned above.

EXTRAORDINARY FECUNDITY IN EWES.

We copy from the last number of the British Quarterly Farmer s Magazine the following notices: "We are informed that Mr. Botterill, farmer of Wroot, has now in his possession twelve ewes, which during the present season, have produced no less than 37 lambs, being three each for 11 of them, and for the remaining one four. Mr. Thomas Shepherd of Wooley, parish of Moorwinstow, Cornwall, had an ewe sheep that produced 44 lambs. Four seasons she had two each season; three times she had three, three times she had four; and three times five. She was a cross bred Nott sheep, and bred by Mr. Colhill of Devon."

The President's Message was brought form Washington to New-York in nine hours and fifty-three minutes.

Notices of Agricultural Societies.

NEW JERSEY STATE SOCIETY.

THE last Fair of this Society was held at New Brunswick, October 27, 1841. Premiums of silver cups, varying in value from $5 to $10, were awarded to Caleb Brokan, for the best pair of matched horses; to Dr. J. A. Pool, for the best thorough bred stud horse, "Raritan;" to the same, for the best jack; for the best imported Durham bull, "Bernard," a portrait of which is given in another part of this paper; also, for the best bull calf, "Franklin," for the best imported Durham cow, "Maria," for the best, not imported, "Laura," and for the best thorough bred heifer, "Minna;" to J. C. Van Dyke, for the best thorough bred mare; to D. Runyon, for the best common bred mare and colt; to D. B. Smith, for the best thorough bred colt; to Philemon Dunn, for the best fat bullock, second best pair of oxen, for best Durham bull, not imported, for the best common heifer, and for best Lincolnshire buck; to Franklin Smith, for best pair of oxen, best common bred bull, under two years, and for the best Leicester buck and ewe; to Dr. J. Elmendorf, for best common bred bull; to John Hick, for best common cow; to Charles Starr, jr., for best boar, (Woburn,) over two years; to J. B. Edgar, for best boar, (Norfolk,) under two years; to A. S. Neilson, for second best do., (Berkshire;) to William Gulick, for the greatest quantity of clover hay from one acre, viz: 3 tons, 1825 lbs.

SOUTH CAROLINA STATE SOCIETY.

THE annual Fair of this Society was held at Columbia, on the 22d November last, when a variety of interesting reports were read; among them, an Essay on Sea Island Cotton, by the President, Reports on Manures and on Forage, by the Pendleton Agricultural Society, and a Report from the Newberry Agricultural Society, on Agricultural Economy. The annual address was delivered by Gen. J. H. Hammond, and is spoken of as an effort of the highest rank. Premiums, in silver cups, of the value of $10 to $20, were awarded on horses, cattle, sheep, mules, swine, &c. Col. Wade Hampton presented the Society with two bushels of "Musquite Grass seed," which, he says, is a native of Texas, and he thinks, from a trial of a single year, is admirably adapted to South Carolina. Col. H. says: "It has, I understand, been successfully cultivated by Mr. Carter, of Alabama, for some years past; and the high estimate he placed on it, induced him very kindly to send me a few quarts of the seed, in the summer of 1840. These seed were planted in September following, in drills, came up with great regularity, and continued to vegetate during the whole winter. A drouth of unusual duration in the spring, and another in July, accompanied by intense heat, produced no visible effect on it, and it has continued to flourish through all the vicissitudes of a most disastrous season. The seed were sown on dry alluvial soil, which had been prepared for turneps; and from a piece of ground, not exceeding the fourth of an acre, I gathered fourteen bushels of seed. It will, I think, make fine hay, growing from two and a half to three feet high; and, in its native prairies, it forms the favorite pasture of the wild horse and buffalo."

ONONDAGA COUNTY (N. Y.) SOCIETY.

OFFICERS.—William Fuller, of Skaneateles, Pres't.; Silas Cheesebro, of De Witt, Fletcher Woodward, of Camillus, Vice Pres'ts.; Chester Moses, of Marcellus, Rec. Sec'y.; Enoch Marks, of Navarino, Cor. Sec'y.; E. F. Wallace, of Syracuse, Treas.

An executive committe, of one member from each town in the county, was also chosen. The prospects of an efficient and useful Agricultural Society in this county are decidedly fair; and, it is to be hoped, the warmest expectations of the friends of an improved husbandry will be fully realized in the result. The thanks of the Society were voted to the former officers of the Society, for the valuable assistance they had rendered in its organization and management.

HARTFORD COUNTY, (CONN.)

REPORT OF THE VIEWING COMMITTEE ON FARMS.

SUCH reports as the one now before us, always possess for us a peculiar interest; and, we doubt not, are equally acceptable to our readers. In the report of the management, products, and expenses of a well conducted farm, there is something tangible, and which exhibits better than any mere theory, the actual results of farming; and we hope that hereafter, premiums on farms, small farms as well as large, will be distributed by every agricultural society in the country. There are many beautiful farms in Hartford county, as we have the pleasure of knowing, but the four included in the Report are those of Mr. Samuel Deming, of Farmington, Mr. S. H. Huntington, of Hartford, Mr. S. N. Bartlett, of East Windsor, and Mr. Jonathan Goodwin, of Hartford. We regret that we have not room for the whole Report; as it is, an abstract is all we can pretend to give.

Mr. Deming's farm contains one hundred and thirty acres, in nine separate pieces, and lying on both sides of Farmington river. These separations are a disadvantage, as they prevent in some degree that unity of design and management which might otherwise be made to appear. Few men, however, would overcome these obstacles, or turn them to better account than Mr. Deming. A considerable part of his meadow land, a few years since, was a worthless bog, which, by draining, he has converted into most productive meadows of the finest grasses. The farm in all its parts, buildings, yards, &c., is in fine order, and bears every where marks of care and improvement. The produce and expenses of Mr. Deming's farm are shown below, the prices being put at the actual market value.

30 acres of mowing, 75 tons of hay, at $9,		$675 00
15 " in rye, 250 bushels, at 80 cents,		200 00
5 " in corn, 130 " 80		104 00
3 " in oats, 150 " 45		67 50
3 " in potatoes, 250 " 25		87 50
Pasturing for 34 head of creatures, $5,		170 00
		$1,304 00
EXPENSES.		
3 men 6 months, $14 per month,	$254 00	
Equal to 1 1-2 men during the winter, at $13 per month,	117 00	
		$371 00
Nett profit,		$933 00

Mr. Huntington's farm is about three miles west of the city of Hartford, and contains one hundred and ten acres, eight being in wood land. Mr. Huntington has had the farm three years, and the effect of good management and an improving culture is visible in every part. The low grounds have been improved by draining, and the gravely knolls by plaster. Mr. H.'s method is to manure well, and plant no further than his manure will go. Last year he made one hundred and fifty loads of manure. The farm buildings are all new, and good models for a farmer, being constructed with due regard to economy and convenience. Mr. Huntington furnishes another instance of a man bred to a professional life, turning his attention successfully to the management of a farm, taking hold himself of the plow, and engaging in this best of all employments with an energy and pleasure that already exhibit the most favorable result. The statement of the crops, expenses, &c. of Mr. Huntington's farm, is as follows:

Received for hay, fruit, &c. sold from the growth of the present year,		$190 85
50 tons hay on the farm, $9,		450 00
200 bushels of oats, 46 cents,		90 00
500 " potatoes, 25,		125 00
15 " rye, 80,		12 00
300 " carrots, 25,		75 00
Oat straw and corn stalks,		20 00
Turneps, 100 bushels, 17 cents,		17 00
Ruta bagas, 75 " 17 "		12 75
Broom corn,		6 00
Pasture for 27 head of cattle,		125 00
		$1,133 60
EXPENSES.		
Clover and grass seed,	$13 50	
Horse rake,	9 00	
Sythes, rakes, hoes, pitchforks,	5 84	
Extra labor in haying,	44 00	
1 man 6 months, $13 50,	81 00	
1 " the year,	156 00	
8 loads of manure,	12 00	
Plaster,	2 12	
Paid for pasturing,	22 50	
		$345 96
Nett profit,		$787 64

Mr. Goodwin's farm is about one and one-fourth miles west of the city, and contains forty-three acres. Few farms show more decisively than this, the advantage of small farms, with high cultivation, over large ones, half cultivated. Every acre of this has been brought to a high state of improvement; the buildings, fences, and indeed every thing in and about the farm, were in perfect order. For farming purposes, the committee judged it to be worth at least $200 per acre. Thirty-four acres are in mowing, and six in pasture. The stock consists of six cows, a yoke of cattle, and a horse. Mr. Goodwin keeps an exact account of the products and expenses of his farm, which is as follows:

Sold 49 tons of hay, at $12 per ton,		$588 00
Sold butter,		109 90
Sold 6 calves, weighing 812 lbs., 4 1-2 cents,		37 50
Received for rowen feed,		33 66
Keeping horse 19 weeks, 4s. per week,		12 67
Profit on two yoke of cattle fattened,		40 00
1 fat cow sold,		30 00
1 " steer "		33 00
6 spring pigs,		15 00
2 hogs, weighing 600 lbs.,		36 00
Sow and pigs sold,		30 00
125 bushels potatoes sold, 25 cents,		30 25
Received for team work, done off the farm,		40 00
		$1,034 72
EXPENSES.		
Paid for manure,	$60 00	
" labor,	90 00	
Pasturing cows 16 weeks, at 40 cents per week,	38 40	
Corn raised on other land,	21 00	
Cost of sow,	11 00	
" pigs,	3 50	
Cow before feeding,	18 00	
Steer " "	20 00	
		$261 90
Nett profit,		$772 82

Mr. Bartlett's farm is in East Windsor, and contains one hundred and fifteen acres, a considerable part of which, when it came into his possession, ten years since, was almost in the condition of *blowing sand*, so light and sandy, and so reduced by improper cropping, was the land. Mr. B. has now twenty-seven acres in mowing and tillage, sixty-three in pasture, and twenty-five in wood. By pursuing a rotation of crops, feeding out all his produce to stock, and manuring to the extent of his means, the whole has been improved, and some of the farm brought into a good state of cultivation. Mr. B. pays great attention to stock, and has some fine Durham cattle. Mr. Bartlett's statement of crops, expenses, &c., to the committee, is as follows:

40 tons of hay, at $9 per ton,		$369 00
50 bushels of oats, at 45 cents,		22 50
140 " corn, 80 "		120 00
150 " potatoes, 25 "		37 50
600 lbs. tobacco, 5 cents,		30 00
Pasturing 22 head of cattle, $5,		110 00
		$680 00
EXPENSES.		
Labor of one man, at $11 per month, 6 months,	$66 00	
Boy, 10 days' haying,	5 00	
		$71 00
Nett profit,		$609 90

WINNEBAGO COUNTY (ILL.) SOCIETY.

THERE are few things more gratifying than to witness the increasing attention paid to agriculture, as demonstrated by the proceedings of the numerous societies that have sprung up within the past year, in almost every part of the United States. The many notices of such societies, in our last volume, are proofs of this, and we shall add more, as the kindness of our friends shall afford the means. We find, in the Rockford Pilot, an account of the annual meeting of the society named above; and it is gratifying to learn that the meeting was fully attended by the farmers from the vicinity, and from the neighboring counties. Fine specimens of full blooded Short Horns, and beautiful Berkshires, were offered for premiums; and the exhibition of horses might have shamed that of many older societies. An address was delivered by Dr. J. C. Goodhue, which was listened to with much interest. It was both practical and illustrative, and enforced lessons which, if put in practice by our farmers, would secure the best results. He dwelt with much effect and eloquence on the bright agricultural prospects of the fertile west, and recommended the adoption of those principles in agricultural operations, which experience has proved are the surest means of ultimate success. The premium for the best horse was awarded to J. S. Norton, for the horse "Uncas." For the best bull, to B. T. Lee, for the imported Short Horn, Duke of Wellington. For the best boar, to Horace Miller, for a full blooded Berkshire, from Lossing, of Albany, "as fine an animal as the country affords." The specimens of vegetables, corn, cocoons, &c. &c., were very fine. In short, the whole went off in the most encouraging manner; and we trust our Winnebago farmers will find, in this commencement, a strong inducement to continued exertion, and with still more complete success.

LAKE COUNTY (OHIO) SOCIETY.

THE first annual Fair of the Lake County (Ohio) Agricultural Society, was held at Painesville on the 19th and 20th of October, 1841. According to the "Telegraph," there are no counties in the northern part of that agricultural state, that can present a more imposing and finer display of cattle, &c.; and we are gratified to learn that a full proportion of them were present at the fair. Besides the animals presented for premiums, there were three ox teams on the ground, that attracted much notice. That from Mentor, numbered thirty-six yoke; that from Le Roy, thirty-six; and that from Madison, twenty-five. A beautiful pair of twin cattle, owned by Mr. Williams, of Le Roy, attracted the notice, and won the admiration of all. They were dark red, with some white on their faces, sides, and flanks, and so perfectly matched, as to render it almost impossible to distinguish the one from the other. The plowing match was well attended. Seven teams entered as competitors, and the quarter of an acre allotted to each was plowed in from thirty-two to fifty-four minutes each. The premiums were awarded to Mr. Ford and Mr. Page, both of whom performed their work admirably, in thirty-two minutes.

The exhibition of domestic manufactures was particularly fine; and the specimens of silks, carpets, woollen cloths, flannels, shawls, straw bonnets, &c. &c., elicited the highest commendation. Mrs. T. A. Tisdell, of Madison, appeared in a beautiful silk dress of her own manufacture. Few would have deemed it any other than imported. Mrs. S.. A Tisdell also obtained a premium on a silk dress pattern, of fine finish and texture, the work of her own hands. This family have, for a considerable time, been engaged in the silk business, and have practically demonstrated that it may be profitably and pleasantly connected with the other agricultural labors of the farm. A number of specimens of sewing silk were presented, which were of the best quality. A very extensive exhibition of large and fine vegetables was made, which, with the fine fruits, &c. presented, gave rich promise of the capabilities of that district of Ohio. The exhibition of articles of mechanical skill was very limited, a fault not likely to occur again, in a population where manufacturing most articles or implements, of domestic use, is practiced. The specimens of the dairy were beautiful, and of the best quality. The unexpected success of this first experiment in Lake county, cannot fail to produce an increased interest in the farmers' holiday, and render the anniversary hereafter exceedingly profitable. The lake country of Ohio is most beautiful; and the impulse which will be given to an improved agriculture, by such annual exhibitions, will be most beneficially felt, in whatever districts they occur.

TRIALS OF PLOWS.

In our first and second numbers of the Cultivator, for last year, we gave a full account of this implement, and the results of numerous experiments, made in England and in this country, to ascertain the form best adapted to remove the soil perfectly, and at the same time require the least draft, or, in other words, be the easiest for the team. Since that time, the subject has continued to receive public attention; the makers of plows have redoubled their efforts at improvement, and the most active exertions have been made to produce implements as perfect as possible. This is the more gratifying, as the plow ever has been, and will continue to be, one of the most essential implements of agriculture, as well as the most common; and every improvement that shall render it better adapted to general use, and spare the labor of our patient animals, will be widely felt. Until the means of measuring the draft, by the dynamometer, became common, the vast difference existing in the power required to move them, was not known, or understood. A plow was a plow; so, at least, the farmer considered it; and though the teams used might have told a different story, had their opinions been asked, or their distress when at work been admitted as evidence, there was for years little effort made for rendering their construction more philosophical, or consistent with the obvious principles of mathematics. The idea that a philosopher could know any thing about a plow, was scouted as absurd; and we well remember the ridicule, not to say suspicion, with which the celebrated essay of Mr. Jefferson, with its reasonings and diagrams, was received by the farming public.

The annual agricultural meetings and fairs, with their plowing matches, have contributed much to bring and keep the subject of plows before the public mind; and those of the last fall have, in many instances, had particular reference to this great element of good husbandry. Massachusetts has, in this respect, taken the lead; and the trial of plows at Worcester, in 1840, did much to invite the attention of agriculturists, both at home and abroad, to the necessity and possibility of improvement. The plows of Howard, Prouty & Mears, Ruggles & Co., all of Boston, and all deservedly celebrated, are among the finest specimens of mechanic and scientific skill the country has yet seen. The improvements made during the past year in their plow, by the last named firm, have rendered it at least equal to the best of the New England plows, in the opinion of those competent to decide. The estimation in which the Howard plow is held, may be inferred from the fact, as stated in the New England Farmer, that the makers have received orders, during the past year, for four hundred more than they were able to provide.

The fair of the N. Y. S. Ag. Society brought together a great number of plows, as well as other agricultural implements; and although the trial, owing to the circumstances stated in the Report of the proceedings, was not as perfectly satisfactory as it might have been, still it was sufficient to show a great improvement had been made in the form, mechanical execution, and ease of draft, over those that had preceded them. At this fair, the Mottville plow, which received the first of the regular premiums, the Laughlin plow, and the Wisconsin plow, as well as one presented by Ruggles, Mason, Nourse & Co. to the editors of the Cultivator, but not offered for the premiums, attracted much notice. But the double mold board plow of Messrs. Mooers & Slater, from the excellence and novelty of its construction, the facility with which it would operate on side hills as well as on level land, and its ease of draft, rendered it deservedly a favorite implement, and the honorary premium was deemed well awarded. It was supposed by many very good judges of plowing, that the resistance offered by the land side share would increase the draft sensibly, but the result showed that such was not the case.

The trial of plows which took place under the direction of a committee of the American Institute, at New-York, was very well conducted; and although the number of plows on the ground was not as great as at Syracuse, the trials with the dynamometer were more satisfactory. It is to be regretted that some of the favorite Massachusetts plows had not been present for competition, as a full investigation and understanding of the matter requires repeated and careful comparison of plows in the same soils, and as near as possible under the same circumstances. We believe that such will hereafter be the case. The manner in which the report of the trials of plows last year at Worcester was presented, renders a comparison of the actual draft used there and at New-York, difficult; but as the mode was adopted at New-York that English experimenters have used, a comparison between the plows of England and Scotland, and those of this country, is more easily made. The following table, which we find prepared at our hand in an account of the New-York trials, given in the Brooklyn Star, we transfer to our columns with pleasure, merely remarking that we have verified the correctness of the foreign results, by reference to the reports in the Journals of the English Royal Agricultural Society, and the Scotch Highland Ag. Society, from which they were taken. The reader will see that the best British plow, Yester No. 1, weight 170 lbs., draft 380 lbs., removed a furrow slice of only 10 inches by 6, while the best American, Barnaby & Mooers' double mold board side hill plow, (the same that received the premium at Syracuse,) weight 142 lbs., draft 350 lbs., removed a furrow slice of 12 inches by 8, or nearly twice as large. We are gratified to learn that this plow, which received the premiums at Syracuse and New-York, has been presented by the Institute to the Royal Ag. Society, and that doubtless it will be subjected to comparison with the best plows of that country. In examining the list of English agricultural implements, we have often remarked the fact, that English plows range in prices from $20 to $30, while the best improved American ones do not cost more than from $10 to $15. The table will be understood without further explanation.

NAMES OF PLOW.	*Weight of Plow.*	*Draft by dynamometer.*	REMARKS.
Hart's, English, ·······	140 *lbs*	400 *lbs*	Furrow not well taken out
Ransome's wheel, do.,	168	480	Bet. furr. not well laid up
Yester, No. 1, Scotch,	170	380	Clean furrow.
" " 2, English	136	440	" "
Scoular's swing, do., ·	150	446	" "
Hunter's, English, ····	190	560	Furrow not well laid up.
Currie's, Scotch, ······	170	500	" " "
Coltman's, do., ·······	176	500	Second best furrow.
Hadden's, do., ········	180	510	Third " "
Neill's, do., ············	185	500	Good furrow.
Wilkens', English, ····	175	540	" "
Ransome's swing, ·····	160	462	" "
Palmer's wheel, Eng.,	230	560	Good work.
New spring, Scotch, ··	189	560	" "
Sussex, English, ······	189	680	" "

The following plows were tried at Sing Sing, 14th October:

Barnaby & Mooers', ···	142	350	Best work of any Americ'n
Wisconsin, ·············	170	438	Secend best rate.
Beebe's swing, ········		451	Good furrow.
Minor, Horton & Co.'s,		460	" "
Cornelius Bergen's, ···		472	" "

The furrow slice turned by the European plows, was 10 inches broad, and 6 deep, and that by the American plows, at Sing Sing, 12 inches wide, and 8 deep.

AGRICULTURAL JOURNALS AND EDITORS.

During the past year, several changes took place among the agricultural papers of the country, some of which we noticed, *en passant*, and there are one or two others, to which we wish to refer at this time. The first is the establishment of a new paper, at Boston, called the "*Massachusetts Ploughman*," (with which the Yankee Farmer has just been united,) under the management of the veteran Buckminster, formerly of the Boston Cultivator, which paper is still continued by its proprietor.

The other event to which we have referred, is the accession of our friend, the Agricultural Commissioner of Massachusetts, the Rev. Henry Colman, to the chair of the New Genesee Farmer, at Rochester, as sole editor and joint proprietor of that paper. The highly favorable opinion we have always entertained, and so frequently expressed, of the talents and extensive acquirements of this gentleman, need not be repeated here; the pages of the Genesee Farmer, previous to its union with the Cultivator, and indeed those of nearly every other agricultural journal of the country, bear the clearest evidences of his practical knowledge, and his happy talent at imparting instruction. We consider his connection with the New Genesee Farmer an auspicious event to the agriculture of our State,—a state that will feel proud to welcome him as a citizen. For ourselves, we present to Mr. Colman, as a gentleman, a citizen, and an editor, a most cordial welcome to New-York.

WINE IN THE WEST.

One of the most successful efforts at the culture of the grape and the production of wine, that has been made in this country, is that of Mr. John Davis, in Indiana, near Clinton, and about ten miles from Louisville, Ky. Mr. Davis has about seven acres in vineyard, but only one and a half in bearing. The vines are planted in rows six feet apart, and three feet apart in the rows; and the editors of the Louisville papers say that in September, on the acre and a half in bearing, the rows presented the appearance of "almost solid walls of fruit." This we can readily believe, since the quantity of wine made from this ground is now ascertained to be 1,170 gallons. No European vineyard has surpassed this; and the ordinary product is not more than half this quantity. Mr. Davis' mode of training his vines is very simple. Posts eight feet apart are set along the rows, with pegs driven in them, fourteen inches apart. On these, rods of wood or lath are laid and secured, and to these the vines are lashed with bark. The ground should be prepared by the spade, or trench plowing, so as to place the rich surface earth beneath the point of washing. Of all the varieties he has tried, Mr. Davis prefers the Catawba, and from this the wine was made. Mr. Davis uses cuttings of well ripened wood, from sixteen to eighteen inches long, of the last year's growth, cut before the sap begins to flow, and cut square, immediately above and below a joint, as is generally practiced in all countries with grape cuttings. The holes are dug eighteen inches in depth, and about the same across, into which, about the middle of April, two cuttings, one on each side, are placed, and the holes filled with rich earth. One or two buds should be left above ground, and the earth well trod about the cuttings. The cuttings, when taken from the vines, should be placed or buried in a cool cellar, and when taken out for planting, it is found to assist their sprouting to soak them twenty-four hours in rain water. There is every indication that wine and silk will become no inconsiderable items in the aggregate of western products; and they certainly are articles for which, at the present time, large sums of money leave this country annually. We shall most cordially welcome any new necessary product or manufacture, that shall make us more independent of foreign nations, and less liable to be laid under contribution by them.

Notices of New Publications.

"THE POULTRY YARD."

We have here in a neat and convenient form, one of the very best works on poultry extant; one which is much needed in this country, and which will be found useful to every one, and indispensable to those farmers who make the rearing of poultry and the sale of eggs an important item of their profits. The author, Mr. Boswell of Greenlaw, Scotland, has given a practical view of the best methods of selecting, rearing, and breeding the various species of domestic fowls, arranged under the following heads:—1. Poultry yards and sheds; 2. Kinds and breeds of fowls; 3. Feeding of Poultry; 4. Pairing, laying, and hatching; 5. Breeding; 6. Peculiar sorts of fowls; 7. Aquatic fowls; 8. Diseases of Poultry. The present is the first American edition; and for this, the public is much indebted to the publishers, Wiley & Putnam, New-York. Messrs. Wiley & Putnam deserve much credit for the valuable publications on domestic husbandry they are furnishing us, and thus supplying a want which has long been severely felt. We hope hereafter to present plans of poultry houses given in this work, to the readers of the Cultivator, as well as extracts from the mass of useful information contained in the volume.

THE FARMER'S ENCYCLOPÆDIA.

We have received the two first numbers of this new work from the pen of Cuthbert W. Johnson, Esq. It is published in monthly numbers of 130 pages each, price 5s. commencing in September last. It is to be completed in ten numbers; cost, some $12. The plan is very much like that of the Dictionary of Agricultural Terms, Processes, &c. prepared for the two last volumes of the Cultivator, and which will be continued. It of course embraces more topics, and treats subjects more fully, than the limits of our journal will admit. The numbers before us embrace letters A and B, and from the examination we have given them, we think the work will prove a valuable contribution to the agricultural public. Mr. Johnson is certainly one of the most able scientific men of England, and as he has for years devoted much of his time to the connection of the natural sciences, particularly chemistry, with agriculture, he can scarcely fail of bringing togther a great mass of useful facts for the advancement of an improved husbandry. His observations on the species of grains and grasses, so far as they have come under his notice, are valuable to the farmer, and creditable to him as a man of science. We can recommend the Farmer's Encyclopædia to such of our friends as wish a comprehensive book of reference on agricultural topics. It is published in London, but may be had of Wiley & Putnam, New-York.

Mr. ELLSWORTH'S APPENDIX—No. 2.

We acknowledge our obligations to that indefatigable friend to agricultral improvement, H. L. Ellsworth, Esq. for copy of the pamphlet, the title of which is given above. It consists of a letter addressed to E. Goodrich, Esq. of Hartford, on the state of Agriculture in the West, particularly in the Wabash Valley; letters from H. O. Smith, Solon Robinson, and A. C. Stevenson, Esq. in reply to a series of queries on subjects of great agricultural interest, addressed to them by Mr. Ellsworth. The mode of fencing prairie farms adopted and recommended by Mr. Ellsworth, possesses so many advantages, that we will present it to our readers, as soon as we are able to furnish the cuts for illustration. We find much in this pamphlet of practical interest, but have room for only the following extract on sowing corn for fodder. Our own experiments leave us no room for doubting the perfect correctness of Mr. Ellsworth's statement; and we recommend the practice to our farmers.

"Permit me to mention an experiment made by myself at Washington on the subject of fodder. Noticing the statement made in the French periodicals, that the stalks of corn (maize,) contained one-half as much saccharine matter as cane, and knowing that my ancestors made their molasses during the revolutionary war from these stalks, I sowed four and a half bushels of common corn, broadcast, and harrowed in the same; this labor was easily performed by a single man with a team, (including the plowing) in a day. Having soaked the corn in saltpetre, it took a rapid start, overtopped the weeds, and covered the ground with a forest of stalks. When fairly tasselled, I cut the same, which I fed to cattle, horses, and hogs, both green and dry. If fed to swine after being cured, it was cut and fermented with chop or bran. Being anxious to ascertain the quantity, I measured a few square feet of the stoutest. I found I had 5 lbs. of green fodder per square foot: this may not seem incredible, and it is probably less than what would grow on rich lands at the west; if, however, we consider there are 43,560 square feet in an acre, we shall obtain 217,800 lbs. equal to 108 1-2 tons of green fodder. I cut the first crop the early part of July, and plowed and sowed the land again, and took a second crop two thirds as large, and even tried a third on the same land; but it did not reach over ten inches before the frost seized it. Persons who have only a small patch of ground may try this experiment to advantage, and fill their barns with fodder."

WORK FOR THE MONTH.

ONE of the most important truths that can be impressed on the mind of the farmer, is, that *whatever is worth doing at all, is worth doing well* ; and, by acting upon this principle, he will rarely find that he has labored to no purpose during the year. The winter months, to the farmer, are months of comparative leisure, but he will find no time for idleness. Negligence is no more to be tolerated in January than in July; and inattention to the interests of the farm now, will frequently add materially to the labors of the year, and seriously reduce, if not wholly destroy, the profits of a season. Industry, economy, sobriety, and unimpeachable integrity, should be the watchwords of every farmer, for with these for his guides, he can hardly fail of success. To these he must add a knowledge of his business, the most improved modes of culture, the advantages of agricultural reading, and a habit of comparison and reflection on facts, and competence may be considered certain.

There is an error somewhat prevalent, that animals do not require salt and water as much in winter as in summer. This is a mistake, and the good farmer will see that they have both. Nature's laws, in this respect, cannot be trifled with.

Animals fed on dry hay, will do much better if they have a meal of roots once or twice a week. For the horse, we prefer carrots, and even if fed on grain, these roots will be found most healthful.

Do not feed your stock in the street, or about your fields, but in your yards. The man who feeds in fields or roads, loses his manures, poaches his grounds, and by the habit wastes at least one-third of his fodder.

If any of your animals exhibit symptoms of falling off, such as growing poor, neglecting their food, &c., they should immediately receive extra attention, and a stop at once, if possible, be put to farther decline. Cows should have mashes of bran, or more nutritive food, and all kinds of stock so conditioned should be carefully protected from the severities of the season.

Do not starve your fowls, if you expect large, well filled eggs, or plump fat pullets for next Thanksgiving. Your profits from your fowls will in general be in direct proportion to the care and feeding you give them. Remember they must have a box of sand, gravel, plaster, ashes, &c. to roll in, and pick pebbles from, to aid in the digestion of their food, and preserve their plumage and health unimpaired.

Give your horses salt frequently with their grain, and if you add a good handful of ashes, once a week, you will rarely find them troubled with cholic or bots. If you keep your horses on corn, you will find it better for them to have the grain and cob ground together.

Keep your lambs and old sheep separate, and, if possible, never allow more than fifty of any kind to lie together. Where too many are herded together, the strong are always in advance, picking out the sweetest and best of the hay, and trampling on the remainder. This is one of the ways in which the weak are sure to grow weaker, as well as the strong stronger.

Be certain to keep your diseased animals, no matter of what kind, if you have any, away from the rest of your stock. Diseases are frequently contagious, and the sickly or weak can be better cared for when separate from the rest of the herd.

Keep your stables and pens well littered with straw, and if you have plenty of it, keep your yards in the same condition. Littering adds to the comfort of your animals; it increases the quantity of your manures, and it adds to their quality, as it absorbs and retains the fluid parts that are otherwise mainly lost.

Examine your apple bins, and separate the sound from the partially decayed fruit. If you keep a memorandum of the times your various apples arrive at perfection, it will aid you much in arranging a permanent succession of good fruit for the year, which every good farmer should aim at.

Feed all your animals regularly. You find such a mode of feeding best in your own case, and you will find it so with them. Where animals are fed irregularly, they remain constantly in a restless, dissatisfied state; whereas, when fed punctually, they eat, and expect no more till the stated hour arrives.

Look out for your fire wood for the ensuing year. Frost seasons wood rapidly, and if you cut and split now, the trouble of drawing tons of water to your wood house may be prevented. Nothing can justify scolding in a woman, but a smoking house, and a fire of green wood. If you love soft words, fair faces, and sweet smiles, make sure of dry wood and a bright fire.

Commence the year with a regular farmer's book. Enter in it, daily, every thing you will wish to remember with regard to crops, labor, &c. Keep a close account of your receipts and expenditures; it is the only certain mode of knowing your actual profit and loss in your business; and this is as necessary in farming as in trade.

Dr. Franklin said that creditors were a superstitious sort of people, great observers of set times and days; and it would be well if those who are in debt would always bear this fact in mind. Settle up all your accounts punctually; do not let your mechanics complain for want of their pay, or the cry of those who have tilled your fields, rise to heaven in complaint of your negligence or dishonesty.

Winter, too, is the season in which works of charity and kindness are frequently required, and which the farmer ought never to neglect. There will always be those who are unfortunate and poor, and for such, good may always be done. The widow and the orphan, the sick and the destitute, all have their claims, that may not be disregarded. The able poor must have employment, but in this land of abundance, none must be left to suffer.

Visit your district school, and take an interest in its management and progress. On this single point, our country schools, the destiny of our country may be said to be depending. There the *men* of our country receive their first and most lasting impressions; and what is done here, should be done in the best possible manner. Children are pleased with such attention, and the instructor will not be less gratified.

Look round among your farming friends, and see who of them takes an agricultural paper. If they have hitherto neglected the advantages such a paper offers, would it not be an act of kindness to them to bring the subject to their notice; to show them your copy of the Cultivator, and invite them to become subscribers. It is those who read such journals that are the best able to appreciate their utility. Do not forget to provide food for the mind as well as the body; the means offered in this country are ample, and easily accessible; and of all negligence, this is the most criminal and fatal.

SILK MANUFACTURE AT AUBURN.

WE are indebted to WILLIAM R. PRINCE, Esq., Flushing, for the following letter from Mr. A. GRIDLEY, showing the gratifying results which have followed the efforts to introduce the manufacture of silk into the State Prison at Auburn:

State Prison, Auburn, Dec. 6, 1841.

In reply to yours of the 2d inst., I furnish the annexed tabular view of our small beginning in the silk operation, but do so as a matter of courtesy to you. You will observe a great falling off in the daily earnings after 1st September ; this is accounted for as follows: we procured one of Brooks' machines for twisting and doubling into sewings directly from the cocoons ; on the 20th May last, we put two convicts (raw hands) at work. The first month, they earned 27 1-2 cents per day; second month, 41 1-2 ; third month, (August,) 63 cents. In the mean time, we built four new machines, on the same plan, and in September and October put them in operation, with an addition of ten inexperienced hands ; all the convicts employed are of a very low grade, cripples, boys, and negroes. The result shows a daily average of 30 1-3 cents per day ; the men thus employed are such as are let to contractors, as quillers and spoolers, at 15 cents per day.

We have been engaged this season in building a two story brick workshop, 208 feet by 34 ; this has given employment to all our efficient men who are not employed by the contractors, so that it has been impossible for us to go largely into the silk operation, nor did we think it prudent to do so ; it is an experiment, and prudence dictates that we should enter upon it cautiously. The experiment, thus far, has satisfied us perfectly that our convicts can be as profitably employed in this interesting branch of business as in any other. We feel a suitable solicitude for the ultimate success of the silk business, not only in this prison, but from motives of patriotism, we feel a keen anxiety that it may, as we think it must, ere long, become a principal staple of our country, second only to cotton and wheat. When we commenced operations, we considered it very doubtful whether cocoons could be procured to any considerable amount, but have been happily disappointed thus far, as we find there has been a simultaneous commencement (in a small way) throughout the entire country in the culture of the worm ; and there are now indications of a general movement throughout the western part of this state and elsewhere, that leaves no room to doubt that a most abundant supply of cocoons and reeled silk awaits us the ensuing season. I am aware of the immense importance to the country of our success in this prison, and as this is properly understood and duly appreciated by the present agent, Henry Polhemus, Esq., I have the fullest confidence that nothing will be left undone on his part that shall tend to produce so desirable a result.

The following table of results shows, in
Col. 1—The months in which the work was done.
" 2—No. of skeins of silk made, 320 skeins to the lb.
" 3—No. of days of convict labor.
" 4—Cost of cocoons, at $4 per bushel—113 ounces silk per bushel.
" 5—Value of silk made, at 2 1-2 cents per skein.
" 6—Amount earned per day by each convict, (omitting the fractions.)
" 7—Total amount of convict earnings per month.

May & June,	2800	102	$35 00	$70 00	$0 27	$28 00
July, ...	2243	54	28 00	56 07	0 41	22 46
August, ...	3279	52	41 00	81 97	0 63	32 77
September, .	5075	168	63 44	126 87	0 30	50 74
October, ...	7476	308	93 45	186 90	0 24	74 76
November, .	10150	338	126 87	253 75	0 30	101 50
	31023	1022	$387 76	$775 56		$310 23

Average earnings of each convict, per day, is a fraction over 30 1-3 cents.

The following is the amount paid for cocoons, silk, &c., since our commencement, 20th May last :

For cocoons, at an average cost of $3 34, ...	$949 69
" reeled silk, average per lb. of $4 87 1-2, .	1,663 91
4 silk machines, and other fixtures, for manufacturing sewing silk, ...	178 75
Total investment to 1st Dec., 1841, ...	$2,792 35

AGRICULTURAL SOCIETY OF THE U. STATES.

A meeting of the friends of Agriculture from the different sections of the United States was held pursuant to public notice, in the hall of the House of Representatives, on the 15th December, 1841; when,

On motion of the Hon. Dixon H. Lewis of Alabama, the Hon. JAMES M. GARNETT of Virginia, was appointed President of the meeting; and the Hon. D. H. LEWIS of Alabama, Hon. EDMUND DEBERRY of N. Carolina, Dr. JAMES W. THOMPSON of Delaware, JOSEPH GALES, Esq. of the District of Columbia, BENJAMIN V. FRENCH, Esq. of Mass. and JAMES T. GIFFORD, Esq. of Illinois, were appointed Vice-Presidents; and J. F. CALLAN of the District of Columbia, and ROBERT E. HORNOR of New-Jersey, were appointed Secretaries.

The President having very ably and pointedly addressed the convention, appointed the following Committee to present the Constitution of the Society, viz. Hon. H. L. Ellsworth of D. C., Hon. D. H. Lewis of Ala., Hon. James A. Pearce of Maryland, Hon. Zadok Casey of Ill. Hon. G. M. Keim of Penn., John Jones, Esq. of Dela., Peter Thatcher, Esq. of Mass., and C. F. Mercer, Esq. of Florida, who after having retired for a few moments, reported a Constitution, which was read and adopted.

On motion, J. S. Skinner, Esq. Hon. D. H. Lewis, and Hon. H. L. Ellsworth, were appointed a committee to wait upon the Chairman, and solicit a copy of his address for publication.

On motion of Mr. Torrey of Massachusetts, it was

Resolved, That the Board of Control of the Society be instructed to present a petition to the present Congress of the United States, to set apart the Smithsonian bequest for the purposes of carrying out the objects of the Society.

The Hon. Levi Woodbury of N. H., Hon. Lewis F. Linn of Mi., Hon. W. C. Rives of Va., Hon. W. C. Johnson of Md., Hon. D. H. Lewis of Ala. Hon. John Hastings of Ohio, Hon. Henry L. Ellsworth, John S. Skinner, Esq. and J. F. Callan, of the District of Columbia, were appointed to select the officers of the Society provided for in the Constitution, to serve until the regular election in May next.

On motion, it was

Ordered, That subscription papers be left with the Secretary of the Senate, the Clerk of the House of Representatives, the Librarian of Congress, and with the Secretaries of this meeting, where persons desirous of becoming members may enrol their names.

And the Convention adjourned.

J. F. CALLAN, } Secretaries.
R. E. HORNOR. }

The committee, appointed by the Agricultural Society of the United States to select the officers of the Society, to serve until the first general meeting and exhibition on the 4th day of May next, have met and do hereby recommend and report the following gentlemen to fill the offices annexed to their respective names. The Recording Secretary is requested to publish the list, and give special information to each individual of his selection.

LEVI WOODBURY, Ch'n, for the Com.

President—JAMES M. GARNETT.
Coresponding Secretary—JOHN S. SKINNER.
Recording Secretary—JOHN F. CALLAN.
Treasurer—EDWARD DYER.
Board of Control—LEVI WOODBURY, ELISHA WHITTLESEY, ALEXANDER HUNTER, JOHN A. SMITH, W. J. STONE.

VICE-PRESIDENTS.

George Evans, Maine.
Isaac Hill, N. Hampshire.
B. F. French, Mass.
Eli Ives, Connecticut.
Gov. Fenner, R. Island.
Wm. Jarvis, Vermont.
C. N. Bement, N. York.
C. S. Green, New-Jersey.
Geo. M. Keim, Penn.
J. W. Thompson, Delaware.
Thos. Emory, Maryland.
Edmund Ruffin, Virginia.
Edmund Deberry, N. C.
Wade Hampton, S. C.
W. Lumpkin, Georgia.
Dixon H. Lewis, Ala.
Alex. Mouton, Lou.
Archibald Yell, Arkansas.
F. H. Gordon, Tennessee.
M. W. Philips, Miss.
Chilton Allen, Kentucky.
Lewis F. Linn, Missouri.
A. W. Snyder, Illinois.
Solon Robinson, Indiana.
Isaac E. Crary, Michigan.
John Hastings, Ohio.
H. L. Ellsworth, D. C.
R. W. Williams, Florida.
Timothy Davis, Iowa.
Henry Dodge, Wiskonsan.

The Vice-Presidents of Virginia, Maryland, District of Columbia, Pennsylvania, and Delaware, are ex-officio members of the Board of Control.

J. F. CALLAN, Rec. Sec.

SALES OF STOCK.

Mr. BEMENT of this city shipped, in December, six heifers, mostly Devons, to the Island of Bermuda. They were of a deep red color, and said to be handsome animals, and were purchased by A. S. Peniston, Esq. of New-York, for the Agricultural Society of that Island, of which Gov. Read is President. Mr. B. also informs us, that he recently sent four Durhams to South Carolina.

It will be seen, by a notice in another part of this paper, that E. P. PRENTICE, Esq. has disposed of his flock of South Down and Cotswold sheep, heretofore kept at Mount Hope, near this city, to J. McD. McINTYRE, intending hereafter to devote his attention more entirely to the breeding of Improved Durhams, of which he has now about forty head. In addition to this purchase, Mr. McIntyre has quite a flock of Cotswolds, bred from the stock imported by Messrs. Corning & Sotham in 1840.

Correspondence, Inquiries, &c.

MANUFACTURE OF URATE.

"Farmer Hodge," from near Baltimore, has requested some information in regard to this substance. He is right in supposing it is a preparation from urine; and its principal value is probably derived from the combination of the ammonia of the urine, (or that substance which makes Farmer H.'s hogshead "smell loud,") with the plaster used. When ammonia comes in contact with plaster, it is absorbed by the plaster, and the plaster rendered more fertilizing than before. If the plaster is mixed with the urine, not only is the ammonia absorbed, but the other salts of the urine are combined, making it still more efficacious. The plaster may be inclined to set, or become hard, but stirring would doubtless prevent it. Lime, in a caustic state, or fresh burned, would not be as good as plaster to mix with the urine. The preparation of urate is comparatively new, and the *best* methods of making and using are doubtless yet to be learned; and these things one farmer can experiment upon as well as another. Experiments in Paris proved that urate was so powerful as a manure, that considerable caution was required in its use; and the quantity used can but be determined by experience.

DIKING MARSHES.

In reply to an inquiry on the diking and improvement of salt marshes, made by a Nova Scotia correspondent, in a former number of the Cultivator, Mr. Jennison refers to Moorsom's work on Nova Scotia, where the process and its advantages are described. Speaking of a marsh so diked, Mr. M. remarks, "In the fourth year of its completion, the land is fit to receive the plow, and is then sown with wheat; the first crop is usually extraordinary, at least twenty-five bushels for one. On a marsh which has been diked and cultivated for a long period, eighteen bushels of wheat for one, or forty bushels per acre, is the average return, and from two and a half to three tons of hay per acre is the usual crop. Manure is never found necessary for diked marshes, as repeated crops of wheat may be raised in succession on this kind of land, without any further preparation than that of merely turning up the virgin mold, which is always found sufficiently rich without further preparation. Whenever a marsh has been exhausted, or worn out with bad management, subjecting it to the overflow of the tide waters, where this is admissible, will restore its fertility. See said work, from page 188 to 194.

We are not able at this moment to lay our hand on Bright's Travels; and if Mr. Jennison will forward, as he proposes, a condensed account of the Hungarian Agricultural School, we shall be happy to give it a place in the Cultivator. His suggestions respecting a price current for the country at large, shall receive consideration.

OPERATION OF SPAYING.

Our correspondent, 'Floridian,' at Tallahassee, has sent us some queries, the first of which is as follows:—"We wish you, Messrs. Editors, or some of your attentive correspondents, to inform a young reader of the most scientific mode of performing the operation of 'spaying,' the reasons for the operation, and the proper age for doing it."

The reasons for spaying are simply to prevent the animal's breeding, destroy all inclination for intercourse with the male, and, by rendering her quiet, increase the aptitude to fatten. Castration in the male produces similar results.

The object in spaying is to remove the *ovaries*, which create the impulse to venereal intercourse, and are small round masses, varying with the age of the animal from the size of a large pea to that of a nutmeg, a little flattened, and attached to the uterus, or "pig bag," as the receptacle of the embryo young is commonly called. In young pigs, the ovaries are whitish, but when older, or during the estrus, they are reddish in appearance, and are more fully developed. Young sows are frequently spayed at six weeks old; in older ones, the best time is when they exhibit desires for the male, as the ovaries are then more easily distinguished. The only implements used, are a sharp pocket knife, and a long straight needle, with strong waxed thread.

Strong cords are fastened to the hind legs of the animal, by which she is to be suspended from a spike or a pin in an upright post. The mouth may be tied to prevent squealing, and the fore legs held by an assistant. The operator then makes an incision, up and down, between the four back teats, commencing with the two back ones, cutting through the skin, the flesh and muscles beneath, to the membrane which envelops the bowels. This must be divided carefully, that the intestines may not be wounded; and in doing it, the knife should be placed at the lowest point of the opening made, with the back of the blade inwards, and passed upwards until a slit, two inches in length, or sufficient to admit two fingers into the wound, has been made. The fingers are introduced, and the uterus grasped, which to the touch will appear like a wet empty bladder, partially flattened. The operator must retain his hold, at whatever point this is seized, gradually drawing it towards him, and working his fingers forward until one of the ovaries is felt, which he will recognize by its hard kernel-like feeling, and its color, when he grasps it between his finger and thumb, and cuts it off as near the uterus as possible. The uterus must still be held, the other ovary sought for, and exterminated in the same way. Care must be taken to excise the ovaries completely, or close to the uterus, or the operation may prove ineffectual. The wound is now to be sewed up; and the object is to make the wound unite on its inner part first, and as equally as possible. For the first stitch, the needle is placed on the belly, on the right hand side of the lower part of the slit, and passed through the skin, &c. into the bowels, taking care that the point does not touch the intestines. The most of the thread is now drawn through, the needle made to enter *beneath the outer skin,* and passed into the bowels as before. Four such cross stitches, only drawing together the inner part of the wound, will be sufficient to place the inner edges of the wound in contact; and the outside is now closed by a similar series of stitches in the outer skin, when the ends of the thread are tied, and some tar salve rubbed over and around the wound. The animal should be kept fasting for some twelve or eighteen hours before the operation, that the intestines may not be distended.

It is somewhat difficult to describe such an operation, so as to be understood fully; but if a person chooses, he may, when pigs are butchered and hung up, make such experiments, when opening them, as will show the position of the parts, and enable him to operate without difficulty.

WELLS—COVERED OR UNCOVERED.

"Is it better to cover wells, or leave them uncovered? I have heard old experienced men say, that water in wells that are covered is impure, full of worms, &c., and that water in wells not covered is always clear and pure. They say that the sun has an effect in purifying the water. What is your experience? Floridian."

Water to which air can have free access, is better than that from which it is excluded, other things being equal; and wells where a bucket is used, are usually better than those with pumps, owing to the frequent agitation of the water. But in places where surface impurities are liable to be lodged in a well, it is better to have them closed. We have found that a trout, kept in a well, was the surest preventive against all worms, bugs, and similar nuisances in wells. Floridian will see that, at the 42d degree of latitude, the sun could have very little effect in a well.

We are unacquainted with the goat, or its diseases, and can find no reference to such a disorder as the one respecting which Floridian inquires.

"PEARL" AND "COMMENTATOR."

We have received some well written remarks from our correspondent, "Pearl," of Mississippi, whose communication on the subject of stirring the earth during drouth, in the August No. for 1841, elicited some remarks from "Commentator" in the succeeding number, and should lay a principal part of them before the reader, had not "Pearl" positively vetoed such a measure. But we make the following extract, on which to hang a few words in reply. Pearl says, "I believe in plowing deep—in the fall, if it can be—or in the spring, cultivating shallow, stir often, keep clean, and think it well done; and unless heavy beating rains occur, no need of a plow in after culture. Now, dear sirs, do we agree, except in moisture rising? I can understand something of the effect of the air and fine tilth, but if dry, cannot see how moisture can rise."

Our creed, founded on our own experience, may be stated in a few words. Manure your cultivated lands highly; in preparing them for a corn or other similar crop, or indeed for any, plow deep, for this not only eventually makes a deep and fertile soil, but gives room for the roots to spread and feed; in cultivating the crop, keep the surface frequently stirred, since this keeps it clean, promotes the absorption of gases, and greatly aids vegetation, as well as prevents crops from suffering by drouth; and disturb the roots as little as possible, or as is consistent with the necessity of keeping the surface friable, or open for the admission of air. So far, it is believed, we and our correspondent shall not differ. As to the effect which stirring the earth has, in the prevention of drouth, it appears to us that that operation acts two ways; first, by promoting the deposition of dew, and secondly, by promoting the capillary ascension of the moisture in the earth below. Neither the earth or the air, in their natural state, is ever entirely destitute of moisture. Stirring the earth promotes the deposition of dew, by allowing a more free radiation of heat from the soil; and it promotes capillary action, by pulverizing the soil. We have never cultivated a soil where sand greatly predominated, but it is evident pure sand would neither cause as copious deposits of dew, or facilitate capillary ascension of moisture, or retain moisture when supplied by rain, as well as soils properly constituted. Clay retains water more strongly, and conducts it more freely, than other earths. Every farmer knows that it is almost impossible to make a strong clay soil, where the necessary depth has been given by previous deep plowing and manuring, too dry.

"Pearl" is right in supposing that "Commentator" is a "brother farmer." He is so, and he is one of which the country has reason to be proud. He speaks from personal observation and experience, and therefore considers himself authorised to speak plain. "Pearl" will see that his criticisms are not confined to our correspondents, but that our own opinions are commented on with the same freedom as those of others. We recommend the following close of our Mississippi correspondent's letter to the notice of "Commentator:" "I have a great horror of being held up to ridicule, even by a farmer—it is not charitable; but tell 'Commentator' I'll practice, and give him a drubbing—if he will come down this way—only, however, in the way of a good true southern hearty welcome; and we will laugh over his logs and pearl of price, and philosophise at our leisure."

CULTIVATION OF BARLEY.

We have received from C. C. Kelly, Esq., of Springfield, Ky., the following inquiries in relation to this crop:

"1. In what spring month should barley be sown? 2. What kind of soil is best suited to its growth? 3. How should the ground be prepared? How much seed is necessary per acre? Should it, as is recommended in Scotland, be cut before it is fully ripe? Will it not, in its crude state, be a good food for stock, and for what kinds mainly?"

Barley should be sown as early in the spring as the ground can be well fitted for its reception. We have known it sown from April to June; but it may be observed, as a general rule, that on soils equally prepared, the early sown grain always gives the best samples. From the 1st to the 15th of May may be considered the usual time of sowing. It rarely suffers from spring frosts.

Any soil that will produce good roots, or clover, will grow barley. It should be rich and friable, moist, but not wet. Cold, heavy, tenacious soils, are unfit for this crop. Stagnant water is destructive to it.

Barley succeeds best after hoed crops, potatoes, turneps, or corn, crops that require heavy manuring, and keep the ground clean. Manure, applied directly to this crop, is not advisable, as it gives too much straw, is apt to lodge it, and injures the berry. It is frequently sown on clover sward; and in all cases, the soil must be made fine for the reception of the seed.

Thin skinned, plump, and rather pale seed is to be selected. Soaking the seed in a weak solution of nitre, for twenty-four hours, has proved of great service. We use from two bushels to two and a half bushels per acre. Poor soils require more seed than rich ones, as the plants do not tiller as much. In England, greater quantities of seed are used than here, from three to four bushels being the amount recommended.

Barley should never stand, before cutting, until it is *dead ripe*. When the ears droop and bend down to the stems, and lose their previous reddish cast, barley should be cut. The straw will now be of a yellow color, and if allowed to stand longer, becomes brittle, the heads break off, and thus easily wastes. Cut early, the berry will be finer and of brighter color than if allowed to stand longer.

Barley is a good food for any animal, but is generally grown for the purpose of making pork, for which it is only exceeded by corn. Barley, if fed to horses, should be ground, and fed with cut straw. If given them in the same manner and quantity as oats, it is apt to produce fever, a proof that its nutritive powers are great, and that some more bulky substance is required for the distention of the stomach.

VARIETIES OF THE PARSNEP.

Messrs. Editors—I would ask whether you have seen or heard of more than one kind of parsnep, the common or Dutch Parsnep? Some twenty years since, when I resided in Ohio, a kind of parsnep, called the Guernsey, was introduced by some emigrants from the island of that name in Great Britain, and soon came into general use, as they were larger, richer, and of superior flavor to the common ones. The method of cooking might have had some influence in producing this superiority, which was in baking the root with pork, or boiling it with a small quantity of water only. I sent some of the seed from Ohio to this place, where for one or two years they appeared to retain their fine flavor, as in Ohio; but they seemed to degenerate, and become more in appearance and flavor like the common parsnep. For this degeneracy, I have been unable to account. Would it not be advantageous for farmers in the northern and middle states to import their seed from Guernsey? Wm. Jennison.

There are several varieties of parsneps, such as the Dutch, Garden, and Guernsey, of which the latter is the most highly prized. Loudon says, "The variety best suited for the field, is the large Jersey, (or Guernsey,) the seed of which should be procured from the island, as that of the Garden parsnep, sold by the seedsmen, never attains the same size." Prof. Low says this parsnep is most approved of for cultivation, whether in the garden or field. Of the Guernsey parsnep, there are two kinds, "one of which is fusiform, and strikes deeply into the earth; the other becomes thick, and tends to the napiform." The cause of the degeneracy may arise from the soil, or in consequence of the seeds being mixed with the common or inferior qualities. The fact that British farmers find it necessary to get their seed from Guernsey, is conclusive as to the propriety of our obtaining it from the same source. Parsnep seed should always be new, as two years old seed does not come up freely.

☞ Some other inquiries, now on hand, will be answered hereafter.

DICTIONARY OF TERMS USED IN
Agriculture and its kindred Sciences.

HERD BOOK.—The Herd Book of the Improved Short Horns in England, is to them what the Book of Heraldry is to the proud nobility of the same country. In each is to be found the claim to distinction and purity of blood, and by its authoritative records and decisions, all pretensions must be judged. When Collings, Coates, Berry, and a few other enterprising individuals, had by their skill in selection and breeding, produced a race of animals superior to any hitherto seen in Britain, and public attention began to be directed to them, the prices they commanded excited the cupidity of less skillful breeders, and cattle were sold as the improved breed which had no title to that distinction. To prevent these impositions, and give the public a standard by which all cattle offered as Improved Short Horns might be tried, Mr. George Coates prepared the Herd Book, in the successive volumes of which the originals of this famous breed, with their most celebrated progeny in all their ramifications, down to the present time, are regularly numbered and recorded, and a glance at this book will show the blood of any Short Horn that has just claim to the title. The number on record at the present time amounts to several thousands, no inconsiderable number of which are at the present moment in the United States. So widely disseminated has this celebrated breed become in this country, that the propriety of an American Herd Book has been suggested, and may ere long be found necessary. The Cultivator, and some other agricultural journals, contain many pedigrees of the best stocks and animals, and by generally registering them in this way, with undoubted reference to the Herd Book, impositions and frauds, if attempted, could be detected, for every purchaser might remember that there is no pure Short Horn whose pedigree cannot be fully traced in the Herd Book. The Herd Book now extends to three volumes, and a fourth is soon to appear.

HIDE-BOUND.—This is a disease of the skin of animals, which gives a peculiarly rough and staring appearance to the hair, and is not unfrequently indicative of a general derangement of the health of the animal. The skin of the hide-bound animal loses its pliability and flexible nature, becomes stiff and seems to adhere to the muscles and bones, and the extent to which this stiffness and feeling of adhesion exists usually marks the severity and intensity of the cause in which it originates. Hide-bound is always attended with more or less fever. The oil which is formed from the innumerable glands or pores of the skin is dried up, and the minute scales which form the outer surface of the skin, no longer yielding to the hair, they, as the skin dries, turn the hair every way, giving that irregular and unhealthy appearance so characteristic of the disease. Hide-bound is much oftener a symptom of disease than a primary one, and the efforts at cure must be directed to a removal of the cause. A dose of physic, (Youatt recommends eight ounces of sulphur with half an ounce of ginger,) and a few washes should be given. Medicines calculated to rouse the action of the skin, such as sulphur, nitre, antimonial powder, or ginger, in small quantities, should follow the physic. When hide-bound follows low keeping, a change to a more generous diet, (gradually, however, and avoiding active tonics) will usually effect a cure. Mr. Youatt says the best alterative to remove hide-bound in the horse is levigated antimony, nitre, and sulphur; and given in doses of two drachms of the first, three of the second, and four of the third, and repeated every night in a mash or in the form of a ball.

HOE.—Next to the plow, the hoe is one of the most effectual implements of modern tillage, and in countries where Indian corn is grown, may be considered indispensable. There are many kinds of this implement, adapted to its various uses in the garden or the field, and in the form of them and the superiority of material and construction, the greatest improvements have, within a few years, been made. The blade or cutting part of a good hoe should be sufficiently hard to keep a good edge and not batter, and at the same time be so elastic and fine tempered as not to easily break. The horse hoe, or cultivator, as it is frequently called, is a great labor-saving machine, most admirably adapted to the cultivation of corn and root crops, particularly in those parts of the west, where, from the nature of the soil, its freedom from weeds, and the quantity of land to be operated upon, much of the labor must be performed by the horse. The great value of the cultivator, or horse-hoe, lies in its keeping the surface free from weeds, light and loose, and not disturbing the roots of the plants by running deep like the plow.

HONEY.—This is a well known substance, collected by the common honey bee from vegetable blossoms, and stored in combs for its own use. The most honey is made in regions of moderate temperature, such as the Mediterranean, Archipelago, or the Island of Cuba. It is also abundant in the United States. Honey when made from poisonous plants, partakes of their qualities, and death has been known to ensue from such a cause. On the south-east coast of the Black sea is a district, the honey of which is famous for causing a temporary madness in those who partake of it when new; age deprives it in a great measure of this power. This effect is owing to the honey being mostly the product of the *Rhododendron ponticum*, which plant (a species of laurel) abounds in that region. It has long been the practice to destroy the bees in order to obtain the honey; but experience shows this custom is as unnecessary as it is cruel and barbarous. A variety of hives are now used in this country, in which the honey made is so stored in boxes that it can be taken without injury to the bees, or disturbing them, at the pleasure of the owner. The bees may also in the common hive be so stupified by the smoke of some narcotic substance, (the common meadow puff-ball gathered and fully dried is one of the best articles for this purpose,) that the honey can be taken away without danger, and without permanent injury to the bees. The honey made on a farm may be considered a clear profit, as the expense of the apiary is usually trifling, and honey is a beautiful as well as delicious article of food.

HOOVE.—Hoven, Bloat, or Hoove, is the name given to a disease in animals, caused in most cases by taking them from a poor or innutritious food, and putting them into a rich and luxuriant pasture. The animal eats greedily, the stomach is overloaded, the rumen ceases to act, the food cannot circulate through its cavities, fermentation ensues, large quantities of gas are extricated and distend the stomach, the animal ceases to eat, and is evidently much distressed, the whole belly is blown up or inflated; in horses the blood is forced to the brain and staggers usually follow, while in cattle this symptom rarely occurs; the tongue is protruded, and unless the animal is relieved, death must speedily ensue, and most generally by rupture of the stomach. There is no doubt as to the cause of this complaint, and the object in cure is to permit the escape of the imprisoned gas, and prevent its formation. Moving the animal about, or the shock caused by dashing pailsfull of cold water upon it, will sometimes cause eructations of gas, and relieve the animal. Alkalies (and the best of these is ammonia) will prevent the formation of gas if it can enter it, but unfortunately the same cause which prevents the escape of the gas, also prevents the entry of the alkali into the stomach, and if given it frequently passes on to the next stomachs where there are no acids to neutralize. At the commencement of hoove, any kind of oil will frequently relieve the beast, as producing a disposition to vomit or purge, but at a later stage it will produce little effect from the same cause which prevents the action of an alkali. The probang, a hollow flexible tube of leather generally, (but we have known some valuable animals saved by an extempore probang, made of lead pipe) with a bulb on the end to prevent laceration, is the best instrument to relieve animals; but where such an instrument is not at hand, the knife may be used for the liberation of the gas. "The safest point for this operation," says Mr. Youatt, "is the following:—Suppose a line to be drawn along the vertebræ from the haunch bone to the last rib, and two other lines of equal length to extend down the flank so as to form an equilateral triangle, the apex of the triangle, or the point where these lines would meet, would be the proper place for the operation, for in that place there is no danger of wounding either the spleen or the kidney." Clover, rowen or fog, or turneps, will produce hoove; and some animals are much more subject to it than others. The farmer will do well to fit such animals for the butcher as soon as he is able.

HOP.—This plant, the *Humulus lupulus* of the botanist, has long been cultivated for the sake of its flowers, which contain a bitter principle much used for giving a bitter flavor to beers and fermented liquors, not only preserving them, but rendering them far more healthy than they could be without it. Indeed the home-made small beer of the farmer, made of malt and hops, and divested of the narcotic or alcoholic ingredients so common in other beverages, may well be considered one of the best of drinks, and a return to which would constitute a fortunate era in the health as well as morals of the community. What are called wild hops, are the male plants of the common hop, and are of no value. The hop is propagated by slips or by roots. The plant yields nothing the first year; in the second they produce their first crop of flowers, and are in full bearing the third year. A plantation will last from twelve to fifteen years, when it will require renewal. Hops require a rich deep soil, rather moist than otherwise, and must be manured occasionally.

HORN.—This is a substance composed chiefly of condensed albumen, combined with a small portion of phosphate of lime, and a small and varying portion of gelatine. In this latter respect it principally differs from bone, which is principally phosphate of lime and gelatine. In many species of animals the males only have horns; and as a general rule the horns are not fully developed until the animal is capable of perpetuating the species. Horns may be divided into four kinds: 1, those of the ox, sheep, goat, and antelope; 2, of the camel leopard or giraffe; 3, of the rhinoceros; and 4, of the deer kind. The substance of the horn is furnished by the skin, and the bony part is secured to the bones of the head by anchylosis. Horns have not been exclusively confined to animals, as the records of medicine show instances in which these appendages have existed on both man and woman. The fixed alkalies readily dissolve horn into a yellow saponaceous fluid. The scrapings of horn are one of the most powerful of manures, and its effects are very durable. Horns are converted to many uses in arts and manufactures.

HORSE-FLY.—There are several insects known by the name of the horse-fly, and which are at all times troublesome, and sometimes fatal to this noble animal. One of these, which is perhaps the most common and dangerous, is the one that produces the bot, (*Œstrus equi*,) a fly resembling the humble bee only lighter colored, and the female is provided with a long ovipositor folding under her belly, with which she lays her eggs on the hair of the legs, knees, &c. of the horse, and these being licked off and swallowed, a small larvæ or grub is produced which is called a bot, and which not unfrequently, by their numbers and irritation, if not by their voracity, destroy the horse. Another is the fly which produces the bot called the *fundament bot* (*Œstrus hemorrhoidalis*.) This fly lays its eggs on the lips of the horse, whence they are licked off and swallowed, and thus get into the stomach. They are most frequently found in the *anal* opening of the horse, and hence it was formerly supposed that the female deposited its eggs in that place. Injections of animal oil ensure the destruction of this bot. Another is the red bot fly, (*Œstrus nasalis*.) This insect is nearly the size of the honey bee, and the female lays her eggs in the nostrils of the horse, ass, stag, and sometimes of the sheep, though it differs from the *Œstrus ovis* or sheep-fly. The horse is rarely killed by this insect, though the larvæ in the nostrils are very troublesome, and when large enough they are sneezed out and pass into the pupa state in the ground. Sheep and deer die when they happen to have many of these larvæ in their heads. Another variety is the horse-fly proper, or *Hippoboscа equina*, which lives chiefly on horses, but sometimes attacks cattle and other animals. From its appearance, and the pertinacity with which it clings to the animal, it is sometimes called the spider fly or the forest fly. There are some other flies of the Tabanis tribe which are very troublesome to horses, but the above are the ones generally classed as horse-flies by naturalists. For further information on the flies that attack or prey on animals, the reader is referred to Koollar, whose work on predatory insects is one of the best extant.

HORSE-RAKE.—This is one of the most valuable of agricultural implements, considered as a labor-saving one, and for raking hay on all smooth meadows, and for several other purposes, should supersede the hand-rake altogether. There are two kinds, one called the single horse-rake, or which has teeth only on one side of the head, and the other called the double or revolving rake, which, on favorable ground, is much to be preferred. Such a rake will do the work well, expeditiously, and with far greater ease to the laborer. It is also very useful in raking over the stubble after wheat or barley has been harvested, and experience with the rake shows that a much greater loss was sustained (even when the crop was gathered in a careful manner) by a neglect in gathering with the rake, than was generally supposed. It is true, all that is left may not be lost, as the hogs may be gleaners, but we believe there are not many farmers who do not lose enough by not gleaning their fields with a rake, to buy a new one every year.

HOT BED.—It is sometimes desirable for the farmer to grow plants for the maturity of which our summers have not sufficient length, or to bring others forward at an earlier period than can be done in the open air, and in such cases a hot bed or forcing bed may be resorted to with success. Plants may be started in these, and when the frosts of spring are passed, be transplanted into the garden, and thus a maturity of the fruit secured. Hot beds are made with a frame to enclose the manure, or without, as suits the gardener. Horse manure is preferred to any other for this purpose, to be placed in masses of such depth, that when fermented there will be a thickness of at least three feet, and of such size as the covering frames demand. Experience shows that beds enclosed in a box or frame of boards do not dry up as rapidly as those without; but as the frame work cannot settle with the manure, the latter is sometimes so low when the fermentation has ceased, as to place the plants too much out of the direct rays of the sun. The earth placed on the manure should be rich garden mold, and of ten or twelve inches in thickness. If radishes are to be grown, a still greater depth is admissible. Too great a depth, however, will prevent the requisite heat, and much lessen the value of the bed. Some care is requisite in regulating the temperature by lifting and moving the glasses, and in pleasant days, air should have free access to the plants. A liberal supply of water of a moderate temperature (rain water is the best) must be given to plants while growing in the bed.

HUBBACK.—This is the name of the celebrated progenitor of the Improved Short Horns, and in the hands of Charles Collings, did for the English cattle what the Godolphin Arabian did for their horses. Mr. Youatt remarks, "that there are no superior Short Horns which do not claim descent nearly, or remotely, from Hubback." The origin of this bull appears to be involved in some obscurity. He was purchased by Waistall and R. Collings, when a calf, of a poor man who grazed his cow on the highway, and his dam was remarkable for the ease in which she was kept in high order, a quality possessed by Hubback to such a degree that a disposition to fatten prevented his usefulness as a bull but a few seasons. That Hubback was of pure Short Horn blood on one side cannot well be doubted; but the present race of Improved Short Horns have descended from a cross between Collings' S. H. bull Bolingbroke, a descendant of Hubback, and a beautiful red polled Galloway cow. Perhaps there is not another instance on record where a single animal has effected more important results, or stamped the character of excellence more decidedly on his descendants than this bull; and the example of the Collings, will go down to remote ages, as a proof of what perseverance, accompanied by a sound judgment, can effect in improving a race of cattle.

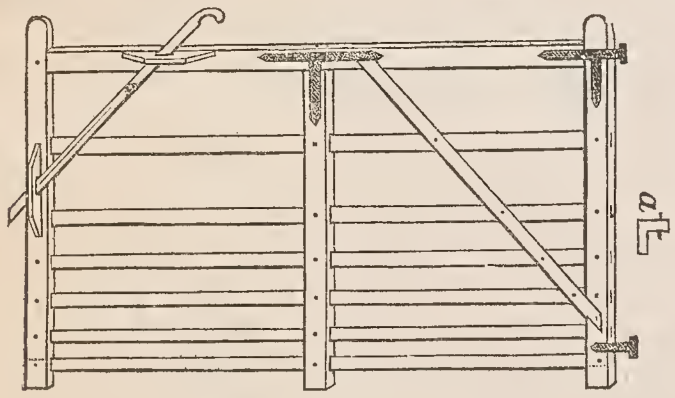
Every farmer should have a work shop.

Original Papers from Contributors.

FARM GATES AND IMPLEMENTS.

Messrs. Gaylord & Tucker—I send you for my present contribution, three drawings, with such a description of each as I hope will prove intelligible to all who may wish to make any use of them. The first is of a farm gate, similar in most respects to that of which I sent a sketch to the Farmer's Register, two or three years ago. The difference consists in the latch, and in having but one diagonal brace on opposite sides, which I am now convinced is sufficient, as I have used a gate of this kind for nearly two years, without any brace of the sort, and it has not swagged more than the springing of the brace edge-wise has caused it to swag. As to the latch, it is the cheapest and most simple that I have ever seen, at the same time that it is quite as effective as any other of which I have any knowledge. The one represented in the former drawing was a contrivance of my own, but this, which I met with in the county of Loudon, is decidedly better. My inducement to send you the present drawing is, that among all the numerous representations of gates which I have seen in the Cultivator, I have not examined one that is not liable to some objections. Having paid much attention to the structure of gates, for several years past, I have taken pains to note every thing in each which seemed worthy of imitation, and in this gate I have endeavored to combine the advantages of all. There is nothing in it of my contriving but the upper hinge, and simple iron that fastens the center-stem to the upper bar. Consequently the only merit I claim is that of combining the inventions of others in one subject.

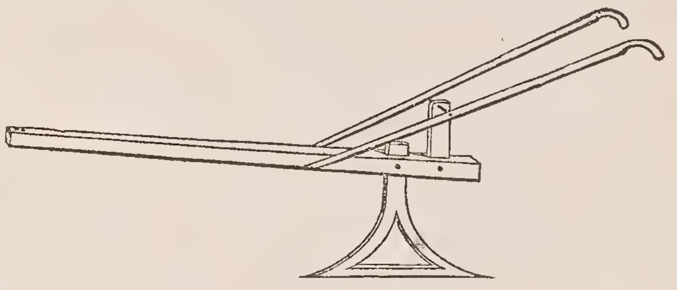
A good gate is a thing which commends itself, highly to every farmer, for we may truly say in its praise, that next to a good fence, it helps much to keep *in* our own stock, to keep *out* other people's, and above all, to keep the peace between testy neighbors. I hope, therefore, that my brethren will not deem the description which I am about to give of the one here presented, unnecessarily minute.



[*Farm Gate.*—Fig. 1.]

This drawing, [fig. 1,] represents a gate nine feet wide from out to out, and five feet high. The size of the hinder stem is four inches by three. The center and front stems are three by two and a half inches. All the bars are three inches wide, but the upper one is square behind, tapered to two and a half inches before. The other bars are one inch thick at the hinder end, tapered to five-eighths at the front ends. Each tenon has a shoulder three-fourths of of an inch deep; but the shoulders of the hinder tenons are cut in the *lower* edge of the bars, and of the front tenons in the *upper* edge, as indicated by the dotted lines across the front and hinder stems, at the ends of the second bar next to the top. These shoulders thus cut, aid both before and behind, in counteracting the tendency to *swag*, which is the chief defect of all gates. This tendency is still farther counteracted by the diagonal braces, which, being pinned across every bar, and let into the hinder stem near the lower end, as well as into the upper bar about the center of gravity, which is behind the middle stem, (as the hinder part of the gate is much the heaviest,) will almost of itself suffice to prevent swagging. But the most effectual counteraction of the whole is the upper hinge. This consists of two right angles, one on each side the gate but united by the shank of the hinge. The opposite parts of this hinge are two inches wide, seven or eight inches long, and one-fourth of an inch thick. One-half this thickness being let into the wood, and the opposite end of the hinge fastened together by screw-bolts passing through the top bar and hinder stem, must effectually prevent all swagging, unless the hinge should break, or bend edgewise, which is hardly possible, when fastened as it is, at the ends, and sunk into the wood. The iron which fastens the top bar to the center stem is an additional security against swagging. It is of the same width and thickness as the upper hinge, and is also sunk into the wood. One of the screw-bolts which fasten the ends to the wood should pass through the upper end of the diagonal braces. The lower hinge is represented by the drawing marked *a*. It has two sides four inches long, two wide, and one-quarter of an inch thick. These are let into the wood one-eighth of an inch, and fastened by a screw-bolt passing through the wood. The shank of this hinge should be two inches longer than that of the upper hinge; and the hook upon which it hangs being driven into the post two inches beyond a perpendicular line let fall from the hook of the upper hinge, will cause the gate, when opened, to shut of itself, although the posts themselves be fixed perpendicularly, instead of the unsightly position of leaning inward, which is the common contrivance for causing a gate to shut of itself. The latch, (which I particularly recommend,) should be made of hard, well seasoned wood; yellow locust is best. It should be about twenty-six by twenty-seven inches long, and so fixed as to cross the upper bar and front stem diagonally, at eighteen or nineteen inches from their junction. A good size for it is two inches wide by one-fourth thick. This will allow the end which slides into the catch to be five-eighths of an inch thick, with a shoulder inside to prevent the end from projecting too far beyond the outer side of the stem. The upper end is of the same thickness as the lower end, with a shoulder far enough below the mortice in which it slides up and down, to allow the lower end to be drawn out of the catch; you may then immediately let go the handle of the latch, and pass through the gate, for the force with which it shuts of itself is more than sufficient to move the latch upwards, when its own weight instantly brings it back into the catch.

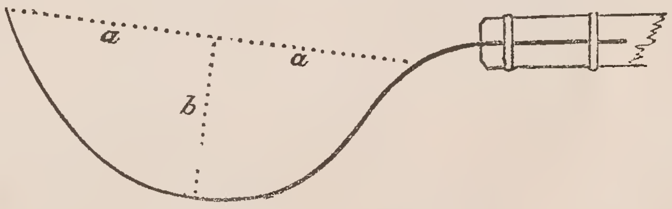
I have made the foregoing description more paricular than some perhaps, may deem necessary. But as I myself have generally found the common descriptions of implements and machines not sufficiently minute for *me* to understand them, I have thought it probable that many others might be in my own situation. I therefore determined, if I erred at all in my explanation, it should be my making it so full as to be perfectly intelligible to all, even the dullest, who may take the trouble to read it. Let me add, in conclusion, that, if any person will make a gate exactly after the foregoing directions, and of good, well seasoned timber, I will agree, should it ever swag while the timber remains sound, that he shall denounce me in your paper as one whose recommendation is not worth regarding on any subject whatever.



[*Single Coulter.*—Fig. 2.]

The second drawing [fig. 2,] represents a single coulter, such as I accidentally met with some years ago, and have used ever since,in preference to any other that I have ever seen. It is quite as simple and cheap as any yet known in my part of the country, and better in two respects. You may use it longer without any repairs, as it has two points exactly alike, both of which may be worn out before the coulter is sent to the shop. And, secondly, the hinder point enables the one in front to run more steadily while at work. A single horse will draw it easily in most of our lands, after they have been well broken up by the plow; and it is particularly useful in the culture of corn, and other crops planted in straight rows, for the purpose of securing deep tillage, in the early stages of their growth, in soils too shallow to admit of being deeply plowed without great injury. No implement that I have ever tried, (and I have used every variety yet known to us,) is of such advantage in the early culture of corn as the single coulter, especially to guard it against drouth.

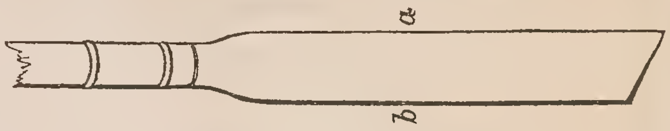
The lower part of the one represented, is here made out of inch square iron, flattened and well steeled at the points, and is twenty-two inches long. The upright part is of bar-iron, about three inches wide by five-eighths thick, and should be eighteen inches high from the top to the bottom of the square bar. The front and hinder edge of the upright should be left square, as it is much easier to break, than to cut a root with a coulter. A half inch screw-bolt will suffice to fasten the upright in the mortice through the beam, which mortice should have a strong iron plate above and below, made so exactly to fit that part of the coulter, as to keep it firm in its place. The usual pitch for the beam of a two-horse plow should be given to the beam of the coulter.



[*Corn-Stalk Cutter.*—Fig. 3.]

The third drawing (fig. 3.) represents a very simple and cheap implement, (I know not by whom contrived,) for cutting up corn, and I venture to commend it as far preferable to the hand hoe which is commonly used for that purpose. Having never heard any name for it, I propose to call it the corn-stalk cutter. The curved iron is two inches broad in its whole length, from the point to its insertion into the handle, which is from twenty-one to twenty-four inches long. Its cutting edge is made very sharp, and of well tempered steel; the back edge is blunt, and about three-eighths of an inch thick. From the point to the termination of the curve is seven or eight inches, which distance is indicated by the dotted line, *a. a.* The dotted line *b*, shows the depth of the curve, which should be about two and a half inches.

In using this implement, the laborer cuts up two rows of corn-stalks at a time, by taking hold of each with his left hand, and cutting with his right. The next man to him does the same, and they throw their stalks together, in the space between them; depositing the butends all the same way, which makes one picker-up to serve two cutters, as he can take an armfull at a single grasp; whereas each cutter with the hand-hoe required a picker-up to follow him, as the corn-stalks fell in every direction, and must be taken up one or two at a time, before enough can be gathered to fill the arms, which retards the stooking much more than the other mode. Another advantage in using the corn-stalk cutter is, that its stroke rarely ever jars off the ears of corn, which the stroke of the hand-hoe frequently does, and thereby causes much more picking up.



[Fig. 4.]

The fourth figure is merely to show the size and form of the iron before it is bent,—*a* is the cutting edge *b.* the blunt edge, three-eighths of an inch thick.

I remain, gentlemen, yours with regard,

James M. Garnet.

Essex county, Va. Nov. 25, 1841.

BEAUTIFUL CORRESPONDENCE BETWEEN THEORY AND PRACTICE.

Liebig's "Organic Chemistry in its application to Agriculture and Physiology," has been repeatedly noticed in the Cultivator. In that valuable work, the author observes, (p. 190, of Dr. Webster's 1st Am. edit.) that,—"It is the duty of the chemist to explain the composition of a fertile soil, but the discovery of its proper state or condition belongs to the agriculturist."

The necessity of *potash* and *lime* as ingredients in the growth and development of plants has been theoretically deduced from chemical and physiological facts by Dr. Liebig. "It is the greatest possible mistake (he says, p. 196,) to suppose that the temporary diminution of fertility in a soil is owing to the loss of humus; it is the mere consequence of the exhaustion of the alkalies."

We also read in the same author (p. 198,) as follows:—"Again, how does it happen that wheat does not flourish in a sandy soil, and that a calcareous soil is also unsuitable for its growth, unless it be mixed with a considerable quantity of clay? It is because these soils do not contain alkalies in sufficient quantity, the growth of wheat being arrested by this circumstance, even should all other substances be presented in abundance."

Indulge me, Messrs. Editors, with a few more quotations from a theoretical writer:

"Wheat will not grow on a soil which has produced wormwood, and vice versa, wormwood does not thrive where wheat has grown, because they are naturally prejudicial by appropriating the alkalies of the soil."—(Liebig, p. 199.)

Wormwood is a plant from the ashes of which a large quantity of potash may be obtained. It was formerly cultivated for the purpose of extracting potash from it, and the product was then called *salt of wormwood*, now known under several forms by the names of salæratus, salt of tartar, potash, pearlash, &c.

"All plants of the grass kind require silicate of potash." (Liebig, p. 200.)

Silica or flint dissolved by means of potash, forms in the soil *silicate of potash*, which is absorbed by grain and grasses, and hardens their stalks, thereby enabling their slender bodies to stand erect.

Again our author says, (p. 200) that, "Potash is not the only substance necessary for the existence of most plants; indeed it has been already shown, that the potash may be replaced by soda, magnesia or lime; but other substances besides alkalies are required to sustain the life of plants."

By these and other remarks of the learned author in the above mentioned work, we find that potash and limes are essential ingredients to be applied, as or with manures, in the cultivation of grains and grasses. Thus far we are guided by theory and chemical investigation. Now let us see how far facts corroborate theory.

In the November number of the Cultivator, p. 182, there is a valuable communication by J. N. Keeler, on the use and application of New-Jersey marl as a manure. This article, so rich in fertilizing qualities, and now so advantageously employed in the poor and sandy districts of New-Jersey, is not like the shell marl of Virginia and other southern states, nor like the white calcareous marl of Ulster county in the state of New-York, but it is a greenish earth, mixed with sand, clay and other ingredients. The application of this variety of marl, (if it may be so called,) having been found the means of producing fertility in one crop, has been successively and successfully applied to others, until it is now applied to all. The cause of its fertilizing effect was only known to the farmer by his experience and practical application. The material thus discovered to be a useful manure, was sufficient for his purposes, and he did not search into the science or philosophy of its action, but used it and profited thereby. Here, then, we have *practice without theory*, and in the chemical investigations of Prof. Liebig, as above quoted, we have *theory without practice.*

With respect to the New-Jersey marl, Mr. Keeler informs us, that,—"It is applied to (Indian) corn when planted, or in its early growth; to potatoes in the hill or row, before planting or after, (but generally covered with them;) to winter grain; and in short with those farmers who have abundance of it, it is a 'panacea,' good for all kinds of crops."

Now, what ingredient is it in this marl, which causes fertility?—Professor Rogers, (State Geologist of New-Jersey,) has analyzed it and found that it consists of a peculiar *green sand, clay,* and *quartzy sand.* The green sand is in the greatest proportion, and when that was separately analyzed, it furnished *nearly thirteen per cent of potash.* The professor says,—" Abundant evidence might be adduced to prove that the true fertilizing principle in marl is not *lime* but *potash.*" Here then we have the opinion of Prof. Rogers agreeing with the theoretical views of Dr. Liebig, and the practical application of New-Jersey marl, producing a striking correspondence between theory and practice in the recommendation and use of *potash* as a fertilizer.

Again, Mr. Keeler observes that,—"Since the introduction of *lime* among us (thanks to the genius of improvement,) many of our sandy loams, by a top-dressing of the two together, have approximated in yield to the best wheat lands of Pennsylvania. It is spread broadcast (marl and lime,) over fallow at the rate of five tons of the former, to thirty bushels of the latter, per acre. Experience has demonstrated that the combination is one of great usefulness; that the efficacy of the one contributes to the speedy action of the other; that the noxious agents contained in the clayey marl, when brought in contact with lime, are rendered inert to vegetation, but more properly speaking, by mutual affinities converted into efficacious substances. Pasture lands, whether meadow or upland, that have afforded but a scanty herbage, are astonishingly benefited by a slight application of marl; but the more general method of applying it, is to spread it broadcast over a grass sward following a winter crop. Its most decided effects I am inclined to believe, are on a clover ley; and so powerful are its fertilizing powers, that when scattered over those melancholy fields, so sterile as to produce only a stunted growth of wild weeds, a luxuriant crop of white clover follows."

Here again we have the practical and useful application of *lime* in conjuction with a marl containing *potash*, producing a further correspondence between theory and practice in the utility of both *lime* and *potash* as fertilizers.

May we not draw some useful inferences from these facts? Wood-ashes have long been known and used to fertilize the soil and increase its cultivated productions. Few or none of our farmers, however, have attributed their beneficial effects solely to the potash it contains. Had this been the case, they would have rejected the spent ashes of the soap-boilers, and employed unleached ashes. Of late years the cultivators of the soil in the neighborhood of New-York city, use the unleached ashes, applying about a gill to a hill of corn, before the first hoeing. They have been applied broadcast upon other crops, and mixed with the barn-yard manure. The spent ashes contain lime, which is put in the leach-tubs by the soap-boilers, and notwithstanding these ashes are deprived of most of their potash, they nevertheless produce fertility. This fertility must arise from the small remains of potash, and the lime they contain. If then, we find refuse or leached wood-ashes doing so much service we must surely conclude that pure unleached ashes would be additionally useful.

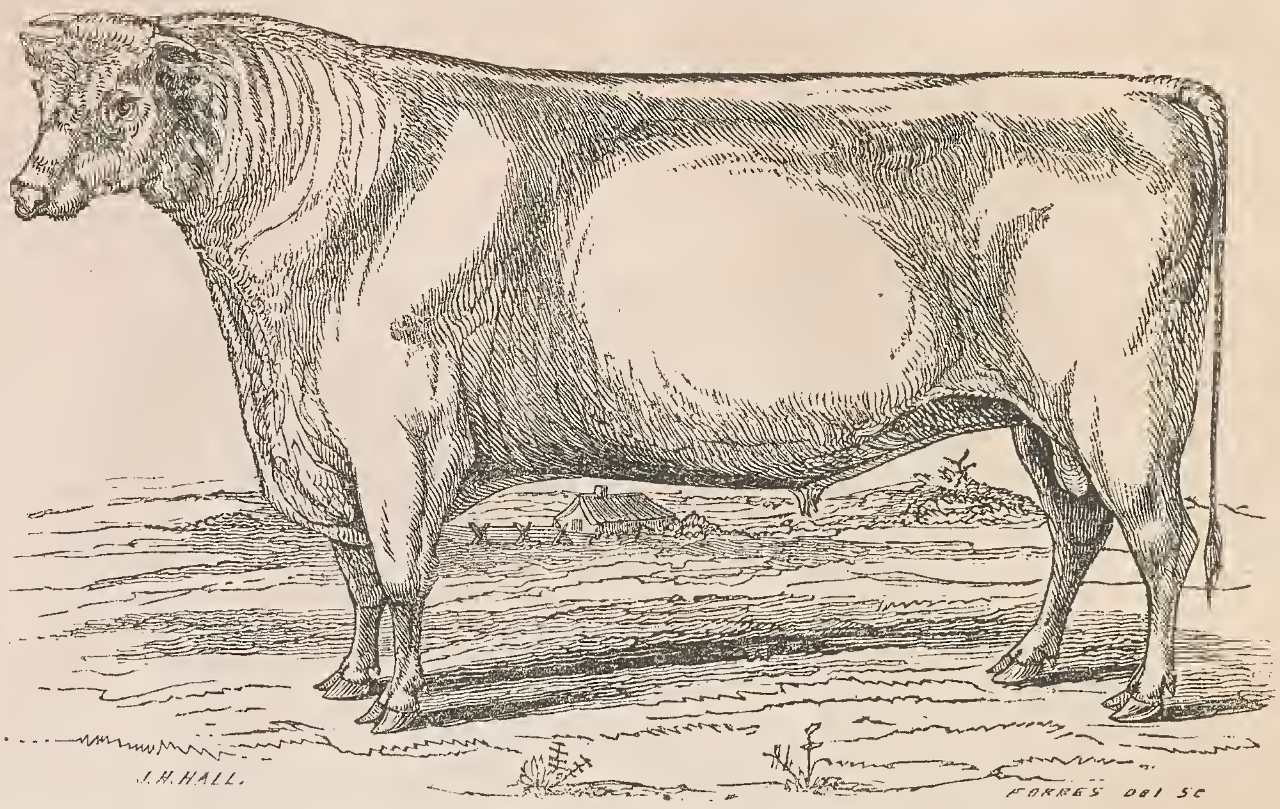
The barren plains of Hempstead in Queens and Suffolk counties, of New-York, may, and have been rendered productive by ashes. Many acres of these barren lands have been added to the adjacent farms on its borders, and kept in a fertile and productive state by ashes. The entire plain, many miles in length, might be reclaimed by employing potash and lime. Situated in the center of Long Island, distant from six to eight miles from the water on either side, the transportation of manure is an objection. But the carriage of unleached ashes and lime in barrels, by water, or on the Long Island railroad, would not be so costly as more bulky manure; and even potash itself might be conveyed in barrels, mixed with the soil, and distributed as manure there and elsewhere. Has not Hempstead plain once been a prairie, and its rich soil been exhausted by its constant employment as a common for pasture of sheep and cattle of the neighboringtowns ?

And do not the rich prairies of the west owe their fertility to the practice pursued by the aborigines, of annually burning them and thereby enriching the soil with a yearly supply of potash ?

May we not profit by the union of theory and practice as above related. The New-Jersey marl contains *sand* with potash, a small portion of *clay*, some *iron*, and occasionally a little *lime*, and other ingredients of no moment. Now cannot those who live on sandy soils, manufacture an article similar to Jersey marl, by a mixture of sand and clay and potash? Those who occupy clayey soils, want only sand and potash, the latter to be purchased in barrels for easy transportation. If we wish to make a compound as mentioned by Mr. Keeler, of marl and lime, we have only to mix the due proportions of sand, potash, clay and lime. A barrel of stone-lime, burnt at Athens on the Hudson river, contains about three bushels, and when slaked will make from eight to ten bushels. Shell lime is principally used hereabouts and in New-Jersey, but it frequently contains so many unburnt shells, that the writer is possessed with the notion that stone lime purchased in barrels and slaked when and where wanted, is preferable, and the cheapest. He feels so sanguine on the subjet that he intends an experiment with *sand, lime* and *potash,* (requiring no clay, as his soil is argillaceous) and if he succeed, you may hereafter hear further from him. RICHMOND.

Staten Island, N. Y. Dec. 6, 1841.

LARGE HOGS.—The Messrs. Gidneys of Newburgh, N. Y. recently slaughtered six hogs, which weighed 3,171 lbs. The heaviest weighed 630 lbs.—the lightest 430 lbs.—average weight, 528 1-2 lbs.



A SHORT HORNED BULL.—[Fig. 5.]

THE above is a portrait of *Bernard*, the property of Dr. JOHN A. POOL of New-Brunswick, New-Jersey, which obtained the first prize at the late Fair of the American Institute. Though but three years old, he had previously received four first prizes at different Fairs, one of which was from the New-Jersey State Agricultural Society.

BURNING TURF.

MESSRS. GAYLORD & TUCKER—In the year 1830, I made an experiment on the burning of blue grass turf; and thinking it likely that its promulgation may be of some service, I send it for publication.

EXTRACT FROM MY MEMORANDUM BOOK.

August and September, burnt four stacks of blue grass turf, which produced about three thousand bushels of ashes. The turf was taken from about three acres of sour ground, which last year was in wheat, and which absolutely produced no grain. The turf was burnt and the ashes scattered on the same ground on which it grew; and the process was as follows: a circular wall of turf was made, about ten feet in diameter, about two feet high, and eight or ten inches thick, into which was cast a cart load of dry wood, which was set on fire, and when the blazing was nearly over, and the interior at its greatest heat, the turf was cast in promiscuously about fourteen or fifteen inches deep, and more turf was added in small quantities as required. The shape of the stacks was conical; the exterior was packed neatly, so that it should not fall, and the height was about ten feet. The turf had been plowed up about two weeks before the burning began, and although but moderately dry, and more than nine-tenths of the weight of the sods was poor clay, yet to my surprise it burnt well, though slowly. By a regular course of feeding, two of those stacks produced black and sooty ashes; the other two I believe I injured by projects. Into one of the last mentioned I frequently thrust a long crowbar, thereby giving it air, whereby it was caused to burn freely; the black smoke which issued was evidence of the discharge of soot, and the ashes were left pale. The other I fed too fast, and therefore I had to pull it down and reburn. For a stack of the above mentioned size, from ten to fifteen inches of sods should be added in twenty-four hours, and about four times during the day; say sunrise three inches, ten o'clock three inches, three o'clock three inches, sundown four or five inches. But this will depend on the state of the weather and turf; at any rate, be cautious in hurrying the process, remembering, however, to lose nothing in smoke. The exterior of the stack will not burn, consequently it stands well until pulled down, which should not be done until moderately cool. My ashes were scattered on the ground from whence the clods were taken, and in 1831, without other manure, I harvested therefrom a good crop of wheat.

The labor which I spent in picking up and burning the turf, and spreading the ashes was perhaps worth		$10
The riddance of the pest was worth, say .	$10	
3,000 bushels ashes, at 1 cent per bushel,...	30	40
And my profit is, then,..........		$30

or, in other words, I make four hundred per centum on my outlay.

The plowing of turf for the purpose of burning should not be more than about three inches deep, and never mind to lead off much earth by the harrow or otherwise, for the more earth one can burn the better, as by this means the acid is dissipated by the burning, and absorbed and counteracted by the manure.

By making four stacks or mounds on an acre, the greatest distance to move turf would be about eighteen yards; and my estimate is, that two hands with a hand barrow can attend ten or twelve fires, after the first day. The turf should be packed somewhat after the manner of brick, to guard against rain, and perhaps it would be best to make those packs immediately around the stacks, and then one old man or woman would be sufficient to keep ten or twelve fires going.

Land thus turfed, and intended for winter grain, I would replow some inches deeper after the turf is off, and after sowing the grain and ashes, harrow all in together; indeed August and September are the proper months for this operation, and the ground being thus prepared at the proper season for winter grain, it should therefore be sowed. I have never attempted to burn any other turf than this blue grass, but suppose any kind would burn equally well; and the richer the earth, certainly the freer it would burn.

ZA. DRUMMOND.

Amherst, Va., Nov. 1841.

ON FEEDING APPLES TO STOCK.

MESSRS. EDITORS—Permit me to call the attention, through your valuable journal, the Cultivator, of my brother farmers, to the subject of feeding apples; and especially of those who have large orchards, remote from market, and make cider of them, and then perchance sell it at a dollar per barrel—as I think I can show them that they can dispose of them to much better advantage by feeding them to their cows and swine. Both are exceedingly fond of them. I am well aware that there exists a great prejudice against this practice; but eight years experience warrant me in saying, that it is not supported by facts, and that it is mere prejudice. The common opinion is, that apples dry up milch cows, and many think, that they will kill them. I have often heard farmers relate how they lost a valuable cow or ox, and how such a neighbor's cows broke into his orchard one night, and he lost a number of them, and those that did not die, nearly or quite lost their milk. Now the same result would have followed had the cows got to a pile of potatoes or bin of oats. But I must confess that I was a believer once myself, and indeed came very near losing a very valubable cow, by eating too many apples, about ten years ago. It dried up her milk entirely; thus confirming all the arguments against apples; and I assure you I was most careful thereafter to keep my cows from eating them. But thanks to a kind and unknown friend in Vermont, who sent me a paper containing his experiments in feeding apples to milch cows, which appeared to me so satisfactory that I at once determined to make a trial of it. I told my hired man what I intended to do; he objected strongly and advised me not to do it, using the old arguments, &c. But I was determined upon making the trial, and not to be dissuaded from my purpose. Accordingly I commenced feeding my cows a peck apiece the first night and again next morning and evening; on the third day I had increased the quantity to half a bushel morning and night. By this time there was an increase of milk fully one-third. The fourth and fifth days I gave them three pecks a piece, morning and night, but there was not a corresponding increase of milk. I then gave them a bushel each. They ate them the first, second and third time, but there was a decrease; I then went back to half a bushel, and an increase of milk followed. This satisfied me that a bushel twice a day was too much, and produced injurious effects. I regret that I did not follow up the experiment, with one cow, and note the result. I fed over two hundred bushels that fall, and was very much pleased with my first experiment.

And while I was paying strict attention as to their effect upon the quantity of milk, I was not unmindful to note the quantity of the cream and butter, and found that it fully corresponded with the increased quantity of milk, and that the butter was of superior quality. The apples were about three-fourths sour and one-fourth sweet, ripe, grafted fruit; and eight years experience has fully satisfied me that apples are perfectly harmless; that they will not kill cows nor dry their milk any more than potatoes, pumpkins or grain; but when eaten to excess, have an injurious effect, dry up their milk, and I have no doubt has often killed cows. Let them get used to them gradually, and there is no danger. It is the eating to excess that does the mischief.

Having stated to you my experience in feeding apples to cows, I will add that of feeding them to hogs. My first experiment was only a partial one, when I fatted my hogs on apples and corn. My second, was five years ago, and more to the point. I had then a large quantity of apples; the price in market was too low to pay transportation. I accordingly turned my hogs into the orchard about the 10th September to help themselves, and they had the slop of the kitchen besides. When dressed, they averaged a trifle over 300 lbs.—age seventeen months. Three years ago, having again a large quantity of apples, my hogs were served as before; when dressed, they averaged 325 lbs.—age sixteen and a half months. Wanting to keep them a couple of weeks longer after my apples were gone, (I only feed them windfalls,) I fed them corn, but they evidently fell away. The reason of this probably was, that their teeth had become tender, and the corn was too hard for them. One year ago my hogs were again fatted on apples; when dressed averaged a trifle less than 300 lbs. excepting one hog, which would not take on any fat at all.

As to the quality of the pork, it is equal to any fatted on corn, or other substances. If any one doubts it, let him come and dine with me, and he will be convinced. Many farmers in this section have got in the right way, and feed all they cannot sell, to their hogs, and it gives me great pleasure in stating, from numerous inquiries I have made, that they are highly gratified with the practice. If boiled, it improves them materially, and all who have experience in this matter, agree in opinion that a bushel of apples are worth as much for fattening hogs as a bushel of potatoes.

I do not mean, however, to be understood that I advise every farmer to feed his apples. Location, price in markett facilities to it, and cost of transportation, ought to be taken into account; but rather than sell them at a very low price, and cart them a day's drive besides, or make cider of them, and sell that at a dollar a barrel, I would feed them, and in that manner convert them into cash.

Yours, very respectfully, **H. D. Grove.**

Buskirk's Bridge, N. Y. Dec. 1841.

VARIETIES OF INDIAN CORN.

Messrs. Editors—Wishing to make some experiments with Indian corn, (*Zea maize*) principally with a view of ascertaining the relative period of maturity in the several varieties commonly cultivated, I took some pains to collect as many kinds as could readily be done, and with the aid of my friends found myself in possession last spring of some twenty-five varieties, or at least such as passed as distinct varieties of this valuable grain. The ground on which it was planted was in tolerable condition, was plowed late in the fall of 1840, but owing to an unusual pressure of business I did not get it ready for planting until the 1st of June, nearly a fortnight later than it should have been. The ground was plowed, furrowed out, and well manured in the hill, or rather by dropping the manure, which was hog pen and yard manure, as thickly in the furrows as it was intended to plant the corn. It was intended in striking the furrows to place them at three feet distance, but they were found to be somewhat nearer, and the corn was planted in the furrows from twenty to twenty-two inches distance. I mention the distance, because it was found altogether too close planting for the larger varieties, and full distant enough for the smallest corns grown. The manure was first covered with earth, the corn dropped upon it, and then the seed covered to the average depth of two and a half or three inches. The seed was soaked in water until swelled, to facilitate sprouting, with the exception of a few rows which were planted dry. The corn came up very well, notwithstanding the extreme dryness which followed the planting, particularly that on the part of the field manured from the pig pen, and in this case, as in many former trials, this manure proved its superiority over all others, in giving the heaviest crop, and showing the earliest maturity. It may be as well to state here that, as a general rule, I do not approve of manuring corn in the hill. It is better to spread the manure over the surface and incorporate it more fully with the earth by plowing. Put in the hill, the corn gets a quicker start, but when the roots spread, they do not find the requisite nourishment, and besides it is much more liable to suffer from drouth; still it may be necessary to adopt manuring in the hill sometimes. It was hoed twice, and the growth was very rapid until the ears were setting, when the long continued dry and hot weather gave it a check from which it never recovered, as the ears were not as well filled as they would otherwise have been.

I shall give the varieties, as numbered at the planting, with the names by which they were known, or which were given by the gentlemen from whom they were received. Reference will also be made to that excellent essay on Indian Corn, by Dr. Browne, of Chester Co., Pa., one of the best descriptions of the cultivated varieties I have yet seen. His essay embraces thirty-five varieties, and a previous collection, made by the Doctor for the French Government, amounted to forty. But there are several well marked and distinct varieties now frequently met with, which Dr. Browne has not included, such as the Rice corn, Texas corn, or that grain each kernel of which is enclosed in a separate envelop, Chinese Tree corn, Brown corn, Red Blaze, &c., not to mention numberless sports of nature which may be detected in a cornfield, but which rarely give any new character to the product. Among farmers there are several varieties principally cultivated for the purpose of parching or popping, as it is called, and these will be so distinguished.

No. planted.	*Name by which known.*	*Color.*	*No. in Browne's Essay.*
1.	Red or Brown Parch Corn.	Brownish red.	24.
2.	Canada Dwarf.	Yellow.	8.
3.	Squaw Corn.	Milk white.	19.
4.	Ackerly's Corn.	White.	17.
5.	Goodsell's Toronto.	Yellow.	—
6.	Red Blaze.		—
7.	Long White.	White.	—
8.	Marks' Canada Flint.	White.	16.
9.	King Philip.	Yellow.	8.
10.	White Common Parch Corn.	White.	16.
11.	Bement's White Flint.	White.	17.
12.	Long Oswego White.	White.	—
13.	China Tree Corn.	White.	—
14.	Dwarf White Parch Corn.	White.	16.
15.	Dutton Corn.	Yellow.	35.
16.	Virginia Dent Corn.	White.	12.
17.	Sugar or Sweet Corn.	White.	20.
18.	Blue Corn.	Blue.	31.
19.	Blood Red Corn.	Red.	21.
20.	Rice Corn.	Yellowish brown.	—
21.	Black Dwarf.	Black.	—
22.	Sweet Red Cob.	White.	—
23.	Canada Flint.	White.	16.
24.	Yellow Canada Flint.	Yellow.	8.
25.	Golden Sioux.	Yellow.	10.
26.	Brown Corn.	Brownish yellow.	—

In my opinion, Nos. 2, 5, 9, and 24, are essentially the same, or are the original King Philip corn found in New England at the landing of the Pilgrims, modified by climate, cultivation, &c., all being yellow, eight rowed, the same color of kernel, and the grain having the general qualities for food, ranking in this respect deservedly high. According to Dr. Browne, the Dutton corn is a cross produced by a mixture of the King Philip corn with the original Indian gourd seed yellow corn, which has twenty-four rows. So, too, the numbers 8, 10, 14, and 23 have, I think, a common origin, the color, solidity, shape, and quality of the grain indicating this. No. 3, or what is called Squaw corn, it being extensively grown by the Indians, and much esteemed, as remaining soft or fit for roasting or boiling a long time, is readily distinguished from other white corn by the color, large size of the kernel, and the time it remains in the milk, resembling the sugar corn in that respect. The white kernels that occasionally appear in ears of sweet corn, appear more like the Squaw corn than any other variety, and it may have originated from such a source. I have marked the Hæmetite or blood red variety as Browne's 21, but it differs from that in being eight rowed, although cob and kernel are similar in color to his. If not admitted to his catalogue in that place, it must be considered a new variety, as it agrees with no other of his hæmetites. The Red Cob Sugar corn, No. 22, is a hæmetite, but is not included in his list. I received No. 12, or the Long Oswego White, from Mr. Chafee of that county. It is a beautiful corn, eight rowed, and may be Browne's No. 15. It has longer ears than any variety of corn I have ever seen grown, some of them reaching fourteen inches in length. There is a peculiarity in the leaf of No. 8, sometimes indeed observed in other corns, but more common in this and those I have supposed to be the same variety, than in any others. At the distance of a few inches from the stalk, a hook appears on the margin of the leaf, as if a strip of the leaf had started off and the point curled round and outwards. Of the varieties planted, the Brown corn has the largest and finest kernel, and would unquestionably be here, as it has proved to be in New Hampshire, a very productive kind.

In the ripening, the varieties planted ranked as follows: Canada Dwarf Dwarf, White Parch corn, Marks' White Flint, Canada Flint, and common White Parch corn, Yellow Canada Flint, Red Blaze, Long White Oswego, and Brown corn; Goodsell's Toronto, Dutton, and the Red and Blue varieties. The Sugar, Rice, China, and Dent corns were the latest, and evidently could not be depended upon for a crop in ordinary seasons, or indeed not at all in our latitude. The Toronto corn is a fine looking yellow corn, but I was somewhat disappointed in its ripening, it being later than many other varieties. Last year I had some of the Dwarf White corn, No. 14, in my garden. On one stalk I observed two ears that ripened much earlier than any of the others, and these I saved for seed. The corn from these ears was as early fit for boiling, within two or three days, as the Canada Dwarf, which has usually been from ten to twelve days the earliest corn grown, thus affording another proof of the advantage of selecting the earliest ripening seeds for planting. There can be no question that most of our cultivated plants might be much hastened in the same way. The Dutton corn I used was from a lot grown by Dr. Bangs, of Amber, which produced at the rate of one hundred and twelve bushels per acre. It is a beautiful corn, but its ripening is not so certain in all seasons as the Brown, Red Blaze, or the smaller varieties, and the large cob renders it more difficult to cure in unfavorable weather. The Yellow Flint (No. 24) is a fine corn, the ears not large, but allowing close planting, and producing well; and like the white flints, ripening early, is a favorite in those places where corn is an uncertain crop. Of the comparative productiveness of the several varieties planted, my experiments this season afford no means of determining. **H. M. Gaylord.**

Otisco, N. Y., Nov., 1841.

Cattle should be duly supplied with salt during winter, which is often forgotten.

CULTURE OF MILLET AT THE SOUTH.

Messrs. Gaylord & Tucker—It is not an unfrequent inquiry in your paper and others, from Southern farmers, what kinds of grass will suit *them* best, or rather their climate?

Having had some experience for ten years past, I will venture to answer the question, as I have never failed to obtain a good crop of *Millet*, when the ground was *rich* and properly prepared, viz: by twice plowing, and harrowing clean. I usually sow a bushel to the acre, and cut it as the seed begins to turn yellow; cure it as any other hay, and horses or cattle prefer it to clover or timothy. It matures in about sixty days, and may be sown from April until the first of August. Red clover is rather uncertain; in *wet* sesaons, does *well;* sown with oats, from October till March, one peck seed per acre; will bloom in May; have cut two tons to the acre on strong land; with it, I generally mix Herd's grass and Red Top, half peck each, but neither of them bear the heat of our long hot summers equal to the clover.

"Pacey's Perennial Rye grass," sown in October or November, without any protecting crop, yields the earliest cutting, viz: about the middle of May, and makes the most delightful hay. The only safe plan for getting *good seed,* is to import it direct.

CONKLING'S ROLLING HARROW.

I must not withhold my tribute of praise to this admirable implement, though rather expensive; freight, &c., about $120. Mine has been in use five years, and passed over one hundred and fifty acres or more each year, and is now as good as new, having, as I believe, been worth the cost every year. In addition to scarifying meadows, rolling "small grain," &c. I pass it over my *corn,* when from two to six inches high, and consider the operation better than a plowing, and will easily go over ten acres in a day; it leaves it in fine order for plowing. Some of my neighbors, seeing it, have substituted a log with spikes, which answers very well, and costs but little.

I think the smooth roller very essential to good farming, and am glad to see them getting in fashion generally. I am your obd't. serv't.,

N. B. Moore.

Augusta, Geo., Nov. 1841.

ON THE CULTURE OF POTATOES.

Messrs. Gaylord & Tucker—Located as I am, near a village on the banks of the Hudson river, I find the most profitable crops I can raise are potatoes, hay, and oats. I will give you a description of the manner in which I raised my crop of potatoes this year. After mowing a field containing three acres, I put on seventy-five loads of manure in the month of September, and plowed it under immediately after it was spread on the field. In the month of April following, I had the ground made mellow by cross-plowing, and in May planted in rows two and a half feet apart both ways. About ten days after the field was planted, when the sprouts began to break the ground, I had the field plowed with one horse, putting two furrows to the row, throwing the dirt on the rows, which covered the potatoes very deep. I then had them harrowed with a wooden tooth harrow; this threw the small stones and lumps of dirt off the potatoes into the furrows between the rows, and made the field appear like a field of newly sown wheat before it had come up. In a few days, the potatoes came up beautifully; all vegetation in the field at this time was destroyed, except the potatoes. In the latter part of June, I had them plowed and hoed once, and that was all the labor bestowed upon them. The field yielded 735 bushels.

I planted another field, containing five acres. I put on twenty-five loads of manure to the acre; it was spread on the sod in the month of April, and plowed under; the potatoes were planted in May. This field could not be tilled as the other; the sod prevented; they were plowed and hoed in the usual manner. This field yielded 910 bushels. I planted another field, containing five acres, which had been planted with corn the year before, and manured at the same rate previous to planting the corn. I had it tilled in the same manner as the three acre field, which is my practice in cases where it is practicable; this field yielded 875 bushels. I bad 72 loads of potatoes; my wagon and cart hold each 35 bushels, making in all 2,520 bushels. With my own stock, I make about 100 loads of manure yearly. I buy about 200 loads in the village for 62 1-2 cents the load, pressed down and heaped on as long as any will stay, and drawn by a pair of strong horses or oxen. The northern part of Westchester county has suffered very much these two years past for the want of rain. I consider my potatoes about two-thirds of a crop. Two years ago, they averaged over 300 bushels to the acre. The plan of covering them with the plow when they are about coming up, saves me twenty or thirty dollars a year in labor, and I think my crop much better. I got it from the Cultivator, and I would give the man that wrote the article the credit of it, but I have searched the back volumes, and I cannot find it. If it had not been for the Cultivator, I probably should not have known it; so I save twenty or thirty dollars a year in this one thing, by reading your highly valuable paper.

Respectfully yours,

Tyler Fountain.

Peekskill N. Y., Nov. 12, 1841.

SHEEP—THE SOUTH DOWNS.

Messrs. Gaylord & Tucker—I am enabled to answer some of the queries of your correspondent, J. N. Smith, in your November Cultivator, on South Down Sheep.

I have sold the fleeces of South Down sheep, and attended the weighing, for an uncle, who first introduced them into the West of England, from Sussex. In the year 1803, I weighed upwards of four thousand fleeces, averaging about three pounds to the fleece; one-third were from lambs. Wool was high at that time, the Spanish and Saxony market being nearly closed to the English, and the lot was sold at two shillings and nine pence per pound, or about sixty-one cents of our currency. The same kind is now selling at from eighteen to twenty cents. I brought a piece of cloth to this country, made from the fine portion of South Down wool, the fleeces being thrown into four sorts, and sold it in this market at six dollars per yard. The same quality is worth at this time, if sold at auction, two dollars and fifty cents per yard.

South Down stock sheep should be kept on mountainous land at least six months in the year. The original English stock were first bred on the South Downs of Sussex, or that ridge of chalk mountains running through that and other counties. The flock brought from Sussex by my late uncle, J. Mighell, Esq., were kept the greater part of the year on the chalk fields running from Marlboro, Wilts, to Caln, a distance of some twelve miles. The grass on these hills is scanty, short, and sweet, and they have to move about the whole time of feeding, the continued action contributing greatly to the health of the flock.

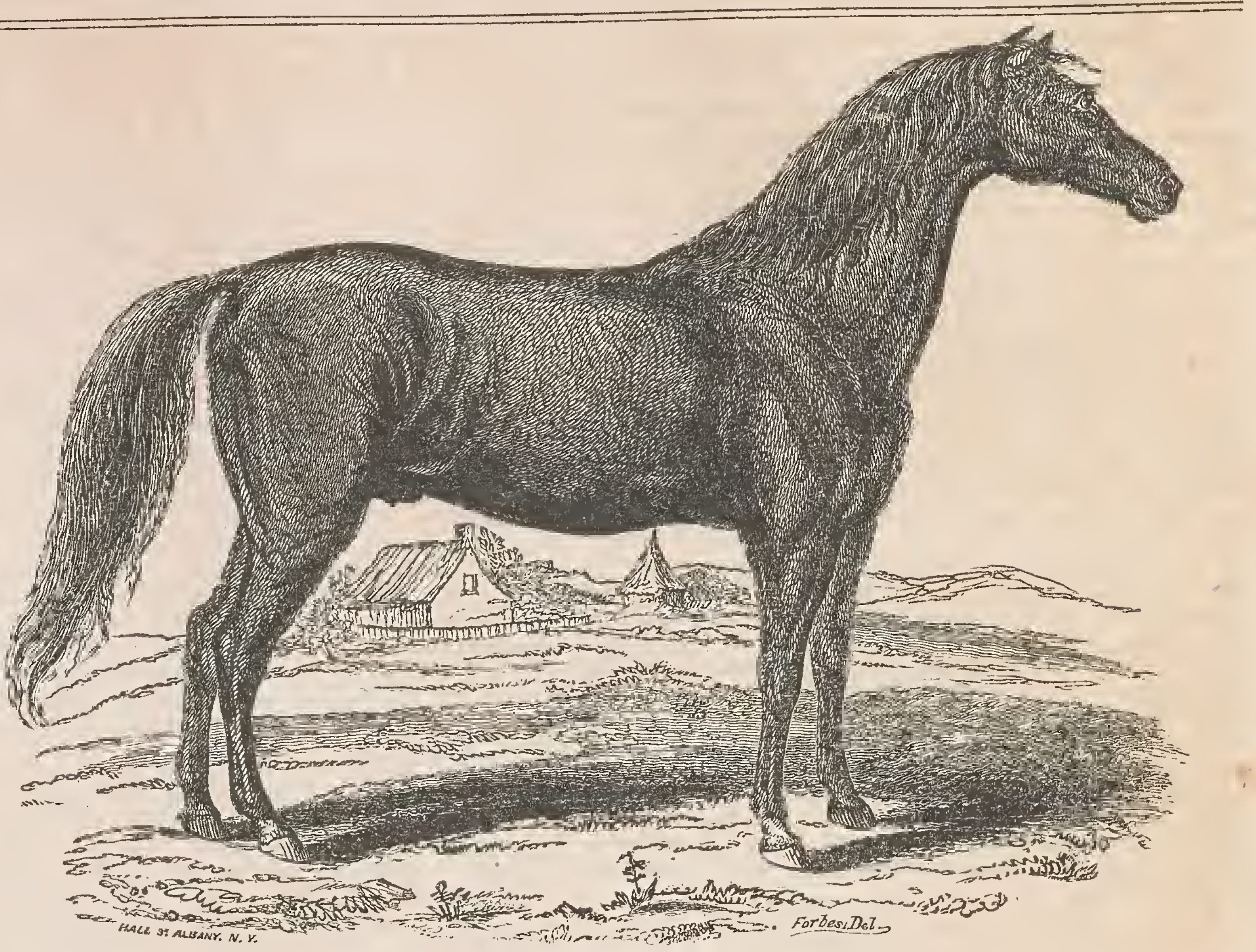
South Down Sheep are easily fed, and fatten quick on moderate feeding. The meat is considered sweeter than any other mutton, with the exception of Welsh runts.

In a visit to England, about twenty years since, I spent three days at a Mr. John Gale's, Stirt, near Devizes, Wilts, who had a flock of mixed South Downs, of, I believe, nearly three thousand; and I examined some cloth made from their wool, which was equal in quality to any cloth now sold in our market at eight dollars per yard. The handle was remarkably soft, and the face fine and silky. Mr. Gale (since dead) was, and had been for many years, a prominent member of the Bath and West of England Agricultural Society. Mr. Gale gave me the following information relative to the crossing of Merino and South Down sheep: that the first cross from the South Down furnished much finer fleeces than from any other English sheep; that the mutton was not much injured, and that the sheep were still easily kept, and were hardy. He further observed that, however fine the fleeces of a flock may be, they will gradually deteriorate, unless the owner attend to the lambs; that every increase will produce some lambs of coarser fleeces than the original stock; that unless these are separated, they will gradually degenerate; but if judiciously attended to, the quality will improve. It is a legitimate deduction, that a cross with Saxony would produce the same results, as the Saxony stock were originally Merino.

Wm. Partridge, 34 Cliff-st., N. York.
Nov. 15, 1841.

THE CANADA THISTLE.

Messrs. Gaylord & Tucker—I wish to make a call on every farmer and friend of the cause of agriculture in the state, to unite, one and all, in making application to the Legislature, at the present session, for a law to compel every owner or occupant of land to prevent a plat or patch of Canada thistle from going to seed on his grounds, or in the road opposite to his lands, under a penalty of $5 or $10 for each and every neglect. With such an enactment in this state, we could partly, if not wholly, arrest the spread of this very obnoxious plant by the seed. The thistle gives the farmer more trouble than all the other weeds put together. A good careful farmer may spend a good deal of time and money to eradicate the thistle from his plantation, by keeping up a continual warfare, till he has finally exterminated the last one; but in vain will a careful farmer regularly cut down the thistles on his own land, if his neighbor is permitted to suffer beds of them to flourish and go to seed on his adjoining grounds. Therefore, I think an act should be passed at once, and there is no doubt but every good farmer will second the suggestion, and enter into it with all his energies, for all know the farmer has not a more powerful enemy to contend with. At the last session of the Legislature, they did render some aid to the farmers of the state, by the appropriation of $8,000 a year, for five years, to promote the interest of agriculture; and all have seen the benefit of the law already, by the splendid State Cattle Show and Fair, and the various cattle shows and fairs held in the different counties of the state the past fall, which have gone off with great credit to the farmers, and with the approbation of all. The present Legislature should do a little more, and help the farmer to get rid of the very worst pest he has, by passing some law to effect the destruction of the Canada thistle. Let this important subject be at all times before the farmers, till they obtain such aid from the Legislature as is needed. Every county society in the state, as well as individuals, should send memorials to the Legislature, at its present session, for the accomplishment of this object; and no exertions should be spared, until we have something done for the destruction of the Canada thistle. J. B. D.


HALL SC ALBANY. N. Y.
Forbes Del.

PREMIUM HORSE "MESSENGER"—[Fig. 6.]

The above is a portrait of Mr. Cooper's "Messenger," to which was awarded the first prize of the N. Y. State Agricultural Society at their Fair, at Syracuse in 1841. He also received the first premium of the American Institute, in October last.

SALMAGUNDI—No. III.

Messsrs. Gaylord & Tucker—Permit me, gentlemen, to tender to you, with heartfelt sincerity, the usual

NEW-YEAR CONGRATULATIONS.

May your lives long be spared, and each succeeding year bring with it renewed health, and increase of knowledge to sustain you in that vocation which has thus far been crowned with such signal honor to yourselves, and usefulness to the cause of agriculture. I have been a vigilant observer of your editorial labors, not accompanied however, with a fastidious, nor fault-finding spirit, but with an earnest desire that the *seed* sown by your hands should be free from *tares;* and without arrogating to myself the ability in all instances to decide, yet in my humble judgment, I can truly say that your course has been free from error, and the result has been a bountiful *harvest* of correct knowledge to your readers. The editorial columns of the Cultivator have been distinguished by a justly balanced scale of science and art, of *theory* and *practice;* the former, teaching us a knowledge of first principles—the laws which govern and influence vegetable nature—and the latter, a minute knowledge of that unerring system of practice which deviates least from these laws, and which the more nearly approximated, the more certain to be crowned with success. In short, I shall take the liberty to say, in behalf of twenty-five thousand readers of the Cultivator, that its editorial matter is all that its friends could desire. Go on, then, gentlemen, with increased zeal in your honorable and useful path; and may not only the incense of grateful hearts cheer you in your progress, but *solid* advantages to yourselves, be the reward of your arduous labors.

DICTIONARY OF TERMS USED IN AGRICULTURE.

Not even a passing tribute of praise has been awarded, by any of your correspondents, to Mr. Gaylord, the author of that admirable digest of theoretical and practical knowledge, published from time to time, under the above caption. Few of us are aware of the amount of information, and continual research, required to fulfill the task he has undertaken; the useful result of which, to every farmer, cannot be too highly appreciated. I have been more strongly impressed with the value of the dictionary, on reviewing it recently; and permit me to recommend a continuation until the lowest letter of the alphabet is reached. Should then, this beautiful epitome of agricultural knowledge be revised and enlarged, if found necessary, and published in a separate volume, it would command an extensive sale, for few books could be found to surpass it in utility to the agriculturist. The Dictionary of Terms, alone, is worth the price of subscription to the Cultivator.

"COMMENTATOR."

The path chosen by your talented correspondent, who attaches the above signature to his valuable papers, (it would be more gratifying to all, however, if he would give us his real name and whereabouts)—meets with my hearty approbation. I speak for myself, and not for others; although let this not be considered as a qualifying remark, for his criticisms and comments evince sound judgment, much and varied theoretical and practical knowledge, and therefore must be equally approved by others. The course he has adopted of correcting errors, of whatever character, which appear in the Cultivator, is precisely what I intended long since to have suggested to you, as your duty, Messrs. Editors; but reflecting on your already arduous labors, as well as on the delicacy of the duty, prevented. That errors of doctrine and practice, exaggerated statements, visionary and ill-tested experiments, will ocasionally make their appearance in all our agricultural periodicals, is very certain; and hence, whenever these occur, immediate correction should follow in the form of notes appended by yourselves. Then would truth go forth to shame falsehood, and orthodoxy arrayed against heresy. The neglect of this often occasions those who are still prejudiced against "book-farming," to carp at agricultural papers; for the great mass of farmers are too shrewd and knowing not to detect many fallacies for themselves. I have not unfrequently been asked by farmers, and some of them my immediate neighbors, if I believed such and such a statement, or, if such a man's experiment was worthy of being published, much less followed; and I have generally been forced to admit their exceptions, and put the statement down as a "Gulliver," and the experiment as devised by a visionary. I do not charge that these things often occur in the Cultivator; no, on the contrary, but seldom. But I would not have a line that would tarnish its columns, nor a foul weed to nurture there. Thanks to "Commentator," for, if we may judge from the specimens of *pure seed* he has presented, his *mill* is a powerful one, and *screens* well. Let Brobdingnags, speculating humbuggers, and visionary experimenters, take heed and not get themselves into his *hopper;* a *blowing* will be the certain consequence.

"DID'NT I DRUM WELL ?"

Many of your readers, doubtless, have read the anecdote of the justly celebrated merchant of Boston, Billy Gray, as he was familiarly called; but lest all your readers may not have seen it, I will take the liberty to give the substance here. When Mr. Gray was somewhat advanced in years, he was one day superintending a piece of carpenter work—for nothing about him was permitted to escape his vigilant eye; he had occasion to reprimand the man who was performing it, for not doing his work *well.* The carpenter turned upon him; he and "Billy" being known to each other in their youth—and said, "Billy Gray, what do you presume to scold me for? you are a rich man, 'tis true, but did'nt I know you when you were nothing but a drummer ?" "Well, sir, did'nt I drum *well,* eh, did'nt I drum *well ?*" The carpenter was silenced, and went on to do his work *better,* agreeably to Billy's orders. Billy Gray commenced his career a poor boy, and began early and continued through his long life to act on the principle of always drumming well, or otherwise, of doing every thing as it ought to be done, and not by halves; and the result was, that he died worth his millions of dollars. A number of years since, I heard from his nephew, who received his mercantile education in his uncle's counting house, several anecdotes connected with his habits of early rising, untiring industry, personal supervision of his immense business, and the clock-work manner in which everything about him had to move—indeed, always "*drumming well.*" This is a text from which much, very much, might be deduced to the advantage of every farmer. Let us, one and all, endeavor through the year 1842, to drum better than we have ever drummed before; and an increased reward to our labors will be the sure result. L. A. Morrell.

Lansing, Tompkins co. N. Y. Dec. 10, 1841.

Agriculture is the most ancient, the most honorable, and the most useful of Arts.

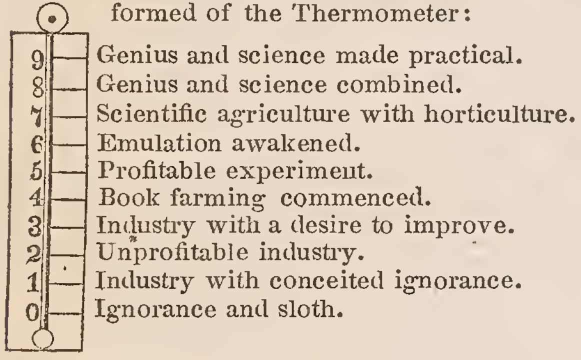
AGRICULTURAL THERMOMETER.

On the morning of the last anniversary of American Independence, wishing always to mingle utility with amusement, I commenced, what I had some time contemplated, constructing an Agricultural and Horticultural Thermometer, which, having now completed, I have the pleasure of sending you a drawing of it, with the result of a few hasty experiments; and as leisure offers shall continue its application to many other characters, no doubt equally meritorious, by way of testing its correctness and utility.

The instrument consists of a cylindrical tube of glass, containing eighteen drops of a liquid, known only to a few persevering amateurs of chemical science by the name of *Florum nectar Americanorum*. The liquid is an animo-vegetable extract, and is very expensive. It was obtained by a skillful French chemist, assisted by an Indian doctor, from native flowers and Chica,* near Lake George† and Lexington,‡ and mingled at Xochicaleo,§ with magical ceremonies, with an extract from exotic sensitive plants of several varieties. Its odor is exceedingly powerful; until sealed up in the glass, like oxygen gas, its stimulus, though very delightful, is insupportably powerful.

The tube, being hermetically sealed to prevent the escape of the liquid, which is of amazing volatility, is fastened and enclosed in a case of finely polished ivory, wood or bone, it being found that metals, particularly gold and silver, will not answer on account of their strong attraction for the liquid, affecting it in the same manner as steel affects the magnetic needle.

From the following diagram, a better idea may be formed of the Thermometer:



9 Genius and science made practical.
8 Genius and science combined.
7 Scientific agriculture with horticulture.
6 Emulation awakened.
5 Profitable experiment.
4 Book farming commenced.
3 Industry with a desire to improve.
2 Unprofitable industry.
1 Industry with conceited ignorance.
0 Ignorance and sloth.

This wonderful liquid, which the thermometer contains, appears almost to say, "I am the spirit that dwells in the flowers." It possesses such extreme sensibility, that, when strongly excited, it becomes slightly luminous, and in some extraordinary cases, emits brilliant sparks. I had thoughts of taking out a patent, but as I am not actuated by selfish views, if it can be of any practical use to my brother farmers, or afford them any gratification by its singular developments, they have my entire approbation to the enjoyment of such benefits; and all editors friendly to agriculture, (and what editor, having due regard for good eating and drinking, is not?) it is hoped will be prompt in directing the attention of the public generally to the Agricultural Thermometer.

The subjoined are some of the experiments:

Jesse Buel.—In bringing the thermometer in contact with his paper, "*Improvement of Farm Implements*," the critique or liquid contained in the tube, appeared unsettled for a moment, inclining to rest at 4, but soon got under way, making a distinct pause at each point of criticism 5, 6 and 7, and passed them to 9 in the most prompt and graceful manner. This will be accounted for by those acquainted with his life. He was a printer, and conducted several papers with great skill, and by judicious management raised himself from very moderate circumstances to a degree of wealth. He then turned his attention to the pursuit of Agriculture, and as a mere book farmer he was eminently successful in converting the sandy barren plains, west of Albany, into rich fields, covered with an abundance of nature's choicest gifts. He then, at the earnest persuasion of a friend, was induced to commence and establish the Cultivator, which, however we may hold those who govern, and those who kill mankind as superior in rank to those who feed them, certainly ranks *him* as one of the greatest benefactors of the human race.

Let those who exult in their own folly, and sneer at *book farming*, bring forward, if they can, any thing in the boasted results of their old hereditary system, to compare in profit, usefulness, or beauty, with the doings and results in agriculture in general of a Buel, a Colman, a Thomas, a Lowell, and an extensive catalogue of others, who from other pursuits, and beginning perhaps with scarcely a knowledge of the names of farming implements, have caused profits to be reaped which our grandfathers never knew; and by book farming have exalted the character of Agriculture from a low groveling pursuit, to its proper rank, the first and noblest employment. But to return to the improvement of farm implements.

The Plow.—In this implement the advance in thirty years has been truly astonishing. There is scarcely less difference between the neat cast iron plow of the present time and the clumsy wooden article used for the purpose at that period, than between that and the iron pointed crotched stick of the ancients. In the ease of working and the effect produced on the soil, every man competent to judge will admit that the difference effected by improvement in the last thirty years is equal to fifty per cent.

The Thrashing Machine.—Experience shows that the farmer who gets out and sells his grain in autumn, admitting the prices are the same, realizes from his crop at least ten per cent more than he who does not dispose of his crop till the next spring. But it may be safely asserted that in grain growing districts, the whole force of the farm, if devoted to that object alone, would not be able to bring his grain into market in the fall if thrashed by hand. Hence the thrashing machine has come to his aid, and does the work so much better and quicker than it can be done by hand, that the getting out of a thousand bushels of wheat is counted a small affair.

The Horse Rake.—With this instrument, on land fitted as meadows always should be, one man and horse will do the work of six men with hand rakes. The value of this labor-saving machine will not be disputed by those who have tested its power, when time presses or storms lower over the hay-field. It is not less valuable as a gleaner in the wheat or barley stubble, where no care can prevent a quantity of grain being left, surprising to one who has never gleaned with the horse rake.

When testing Jesse Buel's article on the *Economy and Application of Manures*, the critique was found stationary at 9—on bringing his *Advantages of Draining* to the test, 5 was found a strong point of attraction, with short trips to 7 and 8. His *Comparative Profits of Good and Bad Husbandry*, when brought to the critique, caused great commotion. The liquid inclining to rest at 0, but after a momentary pause jumped like the dancing master's pupil, to his 1, 2 and 3—4, 5 and 6; but finally rose to 9, and appeared luminous with brilliant sparks. The same was observed on turning to his papers on the *Agricultural School*, and also his *Seven Reasons why Agriculture should receive the patronage of Government*, with nearly similar results.

Henry Colman.—When his truly valuable *State Reports* on the Agriculture of Massachusetts, were offered for the test, the critique was much disturbed, yet played in great dignity with 7, 8 and 9, and occasional trips to 4, 5 and 6, and appearing slightly luminous, emitting at the same time small but very brilliant scintillations round 0, 1, 2 and 3. On turning over some volumes of Mr. Colman's Addresses, found the liquid playing harmonious oscillations from 5 to 9, and 9 to 5, like the movements of a well regulated timepiece. I was much pleased with the effect, as it seemed to indicate his equal claim to those points, and I also consider it conclusive proof of the instrument's correctness. Still willing, however, to remove all possibility of doubt as to the correctness of my instrument, I turned it to several of his valuable essays with similar results in each case.

The public are much indebted to him for his long continued exertions to improve all the departments of our husbandry.

Weight of Cattle.—The records of the Smithfield market in London, prove that within one hundred years, the average weight of the cattle killed for that market, has nearly doubled, rising from between four and five hundred to between seven and eight hundred, and the greater part of this increase has been in the last forty years. It is calculated that the cattle offered at the Brighton market, near Boston, average at least fifty per cent more at the present time than they did twenty years since. This improvement we owe to the knowledge brought to bear on the breeding of cattle and agriculture generally.

Willis Gaylord.—His voluminous papers on *Chemical Manures, Butter, Cheese, Agricultural Associations*, the *Increase of the Corn Crop*, &c. being severally brought to the test, caused rapid movements with the critique, which was noted roving from 4 to 8, but rose to 9 in a chaste and luminous manner, with brilliant sparks at the top of the instrument.

Manures.—The preparation and application of the most active and efficient means, with which the farmer is acquainted, of increasing the productiveness of his grounds, are the effect of chemistry applied to agriculture. There are few who cannot remember when bone dust, lime, sea-marls, urate, poudrette, &c., were things never heard of; when the accumulation of bones about our cities and soap factories was a nuisance, and the only question respecting other substances now so valuable, was, as to the easiest manner in which they could be disposed of; when the leisure of winter and the season of ice were embraced to transport them where the returning spring would convey them to the ocean or elsewhere. How astonishing is this state of things, compared with the fact now ascertained, that the value of animal manures annually collected and applied to the crops in England, at current prices, surpasses the whole amount of its foreign commerce;* and that animal manure has been and can be profitably imported into England from so great a distance as the eastern part of the Pacific Ocean.

Agricultural Associations.—The splendid agricultural improvements, now here and there exhibited, are the results of Agricultural Journals and Agricultural Associations, where enterprising individuals meet periodically, and by interchanging all their ideas, increase the general stock in at least the compound ratio of their numbers; each one returns home with the knowledge possessed by the whole, and with a commensurate stock of new suggestions for future reflection and experiments. The spontaneous operations of the human mind, in an unassisted state, require ages to arrive at results which the united efforts of numerous individuals, excited by emulation, would produce in, perhaps, a few days. Most other employments lead to association, while the farmer remains in an isolated state, scarcely regarding the operations of his neighbor.

Agricultural Associations of this and other states have already effected wonders, and these wonders are now becoming the joint stock of the Agricultural Society of this state, which has been got up by the unremitted and persevering exertions of a few gentlemen, who have thereby conferred lasting benefits upon their countrymen.

Indian Corn.—The benefits of skillful cultivation, are shown in the improvement of the corn crop, as much perhaps as in any other way. A crop of seventy-five bushels per acre is now as common as fifty was twenty years since; and there can be little doubt that one hundred bushels per acre are now oftener reached than was seventy at that time.

David Thomas.—When his numerous articles on *Fruits* were brought to the test, the liquid stood at 8, but soon rose to 9, fully luminous. When his scientific and practical *Floral articles* were tested, it stood at 7 and 9, the strong points of attraction, accompanied by a host of brilliant sparks.

Fruits.—Compare the quantity and quality of the fruits and vegetables now offered in our markets with those exhibited thirty years since, and the improvement is astonishing. From the growth of the cucumber to the production of the most delicious of our fruits, the influence of science is felt, and the encouragement for further effort, and the certainty of an ample reward, is every where visible.

Flowers:—

"Who does not love the flowers, the sweet young flowers,
With their bright radiant eyes, and gentle smiles,
And tones of love for all who step aside
From the dim path of life, to talk with them
Awhile, and gather lessons from their pure
And ever opening leaves?—Oh, it would seem
That God had placed them here, and given to each
Its own meek, simple loveliness, that man,
Proud man, may stoop from his high throne at times,
And humbly own the gentle flowers his teachers
In the great school-room of this busy world."

Henry S. Randall.—On bringing his paper, *Agriculture compared with the Professions*, to the test, 9 was noticed to be the luminous strong point. Found his articles on *Cattle, Sheep*, and *Horses*, at the same point, with brilliant sparks.

Breeding Stock.—The progress of improvement in breeding has been so great, that the best breeders have no longer occasion to use the old proverb, "A good cow may have a bad calf;" on the contrary they can say with confidence, their good cows never have bad calves. A skillful observance of the laws of nature has wrought this change. Formerly there may have been as good animals as we have now, but then it was accidental, and there was no certainty the progeny would resemble the parent; now the breeder makes the good qualities constitutional, and is thus certain of the character of his animals.

De Witt Clinton's *Addresses*, while governor of New-York, were brought for review, and those portions of them relating to promoting agricultural knowledge, coming in contact with the thermometer, the critique rose majestically to 9, where it appeared stationary, continuing luminous for some time, emitting bright scintillations. This result greatly enhanced their value. It brought a tear of gratitude to the memory of that truly great statesman, whose genius laid the foundation of our national greatness, and inspired his country with unconquerable ardor in the achievement of internal improvement.

The Transactions of the Essex Agricultural Society were passed in review, and gave decided evidence of high bearing; 5 was noted a point of strong attraction. On turning over the many yearly proceedings, found the liquid roving to 6, 7, 8 and 9, all movements indicating "Theory to be the parent of practical knowledge."

James M. Garnett.—On presenting several of his interesting communications, the liquid inclined strongly to 6, but on applying his *Maxims and Precepts for Young Farmers*, it rose suddenly to 9, with brilliant sparks, somewhat luminous, with bright scintillations. These maxims, compared with the ephemeral matter which furnishes most of our reading rooms and fire sides, are like Shakspeare's two grains of wheat to the bushel of chaff.

Solon Robinson's papers claiming for *Agriculture the Patronage of Government*, being brought in contact with the liquid, it passed to the top of the tube, with force nearly sufficient to demolish the instrument; my hand, which held it, receiving a shock as if from electricity. After some commotion it settled at 9.

The American Institute.—On collecting together the doings and addresses of the Fourteenth Annual Fair of this Institute, and placing the instrument in contact with the collection, the liquid sunk to 3, but immediately commenced rising by small distinct advances till it settled at 9, emitting a steadily increasing light, continuing to increase in brightness till it became dazzling, beginning to emit sparks, when feeling alarmed for the safety of the instrument, I removed it away.

Daniel Chandler's experiments on the *Cultivation of Indian Corn*, caused the liquid, when brought in contact, to settle at 5.

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* "Chica, an intoxicating beverage prepared by the ancient Indians."—*A. W. Bradford's American Antiquities, p.* 135.

† "Near Lake George, in the state of New-York, formerly stood a large mound; and in its vicinity were fields appearing to have been anciently cultivated, and also oak, palm and orange groves."—*Ib. p.* 38.

‡ "Near Lexington in Kentucky, an irregular structure, 1,400 yards in circumference, with pits and ramparts, the whole of which was overgrown with forest trees of large size, and of the growth and kinds unusual in the vicinity."

§ "Xochicaleo, or the *House of the Flowers*, is situated upon the elevated plains of Cuernavaca, at a height of nearly six thousand feet above the level of the sea."—*Latrobe's Rambles in Mexico.*

* McQueen's British Statistics, p. 51.

Ephraim Parker's paper on the *Dairy Farming of Herkimer County*, was applied to the test, and the liquid found stationary between 5 and 6. The same result was found on testing the *Cutting of Corn Stalks* by **Wm. Clark**, Jr. The value of such detailed experiments entitle the contributors to the appellation of public benefactors.

C. N. **Bement**'s communications on *Improved Pigs*, being brought to the test, the liquid rose to 5, with flights to 6.

Improved Pigs.—Here is an improvement which no one, however slightly acquainted with the animal, can deny. The dullest eye can distinguish between the round fat, beautiful Berkshire, and the thin, lean, long-nosed and long-legged hound-like creature, which seems more fitted for the chase than for the sty. The farmer feels the difference in his corn-crib, and more than all in his pocket. The difference in the cost of feeding and in the pork made, between the improved varieties and those generally fed twenty-five years since, is not less than forty per cent. This is the result of skillful selection and crosses.

William Darlington's *Use of Lime*, was brought to the test, and the liquid was found at 5, but rose to 9. On bringing his *Agricultural Botany* for examination, 9 was found the point of attraction, the liquid bubbling and throwing off luminous brilliant scintillations.

H. A. S. Dearborn.—On applying the thermometer to the writings of H. A. S. Dearborn, in connection with Messrs. **Wilder, Walker, Manning, Pond, Warren, Perkins, Cushing,** and other illustrious pioneers of Massachusetts Horticulture, the liquid was much excited and luminous, with many brilliant sparks, circling round 7; on turning over his various papers, found so much good sense and strength of reasoning, joined to a pure and masterly style, it rose with velocity to 9.

The name of **Washington** is entitled to deathlike veneration, because he made our country free. Who can dispute his claim to an equal perpetuity of gratitude, who has made that country beautiful and delightful? When the creation was finished, "God planted a garden in Eden," from which our first parents were driven for disobedience, and instructed to till the ground for themselves. But Infinite Wisdom invested their descendants with reason, by which virtuous industry could restore the temporal primeval blessing, by the Godlike act of planting another garden, replete with fruits as numerous and delicious, and flowers as beautiful and as fragrant, as those of blissful Eden. The man who has not only done this for himself, but who by his talents has exerted a praiseworthy emulation in others to do the same, not only in his own city and state, but throughout his country, is H. A. S. Dearborn.

Downing's *Landscape Gardening and Rural Architecture*, was brought to the test; the critique appeared stationary at 7, but soon got in motion, touching gracefully at 7 and 8, and settling at 9, with luminous brilliant sparks.

Farm Houses, Gardens, &c.—A more correct taste in the construction of farm houses and out buildings, and particularly in the department of gardens and yards, is now plainly to be seen; for though much cannot be expected of the farmer on these points, the smallest attention to them is proof that information and a spirit of improvement have reached him, and that be begins to think.

A. of the North.

STABLING HORSES.

We make the following extract from a letter written by L. **Durand** of Derby, (Ct.) The first part of the communication, as it relates to a controversy carried on in the New-England agricultural journals, we omit.

"A few evenings since we were in conversation with an old veteran farmer and gardener of this place, to whom in a former article we have alluded, Leman Stone, Esq. He says there is nothing so injurious to horses' hoofs, as the urine and dung for the animal to stand in. And he told me the way he had practiced for several years. It was to rub the hoofs of his horses with liver oil, such as tanners use in preparing leather, once or twice a week; and this serves to keep them flexible and moist. Since he adopted this course he has never known his horses to suffer from the disease called "Hoof Bound," a disease known by the swelling of the top of the hoof, causing matter to gather under the hoof, and producing lameness. Mr. Stone prefers plank, to earth floors, for the horse; and thinks they will stand with as much ease on a chestnut plank floor, as on one of earth. Mr. Stone's stables are as nearly perfect, as any we ever saw, particularly for saving manure, and are on the same plan we noticed in the Cultivator. The floor is made tight with a descent of 2 or 3 inches, with a trough at the bottom of the floor, and everything the animal drops is saved. The straw for littering is cut to about an inch in length, and every morning the dung is hoed down into the trough, and together with the horse manure is mixed up with the urine, and thus nothing is lost. Mr. Stone keeps but one horse and two cows, and the cows are stabled every night, summer and winter, and I venture to say that he makes more manure than some careless farmers do, with three times that number of animals. We are aware that every one will have a way of his own; but all must agree in one thing, and that is to have their stables made so as to save all the manure, and be comfortable for their animals. A neighbor of mine has been building a barn with a basement story the past season. Instead of laying a floor for the stables in this part, he has covered them with a layer of tanbark, as an experiment. It will make a soft bed for his cattle to stand on, and in the spring it can be thrown out, and will make good manure."

NEW USE OF OIL CAKE.

Mr. Cultivator—Taking up your September No., I cast my eye upon Mr. Johnson's "Remedy for the Turnep Fly," which reminded me of experiments made by a neighbor and myself, which proved successful. He had heard the oil cake meal recommended as a good manure for turneps, beets, &c., and procured some of it, and sprinkled it upon *some* of his—not on *all*, at first, as he wished to see more clearly the effect of it, by leaving some without. That season, the flies and bugs which prey upon our garden vegetables were very numerous; but they left all those upon which he had scattered the meal, while *all* the rest were destroyed. He planted more, to repeat the experiment, powdering alternate rows, to make the result more conspicuous, with the same success. Hearing of this, I thought that perhaps it would prove equally obnoxious to other insects, and resolved to try it. My barn, hen house, and cow yard, were infested with fleas to an extent that I never knew before. I procured several bushels of oil cake meal, and dusted the sides and floor of my barn, hen house, and pig stye, and scattered it plentifully all over the cow yard. The enemy entirely disappeared, and I have not seen a single one of all the host on the premises since, although the last summer is the second since they were routed.

Hearing the meal highly extolled, also, as feed for cattle, I have tried it, much to my satisfaction, on my cows, and a little on my hogs, though I cannot say much yet as to its effect upon them. For cows, I am convinced it is so good that I shall continue to use it, as I find it causes them to give not only more, but better milk than other feed, having made more butter since I have used it than before, in the same length of time.

Rusticus, Junior.

SALE OF SHEEP.

Messrs. Editors—Having frequent applications for South Down and Cotswold sheep, and being called upon to answer many inquiries in respect to them, will you allow me through the columns of the Cultivator to say, I have disposed of my entire flock to Mr. J. McD. McIntyre of this city, who, in addition, has several of the Cotswolds imported by Messrs. Corning & Sotham in 1840, making altogether as select and perfect a flock, perhaps, as can be found in the country, and as it is his intention to stock his farm alone with these invaluable sheep, and to give his attention to them, I am very happy in being able to refer my correspondents on this subject to a gentlemen so eminently worthy their confidence and esteem, and to assure them that the exchange will in no way militate against their interest or convenience. But lest it should be supposed that in giving up sheep, I am giving up breeding altogether, pardon me for saying, it is rather that I may give my more undivided attention, and the product of the farm entirely, to the increasing numbers of my high-bred cattle, that I have been induced to dispose of my sheep. Truly yours,

Albany, Dec. 20, 1841. E. P. Prentice.

TREATMENT OF CALVES

Editors of Cultivator—Will you, or will you permit me, to solicit from some dairy-man, an article upon the subject of calves, for insertion in the Cultivator, stating particularly the treatment of the calf from birth till disposed of to the butcher, or in the market, or reared for weaning? Also, the treatment of the cow in the meantime. I do not recollect of seeing any communication upon the subject in your paper; and I doubt not an article at length upon the matter would be well received by your readers; at all events it would be by myself. Let the article be published in season, so that your readers may have the benefit of it the coming spring.

Canaan, N. Y. Nov. 27, 1841. D. B. C.

ELEVATION OF AGRICULTURE.

Messrs. Editors—Being one of the old-school farmers, I am pleased to see the change that has taken place in public sentiment, within a few years, in regard to farmers and their useful occupation. We old-fashioned *fellows*, that were once considered in the light of hewers of wood and drawers of water, find ourselves all at once standing in the front rank, and making constant, accessions to our already numerous forces, not only from the learned professions, but merchants and retired gentlemen are all eager to share in the honor and the profits of the farmer. We salute them all as brethren, and congratulate them on the prospect of the substantial happiness that awaits them. Many of them bring to our ranks a great amount of science and intelligence, of which we are happy to avail ourselves; but we trust they will not let their fondness for the quill, or for theory, make them forget, that a large proportion of the farmers of the country are more or less in debt, and under the necessity of realizing an immediate and fair reward for their labor; and that every thing that is written upon the subject that is impracticable, and out of the reach of the moderate and debtor class of farmers, has a tendency to awaken anew their prejudices against what they consider *book-farming*. Hence the propriety of pursuing such a course, as will be likely to meet the views, and enlighten the minds of this numerous and meritorious class of men; for if improvement that will be lasting is desired, you must enlist in the cause the hard-handed *Frock and Trowsers* go-ahead men, that drive their own teams, are out first in the morning and last at night, and generally wear a few nails in the heels of their boots.

Frock and Trowserr.

We thank F. and T. for his suggestions; and hope he will not "stand back," but furnish us at once his modes of making stone wall, seeding down land to grass, and reclaiming swamp lands. These are important *practical* matters, and we hope our correspondent will remember and practice his own rules, and instruct the thousands who read the Cultivator in the subjects alluded to.

BERKSHIRE PIGS.

Messrs. Gaylord & Tucker—I have slaghtered my hogs (only four in number,) and as many think Berkshires are small hogs, I will give you the age, weight and manner of keeping them.

1. Dolly, 3 years last spring,	15-16	Berkshire,	473 lbs.
2. Spot, 2 " "	1-2	"	467
3. Pet, 1 year last spring,	31-32	"	473
4. Pedro, 1 " "	31-32	"	494
			1838

The two first had been kept for breeders, but had not bred this season; the two last were out of the first, by the boar which I purchased of Mr. Bement.

These hogs ran in a clover pasture until harvest—then in stubble until the grain was consumed—and then in the orchard until the 11th day of October, when they were confined in the pen and fed with barley meal wet with water, and a little salt, and slightly fermented. While they were in the orchard they were fed with a small quantity of corn in the ear daily, not however, equal to one bushel of corn each, in the whole. They were killed on the 10th of December.

Many farmers are prejudiced against Berkshires. The reasons of which I think are, first, they are a thick smooth looking pig, and are therefore *called* fat, when they have not had the feed which is necessary; and second, most farmers have bred their Berkshires *down* instead of breeding *up*. They have bred grade animals together, rather than incur the expense of obtaining full blood; and this course I am persuaded will cause any of the improved breeds of animals to deteriorate.

I will soon furnish you with the report of the Viewing Committee on Farms for this county. E. Marks.

BAKEWELL POTATOES.

Messrs. Editors—I beg leave to offer a few words in relation to my favorite potato, a small sample of which I left at your office the other day. For the use of the table I consider them every way equal, if not superior to the Pink-eyes; their properties in this respect you will please put to the test. I can say nothing regarding their history, further than a two years acquaintance, during which time I have cultivated them, and find that with proper tillage they produce better than the Rohans or any other kind that I am acquainted with. They should be planted early in the season, and like all other varieties, require a rich soil. For the sake of a name, and in view of their superior properties for baking, roasting, &c. I will venture to call them the *Bakewell*.

Marcellus, Nov. 22, 1841. Curtis Moses.

PLOWING AT SYRACUSE.

We copy the following from the letter of a "Friend to Agriculture," at La Fayette, Onondaga county, and think his suggestions worthy of consideration.

"As a farmer of the county of Onondaga, I attended the Fair at Syracuse, and had an opportunity of seeing the plowing match; and much regretted the rules (or one of them) adopted for the government of that interesting part of such exhibitions. This was the time allowed for the work, which I think was too short for good work. I noticed one plow that broke its point, and to get done in the time the horses were put almost on the trot, which rendered the holder incapable of doing the work well. Giving so limited a time, induces the plowman to take the wide furrows, which you are aware does not pulverize the soil, nor when putting in seed divide it sufficiently. Work that is worth doing at all, is worth doing well. When we see a piece of work of any kind well done, it is very natural to inquire who did it; but very seldom how long it took in doing.

I would also suggest that at future Fairs, every plowman set out his own land; the lands to plow being set out by stakes only, and not with a plow before hand, as as was the case at Syracuse; and also that he alone should drive and hold, which is evidently a saving of labor, an essential element of good husbandry."

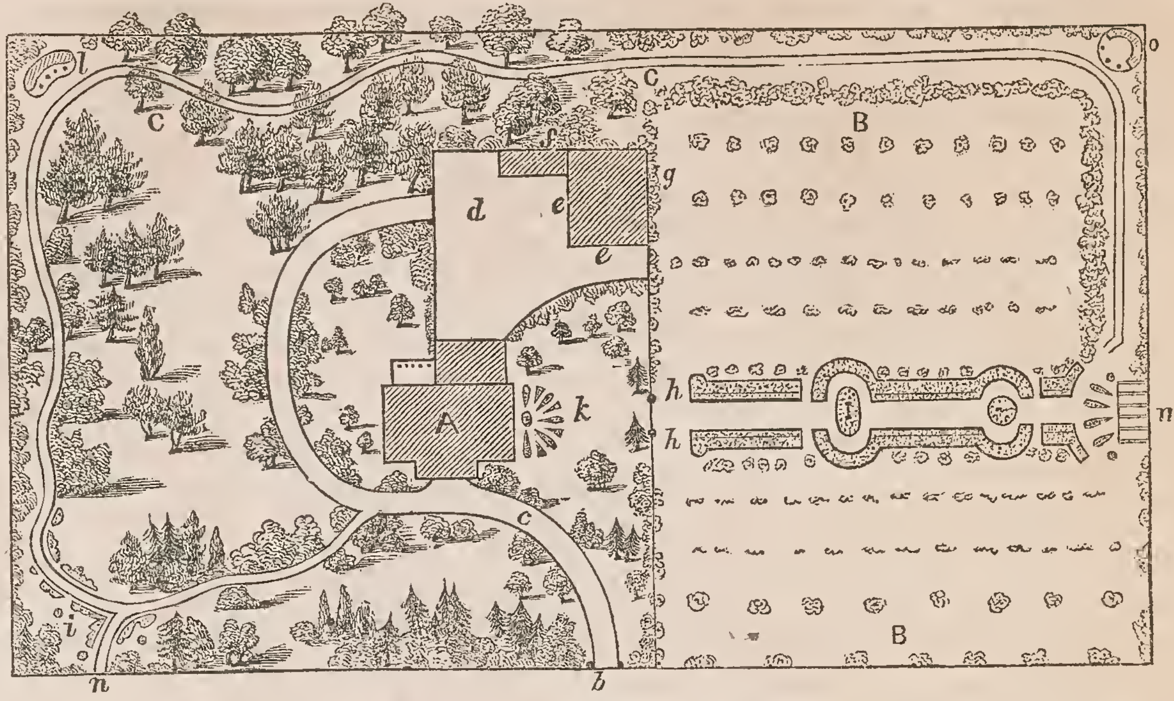
LARGE SUGAR BEET.

Messrs. Editors—I have this year raised a French Sugar Beet that weighed, with the top on, 24 pounds; after being trimmed closely, it weighed 19 pounds and 1 ounce, and measured 31 inches in circumference. I have it now to exhibit, if disputed. If you are so disposed, you may give Vermont credit for this, to begin with, and we may hereafter tell you some large squash stories. Levi Lewis.

Wells, Vt., Dec. 13, 1841.

The Garden and the Orchard.

THE GARDEN.



PLAN OF A GARDEN.—[Fig. 8.]

THE first impression which the annexed plan of a garden and grounds (fig 8.) will make on many readers, is, that it would be altogether *too costly;* that it may do very well for gentlemen of independent fortune, but is entirely out of the question for common farmers. Now, I hope to show, instead of this being the case, that it would be, on the whole, more economical, and better adapted to farmers in moderate circumstances, than any thing of the kind in common use in this country. But an explanation of the plan will first be necessary.

It will be perceived, at a glance, that the old, stiff, and formal geometric style has been, as far as practicable, avoided; and the modern or graceful manner employed, which consists in an imitation of the most beautiful forms of natural scenery. Those who do not greatly prefer the latter, will not, of course, be pleased with the irregular planting and grouping of *fruit trees,* to produce a natural effect; but space admits of nothing further on this question here, except to refer to a full and very interesting discussion of the matter, in Downing's late admirable work on Landscape Gardening, which every man who has any taste for the beauties of nature, or who owns an acre of land, should read. The plan before us is supposed to represent about two acres of ground, but will apply, with slight variations, to a greater or less quantity, or to a different shape. *A* is the house, *b* the entrance from the road, *c* the carriage road which passes in front of the house, back to the yard, *d,* which contains the carriage house, stable, and such other out buildings as are needed near the house. *B B* is the garden, the length and breadth of which may vary with the quantity, nature, and shape of the ground. The space, *C C* is occupied chiefly with fruit trees, such as are of fine kinds and handsome growth, and arranged so as to produce an ornamental effect. The yard and out buildings, at *d,* are placed entirely within the boundary, to give greater length to the walk which passes round the whole, and thus increase the apparent extent of the grounds. These buildings may be hid entirely by trees, or partially by ornamental climbing plants, as the trumpet flower or Michigan rose, on the side *e,* next the lawn, and with hardy grapes, or fruit trees trained upon them, on the sides *f* and g.

The *kitchen garden,* to which attention is especially called, occupies all the space between *B B,* except two borders for flowers, *h h,* and is laid out on a plan entirely different from usual. Instead of being divided into squares and spaded beds, long parallel drills across the whole are employed for nearly all garden crops. On good ground, free from stones, a one horse plow, or narrow cultivator, will pass between rows from two to three feet distant without difficulty; and if too much ground is thus occupied, double or even triple drills may be planted. By thus allowing free space, and frequently stirring the soil superficially with the cultivator, and occasionally deeper for many crops with a plow, vegetables far better than common can be raised. Asparagus, for instance, when planted in dug beds, as is usually done, is much diminished in size and vigor, from the want of space for the free spreading of the roots, as well as from the difficulty of frequent and thorough culture. Planted in drills, in deep rich soil, the difficulties are removed, and each individual plant soon forms a stool one foot or eighteen inches in diameter, throwing up shoots of great magnitude. Strawberries, too, when kept well cultivated in drills, produce much finer fruit than otherwise. Keene, who distinguished himself so eminently in the culture of this fruit, in no case suffered the plants to stand nearer each other than eighteen inches, and by frequently stirring the ground between them, he was able sometimes, to use his own words, to produce *trusses of fruit a foot long.* The same advantages would result to other crops, while the superior cheapness would be a still greater recommendation. There are very few persons who cultivate a garden of half an acre, who have not at least one horse at command, by the use of which, in a garden of this size, at least fifteen or twenty dollars, or three quarters of the labor required, if worked solely by hand, would be saved. The cost of hand labor in this country, and the comparative cheapness of the labor of horses, render such a course of culture exceedingly desirable. Rows of currants, gooseberries, raspberries, and quinces, may also extend across the garden, at proper intervals, and be cultivated by a horse.

In order that the plan of the grounds may be better understood, let us suppose a stranger to enter them for the first time. After passing the gate, at *b,* successive portions of the shrubbery, in front and on the right of the house, are presented, as the road gently curves to the house, other parts of the grounds being excluded by the ranges and groups of trees along the garden and stable yard boundary, and from the house to the corner of the lot, at *i.* The two finest views are seen after entering the house; one from the drawing room on the left, where the eye ranges over the rich profusion of shrubbery near the house, between groups of trees, towards the flower beds, at *i,* and the covered seat, at *l.* Great additional beauty would be given to the latter view, if a small piece of water could be placed in front of the seat towards the house, especially if there be considerable descent between them; it would, however, be attended with considerable expense, except in accidentally favorable circumstances. The view from the dining room is towards the garden. Directly beneath, is the parterre, or flower beds cut into the turf on the lawn, at *k;* beyond this, is the light archway gate to the garden, through which the view extends along the vista formed by the flower beds, *h h,* and terminates at the green house, (or alcove,) at *m.* If the flower beds are of several feet width, an agreeable effect will be produced by planting the smaller flowers near the walk, and the taller further back, and a row of ornamental shrubbery behind, as in the plan. By placing the heavier and darker leaved shrubs near the house, and the lighter beyond, an appearance of greater distance to *m* will be created.

In passing along the foot walk to *i,* an agreeable point of attraction is formed by the arabesque and circular flower beds, beyond which, an arbor or a sun dial might be placed; proceeding onwards, the path curves amid dense trees, a short distance, until the seat, *l,* is seen; beyond this, we pass through the plantation of fruit trees, until we enter the straight walk which leads to the circular roofed seat, at *o.* This walk is bounded on each side, either by a high trellis, densely covered with grape vines, or by fruit trees trimmed flat, so as to resemble a tall freely growing hedge. From *o* to *m,* the walk may be flanked with hedges of evergreens, or by trellises covered with ornamental climbing plants; and if this were arched over head, the impression would be the more striking; when, after passing along such a verdant archway, the full glow of the flower garden, from *m* to *h,* the arched gate, shrubbery, and house, would burst at once on the view.

A small gate is placed at *n,* for the convenience of persons passing on foot to the road in that direction.

The stable yard, which, in the plan, is in common with the kitchen yard, may be separated from it by a light fence, and the whole may be surrounded by an evergreen hedge, closely trimmed inside, and left to grow freely outside. The red cedar, and the American arbor vitæ, or white cedar, would be excellent for such a hedge. If cattle occupy the yard, the ornamental climbers which cover the buildings should be brought from the outside, and trained on the upper part only. Wood decays more speedily when covered with plants; but a barn of brick or cobble stone is of course not affected, and rough wooden boards, which have previously received several coats of lime whitewash, are but little injured.

The change from the ornamental trees, in front and to the left of the house, to the fruit trees at the back, should be gradual. For instance, those ornamental trees which are nearly allied to fruit trees, should be placed near the latter; as the mountain ash, the double-flowering cherry, the Chinese double-flowering apple, the Aronia, and the Siberian crab. These should be occasionally mixed with the strictly ornamental trees on the one hand, and with the fruit trees on the other, so that one may pass to the other by successive gradations.

Those who wish large orchards, especially of apples, will have to provide additional ground for them, where they should be planted in rows, after the usual manner. The part here devoted to fruit, is intended for those kinds only which are of particularly handsome growth, and which could be tolerated on a lawn. Such are most varieties of the pear, and some of the plum, cherry, peach, and a few of the apple. As instances, the Madeleine and Skinless pear, the Early Richmond and Elton cherry, and the Rambo, Strawberry, and Bough apple, may be mentioned.

The cost of carrying such a plan into execution, in the opinion of most farmers, would be sufficient to deter them from the attempt. But in what does the cost consist? The most expensive part is the garden; but a garden, well manured and well tilled, especially if tilled by horse power, is by far the most profitable part of any man's farm. The green house, *m,* may be substituted by a covered seat or arbor, not costing ten dollars. The trellis for grapes and ornamental climbers may be made for fifty cents a rod. The flower beds will cost more or less, according to their style and keeping, but may be made very cheaply. But the half acre of ornamental shrubbery! This need not cost much. Many situations could be found for building a house, where three quarters of the trees and shrubbery needed are already growing on the spot. Supposing, however, this to be otherwise; by judicious selections from our forests and swamps; by free begging from generous neighbors, and by the expenditure of a few dollars at a nursery, for ornamentals, a sufficiency could be obtained for rendering, in a few years, any man's home truly pleasant and beautiful. After the trees are planted, little more is to be done than to keep them hoed round, while small, and to give the grass lawn on which they stand an occasional shaving with the sythe, for the benefit of the horse in the stable. It is true, that by procuring none but rare and costly trees, by keeping the grass constantly shorn perfectly smooth, and by expensive ornamental erections, hundreds of dollars could easily be laid out, but this cannot be recommended to the majority. I will merely observe, before concluding, that I have seen a great many, who considered themselves in quite moderate circumstances, expend more, far more, on unnecessary decorations of their houses, or even on fine carriages and harness, than would buy the land and handsomely plant it, for such a shrubbery and flower garden as the one here mentioned; and who, at the same time, would express ineffable contempt at the idea of laying out five dollars in trees and plants, to render delightful the homes of their children, and add to the sweetness of domestic life. How much are they to be pitied! and how much are their children to be pitied, who, perhaps, from this neglect, may be tempted to seek their pleasures in the midst of dissipation and ruin.

This plan, it will be observed, may be much varied; the ground devoted to shrubbery may be greatly augmented, or greatly lessened; the garden may be made to occupy three quarters; the fruit trees may extend along the walk as far as the front shrubbery; the barn may be placed out of the way entirely, and numerous other alterations made. Where the ground is quite uneven, or irregular in outline, the plan must of course be made adapted to that particular piece of ground, and be perhaps applicable to no other. Judgment must in all cases be exercised. But let none be deterred from attempting improvement, because he cannot reach perfection at once. A little is much better than nothing.

In a future number, I hope to give a list of some desirable fruits, vegetables, shrubs, and flowers, with remarks on their culture, adapted to a farmer's garden and grounds. J. J. THOMAS.

Macedon, 12 mo., 1841.

SLUGS ON CHERRY AND PEAR TREES.

MESSRS. EDITORS—Fruit growers and nurserymen, in this section of country, have had to encounter, the past season, a most formidable enemy, in the shape of the cherry or pear tree slug, an insect almost entirely unknown in this place until the last two years. This insect, when full grown, is from one-half to three-fourths of an inch in length, of a dark green color, filled and covered with a watery, slimy substance. Like the caterpillar, they feed on the leaves, differing, however, in one respect; they feed only on the upper surface, completely destroying the vitality of the leaf. The pear and cherry appear to be their particular favorites; the plum and quince, however, come in for a share of their spoliations.

A year ago last summer, I discovered them, pretty numerous, on several pear trees in my garden; not enough, however, to do much damage. But the past season, they appear to have increased an hundred or even a thousand fold. Indeed, so numerous have they been in many places in this vicinity, and where no efforts were made to destroy them, that the leaves and fruit of the cherry and pear were completely destroyed, having the appearance of being destroyed by the frosts of winter. The English cherry and the pear tree again soon put forth fresh leaves, but many of the common garden cherries have remained destitute of a green leaf since the middle of July.

I discovered many of them in my fruit garden and nursery, about the 20th of June. In this emergency, it became necessary to cast about for a remedy; the only one I could find laid down in the books, recommended lime and ashes to be sifted over them; but in a nursery, containing many thousand trees, it proved to be one of much labor. However, it produced the desired effect, for wherever the dry lime or ashes came in contact with the slimy coat of the insect, it produced death; and although it was impossible to destroy all, yet by this means their ravages were greatly checked.

They were the most numerous on the lower leaves of the trees, and appeared to possess but little life, and, in their slow logy motions, resemble the snail; from this, I inferred that, by stripping or cutting off the lower leaves, and the insect once fairly on the ground, they would be unable to find their way up the tree again. The experiment was tried on several rows of young cherry trees; but, on a careful examination the next day, I found that the motions of the little depredators, by hunger, or from some other cause, had become greatly accelerated, and that they were ascending the trees in search of fresh leaves.

Some kinds of pears were much more their favorites than others. The leaves of the common seedling pear would be almost covered with them, while the cultivated kinds, along side, would not have one-fourth as many. On two pear trees, that stood alone in one part of the garden, they were suffered to remain unmolested. On the 4th of July, they had destroyed all of the leaves, and were in trouble for the want of food; that day, and the day following, they were passing up and down the tree, and soon all perished; and, for aught I know, this will be the way that they are to be exterminated, for should they appear and increase the next season, in the same ratio they have the past, the foliage on all the trees will not sustain them for one week, and then they must perish.

As I have already remarked, this insect made its appearance about the 20th of June, and disappeared about the middle of July. A second crop again made their appearance the last of August, but not near as numerous as the first. But there were some peculiarities about this. In one of my nurseries, some fifty rods distant from my other nursery grounds, and containing some 12,000 or 15,000 pear and cherry trees, and which nearly escaped the first attacks in June; yet, in the month of August, was much more seriously affected than any other part of my premises.

A tree of the Boston Epargne pear, trained as an espalier, cast all of its leaves early in July, but soon after put out in full leaf again; and, what is somewhat singular, at this time, (Dec. 15,) after so much snow and frost, yet retains its green leaves, as fresh and fine as its neighbor, the *Mespilus pyracantha*.

It is certainly very desirable that the history of this troublesome insect should be more fully known. I believe the point is not yet fully settled, whether the egg is deposited on the tree in the autumn, or deposited on the leaf, in the spring or summer. I am quite sanguine in the opinion, however, that the egg is deposited on the leaf by some winged insect. I am the more inclined to this opinion, from the fact the slug appears most numerous on the lower leaves; they remain on the leaves from three to four weeks, and then disappear. Many are found dead on the leaves, while a large majority of them fall on the ground.

I have seen no notice of this insect in the columns of the Cultivator, yet it is quite possible that other parts of the country have been visited. Information on the subject is desired; and if this insect has ever appeared as numerous in any other place, let us know something about it, and what we may anticipate from it in future.

Wishing that subscribers to your valuable paper may increase in the same ratio that this insect has, in western New York, for the last two years, I am, gentlemen, as ever, yours truly, B. Hodge.

Buffalo Nursery, Dec. 15, 1841.

THE ICE MELON.

Messrs. Editors—The seeds of the *Ice Melon*, received by you from the south, and part of which you kindly placed at my disposal, I planted in my garden, with the exception of a few hills, which I distributed to some friends. They fully answered the recommendation given, being far superior to the ordinary melons grown in our gardens, or offered in our markets. The complaints made, that the planting of the citron melon in the same beds with the watermelon, has seriously deteriorated the latter, by giving a thicker rind, and a less juicy and delicate meat, are evidently just to every one who purchases melons grown in the middle states for the northern markets. The ice melon has a rind so thin and brittle, that, when ripe, a gentle pressure of the thumb was sufficient to rupture it, and the flavor was of the richest kind. The melons were not large, whether owing to the extreme dryness of the season, or to the natural constitution of the fruit, I cannot say; but I think it will prove a great acquisition to the lovers of good melons. H. M. Gaylord.

NEW VEGETABLE.

We find the following notice in a late No. of the Mark-Lane (London) Express:—"At the meeting of the Horticultural Society, on Tuesday, Dr. Lindley drew attention to a new vegetable lately introduced into this country, and grown successfully at Chiswick, which is likely soon to become extensively cultivated for our markets. It is known by botanists as the Oxalis Deppii, and the flavor both of the stalks and the tubers is characteristic and quite distinct from any thing previously known at our tables. It has been grown extensively in Belgium, from whence it has been introduced here."

Domestic Economy.

PREPARATION OF HAMS.

When well preserved, and well cured, there are few articles that are more acceptable at the table than smoked ham, yet it is often so improperly managed that no person possessing any pretension to taste, can swallow it with the least relish. Sometimes the fault is in the animal itself, but much oftener in the salting and smoking; on these, indeed the great excellence of the ham may be said to be depending.

A hog, to furnish the best hams, should not weigh more than 200 lbs. and should be fed on sound food, such as peas, corn, or barley. If he has had some range while feeding, the hams will be so much the better, as the muscular part or *lean* will be better developed, and more firm, than if closely confined. It is probably owing to these causes (the smallness of the Westphalia and Virginia hams, and the hogs while fattening being allowed to run at large,) that the bacon of these countries is so much superior to most others; although much may be allowed for the mode of preparation and smoking. Where a hog weighs from 300 to 500 pounds, the hams will be so large that the process of salting and smoking is rarely so perfect as to thoroughly permeate the mass of meat, and the consequence will be a large part of the center will be unfit for the table. Large hams require a longer time in curing and in smoking them than is usually allowed; the difference in size between small and large ones not being generally sufficiently considered.

There are many ways of curing hams, each one of which has its advocates, and many of which do not essentially differ from each other. We shall give a few of the processes that have become the most noted, that the farmer may choose the one he shall deem most proper or convenient.

Mr. Shelby's method, as given by him after 20 years practice, is as follows:—"I measure a bushel of salt, spread it upon a table, weigh a pound of saltpetre, pulverize it carefully, and mix thoroughly with the salt. This mixture is sufficient for 1,000 lbs. of small meat or 800 of large, to be well rubbed on every piece, and more especially on the fleshy surface. If the weather is mild and the meat small, four weeks will be long enough for the pieces to be packed; but if the weather is cold and the meat large, it should be taken up at the end of four weeks, well rubbed again with salt in case the first has dissolved, and lie two weeks longer."

The following is the celebrated "Knickerbacker Pickle," is equally good for beef or hams, and rarely fails, as we know from experience, of producing a good article:—"Take 6 gallons of water, 9 lbs. of good salt, 3 lbs. coarse brown sugar, 1 quart molasses, 3 ounces saltpetre, and 1 ounce pearlash; mix and boil the whole well, and skim off all impurities." The meat to which this pickle is to be applied should be slightly rubbed with fine salt and lie one or two days, that the blood may be extracted and drain off; then pack it tight in casks, turn on the cold pickle, and let it remain till sufficiently cured for smoking.

Mr, John Cockrill of Woodland, Ala. in the Southern Cultivator, thus describes his method of curing hams. "My rule is to make a strong tea of red peppers, then to mix salt and hickory ashes, say one-fifth ashes; then moisten the mass with the pepper tea, and rub the hams and shoulders on the skin side with about a tea-spoon full of saltpetre to each joint; I then rub in the salt well, then rub the flesh side and pack it with salt, and place the pieces in a trough or tub. I let it remain undisturbed for six weeks; when I knock off the loose salt, take fine pea meal, and rub it completely over the flesh side and hang it in the smoke house. The meal will form a close crust and keep off the skipper fly."

The following is one of the easiest and most expeditious methods of curing and smoking hams, and we know makes a very respectable article. Take a good tight barrel, white oak is the best, take out one head, and invert it over a pan or kettle in which a smoke of hard wood chips, or cobs, is to be kept up for eight or ten days. Water must be kept on the head of the barrel to prevent it from drying. A pickle is made of six gallons of water, twelve pounds of salt, twelve ounces of saltpetre and two quarts of molasses, dissolved together in a kettle, boiled, and the scum taken off. The hams are packed in the barrel, the brine, cold, is turned on to them, and in one week the hams are fit for use.

What is termed the Virginia mode, or in some places, the dry method of curing, as the hams do not lie in pickle at all, is as follows:—for each ham take a spoonfull of saltpetre, (a large tea spoon will do,) pulverize it finely and apply it; rub each piece with salt well on both sides, and pack them in hogsheads with holes bored in the bottom to let off the brine. Let them remain five or six weeks; then take them out, brush off the salt, rub each well with hickory ashes, and hang each piece in the smoke house.

The celebrated pickle called the Empress of Russia's Brine, and much used in Europe for curing hams:—Six pounds of common salt, two pounds of powdered loaf sugar, three ounces of saltpetre, and three gallons of spring water, are boiled together, skimmed, and when quite cold, poured over the meat, every part of which must be kept constantly covered. In this pickle hams of medium size are cured for smoking in two weeks.

A process which gives good hams, and is called the Jersey mode of curing, is as follows:—To every 80 lbs. of ham, take 4 ounces of sugar, 3 ounces of saltpetre, and 1 pint of fine salt. Powder and mix them finely. Rub the hams well with this mixture, and lay them on planks for two days. Then pack them in casks, adding 2 quarts of salt to every 80 lbs. of ham. In fifteen days they may be taken to the smoke house.

Much of the goodness of a ham is depending on the manner in which it is smoked or dried. If the process is carried forward too rapidly, if the meat is not at a sufficient distance from the fire; if from any cause, such as want of ventilation, dampness of smoke house, &c. the meat is kept moist on the surface, and in a wet or dripping state, it is idle to expect good or fine flavored hams. In Virginia, the best hams are not considered thoroughly smoked in less time than two months, not keeping a smoke under them day and night for this time, but making a good smoke under them every morning, or daily. In this way they are cured by the smoke gradually and thoroughly. Indeed the great art in smoking seems to consist in drying the meat by the smoke and not by heat. Hams may be smoked in a much less time than this, but they will not be of as fine a quality, nor will they keep as well. Nothing but materials that will produce smoke free from all unpleasant odors, should be used for smoking hams. Hickory or maple, are first rate; oak or ash will do very well; and the cobs of sound, well cured Indian corn make a good penetrating smoke. Hams are frequently injured by being exposed to too much heat in the process of smoking. To avoid this, at Hamburg, the smoking establishments for both hams and beef, are in the upper stories of three or four story buildings, and the fire for producing the smoke is in the basement part of the building. The smoke is conducted in tubes, and every precaution is used that the smoke shall be thoroughly cooled in its passage. In hanging up hams for smoking, care must be taken that they do not touch each other, and they should invariably be suspended, so that the small part of the ham shall be down; as this will prevent the escape of the juices by dripping.

Various methods have been recommended for the preservation of hams, such as packing them in hay, cut straw, the tow of flax, ashes, fine charcoal, and many other ways. The great object is to keep them cool and dry, and away from flies. Tow will effectually exclude flies; charcoal assists greatly in preserving them sweet; and ashes secure their dryness; but all these plans are open to the objection of making the ham dirty, or leaving it liable to mold. The best method, in all respects, we have known, is to place each ham in a bag of cotton cloth, closely tied up and hung up in a close and dark smoke house. Flies will not infest any place from which light is wholly excluded, and if a smoke is made under them once a week, it will greatly aid their preservation. As a security against flies, some of the establishments that produce hams of fine quality, are in the habit, while the process of smoking is going on, of throwing a few red peppers upon the fire once or twice a week; and a few burnt occasionally in the smoke house, while the hams remain in it, will kill, it is said, all flies that may have found their way into it.

EXTRACTING GREASE SPOTS.

One of the best methods of doing this, where drops have fallen on dresses, books, &c. is to place magnesia on the spot, rub it in, cover it with clean paper, and place over this a warm iron. The grease will combine with the magnesia, and be thus removed. Finely powdered chalk will do, but is not equal to magnesia. Repeated operations, or applications of magnesia, may be necessary where considerable grease has fallen.

THE RED ANT.

One of the greatest nuisances to the domestic manager is the small red ant. Any of the ant family are tormenting enough, but this is a plague par excellence. The best way to dispose of common ants is to find their beds, and as late in the season as is possible, or during a thaw in winter, open them with a spade, and thoroughly expose them to the changes of the season. This will destroy them. Where the red ant becomes troublesome, it is said that sage leaves fresh picked will keep them away, when scattered in the places it is wished to protect.

REMOVING PUTTY.

Great difficulty is frequently experienced, when glass is accidentally broken, in removing the old putty to replace the pane. Moisten the putty with nitric or muriatic acid, and it may be removed at once. Where these cannot be had, strong soap laid upon the putty will in a few hours loosen it from the wood so that the new glass can be set without difficulty.

CEMENTING CHINA OR GLASS WARE.

Articles of China or glass are sometimes fractured, which it is very desirable to mend and preserve. To do this, provide some very finely powdered quicklime in in a muslin bag. Take the broken ware, and rub the edge with the well beaten white of an egg. Take the quicklime and sift it thick over the edge rubbed with the egg, press and bind the pieces together, and let the the binding remain several weeks. For coarser crockery, rub the parts with a paint made of white lead and linseed oil, press and bind, and let them remain till the paint is fully dry.

Door latches often work unpleasantly and with difficulty, from want of oiling. A few drops upon them will in such cases operate like magic,

Diseases of Animals.

HOMEOPATHIC TREATMENT OF ANIMALS.

Editors of the Cultivator—I notice in one of your late numbers, that you reject a communication from David Tomlinson, on the subject of Homeopathia, lest it should lead to a controversy on a subject foreign to the object for which your paper was established. I deeply regret your decision, because no topic can be more truly valuable to the farmer, than the preservation of his own health, and that of his family; and I am abundantly satisfied from the success that has attended this system under my own observation, and the perusal of authentic clinical reports, that it is capable of curing disease more speedily, permanently, and with far less expenditure of strength, than any other whatever. You will observe it has no affinity whatever with the Quack systems of Thomson, Morrison, Brandreth, &c.; its discoverer is one of the patriarchs of the profession, thoroughly versed in Anatomy, Physiology, and all the collateral branches of medical science, and its administrators are, all of them, men thoroughly versed in the learning of the medical schools. Nothing of an empirical character is admitted into the system; every thing is submitted to the test of the most rigidly conducted and frequently repeated experiments; and the result of these has been the discovery of a grand key fact, which admits of a generalization of all other previously discovered facts, without which they are comparatively valueless. My object in writing at present, however, is not to recommend homeopathia to farmers, their wives, or their children; but for their horses and cattle. Deplorable as has been the condition of the healing art in relation to the human family, it has been still more wretched as applied to horses. The leading canon of the veterinary schools has been, that all the disorders of the horse tend to inflammation; hence inflammation must be checked by depletion; then, for all disorders of every name, copious bleedings, drenching cathartics, and powerful diuretics, are indiscriminately recommended. In nine cases out of ten, the horse dies under the treatment, and the owner has the pleasure of paying a long farrier's bill, and the consolation of knowing that the horse died secundem artem. The great work of Youatt is unquestionably the most scientific treatise that we possess on farriery; yet even in this, one cannot read three pages without being sensible that the writer knows little of the subject on which he is treating, and that the chance of saving the horse is as good, if left to the unaided powers of nature, as when treated on the most approved principles of the veterinary art. But Homeopathia offers to the proprietors of horses and cattle unfailing sources of relief and cure. Let the symptons be thoroughly ascertained, and homeopathia possesses remedies which if seasonably applied, cannot fail to cure. Let then, those who have such animals, call on a homeopathic physician; (I am sure he will think it no disgrace to exhibit the triumphs of his art even on a horse;) and I am persuaded one trial will be sufficient to convince them that *homeopathia is no humbug*.

In order to show that the views that I have been advancing, are not merely theoretical, I send you the following case, reported by Dr. Humphry of Philadelphia, who prescribed for the horse at the request of Wm. H. Smith of that city, a graduate of the veterinary college of London.

"On Tuesday, Feb. 16, I was called upon to attend a horse belonging to a merchant of this city, which had been laboring under a disease vulgarly called staggers (Phrenetis,) for ten days past. The first symptoms exhibited were, disinclination for food, restlessness, anxiety, starting as if frightened, which were succeeded by stupor, holding the head low in the manger; each succeeding hour aggravating the disease; the animal became furious, bounding from side to side, the head now elevated, and constant inclination to press forward, then dashing himself violently on the ground in convulsive struggles. These were the symptoms I could gather from the persons who had charge of him, which he at first exhibited. No remedy whatever had been used.

"On arriving at the stable, I found the animal lying on the ground, exhausted by the struggle, his head much swollen from the blows he had inflicted during these severe paroxysms; he was perfectly insensible, pulse hurried and irregular, extremities cold, and every appearance of a speedy dissolution. Dr. Smith feeling assured that any means in his power would be unavailing, determined as a mere experiment, to try homeopathia, not dreaming of the least success. Accordingly four doses of Belladonna, 12th dilution, were administered. One was given at 4 p. m. another at 10 p. m. In *two hours* after giving the first powders the horse rose upon his feet, showed no signs of delirium, and appeard evidently relieved! Still a disposition to coma. On making my visit the following morning, I was astonished to find the horse standing perfectly quiet, having evinced no signs of delirium during the night, pulse rather oppressed and slow, disposition to coma, but showed evident signs of returning sensibility. At 8 a. m. gave the third powder, which, like the others, produced a marked change. At 6 p. m. much better, appetite slowly returning, conscious of every thing going on around, pulse more full and regular, occasionally evincing a disposition to become comatose. Gave the fourth powder. On the next evening gave one, succeeded on the following morning by another. The symptoms of the disease had now become so favorable as to induce me to omit the medicine 48 hours, at the end of which time he relapsed into his former comatose state, without, however, any sign of delirium. Four doses of Belladonna, administered at intervals of twelve hours, now perfected the cure.

"For the contusions on the head, tincture of aznica was applied with success."

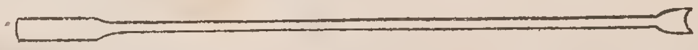
I think no one can read this account of the successful treatment of a disorder, which is generally deemed incurable, by means so simple and speedy, without being satisfied that a new and brilliant light has dawned on the paths of medicine. The pages of the foreign journals teem with accounts similar to the above, and in our own country the triumphs of veterinary homeopathia have been equally splendid and decisive. I have now before me a case in which lethargy was cured. Another, of one that had been poisoned with arsenic; another of acute Laryngitis, &c. If the terrible epidemic now raging among the cattle of Europe, should ever be transplanted to our shores, I have not the shadow of a doubt but that it will be speedily and effectually arrested by homeopathic remedies, and thus add another leaf to the chaplet which encircles the brows of the venerable founder of the system. Yours, &c. N. N. D.

Stockport, 11th mo. 13, 1841.

RELIEVING CHOKED CATTLE.

Messrs. Gaylord & Tucker—Having seen in the October number of the Cultivator for 1841, an article from the pen of David F. Lott of this state, on the subject of choked cattle, I wish to give you my remedy for that difficulty. Last spring one of my milch cows fed on turneps was discovered to be choked, and on examination, we found that a large and somewhat long piece of ruta baga had lodged about half way down the throat. To relieve her the cow was cast, a small clevice was put in her mouth, and several young lads from 10 to 15 years of age were urged to put their hands down her throat and endeavor to remove the root. They refused; seeing the cow must soon die, my wife—it was one of her favorite cows—passed her arm down to the shoulder, and drew forth the obstruction, not, however, without having her arm much bruised either by the teeth of the animal or the iron.

I immediately set about devising some easier, and yet safe way of relieving cows or other cattle similarly choked. I went to work and made what I shall call a *piston*, for freeing the throat of cattle from substances that may lodge in them. I made a rod of tough white oak —I should prefer hickory—three feet in length, with a knob on one end 1 1-2 inch in diameter; the end made hollowing, while the other was of the same size for a handle. The middle part was worked down to five-eighths of an inch, so that it might be flexible, or spring, in case the animal should struggle. The following sketch will give an idea of the piston.



I made, and placed my implement in my garret, and in a short time I had an opportunity of testing its merits. A poor man, a neighbor, had his cow choked with a potato, and when I learned her condition, those who had endeavored to relieve her had left her and gone home, satisfied she must die. On my arrival the cow was much swelled, and breathed only with the greatest difficulty. The owner held her by one horn and the nose, while I took the under jaw in one hand, and with the other passed the piston gently down, shoving the potato about six inches, then drew out the rod carefully, and the cow walk-away and began to graze. The whole was done in less than half a minute. The piston should be well oiled before using, and every owner of cattle would do well to have such a rod made against the time of need.

Jacob Vreeland.

Hudson county, N. J. Nov. 1841.

REMEDIES FOR HOOF AIL.

We have two communications on the subject of the disease in calves, described by Mr. Merrick, p. 176, vol. 8; one from Mr. S. Rowley, of Apulia, Onondaga co., who says: "I cannot give the specific cause of the complaint, but rather impute it to the dry, warm season, producing so much heat as to cause inflammation and stagnation. My advice to Mr. Merrick is, to bleed the remaining calves. If it had been done in the fore part of the fall, it would, probably, have done greater service to them. As it regards hoof ail in sheep, I know of no better remedy than to pare all the sound and unsound feet in the flock; then wash them all (i. e. the feet) in a strong solution of blue vitriol. A few applications will effect a cure, if well done. This disease made bad work in my flock, a few years ago, yet I effected a perfect cure in all cases where I applied the solution. For cattle, I used spirits turpentine and sulphur, with success."

"An Agriculturist," of West Stockbridge, Mass., says: "Having witnessed a number of cases of disease among cattle, precisely resembling the one described by your correspondent, and having, in almost every case, successfully applied a remedy, I venture in part to respond to your call for information. Of its nature and cause, I will say nothing further than that I do not consider it in the least degree contagious, and that cattle of the age and in the condition of those described by Mr. M., are most exposed to its ravages, although I have witnessed its attack upon cattle of almost all ages. The first symptoms of the disease are lameness, when walking, and an almost incessant motion of the limb affected, when standing. The remedy which I have applied, and which I can, with the fullest confidence, recommend to the public, is, to make an incision with a knife in the center of the back part of the foot of the limb affected, between the dew-claw and the hoof. The cutting must necessarily be lengthwise of the foot, to avoid injury to the supports of the limb. This is to be followed by a rubbing of the limb downward until at least a few drops of blood are produced from the wound, when the animal will soon become quiet, and a perfect restoration will be the result."

NOTICES TO CORRESPONDENTS, &c.

Communications received last month, from A. of the North, D. B. C., L. Durand, Frock & Trowsers, George Hentig, D. J. Curtis, M., Thos. Hunt, Rusticus, Jr., L. A. Morrell, Richmond, J. J. Thomas, An Agriculturist, Za. Drummond, Levi Lewis, James Wilson, C. N. Bement, H. D. Grove, J. B. D., John Martin, A. P. Peck, W. F. Cowan, E. Marks, R. North, Jr., J. R. Moser, N. W. L., A Farmer of Cayuga Co., J. B. Tillinghast, R. Harmon, Jr., B. Hodge, L. B. Langworthy, Wm. Ingell, John A. Jones.

The communication of R. Falconer should have been acknowledged last month. It will appear in our next.

Correction.—In the communication of J. B. D., p. 195, vol. 8, the last line but one, should have been placed two lines above.

Review of the Market.—Owing to the derangement of the mails on account of the storm, we have not received from our New-York correspondent the Review of the Market for the last month.

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Advertisements of stock, implements, fruit trees, &c., will hereafter be inserted once, and only once, in the Cultivator, the charges for which will be at the rate of $2 00 for each 100 words. No advertisement inserted for less than $2 00, however short it may be.

PLOWS AND OTHER IMPLEMENTS.

RUGGLES, NOURSE & MASON would invite the attention of the agricultural community to their extensive assortment of Plows and general stock of Agricultural and Horticultural Implements and machines manufactured by themselves at their celebrated works in Worcester, Mass. and kept for sale by themselves at the BOSTON AGRICULTURAL WAREHOUSE, Quincy Hall, South Market-street, Boston, which with a general assortment of foreign articles in the line, imported by themselves, and many from other approved makers in our own country, offer to farmers and dealers superior advantages.

Communications and orders, addressed to them at either Boston or Worcester, will receive prompt attention.

January, 1842.

COMMERCIAL GARDEN AND NURSERY OF PARSONS & Co. FLUSHING, L. I.

THE Proprietors have contstantly on hand, a large and extensive assortment, comprising every desirable variety of Fruit and Forest Trees, Ornamental and Flowering Shrubs, &c. which they are prepared to dispose of on reasonable terms, with the usual discount to wholesale purchasers. They have also a fine assortment of Dahlias and Bulbous Tuberous rooted and Herbaceous Plants, with a very superior collection of China and Hardy Roses, selected from the gardens of the most eminent cultivators in Europe, and tested by the proprietors. In Fruits, every precaution has been taken to procure scions from bearing trees, and the corrrectness of the varieties will be warranted. Peaches and Cherries will be furnished at reduced prices. Those who wish to purchase in the spring, are requested to transmit their orders as early as possible, that they may meet with prompt attention. The nursery is situated eight miles from the city of New-York, with which there is daily communication by steamboat and stage. Catalogues will be furnished gratis, on application. *Flushing*, 12 *mo.* 10, 1841.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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LUTHER TUCKER, PROPRIETOR.

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Subscriptions to commence with a volume; and the money to be sent free of postage.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

THE CREDIT SYSTEM.

BY the advice of several friends, we were induced to give notice in our December No. of last year, that we should send the present volume of the Cultivator to all our old subscribers, unless orders were received for their discontinuance. We find, however, from the short trial we have made, that the "credit system" will not answer our purpose. Our Agents in all parts of the country object strongly to it, as they assure us that very many of the subscribers, finding that they receive the paper regularly, will neglect to pay for it till their bills are presented, which would give them more trouble than they can afford to take. The Cultivator is published at so low a price that it will not enable us to employ traveling collectors; and it is too heavy a tax on our friends to ask them to collect our bills. We have therefore come to the conclusion to resume the "CASH SYSTEM," and hereby give notice that *we shall hereafter send the Cultivator only to such as have complied with our terms by paying in advance for it,* as we believe this will be the best course in the long run, not only for ourselves, but also for our agents and subscribers. Those, therefore, who wish the paper continued to them, should immediately hand their dollar to the person acting as agent in their neighborhood—or what would be better, we should be glad to have each subscriber act as agent, and obtain subscribers enough to enable him to remit us a $5 bill.

THE VERMONT OAT CROP.

IN our last vol., p. 192, we gave an account of a crop of oats grown on four acres, by D. JUNE, Esq., of Brandon, Vermont, which produced 588 stooks, of 12 bundles each. It will be seen by the following letter from Mr. June, that he has since thrashed, measured, and weighed the oats, and that the four acres produced 514 bushels and twenty quarts, being an average of 128 bushels 21 quarts to the acre. Who can equal, not to say beat, this?

BRANDON, Vt., Jan. 22, 1842.

MESSRS. GAYLORD & TUCKER—Having been requested to communicate the result of my oat crop, and manner of cultivation, to your paper, as it has an extensive circulation among the farming community, I would state that the land was pastured several years previous; in the season of 1839, it was plowed up in the sward, (the soil black muck;) in the month of May, 1840, it was thoroughly tilled, harrowed down smooth, then twenty loads of good manure spread to the acre, and plowed in to the depth of four inches, and harrowed; then planted to potatoes. In the spring of 1841, the land was plowed once, four inches deep, which made it very light and mellow; the 16th of May, I sowed sixteen bushels of barley oats on the four acres. I reaped 588 stooks of 12 bundles to the stook, from the four acres; having thrashed and measured them in the half bushel, (not by the stook or load,) the result is 514 bushels 20 quarts, making 128 bushels 21 quarts to the acre, and weighing 36 lbs. to the bushel. DRANCES JUNE.

☞ WE should be glad to engage the services of a few respectable and trustworthy men, as traveling agents **for the Cultivator.**

ANNUAL MEETING OF THE N. Y. S. AG. SOCIETY.

THE annual meeting of the New-York State Agricultural Society was held at the Exchange in the city of Albany, agreeably to notice, on the 19th of January, and was numerously and respectably attended. The exhibition of agricultural products for premiums, took place the day previous, the 18th, and though the specimens were not as numerous as could have been wished, or as may be expected hereafter, they were such as to furnish much encouragement to the friends of agricultural industry, and prove most satisfactorily the advances made within a few years in the improved system of husbandry.

Premiums were awarded as follows:

On BUTTER:
1st—$30—to J. T. Lansing, Watervliet.
2d—$20—to William Merrifield, Guilderland.
3d—$10—to Charles Lyon, Ogdensburgh.
On CHEESE:
1st—$20—to H. & P. Allen, Duanesburgh.
2d—$10—to Daniel Marvin, Cooperstown.
3d—$8—to Phineas Hardy, Le Ray.
On WHEAT:
1st—$20—to George Shaeffer, Wheatland.
On BARLEY:
1st—$15—to J. N. Tunnicliffe, Richfield.
On INDIAN CORN:
1st—$20—to William Ingolls, Volney.
2d—$10—to J. F. Osborn, Port Byron.
On OATS:
1st—$15—to D. W. Weeks, Watertown.
2d—$8—to John S. Jones, East Bloomfield.
3d—$5—to Amos A. Eggleston, Greenwich.
On POTATOES:
1st—$15—to Phineas Hardy, Le Ray.
2d—$8—to H. D. Grove, Hoosick.
On RUTA BAGAS:
1st—$15—to W. B. Ludlow, Esq., Claverack.
2d—$8—to George Shaeffer, Wheatland.
On SUGAR BEETS:
1st—$15—to S. B. Vail, Greenport.

The proceedings of the Society were conducted with the greatest harmony and good feeling; and in the review of what the Society had accomplished the past year, it was found there was abundant cause for gratulation. The manner in which the efforts of the Executive Committee had been seconded by the farmers in almost every section of the State, proved the interest felt in the association, their confidence in the beneficial results that would follow the organization and success of the Society, and their willingness, when properly appealed to, to sustain it by contributions to its funds. The best spirit was every where manifested; and all present seemed to feel that the year 1841 had opened a new and auspicious era in the history of New-York agriculture. It was felt that the principal difficulties in the way of the Society have been met and surmounted, and that the success which had attended its efforts was a most triumphant reply to the objections which a few had made to the utility of such associations.

The address of the president, which was able and interesting, was delivered to a large audience on the evening of the 19th. As it will be published and read with interest and instruction, no farther reference will be necessary in this place.

The Report of the Executive Committee, which is to be made to the Secretary of State, will, we are confident, when it is laid before the public, be found one of the most truly valuable Reports ever submitted to the State Government. Should the anticipations of the friends of the Society be realized in its continued existence and usefulness, the Annual Reports which the law makes it necessary for the Society to present, will present a faithful record of the progress of agriculture in the State, and a mass of authentic facts, such as have not yet been embraced in the agricultural history of the United States.

The proceedings were closed by an Agricultural Supper at the City Hotel, served in the usual good taste of Mr. Foster, which was attended by a number of invited guests, among whom were the Governor of the State, several members of the Legislature, and others. JOEL B. NOTT, Esq., the late president of the Society, presided. In the course of the evening, Gov. SEWARD, Rev. Mr. COLMAN, Gen. LELAND of the Assembly, Alderman JOY, Dr. BEEKMAN of Columbia, Judge VAN BERGEN of Greene, Messrs. WALSH and VIELE of Rensselaer, JOHNSON of Oneida, CALDWELL of Orange, and RANDALL of Cortland, responded to the calls made upon them to address the company. The speeches of the Governor and Mr. Colman are spoken of as efforts of the happiest character. At one o'clock, the company separated, well pleased with their day's labor and evening's entertainment, and with a renewed determination to make the New-York State Agricultural Society worthy the character of the Empire State.

LETTER FROM AN AMERICAN IN ENGLAND.

BY the Brittania steamer, which arrived at Boston on the 22d ult., we received the following letter from our friend, T. C. PETERS, Esq., president of the Genesee County Agricultural Society in this State, who is now on a visit to Great Britain:

LONDON, December 29th, 1841.

MESSRS. GAYLORD & TUCKER—I have been so entirely busy since my arrival in this country, that I have not had time to fulfill my promise to you till this moment. Even now I have so much upon my mind of the cares incident to business, that fear I shall not be able to make a letter at all interesting.

I have seen the country at a very bad season of the year. It has rained almost every day since I landed; but even with all that disadvantage, I can see that it is a beautiful country. And its farming is but an enlarged system of gardening. In many things connected with agriculture, they are decidedly superior to us; and in no one thing more than in the great attention and care they bestow upon their land. No man can farm successfully here without considerable capital over and above his farm stock. Without that, the farmer could do but little towards manuring, which is a great expense. I have been shown farms where the outlay for manure alone was equal to $50 per acre the first year.

As an agricultural people, we are not thirty years behind the people here, and should I live to the common age of man, I expect to see my country fully equal to any thing in Europe for the perfection of its agriculture. We have but to will, and it is done. Let us thoroughly work our own farms, bestowing upon them all our care and attention, encourage agricultural societies and publications, and aim to make our dwellings pleasant, by spending an occasional hour in the proper season, in planting around them trees and shrubs, and it will be but a few years before our country will present an appearance superior to any thing abroad, poets and tourists to the contrary notwithstanding. You see nowhere the same life and activity in the landscape here, as you see with us. It is generally one of sweet repose. You miss the numerous farm houses and comfortable barns and out houses, which are scattered thickly over the country with us, giving it the appearance of life and thriving industry. I am in favor of our fences, as compared to the hedges and ditches, which are used everywhere here. I think a good rail fence is far more sightly than a great majority of the hedges in Ireland and this country. It is true, they may not look so beautiful to a stranger, unaccustomed to country life; but I should feel far more secure if my fields were enclosed with a good rail fence, than the best hedge which I have seen in this kingdom. At some time, I make no doubt, hedges will become necessary with us, and perhaps it is worthy of the attention of agricultural societies to endeavor to ascertain the best tree or shrub for quick fences. But when other materials are reasonably cheap, I would never trouble with a hedge.

In making butter and cheese, and preserving them in good condition for market, we are immeasurably behind the English, Dutch, and indeed all the better parts of agricultural Europe. I have devoted a good deal of time and attention to their butter and cheese here, having been through some of the best dairy regions of Ireland and Great Britain; and I am satisfied there is no good reason why we should not make as good as their best. I have examined the cheese, which has been sent over here from the United States, side by side with English and Dutch cheese: some of it is acknowledged to be equal to their best. A large portion of it, however, is very poor, even worse than the Dutch or Welsh. There are two prominent defects which might be easily remedied; and that done, we might send a large quantity into this market, at a fair profit. At present, it is no use to ship cheese, because it cannot be sold at a remunerating price. One objection to our cheese is, that it is too thin and flat. They should be made in deeper hoops. A cheese weighing from twenty-five to thirty pounds, ought not to exceed thirteen inches in diameter, and should be from five to seven or even eight inches thick. It is an object with the people here to get as much as they can in as small a surface as possible. Our flat cheeses present quite too much outside for the weight. Cheese weighing about forty pounds, when well cured, is the best size, and most preferred, and it should not be less than six inches thick. Another defect is in the making and curing. They prefer a rich mild flavored cheese, that will not crumble in cutting: ours is too strong of the rennet, and not as rich as it would be, if the farmer sold less butter. The whey should all be pressed out, and the cheese well cured, so that it would keep its shape any length of time. Great care should be taken to make all of the same dairy, as uniform in taste and appearance as possible. In fine, if the farmer wishes to have a ready market at home, he must make his cheese deeper and narrower, and mild flavored, and it must be rich and well cured, and keep its shape. My own impression is, that none but the best Liverpool salt should be used.

I find I have no room left for remarks on butter, which perhaps your readers will not regret. I did not get up here in time to attend the Smithfield Cattle Show. Sincerely yours,

T. C. PETERS.

COMPARATIVE PRICE OF WHEAT IN ENGLAND AND NEW-YORK.—It appears from a report lately made to the house of commons, that during the five consecutive years from 1834 to 1839, wheat was only one shilling and two pence higher in England than in New-York, the average per quarter at the two places being as follows:

New-York,	49s. 10d.
England,	51s.

New-York State Agricultural Society.

EXHIBITION OF BUTTER, CHEESE, &c.

The exhibition of Butter, Cheese, &c. offered for the Premiums of the Society, was held in Albany, on the 18th of January, 1842. The show of every thing but Butter, was small. Of Butter, twenty lots, from different parts of the State, amounting to over 2,600 lbs., were exhibited. Of Cheese, only six lots were presented, amounting, however, to about 2,000 lbs. There were but three competitors for the premiums on Wheat—five on Oats—two on Indian Corn—two on Barley—four on Potatoes—three on Ruta Bagas—two on Sugar Beets—one on Carrots.

REPORT OF COMMITTEE ON BUTTER.

The committee to examine and award premiums on butter, beg leave to offer the following report:

There were twenty applicants for premiums, and the whole quantity of butter sent in for exhibition was about 2,600 lbs., the quality uniformly good, and generally put up with much neatness, highly creditable to the contributors.

The committee unanimously award the
1st premium, $30, to J. T. Lansing of Watervliet.
2d " 20, to William Merrifield of Guilderland.
3d " 10, to Charles Lyon of Ogdensburgh.

The annexed statements from the successful competitors, give their several modes of making butter.

Alex. Walsh, George Vail,
Robert Denniston, W. B. Walton,
J. M. Sherwood.

MR. LANSING'S STATEMENT.

1. The number of cows kept is ten.

2. Keep them stabled through the inclement season; feed them from three to four times per day with good hay or green stalks; when near coming in, add some oats, barley, or corn cracked. In summer, good pasture, with living water accessible at all times, and plenty of salt.

3. Treatment of milk and cream before churning.—Strain the milk in tin pans; place them in a cool cellar for the cream to rise. When sufficiently risen, separate the cream from the milk; put it in stone jars, well prepared, before churning.

4. The mode of churning in summer.—Rinse the churn with cold water; then turn in the cream, and add to each jar of cream put in churn full one-fourth of the same quantity of cold water. The churn used is a patent one, moved by hand with a crank, having paddles attached, and so constructed as to warm the milk, if too cold, with hot water, without mixing them together. The milk and cream receive the same treatment in winter as in summer; and in churning, use hot instead of cold water, if necessary.

5. The method of freeing the butter from the milk, is to wash the butter with cold water till it shows no color of the milk, by the use of a ladle.

6. Salting of the butter.—Use the best kind of Liverpool sack salt; the quantity varies according to the state in which the butter is taken from the churn—if soft, more, if hard, less, always taking the taste for the surest guide. Add no saltpetre nor other substances.

7. The best time for churning is the morning, in hot weather, and to keep the butter cool till put down.

8. The best mode of preserving butter in and through the summer and winter, is as follows:—The vessel is a stone jar, clean and sweet. The mode of putting it down is to put in a churning of butter, and put on strong brine; let it remain on till the next churning is ready to put down, and so on till the jar is filled; then cover it over with fine salt, the same to remain on till used.

Watervliet, Jan., 1842. Jacob T. Lansing.

MR. MERRIFIELD'S STATEMENT.

Number of cows.—Eight.

Mode of keeping.—In pasture, in summer; on hay, straw, and roots, in winter.

Treatment of cream and milk.—Milk strained into tin pans, and placed in the cellar.

Mode of churning.—The cream only churned, in a Dutch churn.

Method of freeing the butter from the milk.—By pressure.

Quantity and kind of salt.—Liverpool sack, one ounce to the pound.

Best time of churning.—Morning, in summer.

Best mode of keeping.—In the cellar, in summer, in wood.

In winter, our milk stands twelve hours; is then removed to the stove, and scalded over a slow fire to near boiling heat; the pans removed to the cellar to cool; the cream only churned. The butter, placed in the coldest part of the house, will keep good any length of time. William Merrifield.

Guilderland, Jan., 1842.

MR. LYON'S STATEMENT

To the Committee for the Examination of Butter—In submitting to your consideration the following report, I would remark that at the time of my leaving home, I had no intention of entering the list of competitors, and that the tub of butter exhibited for your inspection was manufactured without any reference whatever to this exhibition—was made during my absence from home, in our ordinary way of making butter. My soil, part sand, heavy pine ridge, on which clover grows luxuriantly, and part black loam, and part clay, nearly equal in proportion, sloping westwardly. With the exception of five or six weeks in the season, water may be found plenty in my pastures; during the dry seasons, my cows have access to water morning and evening, and at mid day, if they choose. My hours for milking are very regular, viz: commencing at early light in the morning, and in time to get through before dark in the evening. My dairy numbers twenty cows, seven of which were milked for the first time this season—their age three years old: the ages of the remainder average from five to ten years. I fattened all my calves to the age of six weeks. The latter part of winter and through the spring, my cows are fed about one peck of ruta bagas each; salted regularly once a week in winter, and twice in summer. I think salting regularly, as often as above stated, to be very essential, as conducive to good health; and during the milking season, tends to produce a uniformity in the quantity of milk, and in my estimation, adds in no small degree to the quality of the milk. The average product of my cows this season is 100 lbs. per cow, besides what I have used in a family of from eight to ten persons. My milk house is what is termed a plank building, clap-boarded; ceiled about three feet from the floor; the remainder of the room lath and plastered. My shelves about six inches wide and five between, so constructed as to admit a free circulation of air. My buildings are on a rise of ground of sufficient height so as not to require drains to my cellars. I have a cellar under my milk house the entire size of my building, with wall of round stone, laid without mortar, to the depth of six feet. In the center of the building, I have a place about three feet square, to admit the cool air from the cellar, over which I have a table, where the milk is strained, butter worked, &c. &c. The milk I required to be strained as soon as possible after milking, in tin pans, about three quarts to each pan; it stands until the milk is slightly turned, the time required depending on the temperature of the weather.

Churning performed every day, (Sundays excepted.) I would here remark, when cows are regularly salted, as I have before stated, I have never known an instance of any extreme difficulty in obtaining butter. After it is obtained, is immediately taken from the buttermilk, all the milk worked off that is practicable at the time, (which in some respect depends upon the temperature of the weather,) salted to the taste, and placed in a cool cellar until the next day, when the buttermilk is entirely worked out by the use of a ladle, and then packed solid in tubs.

The kind of salt I use is obtained in Albany, and goes by the name of sack salt, in parcels weighing from 200 to 300 lbs. After the tub is filled, the butter is kept covered with brine sufficient to keep the air entirely excluded, especially that made during the warm part of the season. My tubs are placed in the coolest part of my cellar. Butter made and protected in this way, I have no hesitation in saying, will keep sweet one, two, or three years. Chas. Lyon.

Oswegatchie, St. Lawrence Co., Jan., 1842.

REPORT ON CHEESE.

The Committee on Cheese have attended to the duties assigned them, and beg leave to offer the following report:

There were only five specimens of cheese presented for premium, that came within the rules of the Society. The cheese was generally of good quality, and alike creditable to the contributors and to the Society; but your committee regret to say the number of competitors was small, and a reflection on our dairy counties, which are so distinguished for the qualities of their cheese.

The specimen of D. Marvin was very good, and the committee had some hesitation in deciding the comparative excellence of this and that of H. & P. Allen of Duanesburgh, and finally decided in favor of the latter, as entitled to the Society's first premium of $20, upon the fact that this was rather the most mild and uniform in taste and flavor.

Your committee did not hesitate to award the second premium, of $10, to D. Marvin of Cooperstown.

The other samples were very good, but were not of so even a quality, nor uniform in flavor; and as there was no entry for old cheese, that came within the rules of the Society, your committee would beg leave to recommend a gratuitous premium of $8 to Phineas Hard of Le Ray, for a sample which they considered very fine, and deserving particular notice.

In closing this report, your committee cannot help expressing their regret that in sections where they *know* so much good cheese is made, there should be so limited a number of competitors for the very liberal premiums offered by this Society. If the reward offered was the only motive for bringing forth these articles, the reason might be found in the little regard in the chastened minds of the community for that which many others have coveted; but when it is recollected that the great object of these exhibitions is to communicate and receive information on subjects of great interest to all, we cannot but think that the grand and high principles which actuate worthy citizens, should lead them, by the exhibition of their own successful manufactures, to instruct, stimulate, and encourage those less informed than themselves.

Your committee consider a *well managed dairy* one of the most valuable sources of a farmer's revenue. The product of a good cow, for a single season, in milk, butter, cheese, &c. may be safely estimated at more than thirty dollars.

We forbear to give particular directions for making cheese, referring you to the annexed statements of the competitors, whose success in obtaining the Society's premiums is the highest recommendation of the method pursued by them.

C. N. Bement, P. N. Rust,
E. R. Satterlee, B. P. Johnson.

MESSRS. ALLEN'S STATEMENT.

Number of cows kept, eleven. Cheese made from two milkings, in the English manner; no addition made of cream. For a cheese of twenty pounds, a piece of rennet about two inches square is soaked about twelve hours in one pint of water. As rennets differ much in quality, enough should be used to coagulate the milk *sufficiently* in about forty minutes. No salt is put *into* the cheese, nor any on the outside during the first six or eight hours it is being pressed; but a thin coat of fine Liverpool salt is kept on the outside during the remainder of the time it remains in press. The cheeses are pressed forty-eight hours under a weight of seven or eight cwt. Nothing more is required but to turn the cheeses once a day on the shelves. H. & P. Allen.

Duanesburgh, Jan. 17, 1842.

MR. MARVIN'S STATEMENT.

The milk strained in large tubs over night; the cream stirred in milk, and in morning strained in same tub; milk heated to natural heat; add color and rennet; curd broke fine and whey off, and broke fine in hoop with fast bottom, and put in strainer; pressed twelve hours; then taken from hoop, and salt rubbed on the surface; then put in hoop, without strainer, and pressed forty-eight hours; then put on tables, and salt rubbed on surface, and remain in salt six days, for cheese weighing thirty pounds. The hoops to have holes in the bottom; the crushings are saved, and set and churned, to grease the cheese. The above method is for making one cheese per day. Daniel Marvin.

Cooperstown, January, 1842.

MR. HARDY'S STATEMENT.

The number of cows kept is thirty-eight. Cheese made from two milkings—no addition of cream. The quantity of salt used was one tea-cupful to twenty pounds of curd, of common Onondaga salt. The rennet was prepared by soaking one rennet in a jar of five or six quarts, filled with salt and water. From one pint to one quart was used, according to the strength of the rennet, for a cheese of eighty or ninety pounds. The cheeses were pressed in a common wheel and lever press, and pressed two days. The cheeses were taken from the press, and rubbed with annatto, soaked in strong ley; then rubbed with whey butter, and turned and rubbed daily through the season with the same.

Phineas Hardy.

Le Ray, Jefferson Co., Jan. 10, 1842.

REPORT ON WHEAT, RYE, AND BARLEY.

The committee on wheat, rye, and barley, beg leave to report:

That they exceedingly regret that they have been compelled to reject several applications for premiums, because the terms of the executive committee were not complied with. They regret it the more, because some of them would no doubt have received premiums—among whom were Elisha Pettibone, James Beaty, applicants for the premium on wheat, and Jay Pettibone for barley.

The first premium on wheat is awarded to George Schaffer of Wheatland, Monroe co., provided he amends his statement by furnishing, on oath, an actual survey of the lot. The amount of wheat raised was 300 bushels on 7 1-2 acres, averaging 40 bushels to the acre.

The first premim on barley to John W. Turnnicliffe, Richfield, Otsego co., one acre yielding 53 1-4 bashels of barley. The whole expense of raising this acre of barley is estimated at $12 50.

The committee are desirous of expressing their thanks to the competitors for the above premiums. Their example is in the highest degree praiseworthy. They regret exceedingly that in so large a grain growing State, so few men could be found who either deserved or were desirous of obtaining the premiums of the State Society.

Anthony Van Bergen, Olcott C. Chamberlin,
W. Fuller, O. Hnngerford,
John B. Dill.

REPORT ON CORN, OATS, AND PEAS.

The committee appointed to examinine and award premiums on corn, oats, and peas, beg leave to report:

That they entered upon the duties assigned to them, and have first to express their regret that the applications for premiums were not more numerous.

There were two applicants for premiums on corn, and your committee regret that the statements accompanying the applications were not more explicit, complying more strictly with the rules of the Society, as much useful information might be derived therefrom.

They award the first premium of $20 to William Ingells of Volney, Oswego county, for raising 142 bushels measure of shelled corn on one acre of land.

And the second premium of $10 to J. F. Osborn of Cayuga county, for raising 144 bushels, weight 56 lbs. to the bushel, on one acre of land; but the mode of ascertaining the quantity was not wholly satisfactory to the committee.

There were five competitors for oats, all very highly deserving of commendation.

They award the first premium of $15 to D. W. Weeks of Watertown, Jefferson co., for raising 113 1-2 bushels on one acre of land.

They award the second premium of $8 to John S. Jones of East Bloomfield, Ontario co., for raising 102 1-2 bushels on one acre of land.

And they would recommend the awarding of a premium of $5 to Amos A. Egleston of Greenwich, Washington co., for the peculiar excellence of the specimen presented by him, weighing 42 lbs. to the bushel, it being also a large crop.

There were no applicants for peas.

H. D. Grove, Howell Gardner,
Henry Holmes, T. W. Sanders.
John A. McNeil.

REPORT ON ROOT CROPS.

The committee to whom was referred the duty of adjudging premiums on root crops, report:

That upon the inspection of the various applications made by the several individuals, which came within the duties of this committee, they found themselves exceedingly embarrassed in the fulfilment of their trust, from the want of the formalities required by the rules of the Society, as well as by the want of evidence to satisfy the committee of the relative merits of the different applications.

The committee have unanimously come to the conclusion to reject all applications that purport to have been harvested, gathered, and estimated by measuring a few rods or other small portion of the acre required by the rules, and also those which have not the evidence of a correct survey.

Several descriptions of the quality of soil, manure used, labor expended, and other expenses incurred in producing the results stated, are so imperfect that it was impossible to arrive at the comparative merits of the crops, as to the economy of expense—all of which defects the committee think can be remedied another year, by having examples of *blank forms* made public through the *agricultural press*, as it is a well settled principle, in the minds of this committee, that no man can nor should be allowed to compete for premiums, who is not liberal and patriotic enough in the great first cause of national prosperity, to put himself in *that way* of procuring the necessary information from *that source*.

The committee think that several of the rejected crops are very meritorious, if the mere dictum of the growers was to be taken as proof, and in several cases would have taken the first premiums, had these oversights been properly avoided.

The committee think it no more than an act of justice to mention the crop of ruta baga turneps of Mr. F. P. Root of Sweden, Monroe county, asserted as producing 1,200 bushels per acre, at 60 lbs. weight per bushel; also the crops of Mr. George Shaffer of Wheatland, Monroe county, which purports to have produced the very large amount of 1,160 bushels of sugar beets and 603 1-2 bushels of carrots per acre, at 60 lbs. per bushel.

The committee award the following premiums:

For potatoes—to Phineas Hardy of Le Ray, Jefferson co., first premium, for 472 bushels per acre, $15. To H. D. Grove of Hoosick, Rensselaer co., second premium, for 440 bushels per acre, $8.

For ruta baga—to W. B. Ludlow of Claverack, Columbia co., first premium, for 1,025 1-2 bushels per acre, $15. To George Shaffer of Wheatland, Monroe co., second premium, for 552 bushels per acre, $8.

Sugar beet—to S. B. Vail of Mount Laurel Farm, Columbia co., first premium, for 559 bushels per acre, at 60 lbs. per bushel, $15.

G. V. Sacket, E. P. Prentice,
L. A. Morrell, L. B. Langworthy,
Patrick H. Cowen.

The committe appointed to examine that beautiful production of art, called the *Amazon Bonnet*, exhibited to the Society by Messrs. Valentine & Eaton, No. 121 Water street, New-York, beg leave most respectfully to report:

That they entered upon the discharge of the duties devolving upon them, with some little distrust of their ability to do justice to the important subject committed to their charge, from the consideration that this almost indispensable article of female apparel had not hitherto been the subject of much of their attention. To obviate, however, this difficulty, they called to their aid a number of intelligent ladies, by whose taste and superior judgment in these matters, they are bound to acknowledge they were in a great measure controlled.

This specimen of ingenuity, doubtless from some fair hand, commends itself to the American public, from various considerations. It combines great elegance and beauty with strength and durability. It is manufactured from the finest quality of *Manilla* grass. Six thousand five hundred fibres, woven together, will make about one hundred yards of braid, which quantity will make one of the finest class of bonnets. This substantial material may be twisted into an endless variety of patterns, and is susceptible of any color or figure that taste or fancy may dictate. This bonnet can be taken apart, and washed or cleansed with ease, and put together again, losing thereby none of its original beauty or value. Its texture and durability have never been equalled, and for beauty, it surpasses almost any thing of the kind, either domestic or foreign. The raw material from which it is manufactured is imported, but is of small value compared with the labor required in weaving or braiding the same. If it comes into general use, of which we cannot entertain a doubt, it will open a vast field of productive industry to the many indigent females and children of our large cities and populous towns. If it supplants, as we trust it may, the foreign articles used for this indispensable covering, it may become a source not only of individual but great national wealth. We commend this bonnet to the patronage of the American ladies, and hope soon to see many, very many of their heads adorned by this evidence of good taste and patriotic feeling. Benevolence and charity to a large class of their own sex, who are in destitute circumstances, should prompt them to encourage the production of an article that will afford employment, and consequently comfort and happiness, to thousands of indigent but worthy females. It is a false and anti-American pride which is satisfied with nothing but that which is "far fetched and dear bought."

J. J. Viele, T. Goodsell,
Henry S. Randall.

☞ The report of the committee on discretionary premiums has not been handed to the recording secretary.

ANNUAL MEETING OF THE SOCIETY.

The annual meeting of the New-York State Agricultural Society was held at the Lecture Room of the Young Men's Association, in the Exchange, Albany, on the 19th of January, 1842. At 11 o'clock, A. M., the president of the Society, Joel B. Nott, Esq., took the chair, and T. R. Courtney was appointed secretary pro tem.

On motion of Judge Sacket of Seneca, a committee of three, consisting of Messrs. Sacket, Bement, and Grove, was appointed to collect the annual dues of members, and to receive the subscriptions of new members. This committee afterwards reported that the sum of $117 had been received during the meeting.

The report of the treasurer, E. P. Prentice, Esq., was received, read, and accepted. The receipts of the Society the last year, were as follows:

Balance in treasury at last meeting,	$46	87
From eight life members, $50 each,	400	00
Seven subscriptions, $25 each,	175	00
Two " $20 each,	40	00
Eleven " $10 each,	110	00
Twenty-three " $5 each,	115	00
From members, and other sources,	442	82
From Comptroller of the State,	700	00
	$2,029	69
Paid premiums, expenses, &c.,	1,065	46
	$964	23

From which is to be deducted about $200 for premiums awarded, but not paid.

The treasurer also reported that a quarter of one of Mr. Rust's fat oxen, which was presented to the Society by Mr. Rust, had been sold for $64 67, which, added to the above sum, would leave a balance in the treasury of about $800, after the payment of all demands against the Society.

On motion of Dr. J. P. Beekman of Columbia,

Resolved, That the thanks of the Society be presented to the Executive Committee, for their successful exertions in raising funds for the treasury.

On motion of B. P. Johnson, Esq., of Oneida,

Resolved, That the thanks of the Society be presented to P. N. Rust, Esq., of Syracuse, for the splendid quarter of beef presented by him to the Society, the avails of which have been applied in aid of its funds.

The report of the corresponding secretary, H. S. Randall, Esq., was then read and accepted, and the thanks of the Society voted to him for the able manner in which he had performed the duties devolving upon him.

On motion of H. S. Randall, Esq.,

Resolved, That a committee, to consist of all the presidents of the county societies present, and a delegate from each county society not represented by its president, be appointed to nominate officers of the Society for the ensuing year.

On motion of J. J. Viele, Esq., of Rensselaer, the same committee were instructed to fix a time and place for holding the next Fair of the Society.

On motion of J. S. Gould of Columbia,

Resolved, That the Executive Committee be requested to procure a dynamometer of superior workmanship, for the use of the State Society, and that it be recommended to the several county societies to procure one for the use of their respective societies.

On motion of Gen. Clark of Washington,

Resolved, That the Executive Committee be instructed to offer gold medals or pieces of plate, or their equivalent in money, to the authors of the best essays upon such subjects as the committee shall deem best calculated to promote the cause of agriculture—the successful essays to be the property of the Society. The list of premiums for essays to be issued eight months previous to the next annual meeting.

Mr. McIntyre, from the committe to nominate officers for the ensuing year, reported the following, who were unanimously elected:

JAMES S. WADSWORTH, Geneseo, *President.*

Vice Presidents.

1st district, Jeremiah Johnson, Brooklyn.
2d " Robert Deniston, Salisbury Mills.
3d " Anthony Van Bergen, Coxsackie.
4th " John Savage, Salem.
5th " Orville Hungerford, Watertown.
6th " George I. Pumpelly, Owego.
7th " John M. Sherwood, Auburn.
8th " L. B. Langworthy, Rochester.

Henry S. Randall, Cortland Village, Cor. Sec'y.
Ezra P. Prentice, Albany, Treasurer.
Luther Tucker, Albany, Recording Secretary.

Additional Members of the Executive Committee.

Alexander Walsh, Lansingburgh.
George Vail, Troy.
Henry D. Grove, Buskirk's Bridge.
J. McDonald McIntyre, Albany.
James L'Amoreux, Albany.

On the report of the same committee, it was

Resolved, That we recommend to the Executive Committee to hold the next Fair of the Society on the 28th and 29th days of September next, in Albany or its vicinity, and that we farther recommend that the Fair of 1843 be held at Rochester.

On motion of L. A. Morrell, Esq., of Tompkins,

Resolved, That the thanks of the Society be presented to the Young Men's Association of Albany, for the use of their Lecture Room, and for their polite invitation to the members to visit their Reading Room and Library.

On motion, the Society then adjourned, to meet at the Capitol at 7 o'clock, P. M.

EVENING MEETING.

The Society convened at the Capitol, pursuant to adjournment, at 7 o'clock, P. M., when the Annual Address was delivered by the president, J. B. Nott, Esq.

On motion of J. J. Viele, Esq., it was

Resolved, That the thanks of the Society be presented to Joel B. Nott, Esq., for his able and eloquent Address, delivered on this occasion; and that a committee of three be appointed to solicit a copy of the same for publication. [Committee—Messrs. Veile, Grove, and Walsh.]

On motion of Dr. Goodsell of Utica,

Resolved, That this Society recommend to the county agricultural societies to use their exertions to establish town societies.

On motion of J. B. Nott, Esq.,

Resolved, That a committee of five be appointed to report at the next meeting on the propriety of establishing an Agricultural Board for this State. [Committee—Messrs. Nott, Van Bergen, Beekman, Ludlow, and Viele.]

Amendments to the Constitution.

On motion of J. B. Nott, Esq.

Resolved, That no article of the Constitution can hereafter be altered or amended, without a notice thereof being given one year before such alteration.

Mr. Fuller gave notice that at the next annual meeting of the Society, a motion will be made to amend the Constitution, so that presidents of county agricultural societies shall be ex-officio members of the Executive Committee of the said Society.

The Society then adjourned, *sine die.*

Notices of New Publications.

FOURTH REPORT OF THE MASS. AG. SURVEY.

We have received from Mr. Colman his Fourth Report, in the form of a beautiful, well bound volume, of more than 500 pages. We have been so much interested in these Reports, and they have contributed so much to the stock of agricultural knowledge, that we regret to learn from the preface to this volume, that this Report is to be the last, "the Legislature of that State having seen fit to repeal the act authorizing the survey, before its completion." In our opinion, had the survey done nothing more than produced the volume before us, it would have repaid the State a thousand fold the trifling expense incurred. It is in fact the most complete history of the present state of New England agriculture, (and, with some slight modifications, that of all the northern States,) that has yet been given to the public. The marks of great labor and patient research and toil, are visible on every page, and form a source of the most valuable information on almost every practical point of our agriculture. The reader may differ from some of the expressed opinions of the writer, but he will not fail of feeling that these opinions have not been hastily formed or lightly expressed. Although in its title, this Report embraces but the counties of Franklin and Middlesex, (the first Report embraced the county of Essex, the second that of Berkshire, and the third Report was on the subjects of Wheat and Silk,) the Commissioner has extended his remarks so as to include the most important subjects of agriculture, and their present condition throughout the State. It includes a mass of practical facts and illustrations, to be found in no other form. We shall have frequent occasion to refer to it, hereafter.

AMERICAN ANTIQUITIES.

We are indebted to the publishers, Messrs. Dayton & Saxton of New-York, for a copy of H. W. Bradford's new work, entitled "American Antiquities, and Researches into the Origin and History of the Red Race." To those who feel an interest in the great questions connected with the settlement and peopling of the American continent; the race of orientals from which those first settlers were derived; the history of those ancient monuments so abundant in both North and South America; the manner in which this continent was first peopled, with the collateral questions of philology, customs, &c. that naturally spring from the subject, this work cannot fail to be abundantly fascinating. The fact that it does not properly come within the objects contemplated in our journal, only prevents a more extended notice. The work is got up in the best style of the New-York press, and we doubt not will at once secure the favorable notice of the public.

"THE VETERINARIAN."

We have received the October, November, and December numbers of this capital journal, conducted by Mr. Youatt, the well known author of the great works on Cattle, Horses, and Sheep, published in London. These numbers are well filled with papers on the various diseases of animals, particularly the Epizootic, which is now producing such disastrous effects on cattle in England. Of one of these we shall hereafter give an abstract, in the department of the Cultivator devoted to such subjects.

QUARTERLY JOURNAL OF AGRICULTURE, No. 55.

The leading paper of this number of this first agricultural journal of Great Britain, is an able article by Dr. Wilson, on the health of the laboring population of Kelso in Scotland. Then follows No. XI. of Dr. Duncan's papers on "Insects most injurious to vegetation and animals, and the means best calculated to counteract their ravages." This series is a most valuable contribution to the history of those insects that in various forms detract so much from the profits of the husbandman. A large part of the No. is occupied with a detailed account of the great meeting of the Highland Agricultural Socicty of Scotland, at Berwick, in 1841. There is also a long and excellent paper by Dr. Madden, on the Effects of Draining, beside many others on minor topics.

LONDON FARMERS' MAGAZINE FOR DEC., 1841.

The engravings in this capital journal, for the present month, are three South Down Rams from the celebrated flock of Mr. Webb of Brabraham. The South Downs brought out by Mr. Allen for Bishop Meade and Mr. Stevenson of Virginia, and Mr. Rotch of this State, are from this stock. It is but a short time since British farmers discovered there was such a thing as American agriculture or American agricultural journals, yet this number of the Magazine contains several papers from the Cultivator and other agricultural papers of this country. The Monthly Review of the Corn Trade in this work, is a good view of the grain markets of different parts of the world; but in the section devoted to the United States, there is sometimes a spice of bitterness which savors of illiberality, and might well be spared.

SILLIMAN'S JONRNAL.

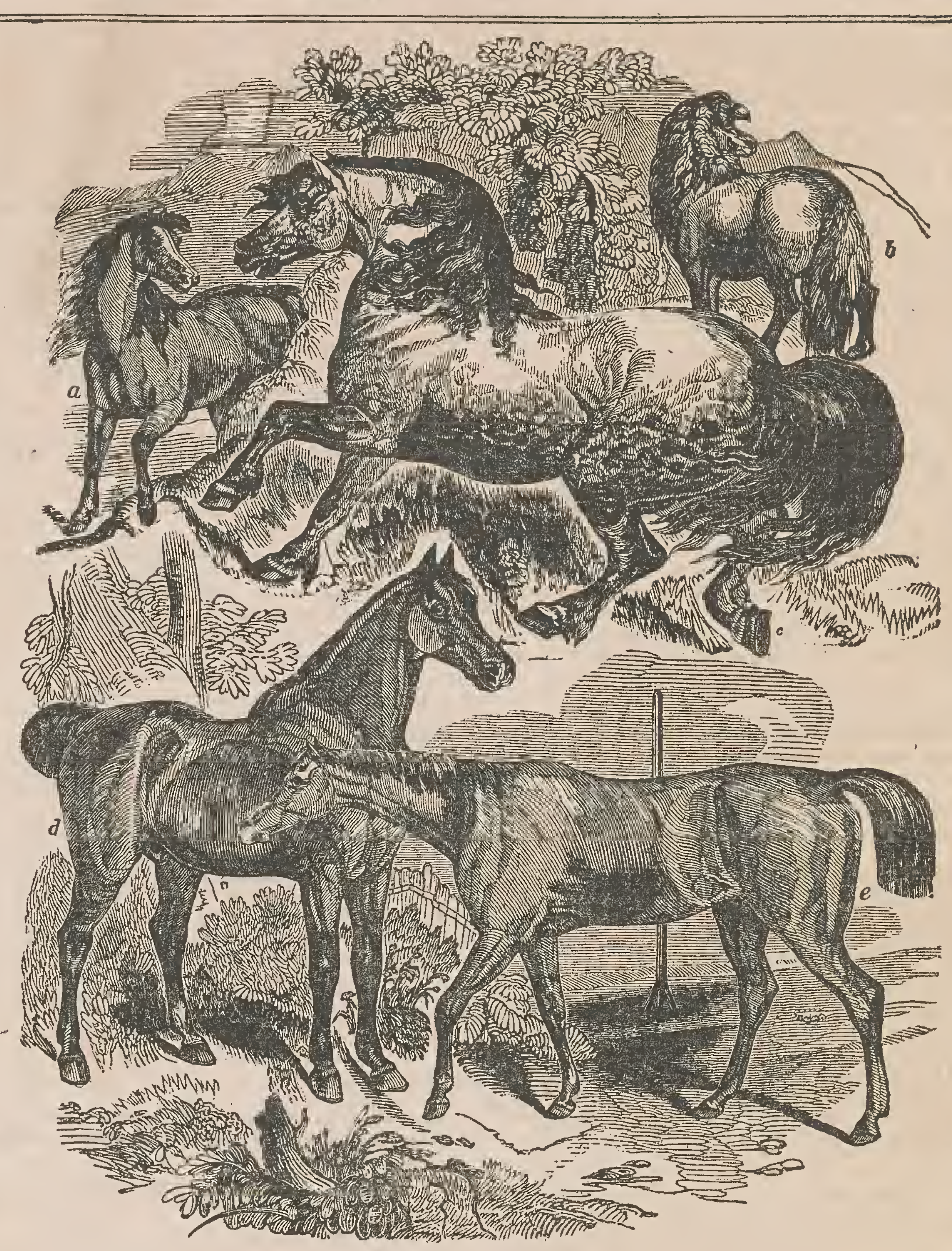
The present number is rich in materials interesting to the friends of science, as well as to the general reader. The notes upon the "Geology of the Western States," by Prof. Hall, are interesting, as showing the relative condition in the west, of the great transition formation of Western New-York. Prof. Hall found that some of the most important formations in New-York, the Onondaga saliferous group for instance, which is in central New-York 1000 feet thick, entirely disappears at the Mississippi; while the Niagara limestone, which in central New-York has but a few feet of thickness, has acquired in Wiskonsan and Iowa, a depth of five or six hundred feet. The researches of Prof. Hall, have proved that the Niagara limestone is the same rock that contains the rich mineral deposites of the West, particularly of Wiskonsan and Missouri; and that it is in consequence, one of the most important rock strata of the United States.

We are pleased to perceive that a suggestion made by us to the editors of this journal, respecting the yellow dust that accompanies summer showers, which has been attributed to varius sources, but which we have long considered the pollen of forest trees, has led to an investigation which has satisfactorily determined its character, and shown that our supposition was correct. In consequence of our suggestion, the editors sent a quantity of this yellow powder, that fell on the deck of a vessel in Pictou Harbor, N. S. and some received from Prof. Eaton of Troy, to Prof. Baily at West Point, who examined it with his powerful microscopes, and discovered at once that the powder from Pictou was the pollen of some species of pine, while that from Troy, was the pollen of various forest trees, the pine excluded. The figures given by Prof. B., in the Journal, exhibit admirably the peculiar form and variations of the pollen.

The paper of Mr. Redfield on the great storm of December 15th, with the accompanying diagrams, will show forcibly the nature and course of our severe storms. The student of botany will examine with pleasure the botanical excursion to the Mountains of North Carolina; and in the miscellaneous department there is much to instruct. Every lover of science should possess this Journal.

"NORTHERN LIGHT."

We are gratified to learn from the last number of this ably conducted and popular periodical, that arrangements have been made for the continuance of the work on the same plan, and under the same editorial supervision as the present or first volume. The execution of the "Northern Light," in both its literary and mechanical departments, is excellent. Established on a plan that admits of free discussion on all the great questions of political economy; embraeing valuable papers on the sciences and on agriculture; furnishing statistical records of the greatest value; and giving a place to articles of lighter literature that have distinguished merit to recommend them, the "Northern Light" occupies an important position, peculiar to itself, and interfering with none of the scientific, literary or agricultural journals of the day. Its distinctive features, and the distinguished ability with which it is conducted, have rendered the "Northern Light" a general favorite wherever it has found its way. We are pleased at the success which has attended this journal; it would have been a disgrace to our country, had *such* a periodical failed for want of a liberal support.



GROUP OF HORSES.—(Fig. 10.)

Above, we give a group of horses, copied from one of the London magazines, showing at a single view the distinctive marks of the principal varieties of that noble animal now existing in Great Britain. It shows the pony, both Welch *(a)* and Shetland, *(b)* the draft horse, *(c)* the hunter, *(d)* and the racer, *(e.)*

The English race horse is unequaled for speed, power, and spirit; and from this stock the American race horse is derived. The excellence of this blood is clearly traced to the Darley and Godolphin Arabians; the first from the deserts of Palmyra, the last a Barb, but of extraordinary performance. The hunter, one of the most esteemed horses of England, as combining the qualities of speed and endurance, is a remove from the racer in the first degree; that is, they are what are called three-fourths bred. The best hunters are the product of a Cleveland mare, a first rate breed for all work, and a thorough bred horse. The best road or saddle horses are allied to the hunter, but more compactly built. The coach horse and light carriage horse are the product of the Cleveland mare and hunter of high blood. The lightest yet best of the English draft horses, is the Cleveland; and the Suffolk, now nearly extinct, is also an excellent stock. The heavy Lincolnshire black exceeds all in size and power. The teams in the London brewers' and distillers' carts are of this breed. Most of them exceed seventeen hands in height. These horses have within a few years been much crossed with the Flanders breed, to their great improvement. The slow, elephantine black, of two and a half miles per hour, has been changed into a lighter but still powerful horse, that steps four miles per hour with perfect ease, and has at the same time more endurance.

The difference between these large horses and the Welsh or Shetland ponies is so great, that it seems scarcely possible they should belong to the same species. The Welsh pony is a beautiful animal, and its strength, in proportion to its size, astonishing. Mr. Youatt states that one of these miniature horses, only nine hands high, carried a man of twelve stone forty miles in one day. Some of the Shetland ponies are very fine, but their size is still less than the Welsh breed. The writer of the article in the Magazine says that, in 1831, he measured a Shetland pony, the height of which at the shoulders was only thirty-four inches, and its length from between the ears to the insertion of the tail, following the curve of the neck and back, four feet two inches. It was a spirited and beautiful animal. The varieties of the English horse, arising from the mixture of these breeds, and of some brought from the continent, particularly the Norman horse, is innumerable, and varied as the fancy or the judgment of the breeder can make them.

AGRICULTURAL JOURNALS, &c.

The United States Farmer and *Journal of American Institutes*, is the title of a new monthly just commenced in New-York, by S. Fleet, Esq. the original proprietor and editor of the old "New-York Farmer," which was discontinued some years since. Mr. Fleet has done much for the cause of agriculture in times past, and we wish him success in his renewed efforts in its behalf. The United States Farmer is issued monthly, 40 pages 8vo. at $2 a year.

Central New-York Farmer.—We have before us the first number of a paper bearing this title, published at Rome, by H. N. Bill, and edited by Messrs. Johnson & Comstock. Though small it is filled with useful matter, and will doubtless prove a valuable acquisition to the farmer's cause.—16 pages octavo, at 50 cents a year.

The Eastern Farmer and Journal of News, is the title of a a semi-monthly quarto sheet, at $1 a year, edited by F. O. J. Smith, just commenced at Portland, Maine.

The Maine Farmer, published at Winthrop, has been greatly enlarged, and changed from a quarto to a folio, with the addition of "Mechanic's Advocate" to its title. Dr. E. Holmes, editor—weekly at $2 a year. A monthly sheet is to be issued, embracing the agricultural articles published in the weekly, at 50 cents a year.

The Farmer's Monthly Visitor.—A new volume, (the 4th,) of this valuable work commences with the new year. It is sufficient commendation to say that it bears the impress of the strong good sense and vigorous action which characterises all the efforts of Gov. HILL. Concord, N. H.—75 cents per ann.—3 copies for $2.

THE MAGAZINE OF HORTICULTURE, is published at Boston, by HOVEY & Co. 40 pages octavo, monthly at $3 a year. It is highly creditable to our country that a work of this high character has received sufficient support to be continued for seven years. It should be in the hands of every amateur horticulturist, and now is a proper time to order it, as the first number of the 8th volume has just been issued.

THE AGRICULTURIST, Nashville, Tenn. and THE SOUTHERN AGRICULTURIST, Charleston, S. C., both well known and valuable works, commence new volumes with the present year.

THE BRITISH AMERICAN CULTIVATOR, is the title of a new journal, at Toronto, U. C. edited by EASTWOOD and EDMUNSON, at $1 a year.

THE NEW-YORK STATE MECHANIC, is the title of a very handsomely executed weekly, at $1.50 a year, recently established in this city, by J. MUNSEL & Co. under the direction of the New-York State Mechanic Association. It is ably conducted, and if properly supported by the subscriptions and contributions of the mechanics of this state, cannot fail to he a valuable acquisition to our list of useful periodicals.

THE AMERICAN MECHANIC, New-York, edited by R. PORTER, weekly at $1.50 a year—and THE ELEVATOR, recently commenced at Cincinnati, by LOVEJOY & ROBERTSON, weekly at $1.50 a year, are both valuable works, and worthy the support of the mechanic interest.

CULTURE OF THE GRASSES.

THE report on grasses, by the committee of Cuyahoga (Ohio) Ag. Society, is principally under four heads; and as the subject is one of importance, and the remarks appear to us very just, we extract the principal part of these divisions.

1st. What quantity of seed should be sown?

Your committee think that eight quarts on new land and ten quarts on old land per acre, is a proper quantity for red clover, and nearly the same amount of timothy, if sown alone. These seeds are frequently mixed before sowing for meadow land, with advantage. Say on dry land two-thirds clover and one-third timothy; and on moist land one-third clover, and two-thirds timothy. We recommend liberal seeding, as it not only checks the growth of weeds, but the hay grows finer and stands better, particularly clover.

2d. Method of seeding?

Where grain is to be sown we recommend wetting it, then mix grass seed; plaster or ashes may also be added before sowing. The seed is thus sown more evenly, and much labor saved; plowed land should be harrowed before seeding in this manner.

3d. Best season for seeding?

Sowing on snow on wheat ground, and with grain sowed in the spring, is the most common method. This mode of late, and in dry seasons, has frequently failed. The seed vegetates but dies for want of moisture. Some farmers have tried fall seeding with winter grain, and your committee are informed with uniform success, and without injury to the wheat crop.

4th. What grasses are best adapted to our soil and climate?

Timothy and red clover require nothing said in their favor. The former for moist land, and the latter for dry land are unrivaled. White clover comes in without seeding and is valuable. Lucerne, from the experiments made, does not seem well adapted to our climate. The experiments with rye grass are flattering. Orchard grass is recommended as growing better in the shade of trees, than any other, and also doing less damage to fruit trees than most other grasses. The seed of this grass is much wanted. The committee announce their intention to test by experiment, the value and adaptation of the other grasses, highly recommended in other countries, and other sections of our own.

COUNTY AGRICULTURAL SOCIETIES.

ALBANY.—At the annual meeting of the Albany County Agricultural Society, held at the City Hall, Albany, Jan. 12, 1842, the following officers were elected for the present year:—Teunis Van Vechten, president; J. McD. McIntyre, Oscar Tyler, Caleb N. Bement, Amos Crary, P. S. Vanderburgh, John Haswell, Abraham Verplank, William Murphy, Robert S. Lay, and David Conkling, vice presidents; Luther Tucker, cor. sec'y; A. E. Brown, treasurer; Thomas Hillhouse, recording secretary; Samuel Checver, E. P. Prentice, L. G. Ten Eyck, John S. Walsh, and James Wilson, additional members of the Board of Managers. ☞ A meeting of the Board of Managers, consisting of all the above officers, will be held at the office of the Cultivator, in Albany, on Wednesday, February 9, 1842, at 11 o'clock, P. M.

NIAGARA.—Officers for 1842:—William A. Townsend, president; Davis Hurd and John Gould, jr., vice presidents; William Parsons, secretary; Wm. O. Brown, treasurer.

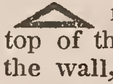
TOMPKINS.—Officers for 1842:—Nicol Halsey, Ulysses, president; Nathan Benson, William Carman, Luther Gere, Joshua North, H. Nurse, Henry R. Morrell, Geo. Jones, Warren Phelps, and Robert C. Ellis, vice presidents; Lewis A. Morrell, Lake Ridge, corresponding secretary; Nathan T. Williams, treasurer; George P. Frost, Ithaca, recording secretary.

SECOND BLOSSOMING OF FRUIT TREES—GREAT CROP OF CORN—STONE WALLS.

THE last season in western New-York, was remarkable for the frequent appearance of that rare phenomenon at the north, the second blossoming of fruit trees. This may be attributed, perhaps, to the severe and protracted drouth, which so reduced the circulation of sap, as to produce a species of hybernation or rest of plants, not unlike that effected by the cold of winter. The case of the orchard near Rochester, however, where the trees, stripped of their foliage by a violent hail storm, late in the season, put forth a full growth of new leaves and blossoms, may be in part attributed to such defoliation. The following extracts from the letter of a gentleman at Sodus, Wayne co., will describe some instances of second blossoming at that place, &c.

"The trees which blossomed twice on my own premises, were pear and apple trees, and among those belonging to others, were several plum trees. My own had been transplanted in the spring, and I believe the others which I saw in full blossom, were also set out last spring. I have occasionally seen blossoms, *a few in number*, on trees in other seasons, but the trees to which I now refer, were full and white with blossoms, in their highest perfection. I saw several in the deep, gravelly soil of the Ridge, and others in a clay soil in another part of the town. The severe drouth of the summer had nearly deprived them of every vestige of foliage, and but few indications of life were remaining. When the early rains commenced, they appeared to renew their vitality, exhibiting all the appearances of vernal resuscitation. Succeeding the blossoms, was a fine bright green foliage, distinguishable at once from that of the surrounding trees, and which retained its fine hue longer than the leaves which had matured early in the season."

"One of the best yields of corn recorded in this State, was grown at the old Shaker settlement, on the west side of Sodus bay, in 1840. The ground cultivated by Mr. Clowe, the grower of the crop, was part of the old Shaker garden, in the highest state of cultivation, and the soil adapted to obtaining a corn crop in the highest perfection. The corn was White corn, and was planted in drills. The crop was 406 bushels from 4 measured acres. He planted the same ground in 1841, but the severe drouth reduced his crop to 60 bushels per acre."

"The stone fence to which reference has been made, is in what is called the Granger settlement, in the south part of this town, and is on the farm of Mr. Flavel Kingsley. He has seventy or eighty rods running across his farm, and next to the highway. It is made by laying the wall in lime mortar, much in the manner of cobble stone building, with a coping of boards to protect the top. Mr. Kingsley's wall has a considerable part of it stood six or seven years, without apparently receiving the least injury from warping or cracking, except at places left for bars, where the end of the wall, being built up perpendicularly, has cracked a little from one to two feet from the square end of the wall. This it is presumed might be remedied by digging down, and laying the bottom below the frost, *just at the end*. All other parts of the wall have sufficient firmness to resist any injury from frost or otherwise, by laying the bottom of the wall on the top of the ground. The durability and firmness of the wall, depend very much on the right tempering of the mortar. Mr. K. has several pieces of wall, in some of which too much sand was mixed with the mortar, and these have washed by the rain; and although not at present essentially injured, will doubtless dilapidate or need repairing much sooner than the wall first built. The wall is laid two feet in width at the bottom, and regularly approximating to about eight inches on the top. A piece of timber or joist for the purpose of nailing the cap or coping of the wall or fence to, in this  form, is inserted three or four inches into the top of the wall, and a board, projecting slightly over the wall, to defend it from the rain and weather, nailed on each side of these blocks of joist.

Mr. Kingsley estimates the cost of the fence at $3 per rod. He has paid per rod $1 25 for laying the wall; the materials and other expense, $1 75. He has some beautiful fence around his yard; bottom two feet two inches, top eleven inches, height five and a half feet; (the farm fence is four and a half feet high.) On the top is laid a stick of timber, flattened by hewing two sides, and this forms the back and basis for sheds. These are made by setting posts in the ground, and laying a pole on the top in front, which, covered with a board roof, makes a comfortable and cheap shelter for cattle. Such fences as Mr. Kingsley's are not only a great ornament to a farm, but can scarce get out of repair—and can never make unruly cattle."

PRODUCTIVE POTATOE.

AT the late meeting of the New-York State Agricultural Society, Dr. HERMAN WENDELL of this city, exhibited six pecks (numbering 494) of a new variety of potatoe, said to have originated near New Haven, called the Kelseyan or Perfectionists, the produce of two tubers. The tubers are studded with eyes: these eyes were cut out singly, and three planted to a hill. The edible qualities of the potatoe are very superior, fully equal to the Mercer.

Dr. Wendell will be happy to present sufficient seed for trial to any gentleman who wishes to do so, and who will share the products with his brother agriculturists, as he considers them a great acquisition to the country, they being at least as productive as the Rohan, and a superior edible root.

SMITHFIELD SHOW OF FAT CATTLE.

THE annual show of the Smithfield Club, was held in London, during the second week of December. This show is exclusively for animals fitted for the butcher. In the four first classes, consisting of oxen and steers of different ages, the Herefords received the four first prizes in each class, and the second prizes in two of the classes. The second prizes in the other two classes, were awarded to the Durhams. We suppose this may be in part accounted for, by the fact, that comparatively few Improved Durhams are sent to the butchers, the demand for bulls of this breed forbidding their use as steers or oxen. In the classes of cows and heifers, the four prizes were awarded to Improved Durhams. Four of the five prizes for South Downs were awarded to the Messrs. Webb of Babraham.

SHORT HORNS.

THE following remarks from the pen of Mr. Bates, of Kirkleavington, the celebrated breeder of Short Horns, we find in the London Journal of November 15:

"With regard to stock; the English breeders know nothing about the value of Short Horns, and if foreigners persevere they will take out the best of them. I told the breeders in Tyneside, above thirty-five years ago, that in less than thirty years not one of them would have an animal fit to look at, and before twenty years this was actually the case. And now those animals, (being despised, as being mine,) prove themselves, and they might then have had access to the same bull that did me so much good, Ketton First, and also Second Hubback; no one could or would see his value, while living. But unless they now get his blood, they can neither have *coat* or *handling*, and what are cattle without these requisites."

In commenting on Mr. Bates' letter, the editor of the Journal adds: "We could have wished, with Mr. Bates, that that invaluable breed of cattle, the Short Horns, had received greater attention from graziers and others than it appears to have had, from their well known merits, while we certainly conceive that our transatlantic brethren have procured from us such blood as will in a few years hence, bring them nearly on a level with ourselves." The editor then quotes from a paper by a correspondent in the Cultivator, a passage relating to the propriety, now we have the means, of rendering ourselves independent of England so far as regards stock, by the improvement of those now in the United States, and then adds:—"Jonathan has here read us a very useful lesson, as it proves to demonstration that however much he may admire English gold, he does not "calculate" that foreigners have any just claim to his."

LONDON FARMER'S MAGAZINE ON THE GRAIN TRADE WITH THE UNITED STATES.

WE make the following extract from the Monthly Review of the corn trade in the Farmer's Magazine, for December; we give it because it contains some truth, and as a specimen of English feeling on this subject:

"From the United States of North America, the information received respecting the corn trade is to the middle of last month, but it is not important. Flour continued to be forwarded to Europe in considerable quantities; and could our transatlantic brethren only prevail on Englishmen, to take their food in exchange for labor, the Americans promised to themselves great and important advantages, from an alteration in the legitimate principles of trade of this description. They are ready to undertake the pleasing and healthful labors of cultivating the fields, while John Bull is to labor in the factories or the mines like a Peruvian slave, or to hammer hot iron before a furnace, in exchange for his food, entirely for the benefit of his liberal employers. A gentleman from the banks of the Ohio, is now lecturing in the manufacturing districts; he knows what is good for the inhabitants of the British empire, far better than they know themselves, and assures them so long as their health permits them to labor like horses, like that useful animal they will be supplied with provisions in proportion to the amount of work they may be able to perform in this—the great workshop of the world. American flour, and American salted beef, will certainly be a treat to John Bull; for it will be a change from the monotony of being continually obliged to eat fresh beef, as he now does, under the present system of protection, which his wages and his food receive from the admirable principles of the corn laws. * * * To give and take is the real foundation of all descriptions of commerce; and this principle is now carried out, and always must be, to its fullest extent. America continues, and will continue, to take from us that quantity of our manufactured goods, which her inhabitants can conveniently consume, and we will continue to take as much American tobacco, cotton, wool, and grain as our actual wants require; but most certainly we can never consent to put our agricultural laborers out of employment for the purpose of employing those of foreign nations, even though *apparently* they should produce grain cheaper than can be done in the British Kingdom."

There is no soil, be it ever so bad, but may by proper care and judicious manuring be brought to a beneficial state of cultivation.

Correspondence, Inquiries, &c.

INQUIRY—RINGING THE NOSES OF CATTLE.

"Messrs. Editors—I should be pleased to receive some instruction, through the Cultivator, as to the proper age for placing a ring in the nose of a calf, and the best manner of performing the operation.

Cecilton, Maryland. T. M. Foreman."

The ring may be placed in the nose of a calf at almost any period after it is weaned, and the muscles of the nose become sufficiently firm to sustain the iron; but perhaps any time between the ages of one and two would be better than earlier. If delayed later, the greater strength of the animal renders the operation more difficult, but it may be performed at any age. The use of the ring is to secure and render manageable the animal, and a bull should always have a ring in his nose, particularly if inclined to be vicious.

There are several modes of making these rings, which should always be of the best iron, that there may be no danger of breaking, and which should be as light as is consistent with safety. The easiest method is to take a large wire or round iron of the proper size, form it into a ring of about two inches in diameter, the ends so squared and adjusted as to fit close and even, and then separated, to pass through the septum or division of the animal's nose; after which, by placing a sledge or other heavy iron on one side, with a smart blow of a hammer on the other, the ring is closed and finished. Another ring is made with a joint, formed by halving and riveting, and after the ring is passed through the nose, it is again riveted and secured. Another ring is made by slightly turning out the ends of the ring, and adjusting the two parts, through which a hole is made by drilling or punching. After it has been passed through the animal's nose, a rivet or screw is inserted through this hole in the projecting part, and the operation is done.

VERMIN ON PLANTS.

H. S. Peck of Newtown, Ct., inquires "whether there is any thing that will effectually eradicate vermin on plants?" We answer we know of nothing which will effect this. Plants are infested by so many and such different kinds of insects, that the extirpation of all would be a hopeless task. Besides, substances powerful enough to affect or destroy some of them, would also be destructive to the plant on which they are found. Perhaps there is no class of insects or "vermin" more numerous or more destructive than the Aphis or plant louse. There is scarcely a tree or plant on which they do not appear in the course of the season, and sometimes in most formidable numbers. All the young and tender shoots of fruit trees, the cultivated plants of the garden, and the crops growing in the field, are liable to their attacks. Air, good cultivation, and healthy, vigorous plants, are the best safeguards against vermin on plants. When they appear, if a little extra attention is paid to destroying them at first, much trouble for the future is saved, for there is no creature that increases its numbers more rapidly than the plant louse. They may be suffocated by the vapor of sulphur or tobacco; may be destroyed by throwing upon them ley, soap suds, or a decoction of tobacco, with a syringe or a watering pot. Some experiments made last year with suds made from whale or tanner's oil soap, seemed to prove that this would be one of the most effectual preventives known in preventing the attacks of insects on plants. It is said to be an effectual remedy for that destructive insect, the rose bug.

NEW MANURES.

Our correspondent, "Rusticus, Jr.," has enclosed us a copy of the paper that for some months has been going the rounds of the papers, as translated from the French journal, the *Phalange*, on an "Important Discovery in Agriculture," or a method of producing vegetation, or growing crops without tillage or reference to the earths proper; and also a copy of Mr. Bommer's prospectus for his "New Method of Making Vegetable Manures by Fermentation," for which he has taken out a patent, and requests our opinion on their merits.

As to the first, the facts stated in it, that are of value, and applicable to the purposes of agriculture, are not new, but have of late been made more familiar by the more extensive application of chemistry to agriculture. It is now well known that the earths, silica, alumina, lime, &c. contribute very little to the growth of plants, and that these derive their subsistence from other sources. The earths appear, however, necessary as a depot of nutritive matter, and a reservoir of moisture, which, in some form, is essential to plants; and as these must have something for their roots to penetrate to ensure support, tillage, by rendering the earth permeable, secures this object, and also enables the earth more readily and abundantly to absorb from the air those gaseous matters which all admit are useful to vegetation. That a plant of wheat should grow and come to maturity on a plate of glass or on a rock, so large that the roots could find no earth to penetrate, and only covered with one inch of straw, is incredible, and we think contrary to the experience of thousands of farmers. The wheat placed on glass, and covered, would doubtless germinate, and if the roots spread over the edge of the pane, and took hold of or penetrated the earth, it would come to maturity, but not otherwise. We think farmers who discontinue plowing, or sow seeds on rocks or glass, where only an inch or even less of earth is to be had, will be likely to be placed at harvest in the predicament of the man spoken of in the scripture, who sowed seed on stony ground, where there was not much depth of earth.

As to Mr. Bommer's patent method, we cannot speak decidedly, knowing nothing more of it than is stated in his Prospectus. If he is able to convert refuse vegetable matters, such as he has stated, into good manure in fifteen days, or, as we understand him, effectually decompose them in that time, he has made an important discovery, provided at the same time the fermentation necessary to complete the process does not cause the escape of some of the most valuable of the substances, or salts of the matters used, and its consequent loss. It is not many years since an invention for the preparation of manures, by which vegetable matters, which take months or even years to decompose, could be speedily converted into mold, was announced at Paris, and created quite a sensation in the agricultural world. Extensive experiments were entered into, both in France and England, to test its utility, the results of which were unfavorable to its use, both as respected economy and value. The violent fermentation necessary to the speedy decomposition of masses of matter such as Mr. B. has specified, is very apt to deteriorate the manure so formed; but if Mr. B. is able to avoid this result, and convert straw, corn stalks, or common earth, into rich manure in the time specified, and at a reasonable expense, he will be considered a public benefactor. Experience in this case, as well as most others, will give the true response.

POUDRETTE—INQUIRY.

Our correspondent, "A. W. S.," at Hempstead, L. I., who inquires respecting the use of poudrette as a manure for potatoes, the quantity used, and the cost of the manure at New-York, is informed that although we have never used poudrette on that crop, yet there can be no doubt, from the testimony of those who have, that it will be found most efficient and valuable for that as well as other roots. The quantity recommended and used is about a gill or rather less per each hill, sometimes put into the hill alone at the time of planting, and sometimes mixed with an equal quantity of good mold, and two gills put upon the seed at planting. From half a gill to a gill is used for corn. One bushel of it is considered equal in effect to thirty bushels of street or horse manure, when applied thus directly to the hill; but when sown broad-cast for wheat, more is required. From fifteen to thirty bushels is generally sown; it is said "fifteen will produce very satisfactory results—more than thirty-five is useless." The present price of poudrette we do not know. Last season, the price varied from thirty to forty cents per bushel, according to the supply, mode of packing, &c.

Our correspondent's crop of four hundred bushels of "fine Mercers" from an acre, would be considered a good crop any where, and there are few varieties of potatoes better deserving of cultivation for the table than this.

If the soil on which our correspondent proposes to plant trees is "so hard as to cut with a pick-axe," we know of no tree which will flourish in such a situation. When it is desirable to plant trees on such soils, the holes should be dug very broad, and at the time of planting filled in with good surface earth or mold. If the soil contains so much clay as to be retentive of water, drains filled in with stone must be made to allow the surplus water to pass off. When so prepared, any tree our correspondent chooses will succeed, always remembering that such as are most common to such localities or soils, or have been acclimated, will succeed best. With us, the elm would push itself forward the most rapidly in such soils; and some of the varieties of the oak will thrive in a very dense soil, if it is suitable in other respects.

We shall be pleased to receive the portrait of his cow, "Eliza," of which our correspondent speaks.

STYPTIC—INQUIRY.

The following is from the pen of a respected correspondent at Flint Rock, N. C. If any of our readers are acquainted with such a styptic as he has alluded to and will forward the remedy to us, we will give it a place with pleasure. White vitriol we have found the most effectual in checking the flow of blood from a wound, of any thing we have seen used. The great object is to coagulate the blood as quickly and deeply as possible, and a preparation of vitriol is very efficient in this respect. The common meadow puff-ball, dried, then opened and bound on a wound, will frequently check the flow of blood. When, however, there is reason to apprehend that an artery is cut or wounded, it must be either taken up or compressed immediately, or fatal consequences may ensue. Compression may be effected by any one, until a physician can be procured.

"Having wounded myself some time since, so as to bleed till I fainted, I take occasion to inquire for an effectual remedy to stop bleeding, particularly in case an artery is wounded, which I have reason to believe was the case with myself. It is very necessary that an effectual remedy, which is easily to be procured, should be generally known, especially among farmers, as it is often the case they have a great distance to go for the doctor, (which is the case here,) and when he did arrive, it might be too late for him to be of any service."

FEEDING SHEEP AT STACKS.

A "Subscriber" at Poughkeepsie, who says "he knows from experience that sheep waste less hay when they run to a stack than when fed in any other way," and who wishes to make some experiments in the way of feeding recommended by Mr. Titus, at page 164 of the last vol. of the Cultivator, requests us to inquire whether the rails in that plan, upon which the stack rests, lie on the ground, or on the bottom rails of the fence enclosing the stack; and if laid on the ground, whether there is not danger, as the sheep eat out the bottom, of the stack falling upon them and catching them under it, or what will be the effect of the grass seed and dust on the wool.

If Mr. Titus, or any other gentleman who has tried this or other methods of stack feeding, will reply to our correspondent, they will confer on him, and us, a favor. We may add, however, that Mr. Titus evidently intended to have the rails on which the stack is to be built, lie flat on the ground, the only object in having such rails being to keep the hay from the ground. We have for several years been in the habit of stacking our straw in such a manner that, as it is eat out at the bottom, it gradually settles—a mode of feeding far more economical and useful than any other we have seen tried; yet we have never experienced any loss of sheep or young cattle from their being caught under the mass while settling. A little attention will prevent such a result.

WOBURN PIGS IN TENNESSEE.

We make the following extracts from a letter received from Wm. C. Hazen, Esq., Pleasant Home, near Covington, Tennessee:

"There is a considerable move in this delightful region of country in the improvement of stock. In this county, we have a few of the Short Horn Durhams, the Berkshires, Irish Graziers, and Essex half black hogs. I have recently received a pair of South Down sheep from Mr. Bement of Albany, and also a few of the full blood Woburns from Dr. Martin of Colbyville, Ky. I have also the Berkshire and Essex half black; and although they are fine animals, I think they cannot compare with the Woburns. I weighed a Woburn sow pig at three months and three weeks old, and she weighed 116 lbs. At the time of weighing, and for several days before, she had been unwell with a disease unknown to me, a listless, sleepy disposition, refused food, and was broken out in many places on the skin with red spots of the size of a ten cent piece, and hard around that to the size of a dollar. I gave a large dose of castor oil, let her drink slippery elm water, and washed the pores on the inside of her fore legs with warm soap water. She gradually recovered, is now six months old, the finest formed pig I ever saw; head unusually small, heavy sides, and the best hams, without exception, I ever beheld, and will weigh 250 lbs. From what I have seen, I think I shall prefer the Woburn to all other pigs, as hogs that will make the most meat, at the least expense. I will write you next spring how my lambs look from my South Downs.

The hint contained in the annexed extract, we hope will attract the notice of many of our present subscribers: "I am so thoroughly convinced that your paper has done good, and will continue to do so, that I shall with pleasure use my efforts to procure additional subscribers. I would like to see such papers more extensively circulated throughout our country; and as only the readers of these papers are fully sensible of the benefit produced, suppose each subscriber to the Cultivator procures an additional one for 1842. It may easily be done, and I here pledge myself to do so; and if all will, your subscription list for 1842 will be doubled, and what a vast deal of pleasure and profit would be added to the country."

Our correspondent will probably be able to obtain Blacklock's Treatise on Sheep at any of the principal cities of the west. It will be found a valuable work to every sheep grower.

RAPE SEED—INQUIRY.

"Messrs. Editors—Will you please inform me, in your next paper, whether any Rape seed has been introduced in the eastern States? The oil from that seed is extensively used in the cloth manufactories of England, and I believe that seed is yielding more oil than any other vegetable matter. It is extensively cultivated along the banks of the rivers Elbe and Weser, in Germany. Rape seed, in German, is *Rubsaamen;* in Dutch, *Raapzaut.* John Eschenburg.

Colliersville, Madison Co., Ill."

We have never known the cultivation of Rape attempted in this country. Considerable quantities of it are imported, we believe, for various uses. It is possible it might be a valuable agricultural product.

The inquiries of A. C. S., (Shusham, N. Y.,) respecting Urate, will be found answered in our replies to other inquirers in our last No. Those respecting Silk, are answered in another part of this paper by Mr. Smith of Baltimore; and those respecting Tomatoes shall receive attention hereafter.

☞ We have on hand several other inquiries, which shall receive as early attention as possible.

WORK FOR THE MONTH.

Trees may be pruned this month; and if orchards are subjected to this operation, as they should be, the fruit will be greatly improved. It is wrong to suffer years to elapse without pruning; since when it is then done, the cutting out of branches of many years growth, makes large wounds, and injures the tree. It will do cattle and sheep good to have the privilege of browsing the prunings as they fall from the trees. A little labor expended on the orchard every year, will be better than heavy and close prunings at once. In pruning, the great object is to so thin the branches, that the sun and air can penetrate every part.

February is a good month to secure a supply of wood, if this important item of domestic economy has not been already attended to. Don't flatter yourself that it is more profitable to burn green wood, or that such wood makes a hotter fire than dry. None but those who get their wood a "drag" at a time through the year, and cut it only as fast as wanted, will maintain such doctrines. If your wood is cut and split, in the woods, a few weeks before it is to be drawn, many tons of water will evaporate from it, and so much is saved in transportation. But in this case you will lose the most of your chips, which, when wood is wholly cut for the fire with the ax, will amount to about one-fifth of the whole. Prepared in the woodyard, most of these are saved. Wood piled in a woodhouse requires air, or it will be attacked with mold and rot.

Sheep, and particularly ewes, will require careful looking to this month. If fed on dry food only as is usually the case, and without access to water, they are very apt to be attacked with diseases arising from costiveness, such as staggers, stretches, &c. although the staggers sometimes arise from worms or grubs penetrating the brain. To prevent disease, the sheep should be fed with cut potatoes, turneps, carrots, or other green food, at least twice a week if once each day, so much the better. They should have salt frequently, and if a load of hemlock or spruce brush, is occasionally drawn to the yard for them they will feed on it with avidity,and with benefit. The weak ones must not be neglected, for if they do not receive the necessary attention now, they will hardly get through the spring months.

Cattle must be salted frequently; it aids their appetites, and is essential to their health. Cattle will do with much less food if kept in comfortable stables, than if allowed to run at large, and are exposed to the cold and storms. Warmth is essential to all domestic animals. Carding or rubbing cattle or horses is a decided benefit to them, cleaning the skin and hair, and contributing materially to health. Change of food is useful. Roots, hay, corn fodder, may be advantageously alternated or mixed, and a good stack of straw for them to amuse themselves upon, will do them no harm. If any animal in the yard is moping, refuses to eat, and has his hair rough and staring, it should receive better treatment, more nourishing food, and proper attention, until improvement appears.

Sometimes the snow disappears in February, and leaves the wheat fields and meadows bare. It is not uncommon at such times to see on some farms, such fields covered with cattle, sheep, or geese, trampling or feeding down the young wheat, or poaching the meadows. This is a bad practice. It is bad for the animals, and it is worse for the wheat, and the roots of grass. Keep your fences up, and all your creatures where they should be, until the proper time for turning them out arrives. Look to the drains in your fields, and see that the water courses are clear. Water flowing over, or standing on winter wheat, is very sure to kill it.

If you have young fruit trees, either in a nursery or orchard, around which the snow is lying, it is a good plan to tread it firmly around them to keep the meadow mice from gnawing the bark, and killing the trees. If the grass is kept from the trunks of the trees, and this precation is used, trees may be considered safe from mice, otherwise serious losses may ensue.

February is a good month to ascertain the condition of your farming implements, your wagons, plows, harrows, &c. &c. to see what need repairs, and what new ones are wanted. Never undertake to be a farmer without tools. Without such as are necessary, a farm cannot be worked well, or kept in order. If proper care was taken of farming implements, if they were kept from exposure to the storms of winter, and the rain and sun of summer, they would on an average last one-third longer than they now do. There is no surer sign of a slovenly farmer, than to see his wagons, carts, plows, harrows, &c. strung about the streets or fields, and left as they were at the approach of winter, for the season. It is from this and similar instances of improvidence, that farmers sustain losses, that materially diminish their profits, if they do not swallow them wholly.

Often as we have alluded to the subject of the improvement of fruit, we cannot avoid calling the attention of farmers to the matter again in this place. It is so much better to have good fruit than poor, and good fruit may be had with so little care, that indifference is most surprising. The most certain mode of securing good fruit is by grafting; and the latter part of this month is an excellent time to select and cut cions. Label them, and pack in a box in your cellar with moist earth, or bury them in a border, where the mice will not find them. They must not be kept too wet, or too warm, but they ought not to remain dry for any length of time between cutting and using.

Cut up a few potatoes or turneps for your sheep, and sprinkle on them some salt; it will keep them in good heart and condition. Give your horses once a week a handful of clean ashes with their oats, and they will rarely be troubled with the belly ache, or bots. It is much easier to keep animals in good condition than to restore them after they once become poor; and it is much better to prevent animals becoming diseased, than to have the trouble of curing them when sick.

AGRICULTURAL SOCIETY OF THE U. STATES.

In our last, we noticed the formation of this National Association for the advancement of Agriculture, and we here present the Constitution, which was adopted at that time, for the government of the Society. It presents several points which are of much consequence, and on which, in our opinion, much of the benefit and efficiency of the Society must be depending. One of these is the establishment of the Board of Control; and the other, the duty of this Board to obtain information of, and introduce for the benefit of our agriculture, such seeds, plants, implements, and domestic animals as may be found abroad, and deemed likely to be useful here. This Board of Control must be prudent, practical men, workers rather than talkers, understanding their duty, and willing to perform it. This body must as far as possible be central, that their consultations may be frequent and free.

That such an association as the one under notice can be made of the greatest advantage to the country, no one can doubt, if supported and managed in the efficient manner which should characterize a national institution, and which, from the spirit and energy of the men engaged in the undertaking, we have a right to expect. When we look at the societies of England and Scotland, their national character, the prompt and liberal support they receive, the immense influence they exert, and the incalculable benefits they are conferring, we are unwilling to admit that a similar association cannot be supported, and be made useful here. Unless we are much mistaken, it will be the means of collecting and diffusing much valuable information from the first; and as its means are developed and its ability for usefulness increased, we trust we shall see the Society taking the high rank to which its position and designation justly entitle it.

CONSTITUTION.

The style of this Society shall be "*The Agricultural Society of the United States.*" Its objects shall be to improve the condition of American husbandry, and, from its central position, to serve as a medium of communication and of action with other agricultural societies throughout the Union.

Article 1. This Society shall consist of such members as shall, at the formation of the same, sign the Constitution, and pay to the treasurer two dollars, and one dollar annually thereafter, as long as they shall continue members.

Art. 2. Any citizen of the United States may become a member of this Society, by paying the fees required for membership.

Art. 3. Any agricultural society in the United States shall become an auxiliary society, upon paying to the treasurer the sum of ten dollars, upon application, and five dollars annually thereafter; and each auxiliary society shall receive no less than five printed copies of the annual proceedings of this Society, and shall also be represented by such delegate or delegates as they may appoint to the annual meetings of this Society, and on all questions to be decided by the Society, such delegation shall be entitled to ten votes.

Art. 4. Any person paying to the treasurer ten dollars, shall receive a diploma of membership for life.

Art. 5. The officers of this Society shall consist of one President, one Vice President from each State and Territory, and one from the District of Columbia, a Recording Secretary, a Corresponding Secretary and Treasurer, and a Board of Control, consisting of five members, three of whom shall constitute a quorum.

Art. 6. The president, and in his absence, one of the vice presidents, shall preside at all meetings of the Society. By the concurrence of the Board of Control, he may call special meetings of the Society, giving public notice thereof, by advertisement, at least three weeks before said meeting. He shall draw all drafts on the treasurer for moneys paid out, which drafts shall be countersigned by the recording secretary; and the treasurer shall at the next annual meeting make a full statement of all receipts and expenditures, setting forth as well the items as the amount thereof.

Art. 7. The vice presidents of the States of Virginia, Maryland, Pennsylvania, and Delaware, and of the District of Columbia, shall be, ex-officio, members of the Board of Control, provided no act shall be done by said Board without the presence of a quorum of the original Board.

Art. 8. The recording secretary shall keep a full record of all the proceedings of the Society, and supervise the publication of them, as may be directed.

Art. 9. The corresponding secretary may be one of the five members constituting the Board of Control, and in addition to conducting all the correspondence of the Society, shall keep a record of all expenditures ordered by said Board, and, in short, perform for said Board all the purposes of a secretary, and shall receive such compensation therefor as said Board, with the consent of the president, may allow.

Art. 10. The Board of Control shall consist of five members, living in or at a convenient distance from this city, who shall perform all the executive duties necessary to the purposes of the Society, not specifically assigned to other officers. They shall avail themselves of all the means in their power to become acquainted with the agriculture of foreign countries, and through such aid as they may be able to receive from our diplomatic agents abroad, as well as our consuls, shall, if consistent with the pecuniary means of the Society, introduce from abroad whatever they may think materially calculated to improve the agriculture of this country, whether it consists of information as to new and improved modes of culture, seeds, plants, additional articles of cultivation, agricultural implements, or domestic animals, the disposition of which shall be made at the first annual meeting of the Society.

Art. 11. The Board of Control shall also use the necessary means of having a large exhibition, at each annual meeting, of improved agricultural implements and machinery, with a full and public trial of the same; of improved stocks of all kinds, and particularly of inviting the exhibition of such animals as have taken premiums at other agricultural shows, with the view of testing the superiority of prize animals themselves; also, of the different breeds of animals, for the purpose of comparing the advantages of each. They shall affix to such exhibitions such premiums as they shall adjudge suitable, appointing such judges as they may select, to award the same, which judges shall not only assign their preferences, but shall draw up a detailed report of their several examinations, setting forth fully a description of the articles or animals adjudged, and the grounds upon which their preferences are awarded.

Art. 12. It shall further be the duty of the Board of Control, when they think it expedient, to procure a model of such implements and machinery as may have received a premium, to be kept in some suitable and convenient place, selected as an agricultural repertory, for the inspection of the public, and particularly of members of the Society.

Art. 13. The said Board may also award premiums for prize essays, to be read before the Society, for well conducted and well reported experiments in agriculture, having reference in the same to the prevailing agricultural productions of the different sections of the Union.

Art. 14. The said Board shall give due notice, by advertisement, of the time and place of such exhibitions, the premiums to be awarded, and the committee by whom they are to be awarded, and for the expense attending the discharge of the duties herein imposed, they shall draw requisitions on the president, setting forth, severally, the items of expense, which requisitions shall be recorded by the recording secretary; and the president, if he approves the same, shall thereupon issue his draft on the treasurer for the amount.

Art. 15. The said Board shall also be instructed to make efforts to obtain funds for the establishment of an agricultural school in the District of Columbia, and appurtenant thereto, a course of public lectures on agriculture, chemistry, botany, mineralogy, geology, and entomology, as appropriate sciences to the great business of agriculture, which, with the buildings and improvements thereon, shall, in the language of Smithson, be set apart forever, "as an establishment for the increase and diffusion of knowledge among men."

Art. 16. The Board of Control shall procure an appropriate seal for the Society, to be attached to diplomas or other documents or instruments which may be issued to honorary members or other persons, under the direction of the Society. They shall fill all vacancies that may occur by death, resignation or otherwise, either in their own body or the list of the officers, to continue until the next general meeting.

Art. 17. In further aid of the purpose of this Society, the said Board shall invite some suitable person to establish an agricultural publication in this city, and shall also petition Congress for the incorporation of this Society.

Art. 18. The first general meeting of this Society shall be in the city of Washington, on the first Wednesday in May next, and thereafter at such times as the Society may direct.

Art. 19. All moneys paid to the treasurer, either for subscriptions or as donations to the Society, shall be deposited to the Society's credit, in such bank or institution as the Board of Control may direct, and can only be withdrawn upon the requisition of the president or acting president, countersigned by the secretary and treasurer.

Art. 20. This Constitution shall be amended only by a vote of two-thirds of all the members present at an annual meeting of the Society; but the Board of Control may, by the aid of the president, establish any needful by-laws for the better order of the Society, not incompatible with this Constitution—which by-laws may at any time be amended by a majority of the Society present.

Art. 21. Elections for all officers of the Society shall be held by ballot at every general meeting thereof; but, until an election at the general meeting in May next, the following persons shall be a committee to appoint the officers herein before mentioned, and to make publication of the same in ten days from this time.

GOOD PIGS.

L. M. Wells, Esq., Pike county, Mo.. informs us that he has two pigs, a cross of the Devonshire, Bedford, and Irish breeds, which weighed, at 61 days old, one of them, 70 lbs., the other 60 lbs.

Original Papers from Contributors.

FERTILIZING QUALITIES OF MARLS, BONES, &c.

Messrs. Gaylord & Tucker—In your No. for December, page 186, the following question is asked: "Is it possible that the blue or green clay or marl of New Jersey, which is so valuable as a fertilizer, owes its power to the ammonia it contains?"

I should consider it too certain to call in question its possibility. When the ocean deposited large masses of shell fish in New Jersey, which constitute their marl beds, the fish must necessarily have been deposited in the shell, and of course large quantities of ammonia been developed during their decomposition, which would be absorbed by the soil mixed with the beds. I should conclude, *a priori*, that the green marl beds would contain more ammonia than the white marls, as ammonia will give a green hue to most soils.

Some years since, I advertised for clays to be sent me, with the view to the finding of fuller's earth, describing the qualities necessary to the composition. I received a great number of samples from several states, and from different counties in the same state, amounting to probably more than two hundred specimens. Among these specimens of clay, were several valuable to the farmer as fertilizers. A sample of white unctuous clay from some part of New Jersey, contained a large quantity of free potash. The gentleman who brought it would not inform me of its locality, as embedded in the clay was found a mass of lignite, fossilized by sulphuret of iron; and he expected to make a fortune from this portion of the product.

Another sample of blue friable clay, from a bank of our North river, was also brought, containing a large quantity of some carbonated alkali, or alkaline earth, which would be highly beneficial for agricultural purposes. The gentleman who brought the latter, informed me the deposit was deep and extensive.

In the same No., page 188, there is an article on "Crushed Bones—mode of action." The writer, on the authorities of Sprenglel and Chaptal, assumes that the phosphates are the principal fertilizing ingredients in bones. I differ entirely from the deduction of those celebrated philosophers. It is stated in the table of contents, that one-third of the weight of bones is animal matter, or gelatine; and I consider their fertilizing property to depend greatly more on this constituent product than on the two-thirds consisting of phosphate and carbonates of lime. I shall give my reasons for this opinion, which I think will be satisfactory. There is no doubt that phosphate of lime contains some fertilizing property, but not one-tenth as much as gelatine, weight for weight.

It is well known that neither phosphorus nor phosphoric acid can by any process be converted into ammonia, whilst gelatine is easily converted to it, and affords a very large quantity.

In the making of prussiate of potash, the ingredients used are gelatine, horn shavings, or more solid pieces, hair of animals, and animal matter generally. The two are mixed in an iron vessel, brought to a melted state, and stirred during the combustion. The animal matter contains the prussine, which in its nascent state is taken up by the potash. The great difficulty in the operation is to prevent the prussine from changing to ammonia, and so great is this tendency, that the most skillful operator cannot prevent a considerable portion from undergoing that change. I have sold thousands of gallons of ammonia, collected during this process.

Your correspondent quotes from the second Doncaster Report, "That horn shavings are a more powerful manure than bones, since horn contains only one or two per cent. of earthy matter, the remainder being animal matter or gelatine." From the third Report, "That before the introduction of crushed bones, the ashes of burned bones had been long employed to a small extent in agriculture, but have since fallen almost entirely into disuse."

Put these two reports together, and what do they prove, but that the gelatine taken out of bones by calcination, contains far more fertilizing qualities than the ashes of the bones which remain?

Bones are boiled for several hours by some of the ivory black manufacturers, by which the fat and much of the gelatine are extracted, yet when distilled in a close vessel, a large quantity of ammonia is collected. Calcined bones afford no ammonia.

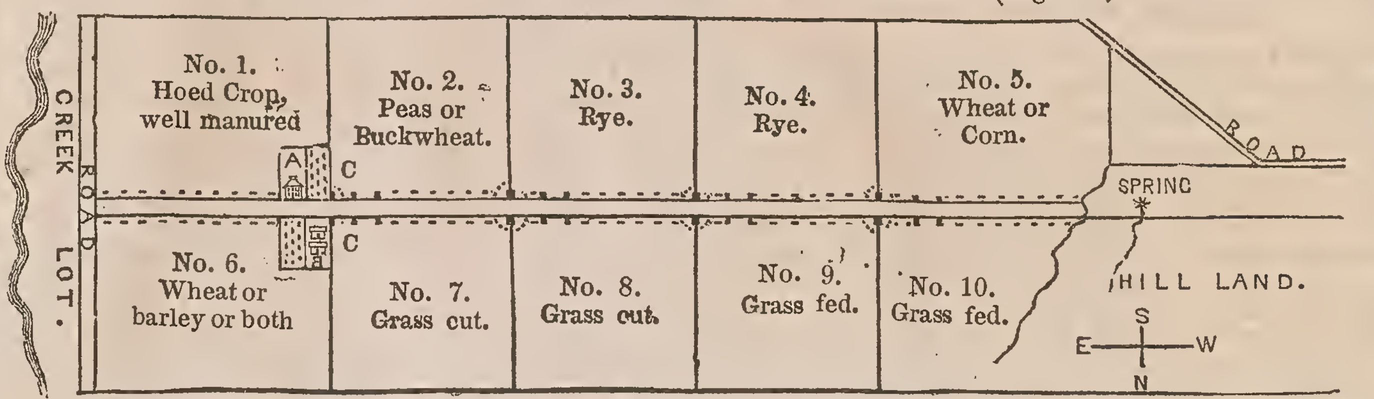
It has never come under my notice that phosphorus, or phosphates of any description, have ever been detected as a component part of any vegetable matter. Prussic acid, on the contrary, is found to be an inherent quality in a large class of plants, shrubs, and trees, the bitter of leaves, flowers, and kernels, being mostly from the presence of this acid, some of them so powerfully impregnated as to afford a deadly poison. There is no doubt that a much larger class of plants would be poisonous, if prussine had not so great a tendency to change into ammonia.

The progress of science, within the last fifty years, has opened to the human mind some faint traces of the secrets of nature, sufficient to show that man, in all he undertakes, is only a feeble imitator; yet enough has been discovered to prove that innumerable operations are silently progressing in the laboratory of nature, displaying Infinite Wisdom in the design, Infinite Power in the execution, and Infinite Benevolence in the adaptations.

Wm. Partridge.

New-York, Dec. 24, 1841.

DIVISION OF A FARM AND ROTATION OF CROPS.—(Fig. 11.)



A. House.—B. Barn.—C. c. Gates.—Hyphens (- - -) trees.

The six interior fields contain 12 acres each. Nos. 1 and 6, are larger, but balanced by house, barn, &c.

No. 5, larger, so as to include flat land.

Messrs. Gaylord & Tucker—The above plan and rotation system of my farm is submitted to you and the farming community, in the hope of receiving your or their opinion as regards the system, either in whole or in part. Believing that a rotation of crops is the most advantageous as well as the most pleasant mode of cultivation, I made it the first object, on my first commencement on a partially cleared level farm, to make a correct survey of the level part, and then deducted the ground occupied by lane and houses, by which I ascertained twelve acres made a complete square field, as appears from the plan. The importance of a lane must be so apparent to every practical farmer, that it is deemed unnecessary to say much on it. In drawing out manure, and in the crops, or in driving out and in the cows or other stock, the opening of gates between cross fences, and safety of crops in the adjoining fields, is of great benefit in saving time and means; and the gate where the cows pasture may be left open, so that they may have free ingress and egress; and last, though not least, if you have a bad horse to catch, you can drive him out of the field and into the barn in less than no time. In order to save ground in lane, I incline the gates into the fields, which gives ample space to turn a wagon loaded with hay or grain. The gates to be labelled, or contain the number of the field it leads to. In the corners of a cross fence, plant trees of evergreen and other kinds, and thus occupy usefully the part the plow cannot reach for shade and shelter, and place a watering trough on the line of cross fence, the fence passing along its center, so that the two fields pastured as above, (Nos. 9 and 10,) are accommodated with water, and the stock still kept separated, and protected in a measure from heat or cold. The creek field is low, and subject to be occasionally overflowed, stands neutral in grass. Field No. 1, manured and planted and sowed with potatoes and turneps, &c., and corn. It is superfluous to say any more, as all speak for themselves in the above plan; and it is only necessary to stretch the imagination to suppose that each successive season the crops shift one step; as, for example, this year No. 1 thoroughly manured and hoed, No. 2 next, and so on, till in the course of ten years No. 1 has produced the successive crops, and cries aloud for its share of the farmer's deposit of manure. On each side of lane are trees planted, and also on road and line fences. West of house and garden, orchard; front of barns, and north of house, orchard.

A PENNSYLVANIA BARN.

Permit me, as my sheet is not quite full, to say that my barn is of stone, with a basement—40 feet by 40—basement 30 1-2 by 40 feet—14 feet allowed for horse stable off one (east) end, with door in centre, and two windows on each side, which, for the better regulation of the temperature of stable, is made of movable Venitian blinds. The door is jointed and hinged, so that it falls back on the wall. The manure is carried off into back sheds by another door. The height of stable is 9 feet, two feet or over above the barn floor, so that hay kept over the horses may be thrown into their troughs, either cut up or in its natural state, as I have long troughs of hollow pine logs that extend the whole distance. Under the floor and other part of the barn, is a root cellar, with hatches over two of the divisions for emptying them into their respective places. One division, appropriated for potatoes, has a shoot from south side outside of building, as they are very troublesome to handle, where the operation of unloading a Scotch cart load is very soon accomplished. An alley passes through center, and a door opens into it from sheds, and there is also a door from stable into it. The sheds are as high as the horse stable, so that hay for cattle contained over them may be fed from barn floor, and give sufficient head room when shed contains the winter manure. This is only one of those intended to form a square: the other adjoining, will form the angle, (30 feet long.) Thence north, a barn for grain exclusively, with thrasher in southwest angle, and the other running east, similar to that above described; east end for cows. I propose a division fence through yard and one from south to north barn; watering at the junction, so that both yards and both stables may be accommodated without mingling—thence water to pass on to piggery. Part of the above is to be seen executed, and the rest is in a fair way, at the premises of your most obedient servant,

P. Falconer.

Warren Co., Pa., Oct. 15, 1841.

CULTURE OF INDIAN CORN.

Messrs. Gaylord & Tucker—I now propose to redeem my promise, made some time since, by giving you an account of my crop of corn. There were four acres in the field—one acre of Dutton, two do. of Brown, and one do. of China. The following is the amount of each variety per acre.

1. Dutton.—One acre produced 7,711 lbs. ears; 100 lbs. ears, taken promiscuously, made 82 1-2 lbs. shelled corn—equal 361 1-2 lbs. shelled corn per acre, or 113 bushels 33-1-2 lbs. per acre.

2. Brown Corn.—7,300 lbs. of ears per acre; 100 lbs. ears made 81 1-4 lbs. of shelled corn—equal 5,931 1-4 of shelled corn, making 105 bushels 51 1-4 lbs. per acre. There were two acres of this variety in the field; I know of no difference in it, but think one acre as good as the other.

3. China Tree Corn—third crop, from seed obtained of William Thorburn, Esq. of Albany, in the spring of 1839. It produced 7,020 lbs. ears per acre; 100 lbs. ears made 79 1-2 lbs. shelled corn—equal 5,580 3-4 lbs. of shelled corn, or 99 bushels 36-3-4 lbs. per acre.

The above crop of corn was all raised in the same field; the Dutton and China were on a part of the field that has been under cultivation for a time that extends beyond the knowledge of any of the present inhabitants of our village. The Brown corn was on a part of the field that was broken up to subdue the sweet elder, with which it was covered about six years ago, and has been under cultivation ever since, with a crop of corn or oats, without manure, except the two last summers. The China corn grew on the same acre of ground that yielded me 100 bushels of Dutton corn in the summer of 1840, and 80 bushels in the summer of 1839. For the present crop, the ground was plowed late last fall; this spring, the ground on which the Dutton and China corn grew, had fifteen loads of unfermented stable manure per acre, spread broad-cast and plowed in, the ground marked across the furrows four feet apart for the China, and three feet apart for the Dutton. Corn planted across the marking, the same distance apart, making the China corn four feet apart each way, and the Dutton three feet apart each way. Seed at the rate of one-half bushel per acre, soaked in copperas water and rolled in plaster; the corn thinned down to four spears in a hill at the second hoeing. The China corn was planted 28th May, Dutton corn 29th of May, and the Brown corn 2d and 3d of June. The corn was hoed three times, and worked twice with the cultivator—no hilling allowed; the ground kept as level as possible. I commenced cutting up the corn at the ground, the 16th September, and put it in small stouts to cure.

The Brown corn was planted in rows three feet apart, and hills from sixteen to eighteen inches apart in the row; manured in the hill with fifteen loads unfermented manure per acre; three-fourths bush. seed per acre, soaked and plastered as the above. A part of this corn failed to come up, from bad planting on coarse manure in the hill; it was replanted about the 12th June. This corn suffered more from drouth than where the manure was spread broad-cast; it suffered in earing, also, from being left too thick in the hill, causing the ears to be short.

I was absent from home at the time of hoeing and thinning the corn. On my return, about the last of August, I saw the fault, and inquired of the man who had charge of it, why it was not thinned as I directed; he said "it looked so *ower* when they hoed it, that the men all thought it a pity to *destroy* it:" so they killed it with *kindness;* but it was too late to remedy the evil, and I let it go with from five to ten stalks in a hill. This corn was cultivated in all other respects as the above. I think with proper management I can get a much larger crop of this kind of corn per acre than I have this year.

By measure, the Brown corn will outshell the Dutton, as will the China, but they both fall short by weight, as will be seen above—the Brown 1 1-4 lbs. in 100 of ears, and the China 3 lbs. in 100 of ears.

The China corn makes a beautiful meal for family use, but is too late a variety for elevated lands in this latitude. The acre of China corn produces about four tons of fodder, the Dutton three tons, and the Brown two tons. The Brown corn produces more corn for the amount of stalks than any variety that I have cultivated.

I am anxiously waiting for a statement of the method pursued by Mr. Osborn in raising 144 bushels of corn and 130 bushels of oats per acre; also Mr. June's statement in reference to his crop of oats, both of which I trust will appear in the Cultivator. I never have had any success in raising oats, and am desirous of learning how it is done by others, who do succeed. I should be glad to learn something about raising barley: which is the best variety to cultivate, which the best method of cultivation, what amount of seed per acre, &c. &c. If some of your readers would furnish the information, they would confer a favor.

MAKING PORK—A SUGGESTION.

I have kept an account of the food that I fed to my hogs this fall in fattening them, and find it exceedingly difficult to make pork for $3 50 per 100 lbs., when corn will sell for 50 cents and potatoes at 20 cents per bushel. I may give you the particulars hereafter. Would it not be well for our farmers to ascertain the cost of making pork, by making some fair trials? If it should turn out to be better for them to give their hogs away and sell their grain, than to make pork, it is time they knew it; or if they can make pork profitably, by the introduction of improved breeds of swine, let them learn by the trial of fair experiment which breeds are the best, for I will guarantee they will never be the wiser from learning the result of such experiments as Dr. Martin and his friend tried between the Woburn and Berkshire sows, which the Doctor gives an account of. Yours, &c.,

E. Cornell.

Ithaca, N. Y., Dec. 27, 1841.

HORSES—ORIGIN OF THE MORGAN BREED.

In my communication on this subject, published in the late October number, I have expressed too confident an opinion in saying I believed that the original horse was of French Canadian origin. I have recently had some acquaintance with a Morgan horse, endowed with all the peculiarities of the breed, sufficient to make me forbear any decided opinion on the point in question, until very clear evidence is adduced. The affidavit which I furnished is only probable and not conclusive testimony that the original horse was of Norman French descent, and procured in Montreal.

The horse which has been with me of late is one of those called, from being in-bred, a full blooded Morgan—an absurd term, for it is impossible that a descendant can inherit full blood from a single progenitor. The term *full blood* or *thorough bred* can only be used with propriety where the distinctive appellation is derived from a race or sort which furnished both parents; thus we may say a thorough bred or full blood English race horse, a full blood or thorough bred Alderney cow, if both sire and dam were of the breed or sort designated. The term thorough bred, however, has heretofore been almost exclusively applied to race horses, because for centuries before the present, the racing breed of horses has unfortunately been the only breed of animals highly cultivated, and of which the pedigrees could be proved by written or printed documents.

All the accounts, being not less than half a dozen, which I have heard of the origin of the first Morgan horse, agree in this, that one Justin Morgan of Randolph, Vt., from whom the name was derived, owned the animal while he was yet a colt. Doubtless there live persons who can testify to his origin, whether or not it be such as represented in the late affidavit. The public would not only be gratified, but greatly benefited by such evidence. There has probably never been another stallion whose stock for thirty or forty years have produced so much nett profit to the growers.

I will now endeavor to point out what appear to be the chief points of distinction between the Morgan breed and the horses of Norman French descent, produced in Canada. Let me premise that a great variety of races exists in the Canadian breed, yet all clearly impressed with a certain general character. The broad, courageous looking head, with the ears far apart, thick neck, general stoutness of frame, full breast and strong shoulder, with a round or fleshy croup; the low set muscles and large sinews, with those tough feet, that know not disease, are distinguishing marks of the French Canadian horse. The shagginess or abundance of hair in the mane and tail and on the legs, are much owing to the severity of the climate, with the manner of rearing the animals, and may be expected in a great measure to disappear under good cultivation, long before the innate excellencies and peculiarities will perceptibly change.

The Morgan horse does not partake of all these marks in common with the Canadian. The clear and deep toned bay color, too, which prevails in the Morgan, is rare among Canadian horses. It occurs in individuals; but, unless characteristic of the race for a long period of time, it could hardly be supposed that this color would so generally occur as it does in the Morgan horses of the present day. Peculiarities produced by a single cross are apt to wear away in a few generations, unless maintained by careful selection on the part of the breeder. If, then, (supposing the Morgan horse to have come from Canada,) his color was an accidental variety, it would not have so generally marked his numerous offspring, unless great pains were taken to preserve it by selection, which has not been the case. It appears evident, from the prevalence of this color through several successive generations, as well as the similar descent of various qualities, which are authenticated as having belonged to the first known sire, that the Morgan horse, whatever may have been its origin, was of one pure stock; that is, that he was not cross bred, or produced by the union of two different breeds; for in that case, there must have been a greater variety in his progeny, some running to one family and some to the other, whereas a remarkable similarity is known to prevail in all of this race. And here we may notice that the breeder is apt to find an essential difference in the two races: the Morgan, crossed or mixed with the various common breeds, inclines to retain its peculiar characteristics and its small size in the offspring for many generations, while all the French Canadian races, though not larger for the most part than the Morgan, when used as a cross, increase the size of the progeny, and frequently assimilate so that the blood can only be recognized by a practiced observer, in the greater development and robustness of form, and the courage, spirit, and aptness to thrive, which are commonly reckoned as constitutional health.

The Morgan differ essentially from the Canadian horses in their action or mode of traveling. A Morgan horse glides over the ground eight or nine miles an hour, with such easy movements of his legs, that one would think they only felt relieved when so employed; the Canadian, if he has speed, seems to go by main strength, every stride arising plainly from a purposed exertion of his powerful muscles.

Another principal dissimilarity is in the endurance of the feet; and here the Canadian horse has all the advantage. The Morgan appears to be subject, as much as equally strong constitutioned horses of any breed, to founder and other diseases of the feet, while with the Canadian such ailments are less known, perhaps, than with any other breed in the world. There are numbers of horses in Canada that, under a mass of shaggy hair, possess dry, sinewy legs, on which the severest service never raises a wind-gall. The legs of the Morgan, though destitute of long hair, have this excellent conformation in a very high degree.

The Morgan is a great traveler, an untiring all-day horse, but seldom a very fast trotter or galloper, and less frequently a perfect saddle horse. The Canadian, if he has the power of rapid locomotion, inclines for the most part to put forth his energies only for a short time, and then to take a leisurely gait, as if a slight sense of fatigue overbalanced the alacrity of his nervous system. There are, however, splendid exceptions to this description, horses that, with no light load behind them, will travel eighty and even ninety miles in a day. Some of the lighter footed Canadian horses, too, are very pleasant under the saddle, though in general the weight of the neck and uprightness of the shoulder disqualify them for this use. The head of the Morgan, though not less energetic, is somewhat dissimilar to that of the Canadian. The ears of one are upright, of the other more apart. The head of the Canadian horse is broader at the upper part than that of the other. Each has a great breadth between the eyes, which is considered a sure indication of energy in an animal. The Morgan has the best open nostril for wind and bottom, more like that of the race horse; and the whole of the muzzle, as well as the eye and ear, indicate more breeding, or a longer period of cultivation, than those of the Canadian. There is a difference of shape observable throughout the whole figure. The Morgan is long in the side, but always short on the back, and strong and beautiful in the loins. His fine shoulder, too, differs from that of the Canadian horse. It is deep, well sloped, comparatively thin at the top and heavy at the bottom, serving, conjointly with a wide chest and the fore legs set far apart, to give the horse an appearance of strength and endurance scarcely to be looked for in one of his spirit and fleetness.

The high crested neck and thick, wavy tail of the Morgan, show much of the character of some races of the Canadian.

Whether the Morgan be a scion of the Canadian stock, or be derived from the Dutch or some other breed which has disappeared in the United States, appears to be a question of some importance to those who would make good selections in order to improve the breed of horses; and whoever can throw any light upon the subject will gratify a large portion of your readers by making known his information through the Cultivator. If the French Canadian did not supply the Morgan, I, for one, should be glad to learn what other breed has ever been known upon this continent that could boast such excellent qualities for common service as are universally admitted to distinguish both of these breeds.

George Barnard.

Sherbrooke, L. C., Oct. 25, 1841.

FRAUD IN THE MANUFACTURE OF SALT.

Messrs. Gaylord & Tucker—Permit me to draw the attention of the public, and especially of law makers, and those whose duty it is to see that the laws are faithfully executed, to an outrageous imposition, a *base fraud*, which is being, or at least has been, perpetrated upon more or less of our citizens in the article of *salt*. I have pronounced it a base fraud: it is more; for, in its operation, it does not only unjustly and dishonestly take from one what rightfully belonged to him, and appropriate it to the use of another, but renders perfectly valueless that which cost much and is worth much in supplying the daily wants of mankind. The grievance complained of consists in the introduction of so large a quantity of *lime*, in the manufacturing of the article, as to destroy its antiseptic properties in the curing or preservation of animal food.

I am informed that the liberal use of *lime*, in the manufacturing of salt by boiling, makes it handsomer, and perhaps has a tendency to facilitate the process. It matters little what the motive is which induces the amalgamation of *lime* with this valuable and indispensable article, but all are interested in its *effects*. I will state to you the somewhat expensive *experience* I have had in this matter, as *facts* are justly considered the best arguments. A few weeks since, I put down several barrels of pork, very nice and sweet at the time of packing; used over one bushel of salt (so called) to every two hundred pounds of meat, and covered it with a very strong brine. Some three or four weeks afterwards, upon examination, I found it nearly worthless. The meat appears to be literally covered with *lime*, and is utterly unfit for table use. Unfortunately, I am not the only one who has thus been imposed upon.

It appears to me that this is a subject that calls for immediate and thorough investigation by the proper authorities; and if those whose especial duty it is to take cognizance of it omit to do so, then it behooves the *people* to devise means to nip in the bud so vile an imposition and base infraction of their rights.

I trust this communication will be sufficient to enlist the attention of those whose immediate province and *duty* it is to remove the cause of complaint. Its importance must be acknowledged by all. Will not the editors of our agricultural papers bring their aid to the accomplishment of the object? The agriculturists are deeply interested. A Farmer of Cayuga Co.

EARLY WHITE WHEAT OF VIRGINIA.

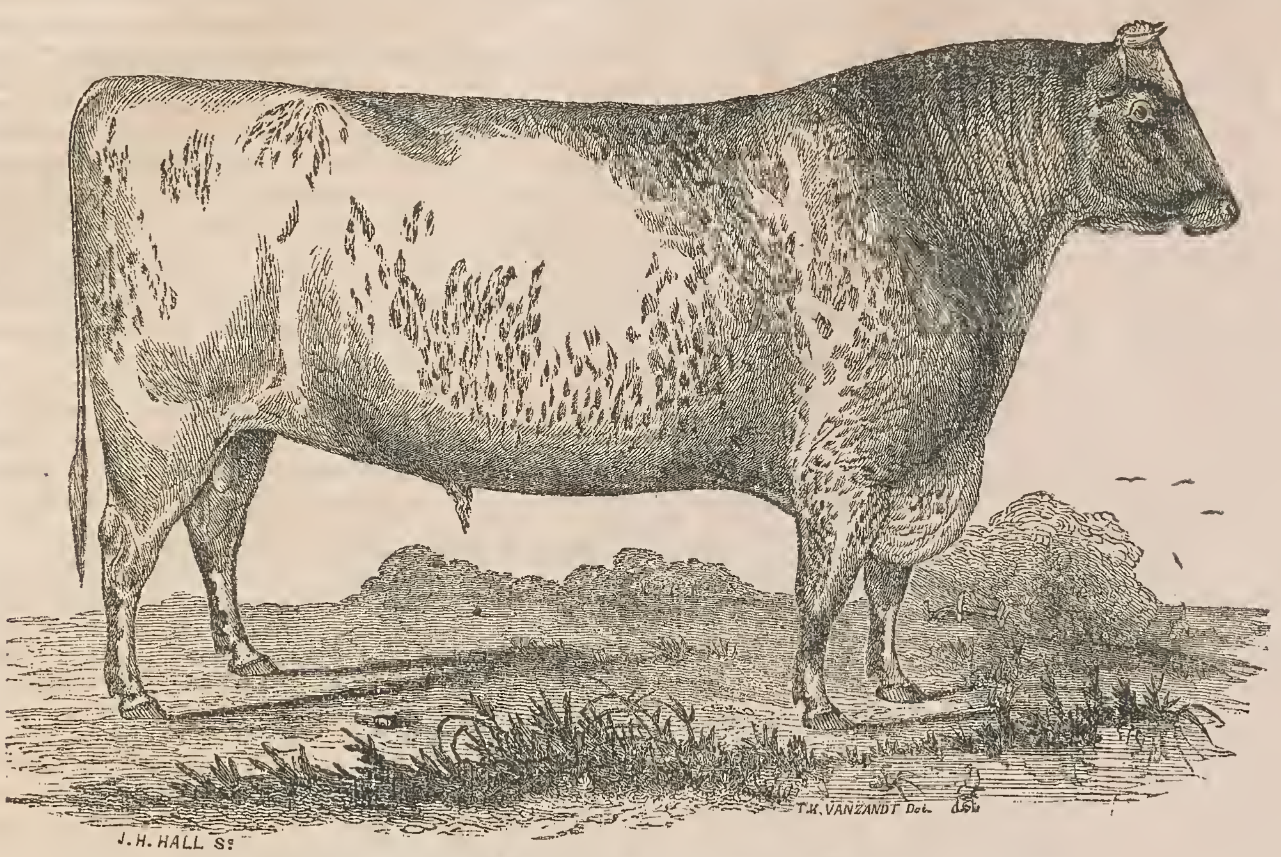
Messrs. Gaylord & Tucker—In the autumn of 1837, Mr. Coeke of Virginia sent a barrel of White May Wheat to the former editor of the Cultivator. The following is an extract from Mr. Cocke's letter accompanying the wheat: "Of late years, in this part of Virginia, we have seen some of our favorite kinds of wheat go almost entirely out of use, from gradual and successive failures, while other kinds of inferior quality have taken place of them, in consequence of their superior productiveness, attributable to no other cause, as far as we can see, but having been produced in different soils and other climes. The early May White wheat of Virginia, which first gave superior character to our flour, and the Mexican wheat, very similar to the early May White, are now rarely heard of among our agriculturists. Not doubting that these varieties would be very valuable in any quarter of the wheat raising region of our country, where they would be new, and being anxious, for the general interest of agriculture, that they should not be lost, as, doubtless, after some acclimating in New-York, they may again be returned advantageously to the south, I have been at some pains to procure a barrel of the first mentioned kind, which I have sent to you at Albany. By putting it into the hands of some of your careful farmers, I am persuaded they will find it a valuable acquisition. The specimen sent has an appearance of being yellow or red wheat, but this is owing to its having been raised for a succession of years on red land; upon grey soils, it would soon return to its native whiteness. For the beautiful and large proportion of superfine flour to the quantity of grain, we have never found any wheat to equal the early White May, until our soils became tired of it. The early May wheat will do well, sown any time in October, or on very rich land in November; in short, I think it not improbable it would do with you as a spring wheat, sown in February or March, fully as well as the Florence."

Through the favor of Judge Buel, I received one peck of the White May wheat. On the 28th of March, 1838, I sowed one quart, from which I obtained eleven quarts of badly shrunk wheat; that, with the remainder of the peck, I sowed on the 12th of September following, on land summer fallowed; on the remainder of the field, I sowed White Flint wheat; all sown the same day. Their appearance in the spring was very similar; as the season advanced, the White May came forward faster than the White Flint, and in heading out, the White May was two weeks earlier than the Flint. At harvest, the May wheat was plump and a fine berry; the Flint was so badly shrunk that the millers would have seventy-three pounds for a bushel; it ripened prematurely, being struck with the rust, which was very general in this vicinity in 1839. On the 13th of September following, I sowed the White May and the White Flint on summer fallowed land, the same field, and on the 17th, some of the White May in a separate field. The quality was very similar in every respect, except the White May was fit to cut one week the earliest; both varieties plump and fine; the berry of the White May retained its red appearance, and weighed sixty-six pounds to the bushel, the Flint sixty-three. On the 14th of September following, I sowed the White May on summer fallowed land, and on the 3d of October, three acres on potatoe ground; my Flint was sown on the 10th, 11th, 12th, and 17th of September.

The White May that was sown on the 3d of October was in head and ripe the same time the White Flint was that was sown on the 10th of September. The cold and wet, through the month of April and more than half of the month of May, injured my White May more than it did the White Flint, but not as much as it did several other varieties that I have under cultivation. My late sown White May was not more than half as good as that sown on the 14th of September; the berry was good; it retained its red appearance. It is a bald wheat, white chaff, the head some heavier than the Flint. For late sowing, on unfavorable soil, it is not as valuable as the White Flint. I have sown but a small quantity this season. I shall test it for a few years more, to see if it will not regain its former quality. Mr. Jones of Rochester was in Virginia in the fall of 1840, and saw some of the White May wheat, and was so pleased with it, that he sent home ten bushels for himself and ten for Mr. Ely. It was late before it arrived, was sown out of season, and proved a failure.

Rawson Harmon, Jr.

Wheatland; Monroe Co., N. Y., Dec. 16, 1841.



IMPROVED SHORT HORNED BULL "ARCHER."—(Fig. 12.)

OWNED BY J. M. SHERWOOD, ESQ., AUBURN, N. Y.,

Which obtained the first Premium at the Fair of the New-York State Agricultural Society, at Syracuse, Sept. 29th, 1841.

"ARCHER" is in color mostly white, with a roan head and neck—his body has some roan spots—was bred by F. Rotch, Esq., Butternuts, Otsego Co., N. Y. Calved 15th of June, 1837. Sired by ROLLO.

	Dam, Adaliza, by Frederick, *H.B.*	1060		ROLLO, sired by Patriot, (*Herd Book*)	2412
G.	" Adelia by Orpheus,......	473		Dam, Romp by Admiral,............	1608
G. G.	" Alpide by Alfred,........	23	G.	" Moss Rose by Young Denton, ...	963
G. G. G.	" Strawberry by Winsor, ...	698	G. G.	" Rosa by Young Denton,........	963
G. G. G. G.	" Old Dairy by Favorite, ...	252	G. G. G.	" Ruby by Denton,..............	198
G. G. G. G. G.	" Old Dairy by Punch,......	531	G. G. G. G.	" Old Red Nose by Frunnell, ...	659
G. G. G. G. G. G.	" Old Dairy by Hubback,...	319			

CATTLE—THE AYRSHIRES.

MESSRS. GAYLORD & TUCKER—I have seen, in a late number of your paper, a letter over the signature of A. B. Allen, stating, among other things, that "we can make Ayrshires by the thousand here, by crossing Durham bulls on our best native milkers." I think this would certainly be something very desirable, if it can be accomplished, as the Ayrshire breed of cattle stands unrivaled for their milking qualities, and for the good quality of the butter and cheese produced from it. Advertisements of the two latter articles are to be found in many parts of Britain. If such a breed can be as easily "made" as Mr. Allen says they can, the sooner we go to making them the better, and begin with the "best" Durham bulls that we can find in the country, even at the present time, without waiting for Mr. Allen's importation next year, from the only "one man's herd that can improve our own." (Query. Does the best breeder of Durhams in England sell his "best" cattle ?) That such a cross as is recommended by Mr. Allen would greatly improve the form, if not the milking qualities, of our native stock, whether the best or the worst milkers, does not admit of a doubt, but that it would produce Ayrshires is quite another question; and, in my opinion, is an idea too absurd to be entertained for a moment by any person who possesses a fraction of the knowledge of these matters that is generally ascribed to Mr. Allen; and I would caution all those (if there are any such) who put faith in Mr. Allen's doctrine, not to be disappointed if the result, as asserted by him, does not happen. The person who cannot detect the difference between such a cross, or even of a cross between the Ayrshire and native, which would certainly be more like the pure stock, and that of a pure blooded Ayrshire, must have a very unpracticed eye indeed. Did Mr. Allen ever see a cow from such a cross, which looked like an Ayrshire ? If so, will he be so good as to inform us where, that we may have an opportunity of judging for ourselves, or will he be kind enough to give us some good evidence of the fact ? for I think we require something more than his mere ipse dixit, that we may go to work with some good hope of success. As the breed is now becoming "popular, and all sorts of impositions" are likely to be "practiced" on it, we ought to be very cautious in believing assertions, even from high authority, if not backed up with evidence: we have had too much quackery already in many things. Will Mr. Allen "stake his reputation as a breeder and his judgment as a man," that the Ayrshires are a cross at all ? Or if so, will he risk the same stake, and inform us what that cross is ? so that we may have the Yankee privilege of guessing for ourselves whether the same blood now flows in the veins of the "best native milkers" and Durham bulls that flowed in the veins of the cross from which the Ayrshires were produced, (if produced from any cross,) so that we may expect like causes to produce like effects. I have just returned from "personally perambulating" a portion of the States and Canada, to the extent of nearly three thousand miles, and have seen some of the "best" herds of cattle in the country through which I passed, both of native and imported stock of different breeds; I have also seen crosses of Durham bulls on native cows, and of Ayrshire bulls on native, half blood Durham, and Canadian cows; and I think that a cross from the latter bull would be more likely to resemble the Ayrshires than that of the former, and would, I think, be the likeliest way of "making" Ayrshires, if there is any truth in the doctrine that like produces like. (Has Mr. Allen found out a better way ?) Now I will "stake my judgment as a man," having seen hundreds of the pure breed in their native country, that, if Mr. Allen would present even the most favorable of these crosses before the good people of Ayrshire, and call them by their name, that they would be as ready to scout the idea, and perhaps consider it as great an imposition and insult, as the people of Berkshire would that of the "white, black, blue, gray, and all sorts of colored pigs," being called by theirs, and would, if asked the question, "what do you call them ?" be as much puzzled to find a name, and as likely to give the same answer, viz: "we don't know—they are not our sort."

It is no doubt presumption in a humble individual, whose name is scarcely known to my next neighbor, to dare to doubt or boggle in any way at the assertions of one who I suppose is considered first rate authority in such matters; but such men are able to do the greatest amount of evil, either from error of judgment or some other cause, as people are seldom deceived by those in whom they place little or no confidence, and of course are on their guard against "imposition;" and as I happen to know a little about Ayrshires, I think I am Yankee enough to guess that they cannot be made in the way that Mr. Allen asserts; but if he can prove it, I shall acknowledge my error. ALEXR. BICKETT.

Lowell, Mass., Jan. 1, 1842.

VERMONT AHEAD IN AGRICULTURE.

MESSRS. GAYLORD & TUCKER—In looking very attentively at a map of the whole territory of the United States, we may discover, away up in a cold corner, the outlines of a state which occupies but a small portion of the paper, with mountainous pictures that nearly fill the whole boundary, which a Frenchman would tell you was *Vert Montagne*, (Green Mountains.)

According to the late census of the agricultural products of the Union, Vermont takes the lead in producing many of the most important articles of consumption and export. If we take into consideration her size and population, she enumerates the most sheep—produces the most pounds of wool—tons of hay—pounds of maple sugar—bushels of patatoes—the greatest value of products of the dairy—and value of products of the orchard. In ratio of population, Vermont beats all her sister New England states, in raising the most bushels of wheat and oats—the greatest number of horses, neat cattle, and swine—and is next to the head in producing corn, rye, buckwheat, poultry, and silk cocoons.

In making an estimate of the money value of the agricultural industry of the several states of the Union, including all their productions, compared to the population of each state, it appears that Vermont produces in value $148 to every inhabitant, and but three other states produce more than $100 to each head of population, viz: Mississippi $111, Arkansas $108, and Louisiana $106. The average products of all the states is $77 50 per head.

Vermont takes the lead, and must certainly be considered the most enterprising, industrious, and thrifty agricultural state in the Union.

Previous to 1838, many of our smart, able, and enterprising inhabitants emigrated west, to the "lands flowing with milk and honey," yet there still appears to be remaining in "the land of steady habits" many industrious sons. Is this the secret why the state should be free from debt, and sustain a sound currency ? Perchance it might have been still better for us and the whole Union, if many other states had early taken pattern from industrious Vermont. "A word to the *wise* is sufficient."

TO PRESERVE TIMBER.

I am satisfied that if timber be impregnated by a solution of blue vitriol in water, it will preserve it for a great length of time. I have received this impression from the fact, by an experiment on basswood, which is a very light, soft wood, of a pale color, and one of the first and most noted kinds of wood to be subject to early decay with us. It is of no value for timber, if exposed to dampness.

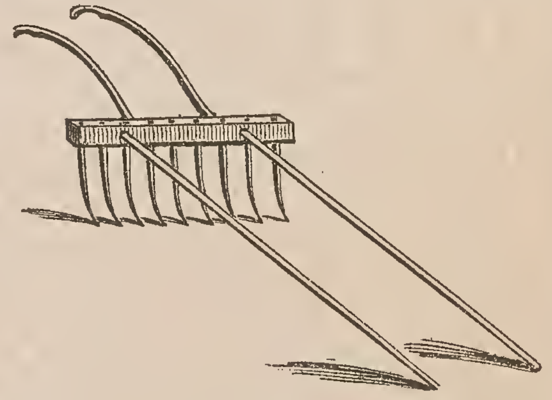
Seven years since, we cut a green basswood, and took therefrom a log eight feet long, one-half of which was grooved out and converted into a trough. It may be interesting to some of your readers to state the use to which this trough was converted. After being partly buried in the ground, with the bark on, boards were fastened up at each side of it, one end of which entered a small enclosure for sheep; flocks that were infected with the foot-rot were obliged to pass out through this trough, in which we constantly kept about two inches of warm vitriol water, at the time of using.

Last season we had occasion to remove this trough, which was supposed to be wholly decayed; but to our surprise, on examination, we found it to be as sound in every part as when laid down. On splitting, its adhesiveness proved very firm, and it had acquired nearly the solidity of rock maple. This wood had remained on the ground seven years, where it was always subject to wet and dry; on examining other portions of this tree, they were, as expected, most wholly decayed.

I have no doubt but this solution may be profitably used to preserve many kinds of timber that are subject to the moisture of the earth, or exposed to wet or damp stagnated air, like the dry rot, which is a disease very incident to the best kinds of building timber, such as flooring boards, and is very destructive to vessels. I presume this solution may be infused into living timber by a very simple process, the invention of which was discovered by Dr. Bouchery, for which recourse is had to no other force than capillary attraction, by which trees take up their sap—a notice of which may be found in the last volume of the Cultivator. S. W. JEWETT.

Middlebury, Vt., Dec. 28, 1841.

A STONE SCRAPER. —(Fig. 13.)



MESSRS. GAYLORD & TUCKER—In the construction of turnpikes, when first introduced into the United States, the usual plan was to form beds of large stones, and on the tops thereof to break smaller ones, to the depth of six or ten inches. By the passage of heavy burden wagons, it was found that the large stones became loosened, and the smaller ones working under, caused them to rise to the surface, thus injuring the face of the road.

The publication of a treatise on Road Making by Mr. McAdam of England, entirely changed the former system. He dispensed with the beds of large stones, and recommended breaking the whole to an uniform size—say four ounces, at the road side, and thence scattered on to the road with shovels. This plan, though tedious, has continued for years. In the repairs of the National road, my attention was drawn, a few days since, to a simple and rudely constructed machine for putting on the small stones from the road side, as a substitute for the shovel; and as it evidently answered a good purpose, and a great saving of labor, I am induced to give you a description and rough drawing of the machine. The person using it told me the usual quantity put on by a man in one day on the old plan, was ten perches, and that with this machine a horse and man, in the same time, could put on one hundred perches.

A piece of tough hewn scantling, three feet long, six inches square, into which are inserted iron teeth of 1 1-4 inch square bar, two feet long in the clear, bent and pointed as represented in the cut. Strong handles are attached to the scantling behind, and a pair of shafts before. When operating with it, the driver bears heavily on the handles, to prevent the machine from bouncing from its hold. JAMES L. BOWMAN.

Brownsville, Pa., Dec. 21, 1841.

TRAVELING MEMORANDA—No. 7.

Editors of Cultivator—On the 13th of November, I brought my long agricultural tour to a close, in that most pleasant of all other places, to the fond husband and father, HOME. It will be gratifying to you, and a great number of your readers, I am well assured by the kind treatment I met with among them, to learn that I reached my "home in the west" in safety, and found my family in health and comfort.

You are aware that it was my intention again to leave home about this time, to attend the first meeting of the National Agricultural Society at Washington, on the 15th of this month. But circumstances beyond my control, one of which is a severe cold, contracted during my tempestuous voyage round the lakes, have induced me reluctantly to forego this duty and pleasure—that is, the pleasure of the hope of doing good, which would have overbalanced all the fatigue of a winter journey, if my health had been such that I had dared risk the undertaking.

My tour through the United States forms an era in my life that I may reflect upon during the remainder of my time, with more interest than I can upon any other period of my life. It has given me the strongest assurance that a spirit has been awakened throughout the country, within a few years past, that is calculated to do more good than all the political vagaries which have of late agitated the world.

The inquiry is in every man's mouth, "what shall be done to improve the agricultural interest of the country?" The extensive and increasing circulation of agricultural papers, the increasing interest in attendance upon the fairs of agricultural societies, all speak well for the cause of the farming interest, the first and best interest of this at present great, and to be greater, agricultural country. I have been made aware that great good could be accomplished by public spirited individuals traveling as I have done through the country, stirring up and awakening the lethargic feeling of the farmers, and urging them to arouse themselves to take the stand in the first rank of society, that their occupation entitles them to hold. The prejudice against "book farming" is fast giving way to a growing anxiety after scientific knowledge, as applicable to the cultivating the soil.

I have been astonished at the interest manifested to become acquainted with one who had no claims to notice except as an agricultural writer; and proud as I may justly feel of the honors heaped upon me wherever I went, I am only proud on account of the convincing proof it gives me of the noble disposition of my countrymen to honor those who are devoted to the object, and who ardently desire to see improvement in the bulwarks of society, rapidly increasing.

Rapid increase of wealth, in speculation or stock jobbing, does not always indicate the best state of morals in society. But show me a community rapidly increasing in wealth by improvement in agricultural pursuits, and I will insure you that the morals of that community are in a healthy state.

But I forget that my moralizing does not continue my journey, and that there are sundry small items in my note book, that may be more interesting to your readers than my present writing.

My letters which you have published have been dated at various points on the road, but as I have progressed more rapidly in my traveling than in my writing, I must now make up lost time at home. As I passed along, I saw so much to interest me, that my letters unavoidably run into particulars, perhaps tediously lengthy.

My last, I believe, was from Baltimore. From thence I took the Philadelphia rail road, which passes over a great deal of poor, level country, and an uncommon number of long bridges. At Wilmington, I visited Dr. Lockwood and Dr. J. W. Thompson, two prominent friends of agriculture, as I find to be more often the case among physicians than any other profession.

Dr. Thompson is President of the Agricultural Society, and to his energetic exertions, in a considerable degree, may be attributed the great good that has been effected by this society. The power of one man to accomplish wonders is indeed wonderful. By the judicious use of manure, marl, and lime, the poor worn out farms of this part of Delaware have been doubled in value within a few years past, and now show a state of fertility that was considered impossible for them ever again to attain, after having been "skinned" for more than a hundred years.

I visited one of Dr. Thompson's farms, upon which I saw a peach orchard of an hundred and fifty acres. He also keeps one hundred cows, for the purpose of raising calves for the Philadelphia market. As soon as one calf is taken off, another, which is purchased for the purpose, is put on. Some of the cows had two calves, and some calves had two cows. This way of using milk he finds very profitable.

While viewing his peach orchard, I learned a fact well worth the attention of all peach growers. Let the trees branch as much as possible from the ground, and never cut off a limb that is broken down by an overload of fruit. If it hangs on by wood enough to keep it alive, let it lay, and it will sprout up next year most luxuriantly, and then produce the finest kind of peaches. The ground between the trees is kept well plowed.

Around Wilmington there is a good deal of thorn hedge, but it does not generally look flourishing. But the general state of agriculture does, as I was still more convinced by what I subsequently witnessed at the Fair of the Agricultural and Horticultural Societies, which I attended on the 15th of September. At this fair, I saw Mr. Canby's celebrated Durham cow, Blossom, that gave 36 quarts of milk a day, and 17 lbs. of butter a week. Although a fine looking cow, I have seen many others that, for appearance only, would take the premium. There was also exhibited a common cow, and a very ordinary looking one too, that afforded 15 lbs. of butter a week.

As an evidence of the flourishing condition of this Society, I will mention that they have a considerable fund on hand, out of which their annual dinner is provided, free for all members and invited guests, among whom I had the honor to enjoy one of the most agreeable public dinners that I have ever partaken of. And the pleasure was not a little heightened by the presence of the lovely goddess of Temperance.

I saw here the sample of sugar made from corn stalks, and became acquainted with the manufacturer, and heard him describe the process, of which much has been published of late. I am inclined to think that this is not all humbug. Should it be found successful on further experiment, the advantage to the west will prove incalculable; for here the corn can be sown broad-cast, upon cheap land, easily cultivated without manure, and yet produce a great crop.

It was painful to me that I had no spare time to spend with the numerous interesting acquaintances that I made here.

I left this delightful town the next morning after the fair, in company with several gentlemen who formed a delegation from the Philadelphia Society, to interchange civilities with their Delaware friends. This is exactly as it should be: it keeps up friendly social intercourse, and tends to increase knowledge and happiness. The visits, too, of distinguished strangers, at such a time, serves as a most valuable stimulant to incite praiseworthy exertions. This is a matter well worthy the attention of all agricultural societies. Send delegations to visit one another.

While in Philadelphia, I met with our mutual friend, C. N. Bement, and with him visited several places of interest, including the Wilmington Fair. We also visited Westchester, and enjoyed the hospitality of Dr. Darlington, known as one of the most scientific writers on agriculture. We also visited Paschal Morris' and Joseph Cope's farms, as well as many other of the highly cultivated farms of the Brandywine hills.

Mr. Cope is known as an importer of Durham stock and South Down sheep, a beautiful lot of which he had on hand. I look upon this as the best breed of sheep for general use in the country. Those desirous of purchasing, may depend upon the genuine article from Mr. Cope.

Mr. Morris is a large breeder of Durhams. We saw here a horse power churn, which makes 100 lbs. of butter at one operation. The apparatus is simple and cheap. Any person desirous of obtaining information about it, will find by making application to Mr. M., that he is a "gentleman farmer"—which means a man of intelligence, and who is always ready to devote his time and abilities to the promotion of improvement among his brethren.

I wish he would also publish a description, and his opinion, of a wheat sowing machine that we saw at his farm.

At one of the farms which we visited, I was struck with the appearance of a fine lot of fat oxen, fed entirely upon grass, which is one of the most luxuriant and profitable crops that grow upon these hills. These oxen are driven, while lean, from the north part of Ohio, and no doubt many of them had while young been driven from the interior of Indiana or Illinois to Ohio, there used for work while in their prime, and then driven to Pennsylvania to eat up the surplus grass, and in turn to be eaten up by the surplus population of Philadelphia.

At the same farm, I saw a very simple and cheap apparatus that forces water forty or fifty rods, up a steep hill, to the house and barn. A lever, about twenty feet long, with a weight at one end and a water box at the other, is hung in the stream, and covered over with a roof, around which, in winter time, straw is placed to prevent freezing. While the end of the lever upon which is the box, is up, a stream of water runs in, and the weight of that overbalances the weighted end of the lever, and down goes the box, striking a pin in its descent that opens a valve and lets out the water, when up it comes for a new supply, each movement of the lever making a stroke of a force pump that sends the water in one perpetual, never tiring stream up the hill.

Instead of feeling as though we were troublesome visitors, seeking our own gratification, we were everywhere made to feel more like one affectionate brother visiting another. We were assured that our hosts rather considered it an honor than a burthen to entertain us. Oh! how I wish agricultural brethren would extend the custom of visiting one another. Much good and much pleasure would come of it.

After our return to Philadelphia, we went, in company with the excellent editor of the Farmers' Cabinet, a short trip into New Jersey, and at the farm of Mr. Edward Tonkin, about fourteen miles from Camden, saw some of the finest specimens of fat Durham oxen, I venture to say, in the United States. Mr. T. is a large breeder of Durhams, and has done what but few breeders would do, that is, to alter some of his best bull calves for the purpose of showing what can be done with this breed of cattle for beef. He also has one spayed heifer. These beeves are now about five years old, and it was the opinion of several gentlemen present that the largest ox would weigh 3,000 pounds. They are to be fed another year. Taken together, they are one of the most beautiful shows of fat cattle I ever saw.

On our return, we visited the old "Haddonfield house," built of bricks and timber imported from England. We now look upon the importation of bricks as ridiculous. When shall we get our eyes open wide enough to see that many of our present importations are more ridiculous, and more detrimental to the best interests of the country?

This house, still in a good state of preservation, is owned by a gentleman by the name of Wood, who owns "*those* chickens" that can eat corn off of a flour barrel standing on end. They are tall subjects.

I was surprised to learn that in this state, so celebrated for peaches, the trees have entirely failed. New Jersey peaches are now no more.

And now, my dear readers, if you are as tired of reading as I am of writing, you will be glad that I come here to an abrupt close—promising, however, that you shall again hear from your old friend,

Solon Robinson.

Lake C. H., Ia., Dec. 1841.

ON THE CULTURE OF POTATOES.

Messrs. Gaylord & Tucker—I have long been satisfied that in planting potatoes, farmers have been in the habit of using too much seed, and have for several years planted all mine with from three to six eyes in a hill. I one year planted three acres with twenty-five bushels; two feet and nine inches apart each way, commencing with one bushel of whole potatoes; after which I planted about one-third of the piece with three eyes in a hill, and the remainder four; and have for my own satisfaction, at other times, planted whole large potatoes adjoining those planted with three or four eyes, but was not so particular as to count and weigh the different products, till the last season—satisfying myself with measuring in a basket, rows of equal length, it not occurring to me that there was any difference in the number of potatoes. The last season, I determined to be more particular, and now send you the result for publication. I am aware that a difference in the soil, season, or in the varieties planted, or some other cause, may vary the result; yet I am satisfied that with pinkeyes, four eyes are sufficient for a hill, and as that is the only variety I cultivate, I know not but it may be different with others. Owing to the severe drouth of last season, my crop was light, yet I think that would not materially affect the experiment. I planted different quantities of seed, which I shall distinguish by numbering the rows. They were planted across the rows of manure, so as to make them equal, and when I harvested them, I selected twenty hills from each number, their chances equal in all respects, as far as I could determine, and counted and weighed the product.

No. 1—All large potatoes, had in number ···	368,	wt. 40 1-4	lbs.
No. 2—6 eyes in hill, cut from large potatoes,	292	" 39 1-4	"
No. 3—4 " " "	220	" 44 3-4	"
No. 4—2 " " "	230	" 45	"
No. 5—All small whole potatoes, ···········	260	" 45 1-4	"
No. 6—6 eyes, cut from small potatoes, ·····	262	" 41 1-4	"
No. 7—4 " " " ·····	270	" 49 1-4	"

I consider the difference in the product of the last three numbers of little consequence, as it might have been accidental, the small potatoes having but about six eyes each; though if it proves any thing, it is, that four eyes are better than six, and that small ones are better than large; but with the large ones the result is very different in the number of potatoes produced, No. 1 having 148 more than No. 3, and weighing 4 1-2 pounds less. That, I think, accounts for the objection so many make to raising pinkeyes, on account of their producing so many small ones, the whole potatoe making altogether too much seed, for they have more eyes than any of the common varieties, large ones having from fifteen to twenty each. In some of the hills I planted with large ones last season, I counted thirteen stalks.

No. 4 is the first experiment I ever made with two eyes in a hill, never supposing them sufficient; still the product is better than the average, and it is not improbable that further experiments may prove that quantity of seed the most economical. I trust this subject will attract the attention of some of your readers, and that they will try the experiment for their own satisfaction, and publish the result for the benefit of others, so that if my conclusion prove correct, others may be induced to depart from the practice of their fathers, so far as to profit by it. Yours, respectfully,

Daniel J. Curtis.

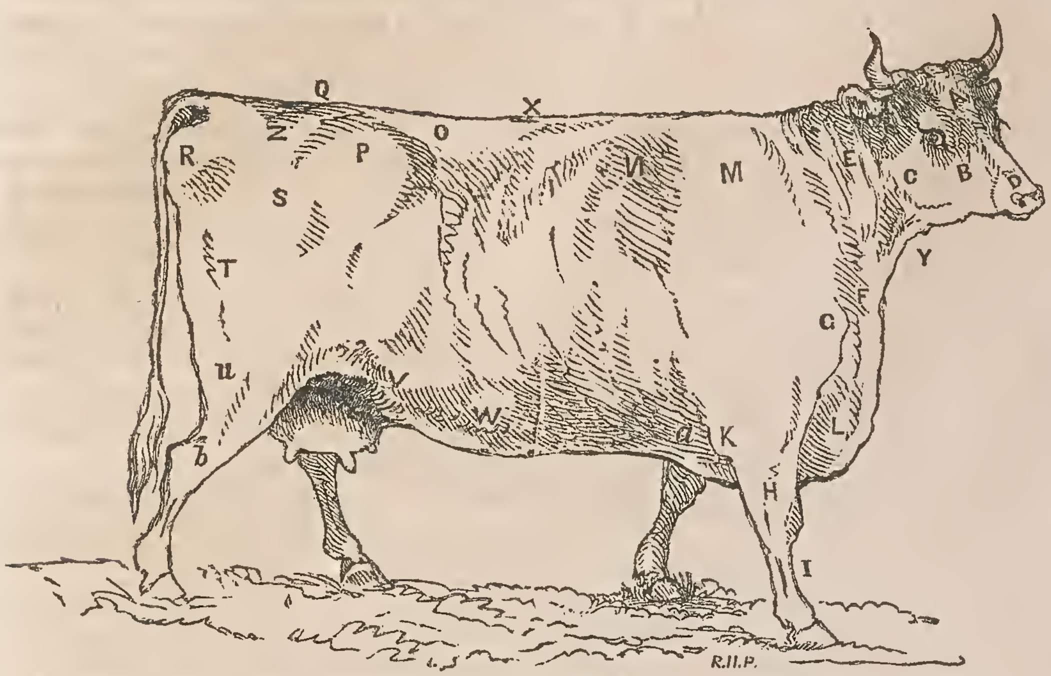
Canaan Centre, N. Y., Dec. 8, 1841.

LARGE EARS AND CROP OF CORN.

Messrs. Editors—I have two ears of corn in my possession which it would do you good to see. They were raised upon the farm of Mr. George Shuman of this county. They are of the gourd seed species, one yellow and the other white. The white ear measures fourteen inches in length and ten and a half in the middle in circumference; is eighteen rowed, and contains, on actual count, 1,185 sound grains. The yellow ear, fourteen and a half inches in length, fourteen rowed, eight and three-fourth inches in circumference, and has, on count, 988 grains. The soil is a sandy loam, and Mr. Shuman thinks will yield him 100 bushels shelled corn per acre.

John Huggins

Liverpool, Perry Co., Pa., Jan. 1, 1842.



EXPLANATION.

A—Forehead.
B—Face.
C—Cheek.
D—Muzzle.
E—Neck.
F—Neck vein.
G—Shoulder point.
H—Arm.
I—Shank.
K—Elbow.
L—Brisket, bosom, or breast.
M—Shoulder.
N—Crops.
O—Loin.
P—Hip, hucks, hocks, or huckles
Q—Crupper bone, or sacrum.
R—Rump, or pin bone.
S—Round bone, thurl or whirl.
T—Buttock.
U—Thigh, or gaskit.
V—Flank.
W—Plates.
X—Back, or chine.
Y—Throat.
Z—Hind quarter.
a—Chest.
b—Gambril or hock.

Messrs. Gaylord & Tucker—In compliance with your request, I have outlined and lettered the figure of an animal, for the convenience of those who may be at some loss as to the whereabouts of certain points and parts frequently alluded to under terms which, it seems, are not always familiar to some of your readers.

I am aware that it is a meagre reply to your correspondent's inquiry; but the fear of missing an opportunity by which I hope to forward the block, must be my apology. Yours, &c.,

Francis Rotch.

Butternuts, Otsego Co., N. Y., Dec. 1841.

FARM REPORT.

Messrs. Gaylord & Tucker—After reading the statements of several farmers in Hartford county, Ct., in the January number of the Cultivator, I concluded to give you an account of the income of my farm. I cannot give you an account of the current year, for my crops are not all sold. I will give you an account of the year ending in July, 1841. This statement is for cash received for the produce raised on the farm, not including what was consumed by a family of six persons. I will offset that against my labor, for I "either hold the plow or drive." My farm contains eighty-five acres, including ten acres of wood land: it is divided into fifteen lots, fenced with stone wall. I keep three cows, two pair of oxen, a pair of horses, and three or four small cattle. I do not keep any account of the butter made from the cows; that is consumed or disposed of by my family. About the 20th May, I commence mowing my door yard, (which contains two acres,) for my oxen and horses, and it keeps them well until after harvest, when I turn them to pasture. In this statement, I have given the average price I received for the articles. The hay brought me from $10 to $15 the ton; the potatoes 31 cents to 40 cents the bushel; apples from $1 to $2 the barrel, &c. I have omitted the fractions, for the sake of brevity.

RECEIPTS.

Sold 26 tons of hay, at $12,	$312
820 bushels of potatoes, at 35 cents,	287
135 barrels of apples, $1 50,	202
414 bushels of cider apples, at 10 cents,	41
491 " oats, at 44 cents,	216
2,350 lbs. pork, at 6 cents,	141
95 bushels of corn, at 69 cents,	65
36 " rye, at 75 cents,	27
3 calves,	12
Poultry,	10
	$1,408

EXPENSES.

Paid for labor,	$262	
" manure,	110	
" lime,	26	
" gypsum,	10	
" salt, for an experiment,	10	
" grass seed,	27	
		$445
Profit,		$963

Yours, &c. Tyler Fountain.

Peekskill, N. Y., January, 1842.

CULTURE OF INDIAN CORN, RUTA BAGAS, &c.

Messrs. Gaylord & Tucker—I have raised the greatest crop of Indian corn this year that I ever raised. The corn was very thick on the ground, and almost every stalk had an ear, very many two, and some three. I had between four and five acres, the half on stalk land, which looked as well as that on sod, until the dry weather came on. It had no manure this season, and was not near as good as the sod of course, but had over eighty bushels. On the sod, had over one hundred and thirty; and to my great astonishment, one acre had one hundred and forty-four bushels. I thought my men must have been mistaken in the measurement, and had them measure it all over the second time. The result was one hundred and sixty-nine and a half baskets, holdding near one and three-fourths bushels.

My ruta bagas have been better, much better than last year, but not over half a crop—five hundred and fifty-six bushels.

My sugar beets did remarkably well until the drouth, when they were attacked by some kind of fly, which deposited its eggs on the leaves, which soon hatched, producing a worm about one-fourth of an inch long, of a streaked yellow and black color, which commenced eating them off. This worm disappeared about the last of August, when the beets took another start, and yielded about what I consider half a crop—552 3-4 bushels on an exact acre—the same land that I attempted to raise ruta bagas on last year, manured again, with 20 loads. I am not discouraged yet with the sugar beet, for I consider them the best crop for cattle that I raise. I last winter fed sixteen head of young cattle, (two year olds,) only 1 1-2 bushels of beets per day, thrown out in the yard, where they had a stack of straw to go to, which I kept renewing, so that they had plenty of that, and nothing else save the beets through the whole winter, only as they might by chance once in a while get a mouthful of hay or stalks, when they were let out to drink, which the cows and sheep had left; and I certainly never saw any cattle feel better and look more healthy than they did in the spring. They would fight and play like the best of fat steers, and are now fat on grass. I think that some gentlemen expect too much from beets or other roots; they think to fat cattle, hogs, &c. on them as on corn, and because they are disappointed, they call sugar beets, &c. worthless. I think that beets or ruta bagas, given to cattle with a small quantity of meal, is excellent feed for fattening them, and for hogs, cooked and thickened with meal, so as to make a beet pudding, fats my pork well. They are admirably adapted to the health of my flocks, and I consider an acre of beets, when a good yield, equal to four acres at least of good meadow, for wintering my stock, particularly milch cows.

I had ninety-three bushels of Mercer potatoes from one-fourth of an acre, while on the same quantity of land, had but half as many pinkeyes. I suppose it was because the Mercers had come to maturity before the drouth affected them, being earlier. J. F. Osborn.

Port Byron, N. Y., January, 1842.

SALE OF CREAM POT CATTLE.

Messrs. Gaylord & Tucker—I attended the late sale of Col. Jaques' herd of the celebrated "Cream Pot Cattle," which took place at the "Ten Hills Stock Farm," Charlestown, Mass., on the 11th inst. The weather was cold, raw, and unpleasant, which probably had the effect to dampen the feelings of those who attended for the purpose of making purchases. Consequently, the sale went off dull and languid, and very little competition or spirit was manifested on the occasion.

From the celebrity which these cattle had obtained for their *rich milking* or *butteraceous* qualities, and from the fact of their being of a *rich red color,* most desired by our eastern and northern farmers, I had every reason to expect a large concourse on the ground, ready and willing to patronise one who has labored so long and so ardently and so *enthusiastically* to establish "a breed that would transmit the properties most desired for the dairy, the shambles, the yoke, &c." How far the Col. has been remunerated, the auctioneer's hammer has testified.

In the catalogue, it is asserted that this breed of cattle "are pronounced, by the best judges in this country, equal, if not superior, to any known." Where were all these "best judges" on this occasion? Why have they kept back? Why have they not come forward, and shown, by their *deeds,* a willingness to substantiate their assertions, and patronise this effort of an individual "to rear a race of animals combining, in a great degree, all these properties"—the dairy, the shambles, and the yoke? "Tell it not in Gath! publish it not in the streets of Askelon!" that this celebrated herd of Cream Pot cattle was struck off to the highest bidder, at an average of thirty-two dollars per head!!

It was asserted on the ground at the sale, that $500 had been offered and refused for the cow, "Betty;" and this, too, was the famous cow that had produced the extraordinary rich milk, the cream of which has been converted into butter in the twinkling of an eye, or forty seconds.

The cows were clean and in good condition, and certainly looked well for their keeping, which was said to be "nothing but hay." Their hair was sleek and glossy, skin loose and elastic, which was evidence of good health and condition. I regret I cannot say as much of the bulls and calves. With one or two exceptions, they were not in such condition as I expected to find them, and which operated in my opinion very much to depress the prices to so low a figure.

"Don" and "Gem" appeared to be the Colonel's favorites, and well they might be, for they were noble animals, and far superior, in my humble opinion, to any of the others—they were Durhams, in red coats. In form and general appearance, as compared with the native cattle of the country, they were certainly much superior; still I must beg leave to differ in opinion with my valued friend, A. B. Allen, that they were "good Ayrshires," although they were a cross of the Durhams on native stock.

The Colonel certainly deserves great credit, to say the least, for making this *attempt* to rear a race of cattle, combining those much desired qualities, "the dairy, the shambles, and the yoke;" and I could not help sympathizing with him, for he appeared dejected and disappointed on witnessing his favorite cattle sacrificed, his hopes blighted, and his darling project frustrated.

C. N. Bement.

Three Hills Farm, January 4, 1842.

CULTURE OF INDIAN CORN.

Messrs. Gaylord & Tucker—Permit me to give you a statement of the management and produce of one acre of land: it was pasture, which had laid two or three years, manured and plowed in the month of November, harrowed in the spring, and plowed three times; planted with corn about the 20th of May; rows about three and a half feet apart; two grains in a hill, about one foot apart.

EXPENSE OF CULTIVATING.

Manure, about	$10 00	
Plowing first time,	2 00	
Plowing three times, and harrowing,	6 00	
Planting,	1 50	
Hoeing three times,	6 00	
Cutting up and husking,	8 50	
		$34 00

PRODUCE.

185 bushels of ears of corn, at 25 cents per bushel,	$46 25
Stalks, about	15 00
	$61 25

The corn is of first rate quality, weighing nearly 60 lbs. to the bushel. It would have been a pleasure to have known how many bushels of shelled corn there would have been; but as I have adopted the principle of feeding out grain, rather than disposing of it to be made into whiskey, I have had some of it ground with the cob, being more economical. A. W. Nurse.

Cazenovia, N. Y., Jan. 1, 1842.

WEIGHT OF FIVE PIGS.

Editors of the Cultivator—I herewith enclose the weight of five pigs of one litter, which I killed on the 13th inst. They were from a Chester county sow, by James Thornton's (of Byberry) celebrated Berkshire boar, and were pigged the 23d day of 5th mo., which makes them exactly twenty-nine weeks old. Even at the extremely low price of pork at present in our market, I would be amply repaid for all the grain they have consumed, being considerably less than fifty bushels, including corn, oats, and broom corn seed.

Their weight, when dressed, was as follows:

No. 1,	244 lbs.
No. 2,	232
No. 3,	213
No. 4,	182 3-4
No. 5,	177
	1,048 3-4

Making the average of 209 3-4 lbs.

Yours, &c. Wm. H. Howell.

Sunny Side Farm, Montgomery Co., Pa., 12th mo., 1841.

IMPROVEMENT IN SHINGLING.

Messrs. Gaylord & Tucker—Some months ago, one of your correspondents recommended, as a means of increasing the durability of oak shingles, the dipping the point of the nail in white lead, ground in oil; but a method of putting on oak shingles, commonly called lap shingles, has been adopted by some of our neighbors, which they think superior to all others. The shingles are placed in the same manner that lap shingles usually are, but instead of driving the nail in the butt, it is driven in the middle of the shingle, so that the butt of the next shingle covers the head of the nail, and protects it, and the wood round it, from the weather. Some may think the butt of the shingle will rise with the action of the sun; but if it should, it will still be fast in the middle, and will come down again in wet weather; the nail head being protected from wet, the wood will not rot round it, and it will remain firm as long as the shingle lasts, while those nailed at the butt are liable either to draw out the nail, or the nail head draws through, thus leaving the shingle loose. A saving of expense is also effected by the proposed method, as smaller nails will answer to nail the shingle in the middle. J. B.

Brownsville, Pa., 12th mo. 30, 1841.

The Garden and the Orchard.

ORNAMENTAL TREES AND SHRUBS.

Editors of the Cultivator—I propose to give you a list of some of our most common ornamental trees and shrubs, suitable for the plan I gave in the last No. of the Cultivator. I freely confess that my knowledge of them and their culture is too limited to do the subject justice, but an imperfect attempt may be useful.

The object, of course, of ornamental planting, is to render home delightful; and whatever contributes to this object the most effectually, more especially during this dreary season, stands first in importance.

Shrubs and trees are rendered ornamental in winter, by their branches or bark, by their berries, and by evergreen leaves. Among the first, may be named,

The *red dogwood, (Comus alba,)* sometimes called red willow, which has bright red stems and branches, and which, if they grow densely, are quite showy in winter and early spring. They vary much, however, in brightness, and the very best only should be selected for transplanting. Though growing naturally in swamps, this shrub succeeds well on common rich soil, when removed. It is seven or eight feet high.

The *striped maple* is admired for its beautifully striated bark; ten to twenty feet high.

The *golden ash* is rendered ornamental by its fine yellow bark. It grows thirty feet high.

The *white birch* is distinguished by the silvery color of its trunk and larger branches, and attains the height of thirty or forty feet.

In planting these, they should as far as practicable be so placed as to be rendered conspicuous by objects beyond; as, for instance, the red dogwood and golden ash should be relieved by a white building when seen from the walk, and the birch by a dark colored building, (as brick,) or by dark evergreens.

Among some of the finest ornamental *berry-bearing* trees and shrubs, are,

The *mountain ash,* rendered elegant and remarkably beautiful in winter, by its large, pendant clusters of orange-scarlet berries. The large fruited American species is decidedly the finest for richness of appearance.

The *bush cranberry, (Viburnum oxycocus,)* which is common in swamps, is much improved by removal and culture, and succeeds well, if placed in a dug bed, filled with muck, where it often bears red clusters of fruit, six inches in diameter, which retain all their brightness till spring.

The *barberry* is eminently beautiful, from its delicate racemes of red fruit.

Several species of *thorn* are quite showy, from the scarlet color of their berries. Some varieties of the most common native, *(Cratægus punctata,)* and the large scarlet, *(C. coccinea,)* are most conspicuous. The evergreen *pyracantha,* if well sheltered and trained low, retains its fruit and foliage through winter. If planted beneath the shelter of taller evergreens, it would doubtless succeed best, and would add much in appearance to the shrubbery. All these are either small trees or shrubs.

The finest situation for the above, is near dark evergreens, where the bright crimson and scarlet clusters will most strikingly contrast with the dark rich green of the trees behind.

None of our deciduous trees, (except such as the above, and a few early flowering,) are a source of much beauty, unless in foliage; this is rarely the case for more than five months in the whole twelve. It is in this respect that evergreens possess such eminent superiority. Where a dwelling is surrounded by them, and the view at a distance is shut out—except when that distant view may be worth preserving,—and especially where they enter largely into the formation of the outer border of the surrounding grounds, their cheering effect, during the bleak winter months, is indescribable. Spring flowers, planted beneath their shelter, would bloom much earlier; and many plants, otherwise too tender for the open air, would thus survive the winter unhurt. Plantations of evergreens would also greatly diminish the severity of cold winds in bleak situations. It is familiar to many that a house, well sheltered by woods, requires the consumption of scarcely one-half the fuel for warming it, as one much exposed. Evergreens would produce the same effect, and in this point of view be highly economical.

The *white pine, (Pinus strobus,)* is decidedly the finest tree of the genus indigenous to the northern States. The lively green of its rich, silky plumes, renders it strikingly ornamental. The *pitch pine, (P. rigida,)* though less graceful and of stiffer appearance, when its growth is dense, is exceedingly fine and beautiful, and is well worthy of a place in every plantation of trees.

The *balsam fir, (P. balsamea,)* although like most of the sub-genus Abies, of more symmetrical regularity than picturesque expression, is scarcely inferior in beauty to any evergreen, except the *silver fir*. The silvery white surface of its leaves below, and the clear green above, give a liveliness to its appearance which few others possess.

The European *silver fir*, *(P. picea,)* strongly resembles the balsam fir, but is a larger tree, and has much larger foliage, which, superadded to the fine qualities of the latter, render it eminently worthy of a place in all ornamental grounds.

The white spruce, *(P. alba,)* and black spruce, *(P. nigra,)* are handsome trees. The former is much improved by thrifty growth in rich soil, and its light green color contrasts finely with the dark hue of the latter.

The hemlock, *(P. canadensis,)* from its great abundance, is much underrated as an ornamental tree, but the color, denseness, and graceful freedom of its foliage, when growing well in open grounds, and not overshadowed by other trees, place it conspicuously among our spruces. Of course this will not be admitted by those whose prejudices impel them to denounce whatever is *common;* but the intrinsic beauty of the works of creation is not affected by prejudice.

The *Norway fir, (P. communis,)* though of less lively color in its foliage than most others, excels them in the graceful pendant sweep of its branches, and as a fine evergreen is scarcely inferior to any, and superior to most. Its growth is perfectly straight, and its form symmetrical, and as a single tree, to stand alone, is exceedingly beautiful.

The *American arbor vitæ,* or white cedar, *(Thuja occidentalis,)* is a handsome tree in winter, and being, when thrifty, of very dense growth, and also easy to transplant, it is well fitted to form ranges or hedges, for screens from severe winds. The brown hue of its foliage during winter, though an objection, may be used to advantage by mixing it with trees of livelier color, to increase the variety of expression, and avoid the uniformity too apt to appear in large plantations of evergreens. Downing says that the stem rarely measures more than ten or twelve inches in diameter, but I have frequently measured stumps of this tree three feet high, that were three feet, and some four feet in diameter.

The *red cedar, (Juniperus canadensis,)* is a fine evergreen. Though not of handsome form, the appearance of its dense masses of purple berries, partly concealed among the dark branches, give it a peculiar wildness and beauty, hard to describe. Its growth is very close and dense, and it is consequently admirably adapted for hedges.

The common *Juniper, (J. communis,)* retains a much livelier color through winter, but is of smaller size.

The *tree box,* the *English yew,* the *Chinese arbor vitæ,* the *savin,* and several others of low growth, are also deserving of attention.

Most of the preceding trees and shrubs, it will be observed, are more or less common as natives of the United States, and they may be procured and transplanted with little difficulty. Nearly all, which are deciduous, are of very easy removal; those from swamps and wet grounds, if transplanted into a dug bed of swamp muck, mostly succeed well; and if situated where they may receive the washings from higher grounds, (which will be retained by deep beds of muck through a long season of drouth,) scarcely any will fail. Many trees from swamps live, and soon become accustomed to dryer soil, if carefully removed, without this precaution.

It must be obvious to every one, that trees taken from the open ground or the outskirts of woods, are better and more easily transplanted than those growing in the midst of thick forests, where they are slender, with few branches and few roots. In the humid climate of Scotland, trees of great size have been successfully removed; but in this country, the attempt should not be made on any much more than 20 feet high at the extreme. It is often exceedingly desirable to produce an immediate effect in grounds by trees of considerable size; but the check which they receive in their growth by transplanting, is more than compensated by the increased vigor of smaller ones, when the work is done in the best manner.

Every tree whose diameter is two inches, should have the earth carefully removed from the roots to a distance of at least two and a half feet on each side, when it is taken up, and all the small roots should be carefully preserved. When set out, the hole should be of full size to receive all these roots without bending, and they should be well and carefully bedded as nearly in their natural position as possible, in finely pulverized, rich earth. I was much amused to hear a person, in pointing out the reason of the great want of success in transplanting trees in this country, describe his own mode, which he considered decidedly a superior one. He first dug a number of holes *two feet* across, then went into the woods, bent the trees over, (such as were about two inches in diameter,) hitched his oxen to the top, and cutting off two or three of the largest roots, drew the trees up, and afterwards set them out. If this was a *careful* mode, what must be the general practice?

Trees of larger size may be *prepared for removal* by digging the earth away from the roots, cutting these all off at a proper distance from the trunk, and again filling in the earth. If the soil thus removed were replaced with richer or manured soil, the effect would be better. A large number of new roots are thrown out to supply the place of those cut off, and when after a year or two the tree is removed, these roots are scarcely injured, and success rendered nearly certain.

Doing the work *well,* is always the most *economical,* as it is cheaper to dig up *ten* trees, remove them, and set them out *well,* than to transplant *thirty* in a hasty manner, and lose *twenty* of them, though the time employed on each tree may be only one-third.

Pines and other evergreens are generally regarded as of exceedingly difficult removal, and many persons are thus entirely discouraged from the attempt. But if properly managed, the difficulty vanishes. Those of smaller size, which are inured to open cultivated soil in nurseries, succeed well; but when taken from their native localities, they require peculiar treatment. As much earth as practicable should always be left on the roots, and to secure this end, it will be found that those from swamps and muck land, where the roots are more perfectly matted with the soil, will always be best, even though removed to the dryest upland. When transplanted, the roots should have a *very shallow* covering of rich earth, and be protected from the drying heat of the sun by a coating of leaves or other litter; and an occasional watering, in dry seasons, would be beneficial. This mode of treatment will apply to the white pine, the balsam fir, the white spruce, the hemlock, and many others. The arbor vitæ, (or white cedar,) when growing in swamps, usually has a dense mass of short roots near the surface, and by cutting round a single circle with a spade, it is taken up with the greatest ease, and if then set out according to the preceding mode, scarcely ever fails of success. But its removal from upland, I have found far more difficult. Some species of pine, which grow on barrens, or on sour soils,* will never grow when transplanted in land of a different quality. Success is only insured by carrying a large portion (as half a cart load,) of their own native earth with them to form a bed for their reception. J. J. T.

SELECT LIST OF FINE ROSES.

Messrs. Gaylord & Tucker—The annexed list of roses embraces a selection of good and distinct varieties, which may be depended on by those who are unacquainted with them:

MOSS ROSES.

1. White Moss, a much admired but scarce variety.
2. Perpetual White Moss, or White Mossy Four Seasons, flowers in clusters, very sweet scented, and flowers sometimes in September, but not always a second time.
3. Pompon, or Mossy de Meux, or Button Moss, flowers small, early flowering, a very desirable variety.
4. Common or Old Moss, a variety known to all.
5. Crested or Crestata Moss, a singular variety, perhaps as much admired as any of the varieties of the Moss rose.
6. Crimson or Scarlet Moss, wood and flowers darker than the Old Moss, but a freer grower, a better variety.
7. Mossy Moss, leaves and wood mossy.
8. Luxemburgh Moss, a new variety, grows very freely, the darkest flowered Moss rose we have.

WHITE ROSES.

9. Madam Hardy, said to be the finest White rose known; when first opened, a little tinged with blush. H.
10. Black Superb, a pure white rose, fine.
11. Brown's Venus, pure white, small, a scarce variety, very difficult to root.
12. Hybrid White, a good rose. H.
13. Unique, or White Unique, a well known old variety, and much admired.
14. Striped Unique, much like the white, but often has a red stripe, and sometimes the one-half of the flower red; much admired variety.

DARK ROSES.

15. George the Fourth, or Black Cabbage rose, a free grower and bloomer, one of the finest of dark roses. H.
16. Miralba, a superb dark rose, like the Tuscany in color, but much more double, and altogether a finer rose.
17. African, a good dark rose.
18. Black Iris, very dark and double, flowers small, wood slender; a dwarf grower.
19. Roi de Nigres, a fine dark rose.

MIXED COLORS.

20. Cabbage, or Cabbage Provins, a rose that will be always admired.
21. Leda, blush margined with pink.
22. London Pride, fine light rose color. H.
23. Village Maid, striped, the best striped we have.
24. Royal Greatness, deep rose color, large and double.
25. Violet Blue, a fine bluish purple.
26. Favoricus, one of the best rose colored roses.
27. La Turturelle, or Turtle Dove rose. H.
28. Pallagi, one of the finest red roses. H.
29. General Foy, or Red Cabbage rose, a fine variety.
30. Ceresette, an abundant bloomer, light rose color.
31. Belle Alliance, or Tri-color, a singular and beautiful variety, not a full double, but much admired.
32. Purple Ravelle, a half running variety, small, but an abundant bloomer; color dark.
33. Harrison rose, yellow, the best hardy yellow.
34. Austren, a single variety, one side of the petals yellow or orange, the other red; a desirable variety.
35. Double Detroit or Michigan rose, with flowers similar to the Cabbage rose, perhaps the best climbing rose.

Those marked with H. are hybrids, mostly tall growers, none of which flower well on the wood of the former year; the wood ought to be two years old to have them flower well. To have a fine and abundant bloom, the shoots ought to be thinned out, but not cut down, as is the practice of some with their roses. It is well to bend them down in the fall, and cover them with a little earth or manure, to keep them from the alternations of freezing and thawing. James Wilson.

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* Indicated generally by the growth of sorrel or broom grass, (*Andropogon.*

Domestic Economy.

UNDER this head, we propose to devote a part of the Cultivator, monthly, to a record of such articles of domestic management, cookery, &c. as may be furnished us, or may come under our notice. As the department is undertaken principally for the benefit of our numerous lady readers, we think we shall not be considered as asking too much, if we request them to aid us in making it more generally useful and acceptable, by their contributions. Our female friends who have before aided us in these matters are entitled to our thanks and those of our subscribers: we hope not only they, but others, will give this appeal a favorable consideration.

MAKING BREAD.

EVERY one imagines they know how to make bread, and almost every one can wet up flour and bake it, but it by no means follows they know how to make bread. To make good bread, good flour, good yeast, and good management are requisite. One of the simplest processes of making good bread is as follows:—To eight quarts of flour, add three ounces of salt, half a pint of yeast, (or good sweet emptings,) and three quarts of water, of a moderate temperature, and the whole being well mixed and kneaded, and set by in a proper temperature, will rise in about an hour, or perhaps a little more. It will rise better and more equally if the mass is covered. It must undergo a second kneading before it is formed into loaves for the oven. The more bread is kneaded, the better it will be. Be careful not to allow your bread to become sour in rising. Milk is by some used instead of water in mixing their bread. Milk will make white bread, but it will not be as sweet, and dries quicker than bread made with water. If loaves are slightly gashed with a knife around the edges, before they are put in the oven, cracking will be avoided in baking. From an hour to an hour and a half is required to bake bread fully.

SPONGE BREAD is made by taking three quarts of wheat flour, the same quantity of boiling water, and mixing them carefully together. When lukewarm, add a tea cup full of common, or a little less of distillery yeast, and set the mass in a warm place to rise. When light, knead in flour till it will mold well; then let it rise again, when it is to be molded into loaves, and baked.

FRENCH BREAD OR ROLLS is made by taking half a bushel of fine flour, ten eggs, a pound and a half of fresh butter, a pint of yeast, or more if not first rate, and wetting the whole mass with new milk, pretty hot. Let it lie half an hour to rise, which done, make it into loaves or rolls, and wash them over with an egg beaten with milk. In common French rolls, the eggs and the butter are not uncommonly omitted, but their addition makes the bread decidedly better.

The following bread has been found very useful for those to whom fine flour bread was injurious:—Of good wheat, ground fine but unbolted, take three quarts, one quart warm water, one gill of fresh yeast, one gill of molasses, and one tea-spoonful of sal cratus. Make two loaves, bake an hour, and cool gradually. It has sometimes been called dyspepsia bread.

No kind of bread should be put into an oven too hot, as a crust will be formed, and the proper rising prevented. Heat your oven thoroughly, but let the first flush heat pass off before your bread is put in. If you fling in a little flour, and it browns in about a minute, put in your bread; if it burns black, wait a few minutes. There is much depending in every family on the bread used, and the greatest care should be taken to have it sweet and of good quality. Bread should never be put on the table till twenty-four hours after baking, where health and economy are consulted.

MAKING MINCE PIES.

THE winter is the season for finding good mince pies on the table, and when well made, there are few things more palatable; of their conduciveness to health, we say nothing. Any kind of lean meat will make pies, but the best is neat's tongue and feet; and if these cannot be had, then beef shank. The meat must be boiled till perfectly tender, cleared from the bone and the hard or gristly parts of the meat, and chopped fine. To this must be added an equal weight of tart apples, also chopped fine. Much of the goodness of the pie will be depending on the *fineness* of the materials. Cider is good to moisten with, and sugar with a little molasses used to suit the taste. Mace, cinnamon, cloves, salt, &c. to be added at pleasure. The pies must be made on shallow plates, and baked from half to three quarters of an hour; there must be holes in the crust while baking, made by pricking or cutting, or the juices of the pie will escape.

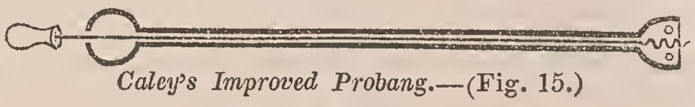
If rich pies are wanted, moisten with wine or brandy, in part, and add raisins, citron, and Zante currants, with the grated rind and juice of lemons.

It is sometimes desirable to keep some of the meat prepared for pies for use at another time, particularly among farmers who do not have ready access to markets. We have found that meat prepared as below will keep for months, in a dry, cool place, without injury. To a pound of finely chopped meat, add a little fine suet, an ounce of mace, an ounce of cinnamon, a quarter of an ounce of cloves, and two tea-spoonfuls of salt; Zante currants and seeded raisins, half a pound of each, and a quarter pound of citron to be added, if desired; half a pint of wine or brandy, three table-spoonfuls of molasses and sugar to make it quite sweet, is added. The whole is packed in a stone pot, covered with a brandied paper, or with a thin layer of molasses. To make pies of this, nothing is necessary but to add equal weights of apples, chopped fine, and perhaps more spices and sugar.

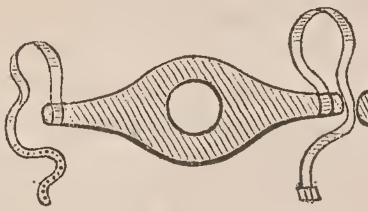
Veterinary Department.

CALEY'S IMPROVED PROBANG.

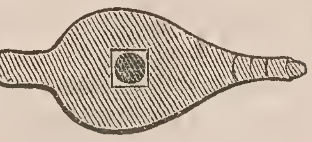
AT a meeting of the Executive Committee of the New-York State Agricultural Society, held at the city of Troy, on the 16th of June, I presented for their inspection one of "Caley's Improved Probangs." It attracted considerable attention, and was favorably noticed and recommended in their proceedings; and now, as the season has arrived for feeding cattle on roots, I have thought some account of its usefulness and structure would not be uninteresting to the readers of this paper.



Caley's Improved Probang.—(Fig. 15.)



Gag and Strap—(Fig. 16.)



Bellows—(Fig. 17.)

The Æsophagus Probang (fig. 15) is a leathern tube about 4 1-2 feet long, 1 1-2 inches in diameter, with two egg shaped bulbs, one of which is perforated with small holes, and an aperture in the end of the bulb sufficient to pass a good sized corkscrew, which is attached to a rod sufficiently long to pass the tube and fasten into the obstruction, whether an apple, potatoe, or piece of turnep. With the assistance of the rod and screw, substances can with ease be drawn out of the throat, without the least injury.

It is not uncommon, when cattle are choked with an apple or potato, to attempt to force it down with a whip stalk or stiff rope, and when it comes in contact with the obstruction, the pressure of the gas or compressed air is so great that it cannot be forced down. By using the probang and letting down the rod with the screw, and forcing the worm or screw into the potatoe or apple, and withdrawing the probang, the obstruction can be removed without difficulty. But it must be remembered, in cases where cut turneps have been fed, it is very dangerous to use much force in passing the substance into the stomach, although it is impossible to lacerate the æsophagus with passing the bulb, if it was larger; but the hard edges of the rough parts of the turnep may, by too much pressure, injure the lining of the æsophagus, which is the most tender membrane of the animal, which, if injured by improper force, the animal will never do well afterwards.

There is also a small wooden rod to put in place of the iron one, in order to stiffen the tube, by which, if the obstruction be small, it can be forced downwards into the stomach.

The common causes of hoven cattle is by eating greedily of wet grass, green clover, turnep tops, or any succulent food. The air contained in the hollow stalks expands so rapidly as to obstruct the organs of respiration, and the animal dies by suffocation, unless relieved. These facts are too well known by farmers to require any further comments from me; and during the few years' practice in breeding and feeding cattle, and witnessing the severe losses sustained by the farmers from these causes, has induced me to notice the probang made by Mr. Caley.

This instrument is equally well adapted for hoven cattle; and the bellows, (fig. 17,) which can be attached to one of the bulbs by means of a screw, acts as a stomach pump, which is intended for the relief of gripes and removing obstructions of the bowels of animals that cannot relieve themselves.

The following are his directions for using the probang in cases of hoven: as soon as the animal is discovered to be ailing, lose no time in passing the probang, with the wooden box in it; but if the stomach is much distended, the partly digested food will stop the holes in the bulb, and prevent the gas from escaping through the tube; in which case, move the probang with the rod up and down, six or seven inches, a few times, which will generally give vent to the gas; then withdraw the rod, and move the probang up and down freely, which will soon give relief. But should this not be effectual, the rod may be passed again, and the bellows applied to the probang, and the gas pumped out. Should there any thing more than gas be received into the bellows, the nozzle may be unstopped, and the contents discharged through it.

In order to use the probang with safety, it is necessary to have something to keep the mouth open, and to prevent the animal from cutting the tube with the teeth. For this purpose, Mr. Caley recommends a mouth piece made of wood, (fig. 16,) with straps on each end, to buckle around the horns.

Mr. Caley informs me that he has lately had an opportunity of testing one of his probangs, and it answered the desired purpose for which it was intended, and proved all that has been said about it. The obstruction was removed without difficulty, and the gas or air pumped out of the stomach with the bellows. No farmer, he says, who keeps cattle need despair, for he is conscious all obstructions can be removed, if properly used.

Every breeder or owner of cattle, whether of the improved or common breed of the country, should have one of "Caley's Æsophagus Probangs," or at least every neighborhood should possess one, as it might be the means of saving hundreds of cattle that are lost to community.

One of these instruments may be found at Mr. Thorburn's agricultural and seed store, where it may be examined, and Mr. T. will receive orders for them, as they will not be made except when ordered. Price $7,00

CALEB N. BEMENT.

Three Hills Farm, Dec. 1, 1841.

GRAVEL IN THE HORSE.

MESSRS. GAYLORD & TUCKER—I have for some time entertained the opinion that very erroneous notions exist in relation to the *nature* and more particularly the *cause* of the disease called "*gravel*" in horses' feet. The general sentiment, so far as I have apprehended it, appears to be that this disease is caused by dirt or gravel insinuating itself through the hoof (in a passage caused by a nail in shoeing, or a crack,) to the quick or soft parts within the shell of the foot or hoof. Now without assuming positively to deny that dirt or small stones ever did cause the *gravel*, I think the facts will bear me out in saying that such is very rarely the case. If gravel gets into an abscess in the foot, and is discharged with the matter, it is as a result of the inflammation and subsequent ulceration, and not as a cause of that inflammation.

The disease in the human system which "gravel" most nearly resembles, is "stone-bruise." The outer skin of a person's foot, accustomed to running barefoot, becomes extremely thick and hard. Does any person suppose that in order to produce a "stone-bruise," it is necessary for dirt to get through this hard skin, following some puncture by a nail or otherwise ? Not at all: on the contrary, when the individual strikes his foot strongly against the frozen ground, a sharp stone or stump, the hard skin, (or hoof, as it may be called,) is pressed strongly against the quick or soft parts underneath. The result is an inflammation of those soft parts, followed by the formation of matter. The outer skin being so indurated over the matter, it cannot escape directly, but is thus obliged to burrow along until it escapes at the edge of the hard skin, unless otherwise evacuated. Precisely so in relation to "gravel" in horses' feet. In consequence of the animal's striking his foot strongly upon a frozen hub, or sharp stone, being pricked by a nail in shoeing, being stepped on by another horse, or any similar cause, or some original defect in the foot, not easily accounted for, the quick or soft part within the hoof is injured, it inflames, and matter or pus is formed. Now how is this matter to escape ? It cannot find vent through the hoof, neither at the bottom nor at the sides of the foot. The only alternative is for the matter to burrow along the inside of the hoof to the top, and thus escape. The proper treatment undoubtedly is, to pare the bottom part of the hoof away, until you reach the matter.

I have certainly, I admit, seen matter escape from such an opening, and with it, dirt, but it was dirt that had a moment before been permitted to enter through the bungling operation of the smith. Thus, as was said above, the dirt being found there, was the result of the "gravel" or inflammation in the foot, and not its cause. If the above remarks should have the effect to induce thought on the subject on which they treat among some of your subscribers, in relation to a disease very frequent in one of our most useful animals, the design of a reader and subscriber will be fully answered, who, for the present, will subscribe himself INDEX.

Monroe, Orange Co. N. Y., Dec. 4, 1841.

VALUABLE RECIPES.

MESSRS. GAYLORD & TUCKER—The following are at your disposal:

OPODELDOC, OR CAMPHORATED SOAP LINIMENT.—Take common white soap, 3 ounces, camphor 1 oz., oil of rosemary, oil of origanum, of each 1-8 ounce, alcohol, 1 pint; cut the soap fine, and with a gentle heat dissolve it in the alcohol in which the other articles had been previously dissolved. Pour into wide mouthed vials or jars, to cool.

If LIQUID OPODELDOC is preferred, take 2 ounces of *Castile* soap, in place of 3 ounces of common soap. N. B. Troy ounces are designated. If not practicable to have the articles weighed by that standard, bear in mind that the Troy ounce is nearly equal to 1 1-9 ounce Avoirdupois.

Opodeldoc, made according to the above recipes, is altogether superior to that usually sold in vials, at exorbitant prices.

BRITISH OIL.—Take spirits turpentine and linseed oil, of each half pint; oil of amber, oil of juniper, and mineral tar, of each 1 gill.

OIL OF SPIKE, or a mixture commonly sold under that name, is nothing but sp. turpentine, mineral tar, and some essential oil, added in various proportions. The following is a good recipe for its preparation: take sp. turpentine, 1 pint, mineral tar, 1-2 pint, oil of amber, 3 oz., oil of rosemary, 1 oz. P.

Bowling Green. O., 1841.

Silk Culture in the United States.

PROGRESS OF THE SILK CULTURE.

BELIEVING, as we do, that the production of silk has taken a firm hold, as an essential element of national prosperity, and that it is destined to rapidly increase in this country, we shall feel a pleasure in recurring to the subject frequently, and keeping the readers of the Cultivator apprised of such important facts as may interest those who have already engaged, or are preparing to engage, in the business. There was the last year, as there will always be, on the introduction of a new branch of domestic industry, some failures and some disappointments, but as a whole, a vast increase of production of silk, over any former year, took place, and the failures, in proportion to the numbers engaged, far less than formerly. The greatest cause of failure has been, attempting to feed too many worms from a given quantity of mulberries, which has produced disease, and in some cases an almost total loss of the silk crop. We are convinced, however, that were the full amount of the crop of 1841 to be made known, it would surprise all, and convince even the most skeptical that we are able to grow our own silk, as well as our own cotton and wheat. In those States where a premium on silk is paid by the State, an approximation to the amount produced may be made, although it must always fall below the actual amount, as multitudes do not present their claims for reward.

The following instances, collected from various sources, will show what was done in a few places the last season. In the county of Monroe, N. Y., 1,538 lbs. of cocoons, and 29 lbs. of reeled silk, received the bounty of the State, and the actual amount very much exceeded this, as many who grew considerable quantities made no claims. In the county of Chautauque, (as appears from the Chautauque Silk Journal, a small monthly paper published by Mr. Lord, at Dexterville in that county,) more than seventy bushels of cocoons were raised last year, and those employed in the business were so satisfied with their success, that many were making arrangements to greatly enlarge their operations the present year. In Cuyahoga co., Ohio, the production of silk rose from 300 lbs. in 1840, to more than 2,200 lbs. in 1841, and the business will be greatly increased during the present year. More than 2,000 yards of beautiful silks, velvets, &c. have been manufactured at Mount Pleasant, Ohio, during the last two years, and a rapid extension of the works is contemplated. As yet, however, the greater quantity of silk produced has been made into sewing silks, and there is a probability that this important drain upon the country will soon be checked by an abundant home supply. At Economy, Pa., the Misses Rapp have produced at their establishment 3,500 lbs. of cocoons, which gave about $1,800 worth of raw silk. We have seen no estimate of the quantity produced at some of the most extensive establishments in the United States, such as those of Northampton, New Jersey, Philadelphia, &c., but the above will give some idea of the progress made in a single year. Those engaged in the silk culture must not expect to enrich themselves at once. Caution in commencing, and experience in progressing, will ensure eventual success. From what we can learn, the Peanut variety of the silk worm will prove the most profitable to the silk grower. Mr. Lord says that in his reeling, he has found the Two Crop and Mammoth White to yield about seven ounces of reeled silk to the bushel of cocoons; the White Sulphur from ten to fourteen ounces, though in one instance, he reeled eighteen ounces to the bushel; from the Peanut, he has reeled invariably twenty ounces to the bushel, and there was less waste with this French variety than any other.

The law of New-York, passed May, 1841, gives a bounty of 15 cents on every bushel of cocoons, and 20 cents on every pound of reeled silk produced in the State until 1846. This bounty will go far towards defraying the expense of cultivation, where children are used to gather the foliage for the few weeks of feeding, as they can easily do where the Multicaulis is used. Fifty thousand worms, kept healthy and well fed, will make fifteen bushels of cocoons, worth some sixty dollars, independent of the state bounty.

Such of our readers as are interested in the silk culture, will rejoice to learn that we are to receive a series of articles on this subject, from G. B. SMITH, Esq. of Baltimore, a gentleman who has probably a more intimate knowledge of the business than almost any other individual in the country, the first of which we publish this month.

CULTURE OF SILK.

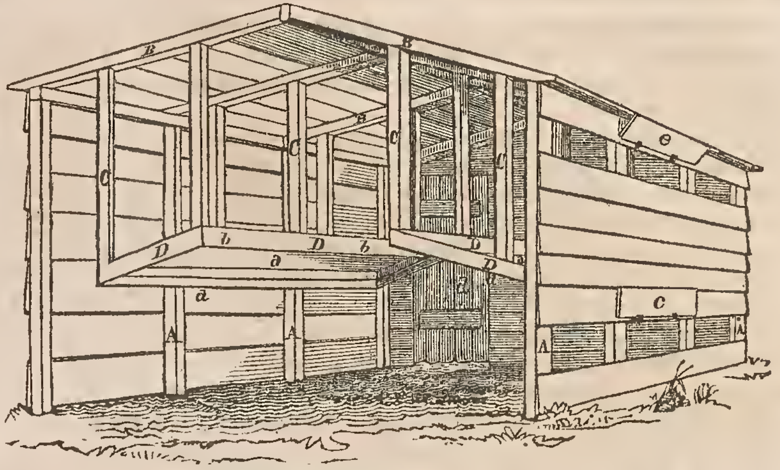
EDITORS OF THE CULTIVATOR—I am much pleased with your determination to devote a portion of the pages of the Cultivator to the culture of silk, and accept promptly your invitation to write a series of articles containing "plain, practical directions, such as are necessary for the multidude of farmers who are just beginning the business in a small way." I will premise that I am preparing a Manual on the Culture of Silk, adapted to the every day wants of the same class of people, and which shall also be adapted to the most extensive range of business, embracing all the improvements recently made in Europe, and all the information I shall have been enabled to collect up to the time of publication. My *plan* of conveying information on silk culture is, to adopt the plainest terms of the English language in all I write; the advantage of this is obvious, for there are none so learned that they cannot understand the subject in a plain dress, while if written in the technological terms of science, none but the scientific can profit by it. In the course of the series, I will embrace the whole subject of silk culture, and will endeavor to say all that can be necessary to the production of first rate reeled silk; but, owing to the season of the year when the series will commence, it will be necessary to adapt each article to the necessities of the season, instead of commencing at the beginning of the subject, that advantage may be taken for the use of the coming season. For this purpose, I will take up the *queries* contained in your letter of the 1st inst. 1. "The killing of the worm in the cocoon" will bear postponement to a later period. I will say here now, however, that killing the worm (chrysalis) with the vapor of camphor, has been found a most excellent and economical mode. 2. The best kind of worm is undoubtedly the Peanut. As this is the proper season for obtaining eggs, I will remark that there are two families of silk worms; the one that forms oval or egg shaped cocoons, the other that forms peanut shaped cocoons. The former has been from time immemorial the insect that furnished the silk of the world, until within the last ten years. This family has a great number of members or varieties. The old fashioned sulphur color cocoon is the parent of one branch of the family; the old fashioned orange color cocoon, sometimes called the Spanish worm, is the parent of another; and the old white cocoon is the parent of a third. Each of these families has numerous sub-varieties, and numerous names for each variety. There are the Large Sulphur, the Mammoth Sulphur, the Large Brown, the Italian Grey, the Two Crop Sulphur, &c. &c. of the first. The Orange or Spanish has not met with sufficient favor to induce division into varieties, or the invention of new names. The third: these are the Mammoth White, the Connecticut White, the Two Crop White, &c. The old sulphur colored cocoon variety is the best of the whole, and the only one of the tribe of egg shaped cocoons that can be recommended. The Peanut varieties, named from a resemblance of the shape of the cocoon to the peanut, (or the fruit of the *Arachis hypogœa,*) has two divisions, the Large and the Small Peanut; these are divided into varieties. The Large Peanuts have the *Mirabel jaune*, or Mammoth Nankeen Peanut, the *Lina mirabel*, or Mammoth White Peanut. These two I consider the very best of silk worms under all circumstances. The silk is very fine, the worms large and robust, the cocoons uniformly well constructed and easily reeled, and the product fully equal to that of any other at all times, and generally much more. The Small Peanuts are the common Nankeen and White. They are an excellent variety, nearly equal to the Large Peanuts in all respects, and when the cocoons are to be transported to any distance, superior to all others, owing to the small size of the cocoon in comparison to the quantity of reeled silk they produce. A bushel of the small Peanuts will generally contain from 3,500 to 4,500 cocoons, and will yield 20 to 22 ounces of reeled silk of the finest and best quality. The egg shaped varieties generally require only from 2,500 to 3,500 cocoons to the bushel, and yield from 12 to 16 ounces of silk to the bushel. The difference between the two families consists in the loose, flimsy structure of the egg shaped cocoon, and the thick, compact structure of the Peanut. The Peanuts are also generally more robust and hardy, and not so liable to disease as the egg shaped. The cocoons of the Small Peanut do not reel quite so easily as the large ones, or as the egg shaped, owing to the firmness of their structure. I should always recommend the Peanut, either large or small, in preference to any other kind.

The best kind of mulberry is the Multicaulis, the next best the *Canton,* (called in France the Elata,) the next, any of the varieties of the White mulberry. The Multicaulis must, however, in northern latitudes be planted on high, dry, rather poor land, exposed to the north; it will not answer if planted on low, rich soils, or at least the leaves are subject to become too succulent for the worms, and the trees to be injured by winter. I shall treat this subject more at large hereafter.

"The improvement of frames" is now in proper season, as preparation should now be made for them. The best frames I know of are made as follows: take inch and a quarter plank, good stuff, saw it into strips an inch and a quarter wide; cut these strips into pieces 3 feet long; put four of them together, by proper fastenings at the corners, into a frame 3 feet square; then take sawed *laths* and set them edgewise, an inch and a half apart, in the frame. The best way is to saw into the side of the two opposite side pieces of the frame, and make grooves one-fourth of an inch deep, just large enough for the ends of the laths to fit in; then drive a brad through the *side piece* into the end of the lath, to hold it in its place. This will form a frame three feet square. They can be made easily by any man, and where there is a steam saw mill or circular saw, the stuff can be got sawed very cheaply, and the frame, when done, will not cost more than plain board shelves. The *supports* of these frames are made as follows: take inch and a quarter plank, eight inches wide, long enough to reach from the floor to the ceiling, and nail upon both sides cleats an inch and a quarter wide and thick; (pieces from the strips prepared for the frames are proper for the cleats.) Place the cleats a little more than an inch and a quarter apart, from end to end of the plank, on both sides. Set up these supports three feet apart in the clear from one end of the room or cocoonery to the other, in rows. You can then slide in the frames between any two cleats on each side, and place five or six frames between every two supports. The object of putting cleats on the supports from top to bottom, is, that the frames may be placed near together or farther apart, at pleasure. The supports should be well fastened to the floor and to the ceiling. When feeding worms, an extra frame, with paper laid on it, may be kept between every two feeding frames, for the purpose of catching filth that may fall from above. For this purpose, a considerable number of frames should be provided more than sufficient to feed worms on. In the course of these papers, the use of these frames will be particularly alluded to, and this in time for the season. My next paper will be more instructive.

GIDEON B. SMITH.

Baltimore, Md., Jan., 1842.



TILLINGHAST'S COCOONERY.—(Fig. 18.)

FEEDING SILK WORMS.

MESSRS. GAYLORD & TUCKER—I send you herewith a drawing of my cocoonery, (fig. 18,) noticed at p. 167 of your last vol., together with the description, as given in my letters patent. The above cut represents a section consisting of one end of my cocoon room. A A is a part of the posts or studs. B B is a part of the rafters. The feeding frames which are to support the worms upon shelves, when first placed there, and which are to sustain the trees and branches after the shelves are removed, are suspended from the rafters so as to stand about two feet and a half or three feet from the ground. C C represent strips of wood nailed to the rafters at their upper ends, and to the side timbers. D D, of the feeding frames at their lower ends. These feeding frames I have made four feet wide, and eighteen or twenty feet, more or less, long, there being an alley or space way between them and the sides of the building, of two feet six inches, and along the middle of the building an alley or space of about five feet between the frames. At every eighteen or twenty feet, more or less, I leave a space of about five feet across the frames, to allow of passing from the middle to the side alleys, and of taking a hand cart or other vehicle from place to place. The frames D D are made open, consisting only of side and end pieces, as they are to receive the shelves and worms from the other apartments after the fourth moulting. These shelves are to be attached to the under side of the feeding frames, by grooves, cleats, and buttons, hooks, or other suitable means. The shelves used in the feeding room, where the worms go through their first stages, are made of thin boards, say half an inch thick, and are capable of being removed in sections with the worms upon them, and they must be of such width as to adapt them to the frames in the cocoon room. A section of these shelves is shown at *a a*, attached to the under sides of the frames D D, by cleats, hooks, or other devices, as at *b b*. When the worms have been so disposed of, I take strips of wood, say of an inch square and four feet and somewhat upwards in length, and place these across the frames D D, resting upon their upper edges. These may stand a foot or two apart, according to circumstances. Upon these I lay the trees and branches, covered with fresh foliage. The worms will soon leave the shelf and ascend upon the trees, and when they have done so, the shelves are let down, by unhooking or unbuttoning them, and are removed off of the way. The worms have then a perfectly free circulation of air, and the litter from them falls unobstructedly on to the ground, and may be swept out at any time. For the convenience of doing this, and for perfect ventilation, I let the lower board of the sides of my cocoon room constitute shutters, which are hung by hinges or otherwise to the boards above them, as at *c*. I make similar openings in my weather boarding, near to the eaves and along the whole building, to which I adapt shutters, as at *e*. *d* represents an end door. The worms, after feeding upon the leaves, will spin their cocoons upon the twigs and branches of the trees, and that in the most perfect and beautiful manner; and what is particularly remarkable, they will never, when thus accommodated, form double cocoons, which so often become sources of loss in the spinning, upon the kinds of apparatus heretofore employed for that purpose. The cocoons have much less floss upon them than is usual, and can be very readily gathered without injuring them, although they are so thickly deposited that I have gathered fifteen pounds and a half of good cocoons upon a space measuring four feet in width and five and a half in length. The approach of mice, so frequently destructive of the worms and the cocoons, is effectually guarded against by the suspending of the frames in the manner described, and by the addition of a shelf surrounding each of the suspending strips towards their upper ends.

The temperature should not vary far either way from eighty degrees in the nursery room, and through the different stages of the worm. A thermometer is necessary to govern the temperature. Fresh foliage should always be given to worms. Young and tender leaves must be given to young and tender worms, and should be removed from their litter as often as their periods of moulting. Picked leaves and small branches, with their foliage, may be fed in the nursery room. Fine slaked lime should be sifted upon worms frequently. It absorbs moisture, and purifies the atmosphere; is a good preventive, (but not the cure all,) of disease originated before the worm existed. The most convenient sized shelves I find is four by two and a half feet, fitted to rest on cleats, upon frames to contain about six shelves each, placed about one foot apart. Worms can' be fed very thick upon those shelves. Soon as they revive from their last moulting, the shelves should be removed with the worms and litter to the feeding frame, as described in the plate. The strips of wood, *c.c.*, should be surrounded at their lower ends, with a board of 8 or 10 inches wide, for the accommodation of laying on trees and preventing them from falling off, to be fastened by buttons, and removed when the cocoons are to be gathered. The building should be on an elevated spot; should be tight when the doors and shutters are closed, to guard against sudden changes of weather; the atmosphere that is most agreeable to those employed is most congenial to the worm. The Morus multicaulis of one year's growth is the most convenient to feed upon this frame. The trees should be planted four feet between the rows, and as thick as they will grow from layers in the rows. Trees that stand out through the winter unmolested, when full of foliage, should be cut near the ground. The trees should be laid lengthwise of the frame when feeding, three days in succession, to form a foundation, that the worms may not easily fall through. After the third day, the shelves must be removed, and the trees should be laid across the frame, and continue to cross the trees, that they may be open and airy. Care should be taken that foliage is not laid on in heaps, or faster than the worms consume it. Trees may be cut twice the same season without injury to the roots, and will produce as much foliage through the season as if plucked from their branches. We design to cut one-half of our plantation yearly. This will enable us to feed altogether of one year's growth upon our frame. Healthy worms will always keep uppermost, attached to the trees and branches, until through feeding, not inclined to ramble at all, but go directly down into the brush and form their cocoons. Diseased worms will be sure to find their way through to the ground, and the sooner the better. Unless the worms all go down to spin at one time, which is not often, the floss of those that commence spinning first catches some of the droppings of those above them, and most of the floss is unfit for use. This is of no consequence in comparison to the many advantages derived from this mode of feeding, for we hardly consider the floss, when clean, worth attention.

We have five acres of mulberry, thickly planted, and a sufficiency of good eggs, we believe; and if we do not succeed in feeding 1,000,000 next season, with the help of two men, and two boys ten years old, we shall fall short of our calculation, and be very much disappointed. And we are now ready to testify to all that may read the foregoing, that all the difficulty and anxiety so attendant upon the last stage of the silk worm, in other modes of feeding, in this way is entirely removed, and has become the most agreeable and interesting employment that we were ever engaged in.

J. B. TILLINGHAST.

Norwalk, O., Jan. 4, 1842.

ALBANY NURSERY.

THE proprietor of the above establishment would respectfully inform the public in general, that he has associated with him Jesse Buel, formerly proprietor of the Cultivator, in the nursery business, and that they have now on hand a large and desirable assortment of FRUIT TREES, (most of which were selected by the late Jesse Buel,) FOREST TREES, ORNAMENTAL AND FLOWERING SHRUBS, GREEN HOUSE PLANTS, &c. &c., which they are prepared to dispose of on as reasonable terms as they can be purchased elsewhere. They have likewise a good assortment of Dahlias and Herbaceous Plants, and a very extensive assortment of Hardy Roses, selected from the best European collections, nearly all of which have flowered in our nursery.

The above nursery is situated about two miles west of the city, on the rail road. All orders must be addressed to the proprietors, JESSE BUEL & CO., Albany Nursery, or be left at the store of WILLIAM THORBURN, Broadway, Albany.

February 1, 1842.

TILLINGHAST'S COCOONERY.

FOR more particular information, and in answer to many letters of inquiry, in relation to my patent cocoonery, I here give my terms of sale. The sum of ten dollars is required at the time a deed is executed, for the privilege of using three hundred square feet of frame, which is sufficient to feed 500,000 worms in one season in this latitude, and in the same proportion for any number of feet required. County and town rights may be obtained much cheaper in proportion to their territorial limits; situations and circumstances always considered, and one-fourth of the consideration in all cases must be made, at the time of sale, and a credit of some years for the balance, with undoubted security, will be given if necessary. The price will be nothing less than one hundred dollars for any county in the United States.

J. B. TILLINGHAST.

N. B. All letters or communications for information, must be post paid, to insure attention.

Norwalk, (Ohio,) Jan. 18, 1841

The New-York Market.

MONTHLY REPORT FOR JANUARY, 1842.

(*Prepared for* THE CULTIVATOR.)

COTTON.—In the fore part of the month, owing to the demand for shipment, prices were firm, and a disposition was evinced by holders to advance; but latterly, although the demand for export has rather increased than receded, the arrivals were to such extent as to produce a tendency in prices to decline. The sales up to the 22d, during the month, amounted to about 14,600 bales, and the exports, up to the 19th, were as foltows:

Great Britain,	3,904	bales.
France,	5,718	"
North of Europe,	351	"
South of Europe,	1,743	"
Making a total of	10,816	bales.

The advices by the Britannia had no effect upon the market, although from the firmness of holders, prices are steady. Considerable new cotton has arrived, but the quality is moderate. The following are the quotations:

	January 1st.	January 22d.
New Orleans,	7 1-2 @ 11	7 1-4 @ 11
Mobile,	7 1-2 @ 10 1-2	7 1-4 @ 10 1-2
Upland and Florida,	7 @ 9 1-2	7 @ 9 1-4

FLOUR AND MEAL.—Prices during the month have been fluctuating, although but merely nominal. Buyers have evinced a disposition not to purchase at the rates asked by holders, and the market for all descriptions has consequently been extremely feeble and dull. The stock on hand is moderately large. The advices by the Britannia represented the European markets generally as without change since the previous advices, and of course had no effect upon the market here. There has also been little disposition shown to speculate. The exports of wheat flour, from the 1st to the 19th of January, have been about 25,875 barrels. Genesee has receded from $6 @ $6 12 1-2, the rates at the first of the month, to $5 94 @ $6; Troy from $6 to $5 87 1-2 @ $6; Michigan from $5 87 1-2 @ $6 to $5 75 @ $5 87 1-2; Ohio has been stationary, at $5 87 1-2 @ $6; Georgetown and Alexandria, $6 12 1-2 @ $6 25 to $6 @ $6 12 1-2; Baltimore Howard street, although rates have fluctuated, is the same as at the first of the month, $6 12 1-2 @ $6 25; Richmond City Mills, $7 50 to $7 25 @ '7 50. There has been an advance in Rye Flour from $3 75 to $4. Jersey Corn Meal is selling at $3 12 1-2; Brandywine at about the same in bbls., and $14 @ 14 50 in hhds.

GRAIN.—There has been a decline in almost every description during the month. The sales have been small, and there is much more readiness on the part of sellers than buyers. The decrease in the demand for Whiskey, and the quantity arrived of distilled from New Orleans, have tended greatly to depreciate prices. A good deal of Southern Wheat has arrived, but being in fewer hands, the fluctuation in price has not been so great. The prices from the 1st to the 22d of the month, have varied for Genesee, $1 25 to $1 22 @ $1 25; Southern, $1 20 @ $1 25 to $1 20. Northern Rye, 75 to 72 cents, about the middle of the month, but it has resumed its previous rates again. Jersey and Brandywine Corn, 66 @ 68 cents per bushel to 62 @ 62 cents, all measure; Southern, 62 @ 66 to 60 cents, all weight; Ohio, 68 to 66. North River Barley, 75 to 74 cents. Northern Oats have advanced from 48 @ 50 to 50 @ 52 cents; Southern have been stationary, at 44 @ 46; New Jersey, 40 @ 45 to 40 @ 48 cents. The export of corn from the 1st to the 19th of the month, was 3,803 bushels.

PROVISIONS—The transactions in most descriptions are extremely limited, and the market is dull and heavy. In the first part of the month, prices were firm, with a moderate demand; but latterly there has been nothing doing in Beef or Pork, and prices are but nominal, with a large stock on hand. At present, the sales are only in lots for city use, or shipment. Beef has remained, without change, at $7·50 @ $8·25 for mess, and $4·50 @ $5·25 for prime. Pork has declined, from $9·00 @ $10·25 for mess, to $8·00 @ $10·00, and prime from $6·75 @ $8·25, to $6·00 @ $8·00. For Lard there is a fair demand for export, although prices have receded from 5 1-2 @ 8 c. ℔ lb., to 5 @ 7 1-2 c., owing principally to the large receipts from New-Orleans in the second week of the month. In Butter there is nothing doing, and prices have not varied. The quotations are, for prime 20 @ 21 c. ℔ lb.; western dairy 15 @ 17 c.; ordinary to good 10 @ 14 c. Cheese, is in moderate demand for shipment, with a small supply on hand. Prices have advanced from 6 1-2 @ 7 1-2 c. ℔ lb., at the first of the month, to 7 @ 8 c. Smoked Hams are selling at 8 1-2 @ 8 3-4 c.—a decline from 9 c., at the first of the month. Smoked Beef 6 1-2 @ 7 c. The exports from the 1st to the 19th are as follows:—

Beef,	1,041	brls.
Pork,	3,456	"
Lard,	4,929	kegs.

TOBACCO—Has been very inactive during the month, and sales have been very limited. During the last week there has been a little more activity, and prices generally have receded a little. The quotations are as follows:—Richmond and Petersburgh declined from 4 @ 8 c., to 3 1-2 @ 7; North Carolina, 4 @ 6 c., to 3 1-2 @ 6 c.; Kentucky 5 @ 9 c., to 3 3-4 @ 9 c.; St. Domingo, 15 @ 20 c., to 12 1-2 @ 20 c. In other desriptions prices remain without change, viz:—Cuba, 12 1-2 @ 20 c.; Manufactured, No. 1, 12 @ 15 c.; No. 2, 10 @ 11 c.; No. 3, 7 @ 10 c., 32 lumps, 16 @ 20 c.; Ladies Twist, 16 @ 20 c.; Cavendish, 10 @ 40 c. From the inactivity, prevailing prices are but nominal, and there is no grounds to anticipate any improvement, either in demand or prices. The inspections and stock on hand, are somewhat less than during the same period last year.

WOOL—There has been no transactions worthy of note during the month, and prices, therefore, are merely nominal. There has not been the slightest variation since last month. The quotations, are for Amdrican Saxony, 40 @ 42 c.; for American full blooded Merino, 34 @ 36 c.; for half blood to 3-4 Merino, 30 @ 32 c.; common to 1-4 do., 18 @ 22 c.; superfine pulled, 36 @ 37 1-2 c.; No. 1, 32 @ 34 c.; No. 2, 25 @ 27 c.; South American washed, 6 @ 8 c.; picked, 16 @ 18 c.; do. unwashed, 5 @ 7 c.; African, 7 1-2 @ 12 1-2 c.; Smyrna, 9 @ 14 c.; Mexican, 11 1-2 @ 12 1-2 c.

ADVERTISEMENTS of stock, implements, fruit trees, &c., will hereafter be inserted once, and only once, in the Cultivator, the charges for which will be at the rate of $2 00 for each 100 words. No advertisement inserted for less than $2 00 however short it may be.

ALBANY SEED STORE, AND AGRICULTURAL REPOSITORY.

THE subscriber offers for sale a large assortment of FRESH GARDEN, FIELD, AND FLOWER SEEDS; also, a large assortment of FRUIT AND ORNAMENTAL TREES AND SHRUBS, with a general assortment of FARMING IMPLEMENTS, viz: Green's Straw Cutters, with 12, 18, and 24 knives each. Price, 12 knives, $25; 18 do., $28; 24 do., $31; Armstrong's do. do., $25; Gilson's do. do., $20; Drill Barrows, from $2 to $10 each; Cultivators, $5 to $10 each; Bull Rings for Cattle; Vegetable Cutters, $10 to $15 each; Plows at all prices.

W. THORBURN, No. 38 Broadway.

Albany, February 1, 1842.

ACKNOWLEDGMENTS.

From WM. SUMNER, Esq., Pomaria, S. C., the *Transactions of the S. C. State Agricultural Society*, with the Oration of Gen. Hammond, delivered at its last meeting.

From Rev. HENRY COLMAN, his *Fourth Report on the Agriculture of Massachusetts.*

From WM. H. RICHARDSON, Esq., Richmond, Va., the *Proceedings of the Henrico Ag. and Hort. Society.*

From Prof. JAMES HALL, State Geologist of New-York, his *Notes on the Geology of the Western States.*

From J. S. SKINNER, Esq., Washington, *A Christmas Gift to the Farmers of the United States*, by Mr. S.

From S. A. LAW, Esq., Meredith, N. Y., his *Address to the Delaware Ag. Society*, at its last meeting.

From R. H. WILLSON, Esq., the *Constitution and By-Laws of the Ohio and Brooke Ag. Society*, Va.

From Capt. R. HARDWICK, Sparta, Ga., the *Proceedings of the Farmers' Club* of that place.

From the EDITORS, London, the weekly nos. of *The New Farmer's Journal* for December. From other friends in London, we have regular files of the *Mark-Lane Express*, and the *Gardner's Chronicle*, together with *The Veterinarian, The Farmer's Magazine*, and *The Farmer's Encyclopedia*, for January.

From the EDITORS, Silliman's *Amcrican Jourual of Arts and Science*, for January.

From J. W. CADY, Esq., Johnstown, an ear of *Rocky Mountain Corn*, each kernel of which is enclosed in a separate envelope.

NOTICES TO CORRESPONDENTS, &c.

We have received, during the last month, besides those published in this paper, communications from the following:—

John Harold, J. C. Robertson, N. N. D., G. H. Chrisman, Enquirer, L. Durand, J. A. S., J. Horsfield, S. D. Martin, C. L. Boalt, A Suffolk Co. Farmer, Wm. Kitchen, Praries of the West, J. Bowen, W. H. & F. J. Scott, M. Quimby, H.W., N. R. French, J. W. Crisfield, G. S.Wright, V. S., J. Ives, T. Goodsell, Columbia, A. Subscriber, Richmond, G.Cook,, G. W. Grant, A Farmer, G. Butler, C. Ingalls, J.W. Smith, X, Henry Long, E. S. Hinman, Geo. Woodfin, A Farmer of R. Island, Wm. Makinster, and A Farmer's Wife.

CHESS.—We have several articles on the subject of the supposed change of wheat, oats, &c., to chess; but, as the subject has been thoroughly discussed in the two last vols., we must decline opening our columns again to the controversy, at least, for the present.

"N. N. D."—Though we have had the drawing engraved for his communication, we have not been able to make room for it in this number, and it is now so late in the season, we may, perhaps, let it lie over till autumn.

"RICHMOND."—We fear this communication, though appropriate to our pages, will have to give place, for the present, to those of a more strictly practical character.

The drawings furnished by S. W. JEWETT, J. HORSFIELD, R. NORTH, Jr., J. HAROLD, and A FARMER, are in the hands of the engraver.

The portrait of "*Irish Beauty*," owned by J. S. NORTON, Rockford, Ill., is not sufficiently accurate for the engraver. It wants the life-like character of the animal. We should be glad to get a *good* drawing of an Irish Grazier.

The portraits of the Short Horned Bull and Berkshire Sow, furnished by the Messrs. SCOTT, are good; but we have given so many of these animals that we have concluded, hereafter, only to give the portraits of Premium animals of these breeds, unless the owners will be at the exprense of the engraving.

☞ The person who advertises for a situation with a practical farmer, may hear of a place, which cannot fail to suit him, on application at this office.

☞ If we hear of a situation which will answer "C. I.," we will let him know.

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THE BACK VOLUMES

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THE CULTIVATOR.

THE CULTIVATOR.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NOTICES TO CORRESPONDENTS, &c.

We have received, during the last month, besides those published in this paper, communications from the following:—
John Wiers, J. Harland, J. Judson, Willets Keese, John Kirk, Colonus, J. Lawrence, A., J. N. Smith, Levi Durand, J. C. Smith, C. A. Savory, J. Horsfield, A. Subscriber of Chester county, S. H., A Young Farmer, L. A. Morrell, L. Numan, George Randall, A. W. L., M. of Jamaica, J. J. Thomas, Alexander Becket, P., L. Smith, J. Edmands, H. Knowlton, P. Easly, Scotus, A. Brigham.

To enable us to dispose of the large number of communications now on hand, we propose to devote most of our next number to the contributions of our friends.

ACKNOWLEDGMENTS.

We are indebted to Geo. C. Thorburn, Esq. for *The British Farmer's Magazine* for October, and for a copy of *The Farmer's Almanac*, (London,) for 1842, for which Mr. T. will please accept our thanks.

To G. V. Sacket, Esq. Seneca Falls, for the Proceedings of the *Seneca Co. Ag. Society* for 1841, embracing the Constitution, By-Laws, the Addresses of Messrs. Sackett and Dunlap, &c.

To H. L. Ellsworth, Esq. Com. Patent office, for his *Annual Report* to Congress.

To A. J. Downing, Esq. for Catalogues of his *Botanic Garden and Nurseries*, Newburgh.

To Wm. R. Prince, Esq. for Catalogues of the *Linnæan Botanic Garden and Nurseries*, Flushing.

To James Grant, Esq. Iowa, for a copy of his *Report* as Chairman of the Committtee on Agriculture, in the House of Representatives of that territory, in which he recommends the passage of a law for the promotion of Agriculture, similar to he law of this state.

To Dr. A. Brigham, Superintendent, for the 17th *Annual Report* of the Directors of the Retreat for the Insane at Hartford, Connecticut.

To R. Alexander, Esq. Hall Farm, Sherbrooke, L. C., for late copies of the *Edinburgh Observer* and *Edinburgh Advertiser*.

SILK—NEW PUBLICATION.

We are gratified to learn that G. B. Smith, Esq., of Baltimore, is preparing for publication a new work on the production of silk in the United States. It will embrace all the information necessary for a thorough knowledge of the business, from the selection and culture of the mulberry to the preparation of the silk for market. A plain practical work of this kind is very much wanted by the multitude of farmers throughout our country who are entering upon the silk culture as an auxiliary branch of their domestic economy, as well as by those who are engaging in it largely as a separate and independent business. From Mr. Smith's long experience in the business, and the opportunities he possesses for obtaining information on the subject, both at home and abroad, he is eminently qualified for the preparation of such a manual as will meet the wants of the public; and we trust that in its publication he will reap a rich reward for his long continued and persevering efforts to introduce the silk culture into the United States, which must ere long become one of the most valuable of our products.

The American Magazine and Repository of Useful Literature.—We have the first and second numbers of the second volume of this work, which is published in this city, 33 pages octavo, monthly, at $1.50 a year, by B. Wood. It is edited by Dr. J. S. & B. Wood, and numbers among its contributors some of our best writers.

Boon's Lick Farmer.—We have received No. 3 of this paper, which is published monthly at Boonsville, Missouri, at $1 a year, by C. W. Todd, and edited by five gentlemen, located in different parts of that state.

Hon. James M. Garnett, of Virginia, President of the Agricultural Society of the United States, has accepted an invitation to deliver the annual Address before the New Castle (Del.) Agricultural Society, at their next Fair.

WORK FOR THE MONTH.

Order, system, is of as much importance to the farmer as to other individuals, and a well arranged plan of operations is essential to contiuued success. *"A place for every thing, and every thing in its place,"* is a first truth in a farmer's metaphysics; a truth that proves itself, and of which the simple enunciation is sufficient. The farmer then should have his farm divided according to system; his crops should follow each other in regular order; the influence of these governing principles should be felt in every department of his business; it should be seen in the feeding and management of his animals, in his fences and gates, and in his houses and barns. The farmer should have his book containing an accurate map and measurement of his farm, and each field, and in this every alteration should be made and recorded. There are thousands who live and farm at hap-hazard; and so there are merchants and manufacturers who conduct their business in the same way, and usually with the same results: that is with the loss of time, labor and capital. "Order is heaven's first law," and he who transgresses, whatever may be his employment, must take the consequences.

Liebig's beautiful explanation of the manner in which plaster performs its effects in promoting the growth of plants, has given an increased impulse to the use of this invaluable article, and we hope every farmer will try some of it on his clover, grain, corn, potatoes, &c., this year. On sandy soils, its value will be more apparent than on any others, and though little used on the potatoe crop, we have heard of instances where it has been nearly or quite doubled by its application. There is no manure of this class, which will at all times, and on all soils, produce the expected effects, and occasional failures will never deter the experienced farmer from their further use. On suitable soils, plaster is the most efficacious as well as cheapest manure that can be used.

March is the month for making that most delicious of sweets, maple sugar; and the farmer who, with the means in his possession of providing himself with this necessary article, neglects to do it, and depends on Cuba or Louisiana, so far surrenders his independence. Maple trees will yield from four to six pounds of sugar per tree, when well tended, and in medium seasons. The labor required comes at a time when little else can profitably be done; takes but a few days; and the result is a material contribution to the profits of the farm, and the comfort of the family. The utmost degree of neatness and cleanliness should be observed in every thing relating to the sugar manufacture; no burning on of the syrup, or souring of the sap allowed; and this system carried out will give a pure beautiful sugar.

It is well for a farmer to be looking ahead, and securing such seeds as he is intending to plant or sow the coming season. He who has noticed the difference in the crop between plants produced from good ripe, perfect seed, and those from inferior, unripe, or perhaps injured seed, will understand the propriety of attention to this point. It is not too much to say, that thousands of acres of corn fail, almost annually, from using bad seed. Better to pay double price for good seeds, than use poor ones, if they could be had for nothing. To attempt economy in this way, would be to invite certain failure.

It is the custom to sow clover and grass seeds on winter sown grain in March, and if there is a little snow it can be done much better and more evenly than without. Never attempt to scatter such light seeds in a windy day; and if you value good crops, clean fields, and peace of mind hereafter, be careful to sow nothing but pure seed in your field. Weeds will come in rapidly enough without our sowing them; and the man who sells Canada thistle, Charlock, Steinkrout, Johnswort, &c. with his seeds, needs instructing anew in the golden rule.

March is a trying month for domestic animals, if treated during our long winters as too many of them are. There is a degree of cruelty in thus half-starving so many creatures, that deserves the severest reprehension; and even a regard to profit should induce a different course. Just compare the profits of a cow well kept through the winter, coming out sleek and smooth in the spring, with one reduced to a skeleton, barely making a live of it, and requiring good pasture till July, to get her in order again. So with sheep, swine, and horses. No man has a right, nor should he attempt to keep more animals than he can keep well, and the proportioning of his stock to his keeping is one of the things that distinguish the good farmer from the poor one.

Fences must be looked to this month, as animals are apt, unless cared for, to be strolling about the fields, and will do much mischief on newly seeded grass lands, and nearly destroy such wheatfields as they can obtain access to. Drains should be examined, sluices cleared, stagnant water let off, and the sown crops examined, to prevent injury from such sources. In all places where frequent passing and repassing is to be done, substitute gates for bars, and you will have access to your fields greatly facilitated.

Trees may be transplanted this month, and if every farmer would see the roads to the extent of his farm were planted with trees, it would require but a few years to change the whole aspect of our country for the better. The maple, elm, ash, and in suitable soils the locust might be profitably used, and if these were not to be had, fruit trees, such as the pear, cherry, or apple, might be substituted. In transplanting make your holes large, but not deep, give the roots space to spread, use rich soil in filling up, and do not cover much higher than the earth naturally was around the tree. If the top is heavy, it should be secured against winds. There are multitudes of families in New England that make all the sugar they need, from maple trees planted within forty years; and such plantations are annually increasing. It has been ascertained at the south, that the attacks of some of the insects so fatal to fruit trees, particularly the peach, may be prevented by planting a small red cedar in the same hole with the fruit tree; the odor of the cedar being offensive to them. Wormwood has also been tried in the same way, and it is probable any strong scented plant would produce a similar result.

Have you made all the necessary preparations for the coming season? Are your agricultural implements in good order, your plows, hoes, sythes, rakes, harnesses, carts, &c. ready for use? Farmers find it most unpleasant, when a piece of work is to be done, to be obliged to go to a neighbor for the necessary implement, and it is not unfrequently the case that the time spent in borrowing and returning a tool, would purchase a new one, or if applied in season, repaired the old one. Don't rely too much on borrowing; the practice is a bad one. Be neighborly, but if you exhibit your good will in some other method than a dependance on your neighbor for the means of carrying on your farm work, you will probably be quite as much respected.

If you have neglected cutting cions, it may be attended to now; but later than March is inadmissible, unless the grafting is performed as early as possible in the spring, and before the buds start. It is truly surprising that the production of fine fruit occupies so little of the attention of farmers. Most of them have orchards, but in a large proportion of them the fruit is good for nothing; even hogs will reject a large portion of it. Apples it is found have become the cheapest article extant for making pork, as if the hogs are allowed, they will keep themselves, and apples are one of the very few kinds of food that is not materially improved by cooking before feeding.

At this time your ewes will require daily some cut turneps or potatoes with a little salt. It will also be an excellent plan to allow them once a day, a few oats in the sheaf, instead of their hay; and all your sheep will be the better for such a course. Roots fed daily will prevent in most cases that costiveness which in sheep fed on dry hay alone, is apt to produce the stretches. If you have not oats a handful of corn daily to each sheep, will prove valuable. Many of the things we have noticed may appear trifling; but it should never be forgotten by the farmer, that the most of his profits arises from trifles, or such as appear such in themselves; and it will be found on examination that those who have obtained a competence by agriculture, are precisely those who have paid the strictest attention to these things.

When your wood is split and seasoned, let it be packed dry, in your wood-house, and if you manage well you will have a year's supply on hand, that the burning of green wood may be avoided. Dont believe the story that green wood is the best, or most profitable; or if you think best, make an experiment with a given quantity of green and dry wood, and see which will keep the temperature of your room highest for the longest period. This is easily done, and will be decisive.

Silliman's Journal.—Our friend at Jamesville, who inquires the price and postage of this journal, is informed that by sending $6 free of postage to Prof. B. Silliman, New-Haven, Ct. it will be sent him one year, and the postage on the numbers be paid by the publishers.

Hatch's Sowing Machine.—In answer to the inquiries of J. Tilghman, Esq., we would state that the price of this machine, a figure and description of which was given in our last volume, page 197, is $40.

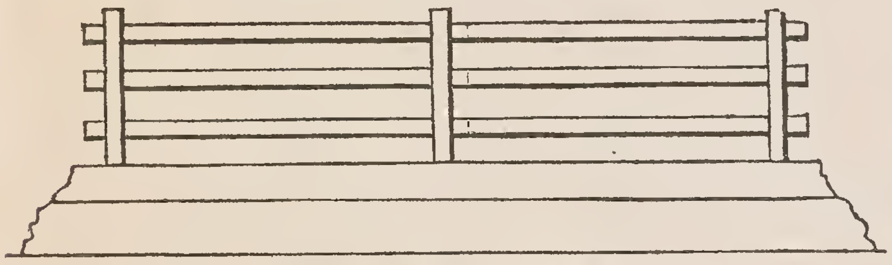
☞ Manufacturers of *Sub Soil Plows* and *Hay Presses* may find a sale for their articles by advertising them in the Cultivator.

FENCING LANDS IN THE WEST.

THERE are few things of more interest to a large portion of our country, particularly the western states, than the best and cheapest method of making a fence. We are of the opinion, that in a very considerable part of the prairie districts of the Mississippi valley, live fences, or fences constructed of some of our native plants, and which are adapted for hedges, and are not liable to the failures attending the fences of imported plants, will eventually be found the cheapest and best. But other fences are at present indispensable; and we are pleased to perceive that the attention of some of our ablest western farmers has been directed to this subject with great success. In a late number, we noticed the Appendix of Mr. Ellsworth, and proposed at some future day to give a sketch of his improvements in fencing as adapted to the prairie lands, or indeed to any lands where the soil is free from obstructions to the plow and scraper. From Mr. Ellsworth's letter, and from other sources, we shall now give some notices that may be useful to the farmer.

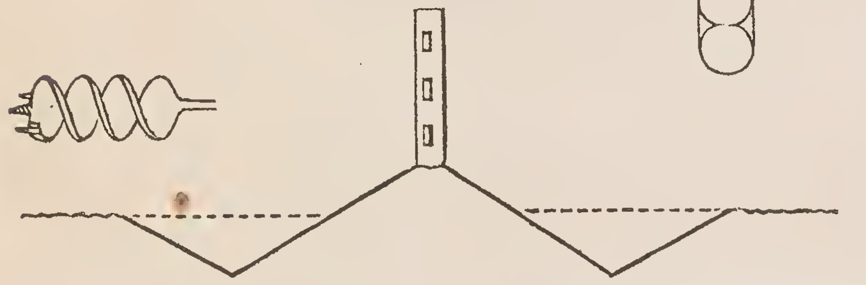
In all new countries, where wood is abundant, the first fences are what is called the Virginia, or worm fence, usually seven or eight rails high with stakes, and a rider to give the necessary firmness. Fence so made will require about the same as ten rails to a length, and nearly two lengths, or twenty rails, to a rod. Such a fence not only consumes a vast deal of timber in its construction, but by being necessarily crooked, and commonly staked, the ground occupied by it is much greater than that of any other fence.

In making some experiments to ascertain the cheapest and best methods of fencing lands, Mr. Ellsworth, from the effects of embanking abroad, was induced to combine the embankment with the post and rail fence; and where the soil is suitable for the action of his scraper, or timber is so scarce as to render the economical use of it desirable, his experiments would seem to show that so far as cheapness and efficiency is concerned, the embankment fence is all that can be desired.

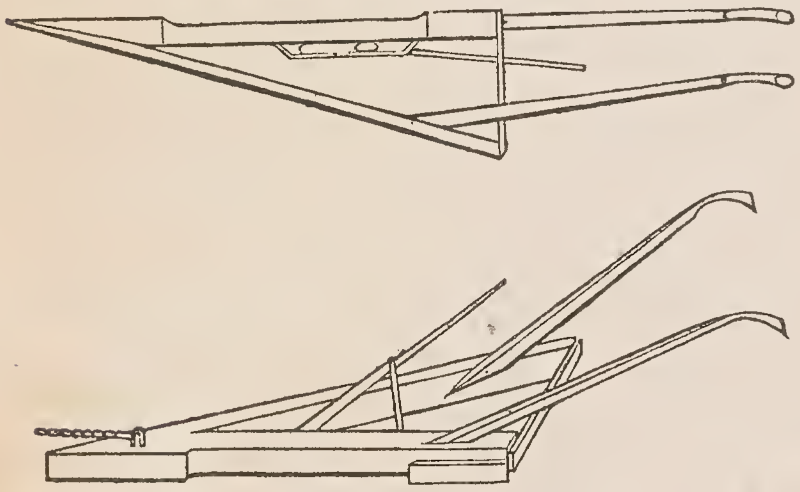


Section of the Fence—(*Fig.* 20.)

Manner of lapping the Rails—(*Fig.* 21.)



Section of Ditches and Embankment, with the Auger, and holes to be morticed—(*Fig.* 22.)



Scrapers used for throwing up the earth—(*Fig.* 23.)

The scraper (fig. 23) is made as follows: "Two planks placed at an angle of 18 to 20 degrees, and twelve feet long, will answer the purpose. One plank must run straight in the furrow made by the plow; the other to be wider, say 12 to 16 inches, placed at the above angle; a brace in the rear gives strength and firmness, and two handles are attached to guide and press the scraper." Mr. E. gives these directions for laying out the fence. "Measure off 8 feet 3 inches; plow the two parallel furrows at this distance, throwing both furrows on the measured space; plow two furrows on each side, and then take the scraper, and thus proceed: first plow and scrape until the embankment is completed, which will be in six rounds, that is, six passages on each side; on a section line, a span of horses would easily make one mile of ditch per day; the angle of the ditch may be about 40 degrees; the angle should be such as the other side of the bank will readily turn over."

We may remark here, that as a team of horses in plowing an acre with a 9 inch furrow travels about 11 miles, the labor assigned to his horses by Mr. Ellsworth does not seem to be overrated, as they will have only 12 miles to travel, unless indeed the draught of the scraper should be much more severe than that of the plow. By making the ditches 18 inches deep, the earth thrown in by the scraper is raised 18 inches above the natural level, making the hight of the embankment alone 3 feet. The angle of elevation is so small that the bank will not slide by frost or rains, and will soon be covered with turf—blue grass being recommended at the West for this purpose. The next thing is to make the post and rail fence that is to crown the embankment.

"The posts are bored with despatch by one or more augers propelled by hand or horse power. The augers are two and a half inches, and these, by two borings together make a mortice of five inches by two and a half. The rails may be sharpened by hand, but best with a circular saw, cutting one side, so that when two rails are brought together they just fit the mortice. The lap of the rails is about six inches, and additional strength is given by pinning the upper rail. If rails are cut 12 feet 3 inches, 440 lengths will make a mile of fence. This will determine the number of posts, which are inserted in the embankment 18 inches, (reaching the original sod,) by driving down a pile the size of the post, thus dispensing with digging. Several piles may be prepared to suit different sized posts."

The above engravings show a section of the fence as completed; the manner of lapping the rails; the auger used for boring, and the two holes to be morticed; a cross section showing the ditches and embankment; and the scrapers used for throwing up the earth.

In an interesting letter to Mr. Ellsworth from S. Robinson, Esq., the latter makes these remarks on this kind of fence. "Many attempts have been made to fence with earth, and nearly all fail. Cause: the sods are piled up like laying stone wall, and in two or three years the whole fence is a pile of the softest fine manure. Others have tried to pile up earth, and sod it over with the native sods. But these rarely succeed; the grass dies, and the bank being too steep, slips down in spring, and there being no rails on top, the cattle soon form a path over. But if some cheap plan of making a bank two or three feet high from the bottom of a ditch on each side, with a gradual slope, which would soon grass over with blue grass sown upon it, can be adopted, in which bank, posts with two or three rails, just like the old fashioned yankee post and rail wall fence—it will be complete." The fences that have been already made on the plan indicated above, seem to show that it will be what Mr. R. suggests—"complete."

Mr. Ellsworth gives the following, as the cost per mile of such fence in the West.

2 teams, $2·50 each, 1 day, (one with plow and one with scraper,)	$5 00
1,320 rails sharpened and delivered, at Mr. R.'s estimate, 2 cents,	26 40
440 posts bored, complete, 3 cents,	13 60
Setting posts and putting in rails, 5 days,	5 00
	$50 00

It is evident that the cost per acre of fencing land, will materially depend on the shape and size of the tract, as the following table will show.

640 acres,	4 miles of fence,	$200,	or per acre,	32 cts.
320 "	3	"	150,	"	46½
160 "	2	"	100,	"	62½
80 "	1½	"	75,	"	93½
40 "	1	"	50,	"	1·25

We find in the "Union Agriculturist" the following notice of a substantial embankment and ditch, which, should it succeed, may dispense with the post and rail. Such a mound would be a capital place to commence a hedge; and if made of some hardy American plant, such as the honey locust, buckthorn, wild mulberry, or perhaps some of our thorns, would soon make a most impervious fence.

"Jason Marsh, Esq., of Rockford, informs us he has been enclosing his land by an embankment 8½ feet in diameter at the base, and 2 at the top, and about 4 feet high. On either side is a ditch 2½ feet across. He has made a mile and three quarters of this kind of fencing at an expense of sixty-nine cents per rod. This we should suppose large enough to be permanent, and resist drouth. It could be turfed over by sowing grass seed upon it, (the Kentucky blue grass, or the orchard grass, would probably be the best;) and then, on the top, a hedge row could be planted that would be out of the reach of cattle. How beautiful would our prairies be, divided by such fences."

Although the Atlantic states are as a whole much better provided with fencing materials, both wood and stone, than the West, still there are large districts where farmers and land owners will ere long, if they do not already, experience serious inconvenience in making good fences. There are thousands of farms in all parts of the country that have been so denuded of their original timber, while none has grown to supply its place, that there is not upon them timber sufficient for rails to enclose them. The old worn fences are rapidly decaying. Twenty years may be stated as the duration of a fence made from any of the common kinds of timber used; and still, very few farmers have asked themselves where the materials for their next fences are to come from, or taken any measures to remedy the approaching evil. Those who have stone on their farms need have no apprehensions; those who have not, should by embankments, by hedging, or by nurseries of forest trees, endeavor to secure the requisite material for the preservation of their crops.

Few are aware of the cost of fencing a farm, after the fences have once been allowed to go to decay. Mr. Shurtleff of Massachusetts, an enterprising farmer, gives from his own experience the cost of several of the most common kinds of fence in the eastern states.

White cedar or cypress fence, made of posts and rails, five rails in hight, three lengths to two rods nearly, cost 91 cents per rod.

White pine rails sawed two inches by eight, and chestnut posts, four rails high, three lengths to two rods nearly, cost 64 cents to a rod. In both these instances, the cost was exclusive of the setting.

Good four and a half feet stone wall varied from $1 to $2.50 the rod, according to the ease with which the stone could be procured, and the manner in which it was laid—whether by trenching or otherwise.

Hedge fence made of the Virginia thorn, set 21 to a rod, cost at the end of the fourth year, including planting, trimming, &c. 40 cents to the rod.

Mr. Shurtleff found his white cedar posts to rot off at the ground in about 15 years; and this agrees very well with our experience with this kind of timber. Farmers err much in making their posts to set in the earth so small as is usually done. We have a cedar bar-post now standing, and promising to remain so for several years to come, that was cut and set 40 years since. The post was from a green tree, and some 16 inches in diameter; and our experience has uniformly been, that durability was much depending on size. The method of setting posts recommended by Mr. Ellsworth, that is by merely driving them, is certainly much the quickest and easiest; but a board fence, the posts of which are so set, we have found would not stand as well as when the holes were dug to the requisite depth, and the post secured by either filling in with stone firmly packed, or earth driven solid and close by a heavy square headed pice of timber. The frosts of the north are more destructive to the post and rail or board fences than anything else; and the securing the posts against its action, one of the most necessary, yet difficult, of fence making operations. In the West this evil is not so great; but still it is not to be overlooked; and we presume it will eventually be found that the posts in a prairie fence cannot be too firmly or carefully set. There seems to be no limit to the growing of cattle, and the consequent accumulation of wealth in the West, if some mode of converting the open woodland or prairie to pasture, and providing the materials of suitable enclosures can be found. The Appendix of Mr. Ellsworth, with the accompanying letters of Mr. Robinson and Mr. Stevenson, (the last of which originally appeared in the Cultivator) would seem to prove that these difficulties have been greatly overrated, and may be easily overcome by energy and perseverance.

"A. OF THE NORTH."

SOME of our friends have requested us to apply the new test agricultural thermometer, recently invented by 'A. of the North," and some of the uses and applications of which have been so well described by the discoverer in a previous number of the Cultivator, to the numerous papers with which that gentleman has enriched so many of the horticultural and agricultural journals of the country. We should have done so before the present time, had we not thought the new instrument too *short* for the purpose indicated, and had we not remembered the fate of poor Richmann at St. Petersburg, while experimenting with a fluid to which that of the new thermometer, when highly excited, bears no inconsiderable resemblance. Science is, however, progressive, and the agricultural thermometer may yet be so improved as to indicate with perfect safety to the experimenter the high value of the papers alluded to, and respecting the excellence of which the public entertain but one opinion.

APPLES FOR STOCK.

UNDER this head, a "Practical Farmer," in the Boston Cultivator, says—"Last year I butchered a hog sixteen months old which weighed 500 lbs. *For some weeks before bringing him to the tub, he ate nothing but boiled apples.*" Corn meal cooked was offered him, but refused; the pork was of the best quality, and though the moon was not consulted in killing him, the

"Meat ne'er shrunk a bit i' the pot."

BOSTON MARKET.

THE YANKEE FARMER estimates the amount of produce, annually sold at the Faneuil Hall market, at $8,000,000, viz:

"Pork,	$3,750,000	Fish,	$300,000
Beef,	1,750,000	Poultry,	270,000
Butter,	600,000	Cheese,	250,000
Vegetables and fruit,	500,000	Eggs,	117,000
Mutton,	300,000	Veal,	63,000"

Cannot some of our New-York and Philadelphia friends furnish for the public the provision statistics of those cities?

New-York State Agricultural Society.

PROCEEDINGS OF THE EXECUTIVE COMMITTEE.

THE Executive Committee of the New-York State Agricultural Society for 1842, held their first meeting on the call of the President, at the office of the Cultivator, Albany, on the 16th of February. Present—JAMES WADSWORTH, Esq., president of the society, and Messrs. WALSH, VAIL, GROVE, L'AMOUREUX, PRENTICE, McINTYRE and TUCKER, members of the Committee. There were also present several other gentlemen, who materially aided the Committee by their counsels; among whom were J. B. NOTT, Esq., ex-president of the society, C. N. BEMENT, Esq., Gen. LELAND of the Assembly, and others.

Letters were read from vice-presidents JEREMIAH JOHNSON of Brooklyn, J. M. SHERWOOD, Auburn, ORVILLE HUNGERFORD, Watertown, and GEO. J. PUMPELLY of Owego, expressing their regrets at their inability to attend, and their warmest wishes for the successful prosecution of the objects of the society.

Letters were also read from WM. B. LUDLOW, Esq., of Hudson, JESSE IVES, Esq., member of Assembly from Cortland, and from "N. N. D." of Stockport; all containing valuable suggestions, which were duly considered by the Committee.

The Report of the Transactions of the Society for the last year, embracing the Reports of the Executive Committee, Corresponding Secretary, and Treasurer, were read and approved, and ordered to be transmitted to the Secretary of State, as required by the "Act to promote Agriculture."

The Premium List for the year 1842 was made out, revised, and ordered to be published.

A Finance Committee was appointed for the year, consisting of the PRESIDENT, TREASURER, and E. A. LE ROY, GEO. VAIL, and J. M. SHERWOOD, Esqs.

The thanks of the committee were voted to H. S. RANDALL, Esq., corresponding secretary, for the faithful manner in which he had performed his duties the past year; and he was requested to continue his correspondence in behalf of the society during the present year.

On motion of A. WALSH, Esq., the following preamble and resolutions were passed:

Whereas the Geological Survey of the state of New-York is in the course of publication, and is deemed of great value to its agricultural interests; therefore

Resolved, That Mr. Vail, Mr. Nott, and Mr. Bement, be a committee to solicit from the state authorities a copy of the same for each county agricultural society in the state.

Resolved, That we recommend to every county in the state, which has not already formed a county agricultural society, to immediately request the county clerk, whose duty it is by law, to give the requisite notice for such organization, that they may be entitled to the bounty of the state, bestowed upon conditions, for the improvement of their agriculture.

Resolved, That the Executive Committee of the State Agricultural Society respectfully recommend to all county agricultural associations to offer premiums for the best, second and third best cultivated farms, having especial reference to profit and economy in the management of the same.

On motion of Mr. TUCKER,

Resolved, That the Executive Committee will hereafter hold regular monthly meetings on the *second* WEDNESDAY of each month at the office of the Cultivator, Albany, at 11 o'clock A. M.

CATTLE SHOW AND FAIR

Of the New-York State Agricultural Society, to be held at Albany, Sept. 28 and 29, 1842.

LIST OF PREMIUMS FOR 1842.

ON CATTLE.

I. BULLS—*Of any breed, 3 years old and over*

For the best,	$20	For the third best,	$8
For the second best,	12	For the fourth best,	*Diploma.*

II. BULLS—*Of any breed, over 2 and under 3 years old.*

For the best,	$20	For the third best,	$8
For the second best,	12	For the fourth best,	*Diploma.*

III. BULLS—*Of any breed, over 1 and under 2 years old.*

For the best,	$12	For the third best,	$5
For the second best,	8	For the fourth best,	*Diploma.*

IV. BULL CALVES—*Of any breed.*

For the best,	$10	For the second best,	$5

For the third best, *Diploma.*

V. COWS—*Of any breed, 3 years old and upwards.*

For the best,	$20	For the third best,	$8
For the second best,	12	For the fourth best,	*Diploma.*

VI. HEIFERS—*Of any breed over 2 and under 3 years old.*

For the best,	$12	For the third best,	$5
For the second best,	8	For the fourth best,	*Diploma.*

VII. HEIFERS—*Of any breed, over 1 and under 2 years old.*

For the best,	$10	For the second best,	$5

For the third best, *Diploma.*

VIII. HEIFER CALVES—*Of any breed.*

For the best,	$10	For the second best,	$5

For the third best, *Diploma.*

IX. COWS—*Cross between the native and improved breeds.*

For the best,	$12	For the third best,	$6
For the second best,	9	For the fourth best,	*Diploma.*

X. HEIFERS—*Cross between the native and improved breeds, between 2 and 3 years old.*

For the best,	$10	For the third best,	$5
For the second best,	8	For the fourth best,	*Diploma.*

XI. HEIFERS—*Cross between native and improved breeds, over 1 and under 2 years old.*

For the best,	$10	For the second best,	$5

For the third best, *Diploma.*

XII. COWS—*Native breeds.*

For the best,	$10	For the third best,	$5
For the second best,	8	For the fourth best,	*Diploma.*

XIII. HEIFERS—*Native breeds, between 2 and 3 years old.*

For the best,	$10	For the second best,	$5

For the third best, *Diploma.*

XIV. HEIFERS—*Native breeds, between 1 and 2 years old.*

For the best,	$10	For the second best,	$5

For the third best, *Diploma.*

The greatest combination of those points or properties which indicate milking qualities and an aptitude to take on flesh on the more valuable parts, together with general beauty of form, (size in itself not being considered a criterion of excellence,) will be the considerations which will govern the viewing committee in awarding premiums in the above classes.

XV. DAIRY COWS—*Of any breed.*

For the best dairy cow, from which shall have been produced, in thirty successive days, the greatest quantity of butter—quality as well as quantity considered—which shall be exhibited at the time,	$15	For the second best,	$10

For the third best, $5.

No premium will be awarded unless an accurate statement of the manner of feeding the cow, management of the milk, and method of making the butter, the time it was made, the breed of the cow if known, the time after calving; the cow as well as the butter to be exhibited at the time, with certificates from the person or persons who milked and managed the cream, and churned the butter.

WORKING OXEN—*Over 4 years old.*

For the best pair,	$20	For the third best,	$8
For the second best,	12	For the fourth best,	*Diploma.*

STEERS—*3 years old.*

For the best pair,	$15	For the third best,	$5
For the second best,	10	For the fourth best,	*Diploma.*

In awarding this premium, particular reference will be had to the close matching, excellent training, and docility of the animals, as well as their general good appearance.

FAT CATTLE.

For the best fat ox, cow or steer, $20

For the second best,	$12	For the third best,	$8

FAT SHEEP.

For the best wether,	$10	For the second best,	$5

For the third best, *Diploma.*

Applicants for the premiums on fat cattle and sheep must furnish a statement of the manner of feeding the animal, the kind, quantity and cost of food, to entitle them to the premiums.

TO BREEDERS.

To the breeder of the best Bull, class I,	$10
To the breeder of the best Cow, class V,	10
To the breeder of the best Heifer in class VI,	10

ON HORSES—*Over 4 years old.*

For the best Stallion,	$20	Best breeding Mare & Colt,	$20
For the second best,	12	For the second best,	12
For the third best,	8	For the third best,	8
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

For the best pair of matched Horses, $15.

For the second best,	$10	For the third best,	$5

Three years old Studs and Mares.

For the best Stud,	$10	For the best Mare,	$10
For the second best,	5	For the second best,	5
For the third best,	*Diploma.*	For the third best,	*Diploma.*

A variety of horses possessing size, strength, and endurance for field labor, combined with that action which qualifies for the carriage or saddle—in short, the horse *of all work*, is probably the most profitable class which our farmers can now engage in rearing, and to such, therefore, will the preference of the Society be given.

SWINE—*Over 10 months old.*

For the best Boar,	$10	For the best breeding Sow,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

In awarding premiums on hogs, reference will not be had exclusively to size or to present condition, but to that form and that proportion of bone and offal to more valuable parts, which promises the greatest value from the least amount of feed.

SHEEP—I. LONG WOOLED.

For the best Buck,	$10	For the best pen of 3 Ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

II. MIDDLE WOOLED.

For the best Buck,	$10	For the best pen of 3 Ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

III. FINE WOOLED.

For the best Buck,	$10	For the best pen of 3 Ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

The term "long wooled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—the "middle wooled," the South Down, Norfolk, Dorset, Chevoit, native, &c.—the "fine wooled," the Spanish and Saxon varieties of the Merino and some of their crosses.

FARM IMPLEMENTS.

For the best *Plow*,	$30	Best *Threshing Machine*,	$20
For the second best,	20	For the second best,	10
For the third best,	10	For the third best,	*Diploma.*
For the fourth best,	*Diploma.*	For the best *Horse Rake*,	8
For the best *Harrow*,	8	For the second best,	5
For the second best,	5	For the third best,	*Diploma.*
For the third best,	*Diploma.*	For the best *Fanning Mill*,	8
For the best *Cultivator*,	8	For the second best,	5
For the second best,	5	For the third best,	*Diploma.*
For the third best,	*Diploma.*	For the best *Straw Cutter*,	8
For the best *Drill Barrow*,	8	For the second best,	5
For the second best,	5	For the third best,	*Diploma.*
For the third best,	*Diploma.*	Best improved *Ox Yoke*,	5
		For the second best,	*Diploma.*

ON SILK.

Best half bushel *Cocoons*,	$15	For the third best,	$5
For the second best,	10	For the fourth best,	*Diploma.*
For the third best,	5	Best specimen *Manf'd Silk*,	15
For the fourth best,	*Diploma.*	For the second best,	10
Best pound of *Reeled Silk*,	15	For the third best,	5
For the second best,	10	For the fourth best,	*Diploma.*

SILK REEL.

For the best,	$10	For the second best,	*Diploma.*

BUTTER AND CHEESE.

For the best sample of Butter, not less than 80 pounds,	$20	For the best sample of Cheese, not less than 100 pounds,	$20
For the second best,	12	For the second best,	12
For the third best,	8	For the third best,	8
For the fourth best,	5	For the fourth best,	5
For the fifth best,	*Diploma.*	For the fifth best,	*Diploma.*

The butter offered for premiums may be presented in butter tubs, jars or firkins.

The claimant for premiums on butter, must state in writing the time when it was made; the number of cows kept on his farm; his mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed; the best time for churning and keeping butter in hot weather; and the best mode of preserving it in and through the summer and winter, and in what vessels.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese is made from one, two or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used and the mode of preparing it; the mode of pressure and the treatment of the cheese afterwards.

FIELD CROPS.

Best crop of *Wheat*, not less than one acre,	$15	Best crop of *Indian Corn*, not less than one acre,	$15
For the second best,	10	For the second best,	10
For the third best,	5	For the third best,	5
For the fourth best,	*Diploma.*	For the fourth best,	*Diploma.*

For the best crop of *Barley*, not less than one acre, $10.

For the second best,	$5	Eor the third best,	*Diploma.*

For the best crop of *Rye*, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

For the best crop of *Oats*, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

For the best crop of *Potatoes* for the table, not less than one acre, $10.

For the second best,	$ 5	For the third best,	*Diploma.*

For the best crop of *Potatoes*, quantity considered, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

For the best crop of *Beets*, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

For the best crop of *Ruta Baga*, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

For the best crop of *Carrots*, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

For the best crop of *Peas*, not less than one acre, $10.

For the second best,	$5	For the third best,	*Diploma.*

Those who present claims to premiums for farm crops must state in writing the following particulars:—the condition of the soil at the commencement of cultivation for the crop; the previous cultivation, product and manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning, and harvesting the crop; the amount of the crop determined by actual measurement; and the expense of cultivation. The land shall be measured by some sworn surveyor, and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor.

MAPLE SUGAR—50 lbs.

For the best specimen,	$15	For the third best,	$5
For the second best,	10	For the fourth best,	*Diploma.*

Applicants for the premiums on maple sugar will be required to furnish a statement of the manner of making and clarifying the sugar.

DISCRETIONARY PREMIUMS

will be awarded for such implements and products, not enumerated above, as shall be deemed worthy of notice and encouragement.

HORTICULTURAL PRODUCTS, &c

The list of premiums on horticultural and household products will be published next month.

PREMIUMS FOR ESSAYS.

I. For the best popular treatise on Agricultural Chemistry,	$100
II. For the best essay on the Rotation of Crops, best suited to the soils of this state,	20
III. For the best essay on the General Management of the Farm,	20
IV. For the best essay on the Introduction of New Agricultural Products,	20
V. For the best essay on the Management and Application of Manures,	20

TO ARTISTS.

I. To the painter of the best specimens of Original Portraits of Domestic Animals—*A Gold Medal.*

II. To the engraver of the best specimens of Portraits of Domestic Animals on wood—*A Gold Medal.*

PUBLIC SALE OF STOCK.

On Friday, Sept. 30, there will be a public sale of stock; gentlemen wishing to dispose of their stock are requested to enter them with the Recording Secretary previous to the 15th Sept., that catalogues may be prepared in season.

RULES AND REGULATIONS.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on

Dairy Cows, Fat Cattle and Fat Sheep, Butter and Cheese, Field Crops, Maple Sugar, and to the following regulations.

All persons who intend to exhibit cattle, horses, sheep or swine, should give notice to Luther Tucker, Recording Secretary, Albany, previous to the 15th September, in order that the necessary accommodations may be made for them; and all animals must be on the ground by 9 o'clock of the 28th.

All persons intending to compete for the premiums on plows must send their plows to the Recording Secretary, Albany, previous to the 1st of August next, that the committee may have opportunity to test them thoroughly, and at such times and places as they may think best, and be prepared to report at the Fair.

All other agricultural implements must be sent as as above, on or before the 26th of September, that the committee may have an opportunity to test them the day before the exhibition.

The statements required from those who compete for field crops, must be sent to the Recording Secretary, Albany, previous to the 1st of January, 1842, and the premiums will be awarded at the annual meeting of the society, on the third Wednesday of January.

It is very desirable that all those who intend to compete for the premiums on butter and cheese, maple sugar, cocoons, silk, &c., should have their specimens in Albany early on the morning of Sept. 27, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

All premiums will be paid in cash or plate at the option of the winners.

The premiums for essays, to artists, and for agricultural implements, will be open to the United States; but all others will be confined to residents of this state, who are members of the society, or who may become so by the payment of one dollar on entering their articles.

Competitors for the premiums on essays must forward their manuscripts to the Recording Secretary, Albany, previous to the first of June, 1842, free of postage.

PREMIUMS

Offered by the Albany County Agricultural Society for 1842.

The Board of Managers, with a hope of awakening the attention of the *farmers* of the county of Albany to a sense of the importance of good cultivation, and at the same time of exciting an honorable competition for exhibiting the best cultivated farms, have decided to appropriate *ninety-five dollars* of the funds of the society the present season, for

PREMIUMS ON FARMS.

For the best cultivated Farm of not less than one hundred acres of cleared land—regard being had to the quantity of produce, the general appearance, improvements and skill in husbandry condition of stock, &c., and the expense of cultivation,	$30
For the second best, not less than one hundred acres,	20
For the third best, not less than one hundred acres,	10
For the best Farm, not less than thirty acres cleared land,	20
For the second best, not less than thirty acres cleared land,	10
For the third best, not less than thirty acres cleared land,	5

Remarks.—All claims for the above premiums must be made and addressed to L. Tucker, Esq., Secretary of the Society, and left at the office of the Cultivator, in the Exchange Building, on or before the 15th day of June next. The Committee will commence their duties to examine the farms that may be entered about the first of July and first of September.

The following may be the form of the application:

Sir—The subscriber living in the town of ————, hereby makes known his intention of applying for premium for the best farm, (of not less than 30 or 100 acres as the case may be,) and offers the same for inspection.

C. D.

The Committee will require of the applicant an accurate description of the farm, statement of the management and produce thereof; the number of acres tilled; the quantity of manure applied to an acre, (loads calculated at 30 bushels); whether long or compost; means and manner of collecting manure; whether spread and plowed in for corn and roots, or put into the hills or drills; average quantity of grass mowed, whether upland or interval; number of acres of corn, potatoes and other roots, whether for the table or for stock; number of acres of wheat, rye, barley, oats and buckwheat; how much per acre; number of acres laid down to grass; quantity of seed sown to the acre; kinds used; number of horses, cattle, sheep, and swine; method of feeding and management—summer and winter; whether native, mixed or foreign breeds; management of calves—whether for the butcher or rearing; quantity of butter and cheese made; number of hands employed, and expense of the same.

The Committee will expect these questions to be answered with as much particularity as possible. The applicant will not be required to make oath, as it is presumed no farmer will so far descend below his calling as to state an untruth for the paltry sum of thirty dollars.

The Committee hope and believe that from the method proposed, many important facts may be elicited, and the farming community enabled to derive much useful information from the skill and experience of *practical* farmers.

PREMIUMS ON FIELD CROPS.

For the best acre of winter *Wheat*,	$8
For the second best,	5
For the best acre of *Barley*,	5
For the second best,	3
For the best acre of *Rye*,	5
For the second best,	3
For the best acre of *Oats*,	5
For the second best,	3
For the best acre of *Indian Corn*,	10
For the second best,	7
For the third best,	5

Remarks.—It is to be understood that the quantity of land specified above, is in each case to be in one piece. And the claimant of either of the above premiums shall, with one other person, make a statement according to the best of their knowledge and belief to the following particulars; and shall obtain a certificate of the measurement of the land by some sworn surveyor.

The particulars are—

1st. The general state of cultivation and quality of manure used, and quantity applied on it the preceding year.

2d. The quantity and quality of manure the present season.

3d. The quantity of seed used.

4th. The time and manner of sowing, weeding and harvesting the crop, and the amount of product ascertained by actual measurement or weight, after the whole produce for which a premium is claimed is harvested, and the entire expense of cultivation.

5th. Of Indian corn, the entire crop of the acre to be offered for premium, is to be measured in the presence of the claimant, who is to sign the statement made by the person or persons who did harvest and measure it; and to be measured between the 15th of Nov. and first day of January. Seventy-five pounds in the ear to be considered a bushel.

For the best acre of *Potatoes* for the table,	$8
For the second best,	5
For the best acre for stock,	8
For the the second best,	5

Remarks.—Some sorts may be of superior excellence for their mealiness and rich flavor, but moderate in their product; some, not so well flavored, may be very abundant in produce and highly valuable for feeding stock; some growing compactly, and more expeditiously harvested. The sorts which combine most of these good qualities shall be judged the most valuable, and will be preferably entitled to the premiums, without excluding claims for potatoes of highly superior goodness, although less productive.

For the best half acre of *Ruta Bagas*,	$8
For the second best,	5
For the best quarter acre of *Beets*,	8
For the second best,	5
For the best eighth of an acre of *Carrots*,	8
For the second best,	5

Remarks.—It will be required of the claimants of the above premiums to state in writing the condition of the land at the time the course of cultivation for the approaching season may commence, and the several operations in that cultivation, the kind and amount of manure applied, and as near as possible the expense of the whole cultivation and harvesting; and the amount of produce, as well as the measurement of the land, must be attested as in the other crops before mentioned.

For the best quality of Butter and Cheese, not less than 80 pounds,	$10
For the second best,	7
For the third best,	5

Remarks.—Claimants for these premiums will be required to furnish the Committee on this subject with a written statement (and the name concealed) of the entire management of their dairy, specifying the number and kind of cows; the manner in which they are fed through the year; the produce in each month distinctly; the manner and time of milking; the butter and cheese, and the method practiced of preserving and taking care of the same. No premium will be awarded, unless the specimens are accompanied with full and satisfactory statements of the management of the dairies in which the same was produced. Ladies, if your husbands are wanting in enterprise, come forward yourselves, and you will find your reward.

N. B. Without a strict compliance with the above conditions, the Committee have determined not to award the premium.

MAKING SUGAR.

March is the month in which the making of Maple Sugar, one of the most delicious of sweets, is commenced, although the period of manufacture is at times prolonged into April. New-York produces annually, from ten to fifteen millions of pounds, and the quantity might be greatly incerased. The whole made in the United States, (and only those in the north make this sugar,) amounts to thirty or forty millions of pounds annually. In making sugar, much is depending on the season. Some years successive thaws and snows occur, which prolong the flow of the sap, while in others, the rapid approach of warm weather swells the buds, and by rendering the sap unfit for sugar puts a stop at once to the manufacture. Days of a moderate, or rather warm temperature, with frosts at night, and some slight snows, make the best sugar weather. During the latter part of the season, the sap sours readily, turns whitish, and becomes ropy in a short time, and in that state cannot be made into sugar. If converted into molasses, as it sometimes is, the flavor is not as good or the fluid as pure as that made earlier. If boiled as soon as gathered, or if a handful of lime is added to each barrel of sap, the sugar or molasses made towards the close of the season will be much improved in quality.

Every thing connected with the manufacture of maple sugar, should be made ready early in the month. For a long series of years we find that our sugar works has been tapped between the 12th and the 17th of the month of March, with very few exceptions. There is no use in tapping before the sap flows freely; and if neglected beyond the proper time, much of the sugar will be lost. The kettles, pans, or whatever is used for evaporating the sap, the reservoirs or tubs for storing it when gathered, the troughs or tubs in which it is to be received from the trees, should receive a thorough cleaning, by being washed in boiling water, and then in strong lime water, before they are required for use. This important preparation is too often neglected, and an impure, unpleasant tasted article is too often the result. It is indispensable that every thing about the sugar camp, from the gathering of the sap to the completion of the manufacture, be conducted with the utmost care and neatness.

During any part of the season, if the sap when gathered, (and it frequently will flow in such quantities as to accumulate on the hands of the maker of sugar,) is obliged to be kept a few days before boiling, lime should be placed in the reservoir, or occasionally sprinkled into it, to thoroughly check any tendency to the formation of acids, and assist the formation of sugar. Sap, when boiled, into which lime has been thrown, will have its impurities more easily separated, and the process of graining will be more satisfactory and complete. On the cleansing of the syrup, previous to its conversion to sugar, much of the purity and consequently the goodness of the article will depend. Our method is, to boil into syrup each day all the sap possible; to strain off the syrup at night into vessels where it remains over the night; in the morning it is carefully turned off from what sediment there is, and placed in the kettle for reduction into sugar; for cleansing the syrup we prefer the white of eggs, although milk will do, when eggs are not to be had; the white of the egg alone to be used, well beat, and carefully stirred into the syrup, after the kettles are over the fire, but before it is warmed. The syrup must then not be disturbed until it begins to boil, when all the impurities will rise to the surface, and may be taken off with a skimmer. The syrup must be heated gradually, or it will be apt to burn. When fully cleansed, the boiling may be pushed until the syrup is ready to be dipped into the pans or molds for sugar. Some sugar makers reduce their syrup to sugar, or so that the mass will grain, and then pour it into barrels or tubs, for graining. When this is fully done, a hole is opened at the bottom of the barrel, from which the syrup not grained, will gradually drain, and the sugar will be left of a beautiful quality and whiteness. When made into cakes, these may also be drained, and will then, in whiteness, resemble the best Muscovado.

Notices of New Publications.

NORTH AMERICAN REVIEW, FOR JAN'Y, 1842.

This number of the leading literary journal of the United States contains a number of articles of value, and well sustains its high character. Those on the Florida war, that gulf which has swallowed up so much of the life blood and treasure of this country, Chandler's American Criminal Trials, Brougham's Natural Theology, &c., will be read with interest. But to the agriculturist, the most valuable article will be the one on Harris' Entomology of Massachusetts, of which it gives a synopsis or review. We have not had the pleasure of meeting with Dr. Harris' work; but the review has convinced us that it is a work much wanted, and one honorable to his character as a man of science. It is a work prepared in connection with the geological and agricultural survey of Massachusetts, and is worthy a place by the side of Hitchcock's and Colman's Reports. Such publications as this lead us to look with increased anxiety for the reports of the survey of our own state; and we must take the liberty of repeating here that it is to be ardently hoped no unworthy parsimony on the part of the state will prevent these final reports from being got up in a manner that will be the most creditable and useful to the state. The report on Entomology will be of great importance to the farmer; and if the illustrations and descriptions are such as they should be, an incalculable service will be rendered the agriculturist by enabling him to know, and of consequence to guard against his insect enemies.

The necessity of this knowledge will be apparent from a single fact stated by Dr. Harris. In this country the name of *weevil* is applied to at least six different insects; two of which are moths, two beetles, and two are flies. Now as all these are depredators on the crops of the farmer, but have habits and forms entirely different, he requires to know what is a weevil and what is not, that he may adopt proper measures of security from these pests, as it is evident that what would save his crop or his granary from one of these would have no effect whatever on others. It should always be remembered that the weevil is always a bug; never a moth or fly. Dr. Harris says that the plum weevil, or the one that stings the young plum and causes it to fall prematurely, is also the cause of the black excrescence which disfigures and has destroyed so many of the best plum orchards in the state. The doctor may be right; but from an examination of the grub, we had been inclined to think differently. If this grub is the product of the plum weevil, then the measures resorted to in order to save the fruit from its attacks would be useful in the case of the tree.

The *cutworm* attracted a large share of Dr. Harris' notice, as it deserved to do, since it is one of our worst depredators in gardens and corn fields. He procured a number, all alike in color, but varying somewhat in size, all called cutworms; and in August, from the crysalis formed by these worms, five different kinds of moths made their appearance. That which the doctor believed to come from the cutworm proper is a moth which flies about our candles in great numbers in the latter part of summer. He calls it *Agrotis devastator*. The bee moth, Dr. H. says, was brought from Europe with the bee—the old straw hive affording an excellent shelter to the grub or worm which feeds on the comb. The grub prefers the old to the new comb; and when it once makes a lodgment, always is most common in the upper part of the hive. Weak swarms suffer more than large ones, as the comb is more easily reached by the grub. The presence of the worm may be known by the particles of comb and black grains scattered over the bottom of the hive. The moths may be destroyed in great numbers when they appear, by setting shallow vessels containing a mixture of honey or sugar with vinegar and water near the hives in the evening. Perhaps too, as is practiced for the destruction of some other insects, a lamp suspended close to the surface of a bason of oil in the evening near the hive, would be the means of trapping multitudes. Dr. H. speaks rather doubtfully, though he inclines to the belief that the European grain moth, *Tinea granella*, is found in this country. We think there can be no doubt on the subject. We received last year an ear of wheat (the California,) from the South, and carefully wrapped it in a paper. After a few weeks we opened it, and found several moths resembling the tinea granella, and on examination found quite a number of the kernels had been perforated, and in some the larvæ was still existing, and afterwards in the same paper, produced more moths.

The *Aphis* is another destructive family of insects of which Dr. Harris gives an instructive account. There is one of the species very destructive to melons, cucumbers, &c., and frequently escapes detection, from the fact that its ravages are committed below the surface, on the stems and roots. Some have supposed that the downy aphis, *Aphis lanata*, which produces in Europe the disease of apple trees, called the *American blight*, was not known in this country. Judge Buel, however, found it on his apple trees, and Dr. Harris has observed it in a few instances, though they are still rare. The downy or cottony aphis is, in this country, more common on some other trees and shrubs than on the apple. We have seen it on the bittersweet, (*Solanum dulcamara*,) in a few instances on the sugar maple, but in the greatest abundance on the black alder of our swamps. In the year 1839, in passing the Tonawanda swamp, between Lockport and Batavia, we observed in several places the clumps of alder loaded with white down which hung in waving masses, and which examination showed belonged to the aphis. Where a branch was touched, a tremulous motion, evidently voluntary on their part, was communicated to the downy matter. Examination with the microscope proved that this downy substance was alive with the young aphis, ready to float with the first wind to new habitations, and new depredations. In 1840 we observed in the air some downy particles floating in a strong south wind, and succeeded in arresting them. As we suspected, they proved to be the nidus of the cottony aphis, the young being easily detected. As we know of no place where they were to be found in that direction nearer than a swamp some three miles distant, their presence floating in the air proves the facility with which their migrations are performed.

Perhaps there is no insect more vexatious to the lover of good fruit than the apple worm. The parent moth places the egg in the hollow at the blossom end of the young fruit, where it hatches in a few days, and the young grub immediately makes for the heart of the apple. In a few weeks it attains considerable size, works numerous galleries in the interior and around the core, opens a hole through the outside of the fruit to get rid of the rubbish it makes, and when the apple falls, which is hastened by the presence of the insect, it escapes to the earth, where it generally remains in the chrysalis state throughout the winter. The apple moth is distinguished by oval spots of brown, edged with copper color, on the hinder margin of each of the fore wings. In Koller's work on injurious insects, page 230, it is figured and described as the Codling moth, (*Carpocapsa pomonana*.) To diminish this nuisance, let the apples that fall be daily gathered and fed to swine; or where this is practicable, let these animals run in the orchard at the period when the damaged apples are usually dropping. Serious losses occur annually in New-England from this source; and the insect is progressing westward, having within a few years made its appearance injuriously in central and western New-York. As the egg is deposited soon after blossoming, all preventive measures must be applied in season to meet the evil—say in June or July, when it is probable the moth might be attracted and destroyed by lamps or fires in the evening.

Dr. Harris has led us somewhat away from the object we had in view at the commencement of this paper, which was to notice the North American Review; and we return to it in order to say that it is published by James Munroe and Company, Boston. Price $5 per ann.

CEREOGRAPHIC ATLAS OF THE U. STATES.

UNDER this title we have received the first sheet of the Cereographic Atlas, now publishing by the proprietors of that valuable and widely circulated journal, the New-York Observer, one of the editors of which, S. E. Morse, is the inventer of the system of cereographic engraving which promises such important results. This first sheet contains beautiful and very correct maps of nine of the states—Maine, Vermont, New-Hampshire, Connecticut, New-Jersey, Maryland, Delaware, Virginia, Ohio, and the territory of Iowa. This valuable Atlas is furnished gratis to such of the subscribers to that paper as are not in arrears, or shall pay for the paper two years in advance. Whether copies will be printed for sale, we are unable to say; but the introduction of such a map of the United States into every family in the country would be a most important acquisition, and do much to dispel that geographical ignorance of our own country which is unfortunately so prevalent. We hail with pleasure the appearance of this first sheet, as a proof that cereography has surmounted the obstacles attendant on the introduction of a new art, and can assure our readers that the Atlas, alone, will be worth far more than the advance subscription to the Observer.

Correspondence, Inquiries, &c.

SANDY SOILS.

MESSRS. EDITORS—I am in possession of a farm, a large portion of which is a deep sand, and which has been so completely exhausted, that in some places the surface is nearly a drifting sand. Manure put upon it produces a good effect, but its influence is felt only a short time. It has occurred to me that the best method of improving this soil, would be to change its character, if possible. If you would give your opinion on this matter, and add some remarks on the best method of cultivating sandy soils, you would doubtless confer a favor on many subscribers. L. S. T.

Hartford Co., Ct.

All soils in their essential parts, are composed of sand, clay, lime and organic matter. If either of these substances exist in too great proportions, the soil will not be good or fertile. Kirwan says that a good proportion is 56 of sand, 14 of clay, and 30 of calcareous matter. Morton says the proper proportions of these primitive earths is from 50 to 70 per cent of sand; from 20 to 40 of clay; and from 10 to 20 calcareous matter or lime. We have found by analysis that some of the best wheat lands of west New-York, contained much less lime than the lowest proportion stated above, while the proportion of clay was somewhat greater. A good soil should be friable and porous to permit the roots to penetrate freely; to allow the superfluous waters to readily pass through the subsoil, and at the same time sufficiently tenacious to retain moisture for the support of plants. This capability of retaining moisture is owing to the clay, and this fact indicates what is necessary to be done to change the character of a soil, when such as is described by our correspondent. When sandy soils are deficient in clay, they soon decompose the manure put upon them, which is speedily carried off by filtration and evaporation; the name of *hungry soils*, has hence been given to soils too deeply porous and sandy.

L. S. T. if he had a sufficient supply of manures at command, might render his sands fertile, but if he wished to change their character, and render them permanently fertile, he must increase the quantity of clay. On sandy soils, a load of clay properly incorporated, will produce a greater, because more lasting benefit than a load of manure. Of this, the fine farm formerly owned by Judge Buel is an example. This was originally an hungry porous sand. To give it tenacity, and a proper retention of moisture, Judge Buel covered his fields with clay from the Albany clay banks, at the rate of from twenty to thirty loads per acre, and his experience convinced him that a load of such clay (it contained from 20 to 30 per cent of lime,) was of more benefit than a load of barn-yard manure. He distributed his clay as fast as drawn, upon the sward or surface, where it was decomposed by the rains and frosts, when it was pulverized by the roller, and further distributed by the harrow. There are other instances equally illustrative of the good effects of clay in changing the character of such soils; but this was one of the first attempts at improvement in this country, and therefore the more deserving of honorable notice. Fortunately there are very few instances where the clay necessary for the amelioration of such soil cannot be obtained in the immediate vicinity. To dig, distribute, and incorporate the clay with the sand is the cheapest, and the only certain mode of rendering such soils capable of permanent fertility.

Owing to the ease with which water penetrates soils in which sand constitutes too large a proportion, they soon become exhausted of the alkali which is indispensable to the formation of plants, and the growth of sward being impossible, the surface becomes more impoverished and loose. Ashes distributed on such soils furnish the required alkalies, and hence the great advantage of their use, as fully demonstrated on the sands of Long Island and New Jersey, as well as those of Belgium and Holland. Soap boilers' ashes, or the leached ashes of the asheries of the country, are invaluable for this purpose, as they still retain sufficient alkali, while the earths of lime and clay combined add to the necessary constituents of the soil, and partially restore the proper equilibrium of the original elements. Liebig, in his late valuable work on organic chemistry, explains most satisfactorily the action of the alkaline matters so contributed to the soil, and their absolute necessity where fertility is to be expected. The first effort in improving sandy soils should be to change its character, then to cover it with a sward, or a growth of clover; and when this can be effected, the great obstacle to rendering them fertile or capable of cultivation, is overcome.

There is no soil on which gypsum produces so great, or such immediate effect, as on sandy ones; and from its effect on these has originated the impression that gypsum is a great exhauster of soils. It is evident that where but a given quantity of alkaline matter exists in a soil, the more vigorous the plants we produce on it by the use of substances that afford no alkali, the sooner it will be exhausted of that ingredient, and become incapable of growing plants. Gypsum furnishes no alkali; and as sandy soils, for the reasons stated above, contain but little, that manure by stimulating the rapid growth of vegetation exhausts it rapidly. But other substances used as manures that contain no alkali, produce the same exhausting effects, horn shavings for instance. These facts show the proper course to be pursued in the treatment of sandy soils, or indeed all others where the alkalies are deficient. Manures are to be applied which contain the necessary alkalies, in connection with the gypsum. Ashes, green crops, clover fed off on the ground or turned under, animal manures, or indeed any substance in which alkali abounds will be found useful. Lime is valuable, but on sandy soils which are already too dry, the effect is not as perceptible as on heavier soils, which it assists in rendering more friable, as well as giving fresh supplies of alkali. By changing the character of a sandy soil, and giving it the power of retaining the manures and alkalies furnished it, we speedily convert it into a rich loam, easy to cultivate, and most abundant in its products. There is not, we are convinced, a farm such as our correspondent has indicated, in New England, that may not be "reclaimed" and restored to fertility, and in nine cases out of ten, the materials may be found on the farm where they are wanted. A swamp, a morass, a peat bog, will furnish the clay and the vegetable matter necessary to insure productiveness; it is the business of the farmer to search for, and apply them.

STEARIC CANDLES.

"MESSRS. EDITORS—I have observed in the New-York papers a notice of a new kind of candles sold under the above name. It is said the oil is expressed from the tallow, and then the substantial part made into candles, which are very hard—not oily—endure a higher temperature than spermaceti candles, and burn as clear as candles made of spermaceti or wax. Can you tell us anything about these candles, their nature, or the preparation of the tallow? A HOUSEKEEPER."

It was first observed we believe by the chemist Chevreul, that the expressed oils of plants, as well as animal oils, are composed of two substances, or oils of different degrees of fusibility; so that on exposing any oil to a low temperature, one part would become solid, while the other portion retained its fluidity. To the least fusible oil he gave the name of *stearine*, and the most fusible he called *elaine*, which has been changed to *oleine*. Several methods have been proposed for separating these two substances, which is at times very desirable. Thus in preparing almond or olive oil for clocks and watches, it is necessaay to separate the part which becomes white and hard from the more fluid part; and in France for some years the separation of *stearine* and *oleine* in tallow for candles has been practiced. Alcohol combines with oleine very readily; and when thus separated from the stearine, it is obtained pure by evaporating the alcohol. They may also be separated by pressing the substance between folds of blotting paper till it ceases to render it greasy. The *oleine* which the paper has absorbed is then separated by boiling it in water, on which the oleine floats and the paper sinks. From the *stearine* thus obtained, the candles to which our correspondent alludes are made, and named *stearic* candles. These peculiar qualities of oils, animal and vegetable, have a great influence in the manufacture of soap, which is a combination of *margaric acid* and *oleine*. Of the particular method adopted in the preparation of tallow for the New-York candles, we are ignorant, having seen nothing more than the paragraph alluded to by our correspondent.

BONE DUST, ASHES, &c.

OUR friend "ENQUIRER," of New-London, (Ct.) gives so pleasant an account of his experiment with bone dust on corn, and its total failure, that did our limits permit, his paper should go upon our pages entire. Enquirer put twenty loads of long manure on an acre of good sward land in May, turned it under and harrowed well. He then mixed twenty bushels of bone dust with twenty bushels of loam, and when fermented well, put this compost in each hill, dropped his corn upon it, and covered in the usual manner. The experiment was a total failure, and our opinion is asked as to the cause.

Failures with bone dust applied to crops are not uncommon in this country or in Europe; and they have been attributed to various causes—such as the qualities of the soil, the state of the bones previous to grinding, or the method of application. Invaluable as this substance is for some crops, and in most instances where it is used, it at times appears perfectly inert and useless. Thus, at page 341 of Mr. Colman's Report, may be found a paper from Mr. Haggerston, the able and intelligent superintendent of the Cushing farm at Watertown, Mass., in which some experiments with this manure are detailed, and which so far as potatoes and corn were concerned proved a complete failure. Two acres were planted with corn, the whole manured with compost, and on one-half of the field bone dust applied at the rate of 55 bushels to the acre. The yield was not at all improved by the bone dust. Of the potatoes, the rows manured with compost gave 9½ bushels to the row; those without manure, 4 bushels; and the rows with bone dust, 2¼ bushels each. In other cases, however, and particularly on root crops, bone manure was excellent. We are inclined to think the bad effect of the bone dust on Enquirer's seed corn is to be attributed to the state of fermentation in the compost; the heat produced being so long continued as seriously to affect the germinating powers of the corn. We have known a precisely similar result ensue from the use of hog and horse manure applied to corn in the hill, or the seed planted on it, while the manure was in a high state of fermentation. The slow germination of his corn, and its after appearance, would indicate unfavorable and unnatural chemical changes during the first process of vegetation.

"Enquirer" asks whether a covered or open drain would be preferable, when it would be dry one-half the year? Open drains we do not think advisable, only in those cases where so much water flows as to prevent the use of covered ones. Covered drains are the best in many respects. They are not in the way of farming operations; and they prevent that constant carrying off of the finer and more valuable parts of soils which is always more or less done by open drains.

As to the best methods of using ashes, we have found them valuable in all the ways we have tried them, but prefer using them on our meadows as a top dressing. If applied to crops, we think the best way is to make them into a compost with lime, gypsum, &c. In this way, they are valuable for any crop. Since attention has been drawn to the subject in Massachusetts, some of the most intelligent farmers and gardeners make one of the most efficient and active of manures, by mixing the muck from swamps in layers with barilla or soap boiler's ashes, and when the fermentation has considerably progressed, mixing the whole mass. In this way, the peat or muck is decomposed, its natural acidity corrected, and applied directly to crops, or to grass lands, is most valuable.

THE ROHAN POTATOE.

From the letter of a correspondent at Solebury, (Pa.) we make the following extract. Our experience in the culture of the Rohan corresponds with his own.

"I see that some of your correspondents are crying down the Rohan potatoe, as not fit to eat, nor even fit to feed to stock. One cause of this prejudice against the Rohan is doubtless to be found in the fact, that during the high prices many potatoes were sold for Rohans that were not genuine, and probably some of them of very inferior qualities. Where such was the case, disappointments would ensue, and the cry of humbug naturally be raised. Now I never wish to persuade people into new measures of any kind, further than to give my own experience; and that with the Rohan is as follows:

"I got my seed from Judge Buel of his own raising, which I suppose must have been genuine; and I have planted them now four years, and also the Mercer, which has been the standard hereabouts and in the Philadelphia markets for many years; and in all cases have the Rohans produced nearly double what the Mercers have done, when planted and treated alike. We are also eating of them every day, and though our family is large, we all think them equal if not superior to any other potatoe. I am also inclined to think they are as good for stock as any other potatoe, and of more value to the farmer; for if he can raise only 3 bushels in the place of 2, which he may do in all cases where he plants Rohans and Mercers, the advantage in cultivating the Rohan must be decided. You must judge from this my experience in raising and eating Rohans, whether I am in my common senses or not."

PLASTER AND MANURE.

The following extract is from "Observations on Farming," a paper by G. Cook, Esq. of Tivoli, N. Y.

"I have been for some time past a close observer of the effects of plaster on our lands, and make bold to declare my opinion, that I think it a deleterious stimulant in the hands of the ignorant or grub-worm farmer. That plaster is not a direct manure it is presumed none will deny; but that by its inherent properties it excites and stimulates the plant to which it is applied to an increased appropriation of the fertilizing properties of the soil, producing temporarily, (unless in the mean time manure is applied,) an increased production. Accordingly we find that it produces the greatest effect upon new lands, or rather lands upon which it has not been before used. I have conversed with many farmers who have been in the practice of using it for some time past; and all seem agreed that without any other manure, it soon loses its magical effects upon their fields, and that they have found it necessary to resort to other means of keeping their lands in a proper state of fertility.

If such be the case, and from my own observation I judge it to be a correct conclusion, I would advise my brother farmers to expend the money heretofore applied to the purchase of plaster, in additional labor to prepare their barn-yards to retain more perfectly the real enricher of their soils.

But how often do we see those who would be very much offended to be called slovenly farmers, allowing their cattle, sheep, and swine to be upon the road, wasting their manure, making the road their barn-yard, or if they have one, suffering it to drain, where all the drainage is lost to all beneficial farm purposes, and following that wasteful practice of feeding their stock upon the ground, while at the same time advocating both in theory and in practice, the greater strength of well rotted manure.

Who, that is a real friend to agriculture does not hope to see a better system succeed one so wasteful and ruinous; and when the misinformed or prejuced farmer shall better appreciate the great saving made by housing his manure, and applying it to his land before its strength is gone by evaporation or washing. Then indeed he will find no necessity for applying plaster to his plants, like ardent spirits to the body to give but temporary strength; but will be able to add yearly to his lands the only true and legitimate manure."

Remarks—We must be permitted to enter our protest against any speculations or inferences that shall go to diminish the use of plaster by our farmers. The "grub-worm" or the "skin flint" farmer, the one who takes from his land all he can get, and returns nothing to it, will doubtless find his land exhausted, and the sooner the the better, if that shall open his eyes to the folly of such a course of farming. But the skillful husbandman, the one who farms his fields in rotation, who enriches all his fields and exhausts none, finds in plaster one of the most efficient and money-saving aids in his course. Besides it will not be so readily conceded, that plaster is nothing more than a stimulant, that it is no manure, even in the restricted sense of the term. The fact that plaster is found to a considerable amount in those plants on the growth of which it exerts the greatest influence, clover for example, would militate against such a supposition. That it is mainly active in contributing one of the most important elements of plants, nitrogen, has been proved by Liebig; and as much the largest portion of the carbon of plants is derived from the atmosphere, any substance that enables the plant to appropriate this the most readily, must be of service. But experience in such matters is entitled to great weight. We have long lived in the centre of the New-York plaster country. We should not err perhaps in saying that there is more plaster used in the counties of Onondaga and Cayuga, than in any other two counties in the state. Many of us have used it anually for more than thirty years; and never have we heard a farmer who deserved the name of one, assert that his soil was impoverished by its use. On the contrary there are thousands who have grown rich by the rotation of crops which the use of plaster and clover enabled them to pursue, and whose farms at the present moment are in better condition, and as productive as they were when the use of plaster commenced some thirty years since. There are *exhausting* farmers in all countries; men who will ruin their farms, whether they have plaster or not. We advise no one to rely on plaster alone. Depend upon it the barn-yard and barn-yard manures cannot be too carefully looked to, and here the opinions of our correspondent have our hearty approval. But we say, combine the two; use both plaster and manures; feed your fields well and they will feed you.

RAISING CALVES.

A correspondeut at Hanover (N. H.) writes:—"Though no dairyman, I have a fact for your correspondent D. C. B., Canaan, N. Y., in relation to calves. About the first of March last my cow had a fine large heifer calf, three-eighths Durham; white and red, and very handsome, and together with the fact that the mother (of common stock,) was a very superior milker, determined me to raise her progeny. The udder was some inflamed and caked, but was reduced by greasing and thorough milking. The afterbirth did not, however, come away in the usual time, and an experienced manager attached a brick to the protruding part about a foot from the root of the tail, which by its gravity accomplished the object in a day or two most completely and without violence. The calf took the teat readily, and had a full supply of milk. In April the cow died, as supposed from some obstruction in the gall duct; at the time giving 12 quarts of milk daily; feed, hay and roots. 'What shall we do with the calf?' was the question now asked; for calves, though they will suck the finger readily, will not always learn to drink. An ingenious young Illinois farmer who was with me took a junk bottle, filled it with warm milk and a little Indian meal, and put it to her mouth. She seized it and exhausted it at an effort. For 5 or 6 weeks, the food was 3 quarts of milk and half a pint of meal morning and evening, and the whole from the bottle. During the day a small quantity of fine hay was within its reach, which was constantly nibbled, and never have I known a calf in better heart, or thrive faster than this. I hope if any of your readers should meet with a similar misfortune, they will make an attempt to bring up the calf 'on the bottle,' as they will find it perfectly easy. H."

RUTA BAGA.

A respected correspondent in Peru, makes the following remarks on the culture and preservation of ruta baga.

"Some of my neighbors object to raising this root, on the ground of the expense and trouble. I presume they do not consider that in the first place the seed compared with that of potatoes is a mere trifle; that the sowing of an acre is but a morning walk, provided they are supplied with a drill barrow, which every one should have; and that when sown in drills, a great share of the work can be performed with a small plow. The harvesting can be accomplished in one-third of the time required for potatoes; if you are not provided with a regular turnep hook, a common hoe will answer if made sharp. The easiest way of keeping them through the winter, is to level a piece of ground in a dry place, build them up in the form of a house roof, covering them with a light coat of straw, and six or eight inches of earth; not more. I have kept them in this way a number of winters, and always found them very nice in the spring. Be sure not to put on too much earth, since if kept too warm they will decay. I know this from experience. W. K."

A hole made by a crowbar, or stake, through the top of turnep heaps, and kept open, will allow the heated air to escape, and prevent the decay spoken of by W. K.

CULTURE OF BUCKWHEAT.

Messrs. Editors—I wish to know on what kind of soils buckwheat will grow the best? And whether it is not a great exhauster of the soil? and whether it can be profitably turned under as a green crop? It being objected to by some, that the acid which it contains tends to render the soil unproductive. L. Durand.

Soils rather light than otherwise are the best for buckwheat. On heavy clay soils it rarely succeeds. From 30 to 40 bushels an acre are not an uncommon crop on soils adapted to its culture, and properly prepared. Buckwheat is not a greater exhauster of the soil than other plants which yield the same amount of straw and grain when removed from the field. A few years since we saw a heavy crop of buckwheat on a piece of land from which the owner assured us he had for thirteen years in succession taken a similar crop. This was in one of the southwestern counties of the state; the soil a light yellow loam. Buckwheat is extensively used in Germany and some other parts of Europe as a crop for a green dressing, and is highly prized. In England, turneps fed on the ground are preferred, as in that way food for animals and the dressing of the soil is at once effected. It is very probable that on a soil divested of alkalies, too liberal dressing of any green plant might prove hurtful at first; but such instances must be very rare, and a small quantity of ashes or lime strewed over the field would prevent the possibility of such a result.

LARGE BERKSHIRE PIG, &c.

Mr. Bowen of Eastford (Ct.) has furnished us an account of a pig fattened in that place by Mr. Taylor, which, when killed, at 8 months and 22 days old, weighed 349 pounds. Mr. Taylor purchased the pig at six weeks old, fed it through the summer on skim milk and boiled potatoes, and through the fall with potatoes and corn meal; the latter ground in the ear. Mr. Taylor's manner of feeding was always to give it something whenever it got up from its bed; and he besides *gave it a frequent washing with soap suds*. We fully agree with Mr. B. in his estimate of the superior value of the Berkshires.

We entirely mistake the character of the New-England farmer, if he does not rise superior to the present pressure, (trying to him as present prices for agricultural products must be,) and that too without the aid of any law, bankrupt, or otherwise. Western products may in some slight degree interfere with those of the East, yet we must remember that we are but parts of one great whole, and that prosperity cannot attend one part without exercising a corresponding influence on the others.

ILLUSTRATION OF TRANSMUTATION.

Our correspondent at Solebury, (Pa.) also gives the following illustration of the transmutation of plants: "An old and respectable farmer prepared a piece of ground, and planted it with pumpkin seed which he knew to be genuine; and behold! they all came up beans, and produced a good crop, as numbers of his neighbors could witness. Now for the explanation. The old man had married a second wife some years younger than himself, and who had a mind of her own, as well as her husband. For some reason, she preferred beans to pumpkins; and when the latter made their appearance, she pulled them up and put out beans in their places; a trick of which the old man never dreamed, but to his dying day considered the fact as an unanswerable argument in favor of transmutation."

PAGE'S PORTABLE SAWMILL.

Several correspondents in different parts of the country, have requested some information respecting Mr. Page's newly invented Portable Sawmill, its performance, cost, &c. We hope some of our friends in Baltimore, will give the information desired. By the way, we would suggest to the makers and advertisers of agricultural implements, or others, that they accompany them with the price or prices, where there is more than one. It would be well to state where the implements are to be found. Such a course would greatly facilitate sales, and save those desirous to purchase much trouble in making the necessary inquiries.

LIVE FENCES—PRIVET.

We are unable to inform H. Long, Esq., of Long Green, Ill., whether the Privet *(Pyracantha)* of which he speaks so favorably, has ever been tried in this country for the purpose of hedging to any extent, or where the seeds of the plant could be procured. If any of our friends are able to inform Mr. L. where such plants or seeds can be procured, they might confer a favor by making it known through the Cultivator.

DICTIONARY OF TERMS USED IN

Agriculture and its kindred Sciences.

HUMUS.—Plants are supposed in some form to derive their nourishment from a peculiar substance in the soil, called *humus*, and which is the result of the decomposition of other and previous plants. "Humus is described by chemists as a brown substance, easily soluble in alkalies, but only slightly soluble in water, and produced during the decomposition of vegetable matters, by the action of acids or alkalies." "Woody fibre in a state of decay, is the substance called *humus*." (Liebig.) There are various modifications of *humus* known to chemists; those which are soluble in alkalies are called *humic acid*, while the insoluble modifications are called *humin*. Dr. Dana applies the name of *geine* to this substance, and divides it into soluble and insoluble geine, and considers that in the three states of vegetable extract, geine, and carbonaceous mold, it is the principle which gives fertility to soils, long after the action of ordinary manure has ceased. He pronounces it to be the "decomposed organic matter of the soil." That *humus* owes its origin to decayed vegetation, can scarcely be questioned; but the manner in which it produces the fertilizing effects on the soil, or rather in what manner it is made subservient to the growth of plants, is a question which is exciting no little interest, and is certainly one of importance to the farmer as well as the vegetable physiologist. The more common opinion has been, that *humus* was no further available than it was soluble, and that in this state it was taken up by the roots of plants, and converted by their vital action into the substance of the plant. Others, and among these are the celebrated chemists, Liebig and Raspail, maintain "that *humus*, in the state in which it exists in the soil, does not yield the smallest nourishment to plants." That plants *may* receive some nourishment from *humus*, in the shape of humates, or humus combined with an alkali, such as humate of lime, would seem probable, as such humates become soluble in water; but the ingenious experiments of Liebig prove that but a small part, if any, of the nourishment of plants is actually derived from that source. Humus, then, must be available in some other way than by actual absorption by the roots, and this way, Liebig contends, is by its gradual conversion into carbonic acid gas. Several furious attacks have been made on the German chemist, for his assertion that humus, as it exists in the soil, is of no avail to plants; but if humus is only the decayed matter of plants, it is clear that, no matter how fine its particles may be, it must undergo some change before it can be taken up by the plant, or be converted to nourishment in any way. The modern doctrine is, that plants derive most of their nourishment, or in other words, the carbon which constitutes the most of their structure, from the carbonic gas of the air, and that *humus* is only or chiefly useful in furnishing a constant supply of this gas for the use of the plant. It seems to us, however, that as carbonic gas is readily soluble in water, or combines with it in large quantities, that in this form it is presented to the roots of the plants, and appropriated by them to their growth or nourishment, as well as from the air by the leaves. This opinion is sustained by the remark of Liebig, that every root and leaf acquired by the plant, gives it a new mouth and stomach. Common manures, such as are derived from vegetables principally, are of little use until decomposition has been effected, and the formation of carbonic gas has commenced. Those manures in which the nutritive and stimulating properties are combined, or those in which ammonia exists with the carbon, are found to be the most efficient and the earliest in their action on plants. The prepared manures belong to this class.

HURDLES.—In the cultivation of silk, various methods have been adopted for the feeding of the worms, so that the dangers arising from crowding, or from the filth of their excrements and fragments of leaves, in feeding, may be avoided. In consequence of a neglect of these things, disease is engendered, and the whole of the worms are not unfrequently destroyed. To prevent this, it has been proposed to feed them on a kind of net-work, called hurdles, through the interstices of which all offensive matter falls, and by turning which, the rejected leaves are easily removed, without disturbing the worms. Several American silk growers have directed their attention to this point, particularly Mr. Morris of Burlington, New Jersey, Dr. Goodsell of Utica, Mr. Fox of Mount Pleasant, Ohio, and perhaps others; and very great improvements have been made, combining neatness and ease in feeding, and contributing much to the health and productiveness of the worm.

HYBERNATION.—That state of inaction and rest, which some animals and many plants undergo during the cold season of the year, is called hybernation, and exhibits some remarkable phenomena, well deserving the attention of the naturalist. On the approach of winter, the badger, marmot, ground squirrel, frog, toad, snakes, &c. betake themselves to their retreats in the earth, where, in a torpid, motionless state, with but just circulation enough to preserve vitality, they remain until the returning summer rouses their dormant faculties to action once more. Those instances in which animals and insects have been found in positions where they must have remained for centuries, as toads, frogs, bees, &c., in solid rocks, are examples of continued hybernation, produced by being placed in a position where the temperament and the confined state adopted at the commencement of the hybernation, is continued by causes afterwards superinduced. Thus the bats enclosed in the old mine, at Cheshire, Ct., by a slide from the mountain, while in a state of hybernation, remained in that state for more than a quarter of a century, and were so found at the reopening of the mine. Thus toads, hybernating in swamps, if covered while in that state to a depth which would prevent the usual effects arising from the changes of the seasons, would remain in that position; and the subsequent conversion of the covering matter into stone, would enclose them forever in the rocky mass. It is to this indurating process that we must ascribe the wonderful preservation and continued vitality of those reptiles which are found in the sand stones of the transition series. The condition of plants, too, during our winters, in which the sap ceases to circulate, or circulates but to a limited extent, and in a languid manner, is a species of hybernation. It is a rest of the plant, a cessation of its functions, growth ceases, and what may be called a sleep of the plant ensues. Other causes may produce this rest of plants. Numerous instances have occurred the present fall, (1841,) in which a second blossoming has taken place, and the flowers of the first of October have vied with those of May or June. This reviving of the plant has been noticed in the apple, plum, and pear. It is unquestionably to be attributed to the check which the extreme hot and dry weather gave to the trees, and which produced on them an effect similar to that of the hybernation of tropical plants. The functions of the plant were for a time partially suspended; heat had performed the effect of cold; the secretions of the plant, which prepare it for blossoming and reproduction, had been performed, and when rains succeeded the drouth, their blossoming in October as well as in May, was the natural result.

HYBRIDS.—When copulation takes place between different species of animals, the progeny which in some cases is the result, is termed a *hybrid*, as partaking of the qualities of both, yet distinct from either. Thus a connexion between the ass and the mare, produces the mule, and between the horse and the female ass, the hinny, the two most common hybrids among animals. Hybrids among animals do not have the power of reproduction, a proof that muling is a violation of nature's law, by which the races as distinct species are governed. There is at present in the highlands of Scotland, a hybrid between the stag and the mare, the first ever known. Hybrid plants are quite common, and there is no so certain way of producing new varieties, as by muling or cross breeding; and in the language of Prof. Lindley, it is to "this process, more than to any thing else, that we owe the beauty and excellence of most of our vegetable garden productions." The operation of producing hybrids, or of muling plants, is very simple, consisting in nothing more than the applying the pollen of one plant to the stigma of another. Some precautions are, however, requisite in this, such as depriving the flower intended to be fertilized of its own anthers; otherwise the stigma will be self impregnated, and the pollen must be applied at the proper season, when the peculiar mucus which detains the pollen is present on the stigma. The power of muling is among plants, however, confined within narrow limits. Mr. Knight, who was probably more successful in the process of muling than any other man, and to whom we are indebted for some of the finest of our modern fruits, was never able to make a cross between the Morello and the common cherry. Prof. Lindley says he has "in vain endeavored to mule the gooseberry and the currant;" and the apple and the pear, the blackberry and raspberry, have never mixed, though such a result might reasonably have been expected.

HYDATIDS.—These are animals, generally pear shaped, found in various animals where they are parasitic, and resembling a vesicle or bladder filled with water. It was for a long time doubted whether they had an independent existence; but as they have evidently a voluntary motion, and as they have the property of acting on matter in such a way as to convert it into a substance like that which constitutes the agent, (which, according to Roget, demonstrates a vital power,) there is no reason to doubt it has a distinct animal existence. Hydatids occur sometimes in man, but more frequently in animals. In hogs, it causes the measles; in sheep, in the brain, they cause the staggers, and in the liver, the rot; and some of them are lodged in the tissue of the muscles, while another, the *Hydatis globosa*, is frequently observed on the intestines of pigs. Sheep are best cured of these parasites by a removal from all wet, low land, to dry pasturage. They have, in some desperate cases, where the affection of the brain was indisputable, been cured by trepanning, and the extraction of the hydatids.

IN-AND-IN BREEDING.—This is a term applied by the breeders of animals to that kind of propagation where both are of the same blood, and the nearest relations possible. Although some of the most decided improvements have been made by following this system of breeding in-and-in, yet it has only been done by the most judicious selections, and the exercise of cautious judgment, while in the hands of the ordinary breeder, it is sure to run out a stock, degenerating them rapidly, rendering the males impotent in many cases, and the females of little value as nurses or breeders. Experience seems to have proved that crosses of the same variety of animals, but of another family, have made the best animals, and such a course is to be preferred to breeding in-and-in. In some cases, where there is a marked superiority in any race of animals, which it is wished to retain, a cross with a race less perfect in some respects, perhaps, but more vigorous, making what Berry calls a strong cross, and then breeding directly back to the favorite blood, has been very successful. The first attempts to improve the Short Horns, Berkshires, &c. received serious checks from this system of in-and-in breeding; and both Berry and Collings found it necessary to give more vigor and constitution to their animals, by an infusion of different, and in some respects inferior blood.

INDIAN CORN, (*Zea maize.*)—One of the most valuable of the plants cultivated for the use of man or animals; a native of America, but now spread over a large part of the habitable globe, and where cultivated, constituting an article of bread in perhaps more general use than any other. Corn requires a warm climate, a rich soil, and good cultivation; under these circumstances, the product per acre will rise high, many instances being reported of crops from one hundred to one hundred and fifty bushels. In England and Scotland, the average temperature of the summer is too low for corn, and few attempts are made to cultivate it, while in the United States, it is extensively grown in all parts; and in parts of the middle, and over the entire south, it constitutes the chief or only source of bread. There are many varieties of Indian corn. In the excellent treatise on this plant of Dr. P. A. Browne, of Pa., eleven kinds of yellow corn are enumerated; nine kinds of white corn, ten of red corn, or red cobs, two of blue corn, and four of varieties not properly classed with either of these, making some thirty-five in the whole. Since this treatise was written, several new varieties have been noticed, among which is the singular corn called rice corn. Some of the varieties of the white corn differ from each other but by slight shades, and the same remark may be made of the yellow. We have the present year cultivated some twenty-six varieties, most of them very distinctly marked, but some of them with variations very slight, and which we can hardly consider permanent. This is particularly the case with two or three of the small eight rowed whites. Corn differs in the shape of the grain, in the color, in the color of the cob, and in the number of rows on the ear. Northern yellow corn is considered as the most nutritive, is preferred in distilleries, and can be preserved longer in a perfect condition than any other; but the southern white is generally preferred for bread, or rather for the hot cakes, in which form it is most commonly served up in the south. In cultivation, that corn is to be preferred which gives the greatest weight of stalks, cobs and corn per acre, where the climate is such as to ensure its ripening; but where it is necessary that early maturing kinds should be chosen, that variety which has a large kernel and small cob is to be preferred, as the cob is the last part of the ear that reaches maturity, or that state of dryness in which it is safe from mold. At the north, the Canada White Flint, Toronto Yellow, Oswego Long White corn, Twelve Rowed Yellow, Dutton, and Brown corns are much cultivated; while in the south, the white and yellow Gourd Seeds, Dent corn, &c. are most esteemed, and where the soil is of proper richness, grow to a great size. No part of the world seems so well adapted to the culture of corn as the Mississippi valley, and the quantity already produced is almost incredible. It is cultivated with so much ease, the labor required is so trifling, and the product per acre so great, that it will in some way constitute the great staple of the west.

IRRIGATION.—The importance of water to vegetation is known to every farmer, yet very few are the instances in which this natural want is supplied by artificial means. In most cases, by a wise dispensation of Providence, showers supply the requisite moisture, and of all water that can be applied to plants, rain water is found the most suitable; but there are some soils and some crops which require more water than others, and which are greatly benefited by artificial supplies. Thus the drifting sands of Arabia are arrested and covered with vegetation by water; the rice fields of India and the south are flooded to secure a crop; and irrigation, or an occasional flowing of water from brooks, rivers, or springs, over meadows, is found to add much to their productiveness. All water contains more or less matter essential to plants. The soluble salts, the finely divided organic matters, and the richest parts of all soils, are continually passing away in the streams by which our fields are watered, and it is this cause which forms one of the active drawbacks on their fertility. To arrest and detain these matters from wholly passing away, and being lost to the soil, is another important end of irrigation. The more foreign matter any water contains, the more valuable it will be for irrigation; thus rain water is better than that of springs, and rivers below large towns are found to act far more effectively than above. Of this there is abundant evidence in the use of the Thames water below and above London, and particularly the celebrated Craigintinny meadows below Edinburgh. Water generally contains sulphate of lime, at least all hard waters do, and a single flowing of a meadow with such water for a few days, besides the other materials it deposits, will leave more of this sulphate or plaster than is usually applied per acre by farmers. Some of the best meadows and lands of England have been formed by flowing them and increasing the deposit, until poor lands have become like the richest alluvion. In this country, few instances of irrigation have as yet been attempted; but where it has been done by system, and with reference to permanent results, they have proved most successful; and the practice, as the soils become older, and other methods besides manuring become proper to promote fertility, will doubtless be common.

Original Papers from Contributors.

ON THE CULTURE OF THE POTATOE.

Messrs. Gaylord & Tucker—Observing an article in your paper, written by a person on the bank of the Hudson, on the subject of raising that valuable crop, the Potatoe, I am induced from my experience in the potatoe way, with due deference however, in all probability to his better judgment, and perhaps to his more practical knowledge, to offer you a few remarks.

Being of the opinion that a sward plowed in the spring, say the last of April, is all important to the preservation of the crop, during a severe drouth, I am extremely careful that the sward should be plowed and harrowed so as to exclude the air, and as deep as it may be done, in order that it may rapidly decay, to afford not only nutriment to the roots of the vines while growing, but add by its sudden decay to the moisture of the ground, so essentially necessary in case of a drouth, that being generally ruinous to the potatoe crop, and against which we should endeavor to guard. My premises may be wrong as to the use of the sward plowed in the spring. To test which, 1st. I will enquire whether a sod would decay so soon and well in cold weather as warm? 2d. Whether, if as well, that object *thus obtained* can be of equal benefit to the crop, as the consumption of the soil would be, if going on during the growth of the vine and root of the plant? 3d. Will not a stiff sward, well plowed under, (as deep as may be,) and harrowed over in such way that every part of the sod shall not only be excluded from the eye, but the ground absolutely closed and smooth, if plowed just before planting, and not disturbed by furrowing, be the means of retaining moisture not only from rains and dews to fall thereon, but by prohibiting evaporation through the sod from the ground thus covered and under the sod, which in the spring of the year must be necessarily moist? 4th. I am also to enquire whether the ground will be equally strong, plowed in the month of September, after being exposed to the evaporation of the sun and winds from that month, beside the freezing and thawing of the winter, as the same ground would be for a summer crop, turned up just before planting, setting aside the difficulty of my friend's cross plowing of the sward in the spring? 5th. I am to enquire whether your lot will be equally well fitted to plow in the spring, (the sward having been turned up in the fall,) taking into consideration that by your fall plowing you have most probably stopped or closed up the necessary small furrows, which were made to lead off the water found on all grass lands? If laid down by a good and practical farmer, I contend *the sward thus laid down* will be in a much better condition to plow *in a wet spring*, than if it had been previously plowed in the fall.

In addition, I would further enquire whether there is not a loss of time, labor, interest of land, and sacrifice of manure, in promoting the culture of your crop by plowing your sward in the month of September, as stated by our friend on the banks of the Hudson—1st. I save time by one plowing: that to be performed immediately before planting. 2d. The labor of my team, as I not only make one plowing answer, but the land will be in better order and my team will have done the work with much more ease, in consequence of the sward plowing easier in the spring than in the month of September, or fall of the year, as nine times out of ten, your sward is too dry to plow with ease to your team in the fall of the year. 3d. By plowing your sward in September for a summer crop, you lose the interest of the land by sacrificing the natural growth of your grass, during the fall, which if left to grow and plowed under in the spring or fed off in the last of the preceding fall, leaving the manure thereon, would unquestionably in either case, add to the culture and value of the spring crop. 4th. If my premises, in preparing the ground by spring plowing, are correct, I apprehend the application of manure and mode of cultivation I have adopted in raising this valuable crop, will *by some* be considered not altogether improper. In using the manure, (which I contend should never be put under the sod,) I have no hesitation in saying, it should be applied in such way as to immediately and advantageously operate on the present crop of potatoes—to effect which I plow my sward at such time in the spring as to finish the piece just before planting—to be plowed and harrowed as stated, to plant in hills about two and a half feet apart, by furrows made without disturbing the sod thus plowed. This can be done by harrowing your sod with a hinge harrow first and second time in the same way it was plowed; that is by beginning as you began to plow, then to cross harrow so soon as the potatoes start, then apply the manure by top dressing each hill—the same to be immediately plowed by horse and small plow, commencing by turning the furrow from the hill, going as close as possible, not only to loosen the ground, but to cut up weeds, (if any,) which are scarcely found on sward land thus managed; this to be immediately followed by the second plow, turning the furrow to the hill, from the center (between furrows) so as not only to cover the potatoes, but the manure thus put on the hill, protecting the same from the rays of the sun—this to be done both ways of the rows of hills. At the end of eight or ten days, plow them again, turning the furrow towards the hill, and as deep as you can, both ways, leaving the greater part of the sod undisturbed, through which the roots will find their way—you then have your hill left in the shape of a hollow square to receive the rains—and that without a hoe, saving the ends of your field, thus finishing the culture. I have raised by the above method from 300 to 330 bushels to the acre, in lots from three to five acres, and that of Kidneys, the most difficult to raise of any other potatoe. Should you deem the method of any consequence to the farming interest, give the enclosed a notice in your useful paper, being the only object of the writer, of which he assures a Westchester Farmer.

Claverack, N. Y., Jan. 18, 1842. Columbia.

REMARKS ON VARIOUS SUBJECTS.

Editors of the Cultivator—I propose to send you a few miscellaneous remarks, and submit them to your disposal.

I. THE CORN CROP.

I have no mammoth yield to record, though the truth would warrant me in saying that I obtained a result little if any inferior, to any crop grown in the town where I reside—thirteen two horse wagon loads of stalks, well put on, having been taken from the piece, containing but little more than two acres. The soil, rather hard and stony, was prepared in the following manner: One acre had oats the previous year; on this was spread thirty-eight loads of manure, chiefly from stables and sheds, and plowed once. The other acre had been in meadow about six years, was plowed about the first of May, after a thorough harrowing; by the way, let me remark, that this is a very important preparatory step, both as respects the ease of plowing and the decomposition of the soil. The land was twice harrowed after plowing, then furrowed slightly both ways, at the distance of three feet; the latter piece manured in the hill, at the rate of eight loads to the acre, with hog manure and night soil compost. The planting was commenced on the 19th, and finished the 25th of May. That portion manured in the hill, although planted last, soon out-stripped the other, although the quantity applied was only about one-fifth as great as that spread broad-cast, and the crop I think exceeded that one-fourth if not one-third. From this I was led to conclude that manure, if in a suitable condition, applied to the hill, produces a far greater effect, than when spread and plowed under. Great care, however, is necessary in planting, as otherwise in a dry time much of the seed is liable to perish.

II. FALL PLOWING.

It is no doubt best in many instances to plow land in the fall, but as a means of destroying worms I think its tendency has been much overrated. Some years since I plowed a piece of meadow, just as winter set in, the land freezing very hard in a few hours after the work was completed. But lo! when spring opened, the ground, for aught I know, was quite as *lively* as ever, full of hungry mouths, satisfied with little or nothing short of the last remnant of vegetation.

III. NATIONAL AGRICULTURAL SOCIETY.

Should the tendency of this Society be to make labor universally reputable, to elevate the laborer every where to his proper standing in community—to infix more deeply the maxim that,

> "He that by the plow would thrive,
> Himself must either hold or drive;"

then a bright era is dawning upon us. But without any over-wrought expectation from this source, I remark that the plan of a Society, as proposed by F. Burt, in the Cultivator, for Dec., meets my hearty approbation. Individual effort is the main thing in the business of agriculture, as in every thing else.

IV. WHITE DAISIES.

Your Plymouth correspondent, Calvin Butler, places a higher value on "daisy hay," than I had supposed facts would justify. Still he may be correct. His stock, especially cows, would not suffer by comparison with any I have seen. I conclude, however, that he does not intend to encourage the *cultivation* of daises, where they have not already obtained possession, but rather to make the best disposal of them in existing circumstances.

V. AGRICULTURAL PUBLICATIONS.

Some persons object to these because visionary notions are, perhaps, not unfrequently advanced in them. And what then? Where is the gold without alloy? Similar objections might be urged against every department of science. I have read every number of the Cultivator from its commencement, and if without benefit, the opportunity has not been wanting. A neighbor of mine proposed as the best means of promoting the interests of our calling, to hold district meetings for a free interchange on this subject. This is no doubt a good suggestion; but the monthly meeting at my house, I could reply, is preferable; attended usually by the greatest number, with the least trouble, although some may have traveled a thousand miles, and very likely with the most benefit. There is no doubt, as a general thing, quite too much puffing of new varieties of seeds, implements, &c., and no small degree of caution is necessary in regard to these matters. We have long had better potatoes than the Rohan, better corn than the Chinese, and, dare I say it, better swine than the Berkshires. Still there is much room every way for improvement. We need frequent hints on subjects with which we are in a measure acquainted, and you will please send me your paper until countermanded.

I ought to have remarked while on the first subject, that I deem the advice to cut and stook corn as soon as glazed, not correct. My first stooks were cut soon after that period, the rest some days later. There was a perceptible looseness of the grain on many of the ears of that cut first, which did not appear in the portion last harvested. In the first instance, the fodder was perhaps the most valuable, but as the grain is the first object, I prefer a greater degree of ripeness. Wishing you a happy and prosperous new year, I conclude.

Gaius Butler.

Clinton, Oneida Co., N. Y. Jan. 1., 1842.

ANOTHER VERMONT OAT CROP.

Messrs. Gaylord and Tucker—I have raised the past season a good piece of oats. I am sensible it has several times been exceeded; but the result in profit is good, and I have been asked to communicate to you by my brother farmers. It will come in competition with Gov. Hill's crop, but nowhere near Mr. Junes', if his measuring after threshing should be as high as his guessing. My piece consists of four acres, from which I have threshed and measured 389 bushels. The result in profit is as follows:

389 bushels of oats, at 45 cents per bushel,....		$175 05
976 bundles of straw, at 2½ cents,............		24 40
Expenses,...........................		$199 45
2½ days' plowing with team,..........	$5 00	
2½ days' sowing, and harrowing, and team,..........................	5 00	
9 bushels of oats, 50 cents, ...	4 50	
13 days' reaping, binding and stooking,	13 00	
2 hands 1½ day with team, housing,...	4 50	
16 days' work threshing and cleaning,.	10 67	
Interest on land 100 dollars per acre,...	24 00	
Whole expenses,....................		66 67
Clear profit,........................		$132 78

The soil on which the above crop grew is alluvial. I came in possession of it (with the remainder of my farm) in the spring of 1839; it was then what is termed bound out meadow. I broke it up, put 25 loads of barn-yard manure to the acre, and harvested 60 bushels of corn per acre. 1841 again planted with corn, applying 30 loads of same kind of manure to the acre, and harvested 65 bushels shelled corn per acre. You see the land is not in debt for previous manuring. I observed your remark in the account of Mr. Junes' crop of oats, recommending sowing thick. I don't know but my crop might have been increased by using a larger quantity of seed. I have some doubts, however, as they appeared to be thick enough, especially as I stocked the land to grass with the crop. I will try the experiment of sowing more to the acre. Jona. C. Thrall.

Big Elm Farm, Rutland, Vt., Jan. 31, 1842.

CANADA THISTLES—POTATOES.

Messrs. Gaylord & Tucker—Among the various plans pointed out in the Cultivator, for the eradication of this pest of the farmer, there is nothing that can be done with certainty on a large scale. I can, however, point out a simple, cheap, speedy and *effectual* mode for destroying this troublesome weed. When a field, or any considerable part is overrun with thistles, lay it down in clover and grass for hay. Mow two or three years, and they will entirely disappear. In this manner a neighbor and myself have treated, each of us, separate fields much infested with them, and with the same success. I cut the first crop of grass in 1840, when the thistles were very thick and strong; they were mowed, dried and put into the barn, the cattle eat them greedily—last summer there were only a few weak, straggling plants; my neighbor's field is entirely freed from them.

The proper time for cutting down is before the flower buds burst; if cut down earlier they again spring up; if the blow is allowed to expand, before the plant is cut down, the seed ripens—or if allowed to stand till ripe, the seed does its full mischief and the plant springs up again. This is the case if buck-wheat is sown with a view to destroy them.

Your correspondent Mr. Roberts, by chance, hit on the proper season for cutting them down, but attributed their destruction to the wrong cause—the dry season. Be the weather dry or wet, if cut down at this stage of their growth they die. They are usually in this state at haying time.

Last season during the heat of the day, I went through my grain fields, with a blunt sythe and cut down thistles and other weeds—the grain being flaccid from the sun's rays, bent before the sythe, and was little injured, the weeds being full of sap, were cut down, and before they commenced a second growth the grain over-topped them. The public road running past my farm was a complete nursery for thistles a few years since, when I entered on it; these are now all destroyed by cutting down at the season recommended.

One of your correspondents recommends during winter to cut off from the Potatoes made use of, what in this quarter is termed "the *seed end*," and string them up for seed in spring: This piece of economy I have practiced to my loss. Being put into the cellar while the wound is green, to prevent injury by frost, they there get heated, and rot. Last spring and that of 1840 I had the greater portion of my potatoes to plant a second time, from using such seed—the evil I detected last spring when too late—the rotted seed was thrown away as taken out of the cellar—not suspecting any mischief, the remainder was planted; the consequence was that the seed which had got heated, although apparently quite sound, did not vegetate, or came up mere spindles, good for nothing. A number of my neighbors suffered from the same cause, and are this winter feeding their "*seed ends*" to the hogs.

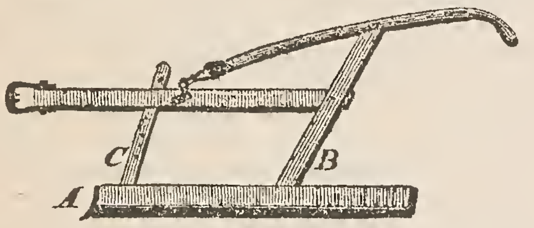
Ascot, L. C., Jan. 15, 1842. Scotus.

ON THE CULTURE OF COTTON.

Messrs. Gaylord and Tucker—Should you not receive a better article *on the cultivation af cotton,* than I am capable of writing out for you, this shall be at your service. I cannot affirm my mode to be best, as many in this state and elsewhere out-crop me; whether better crop masters, better land, more suitable to the article, or work harder, I cannot say. Nor can I give you a detailed mode as plain, or even as satisfactory to myself, as many others I could name; but in pursuance of your request, "I'll try," as an officer once said.

Not having the opportunity to plow in fall and winter as your farmers do, we are compelled to do the best we can. We seldom get our crop into market even by the 1st of January, and frequently occupied in picking cotton till 1st of February, and some pick until plows start in the spring; thus, our plows seldom get to work until necessary to "push along," to "keep moving."

When our land has been the preceding year in cotton, we either pull up the stalks, throw several rows into one heap row, roll them into heaps, and burn; or thresh them down with cudgels, to be plowed in. The latter plan I pursue. Having cut, heaped, and burnt up what logs may be lying on the ground, we commence our plowing operations by running a furrow (straight on level land; with the hill on rolling or hilly land,) in the old water furrow with a shovel plow; to this, we throw two furrows with a turning plow, and leave it so until time to plant. Should the land have been in corn, many cut down corn stalks, pile and burn, (I plow all in,) and proceed as above; if in oats, I invariably flush deep with a two horse plow, and run off rows as before, 4 feet apart in thin land, and 5 in rich land; on our strongest land, rows are even as much as 8 to 10 feet apart. The plowing so far done, cannot, in my opinion, be done too early. From the 1st to the 5th of April, some seasons earlier, we commence to plant cotton; having completed planting all corn that the land will admit planting, and now break out the entire row *well,* and as deep as we can, about 4 inches the deepest, being particular to break out just in advance of the hands planting. The ridge would be the better for being harrowed with an iron tooth harrow, leaving it in fine condition. Then open out the furrow for seed with some implement about three-fourths of an inch deep. I use the following: take a piece of timber 3 feet long, 3 inches square, round the lower side; fasten by a mortice and tenon to the bottom of chip (*b*) of shovel plow, about midway of this piece; near the front end, let in a piece 2½ by 1 inch (*c*) long enough to pass up through the beam, and have holes in it and one in beam, so as to raise or drop the lower piece; the front end of the lower piece (*a*) has a shovel of some size, but to project below about half an inch.



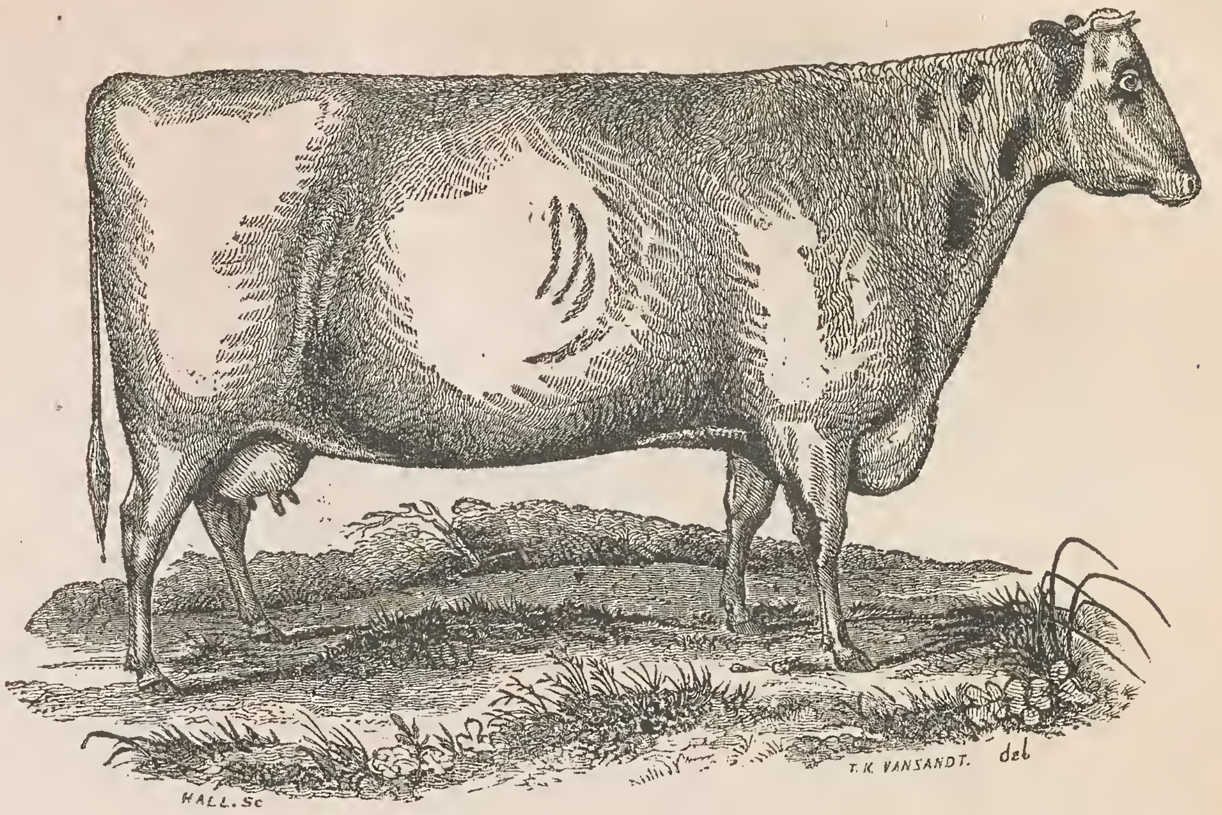
This row should be as straight, or as regular in its curves as possible, to permit after work being done to the best advantage. In this furrow on the ridge we sow seed, having had them hauled and dropped in parcels at suitable distances in the field, from 2 to 4 bushels to the acre—not being particular, only in having enough; then cover with a wooden tooth harrow, or a board about 6 inches wide, 18 inches long, concave on the lower edge, and pinned with the heel pin of shovel plow on the chip. Now, the reasons of all this: we throw three furrows together some time before plowing, to allow the bed to settle, as earth with some firmness is better adapted to the young tap roots at its first striking; the subsequent furrows leave the row clean and light, thereby giving the cotton a fair start; as the planting cleans off all the original bed exposed; the opener leaves the earth behind the shovel somewhat compressed, and not the little variations; the harrow or board levels the bed, covers and takes off clods, &c. We do not desire to cover cotton over half an inch; and indeed the covering is not necessary, unless in dry weather; for a light shower will so beat the seed in the soil and compress the wool left on seed so as to germinate immediately.

Having planted about half the crop, we pursue other business for a few days, so that an entire scraping comes on not at same time. One hand and horse can open 10 to 15 acres 4½ feet apart, one hand can sow seed, and one hand and team cover. But I look on it as very hard work to drop 15 acres; though I have done it myself, I could not have repeated. I always begin to scrape as soon as I have a stand up, grass or no grass, and no regular time for this. On referring to "Farm Book," I find in '40—"planting on the 27th of March; coming up on the 6th of April; began to scrape on the 16th." In '41—"planting 2d of April; began to scrape on the 17th." I have usually begun to scrape by running the bar of a turning plow next to row; throw from the plant to water furrow about 1½ to 2 inches deep; but believing with others it is best not to take earth from the bed, I now use a scraper, attached to chip of shovel plow, that will barely sweep off the surface as near the plant as possible, throwing the surface towards middle of row. When this is well done, one good hand can clean the remainder as easily as is usually done with two ordinary hands—by passing the hoe through the row, cutting out all, to one or two stalks the breadth of the hoe apart, say about 10 inches apart, leaving the row perfectly clean and scraped. This is, as Dr. Dewees used to say, a "sine qua non," absolutely necessary; for should there be young grass or weeds, they will soon outstrip the plant, it being very slow in growth while young. About a week or 10 days, we commence molding the plant with a hill tongue or scooter plow, or with a new implement, on a 40 year old plan—the double shovel, both molds throwing the earth same way, and square at the bottom; or some use the shovel, others the turning plow. We make it a point to get the plows in at this work as soon after scraping as we can, and get back with hoes to clean once more, either by scraping again, or dirting; and if pleasant weather, cut out at this time every other stalk. (In poor land I have the stand as at first—single stalks, about 10 to 12 inches apart); reducing to a stand one stalk, in good land, *about* 2 feet apart; in rich land, even 3 feet at times. If this has been done well and in due season, unless a wet spring, the push is over, as we now cultivate with double shovel, (I prefer it to anything I have tried,) cultivator, and harrow, just as the growth of grass and appearance of earth indicate—governed by—keep clean and stir well. I throw a little earth to the plant the two or three last workings, but never make a hill unless on hill sides; then merely to prevent washes. I think any implement seldom necessary in cultivating a crop, except the above, unless "the crop is rightly smartly in the grass;" then we must use the turning plow—the greater good to be considered. Purslain, and weeds, and crab grass grow here amazingly fast. I work our crop with hoes generally three times, and with plows four times.

The way scraping is generally done, is to bar off, throw earth in water furrow; a hand chops through the row and cleans the side next him, returns on the other side, cleans that, and cuts up the surplus cotton, leaving one or two stalks breadth of hoe apart; or two hands clean the row along—one on each side. I make it a point to plow with a two horse plow as long as I can have time in breaking up, and to plow as deep as I can. This season I am breaking up near on to 6 inches; I think probably average it. One great oversight in many farmers and planters, they do not commence scraping early enough, leave the cotton standing in a mass, I may say, until it becomes tenderer than it is by nature; and when thinned out it becomes yellow, and checked in growth for several days. Whereas, if thinned earlier, it commences to grow off earlier, and sends off branches nearer to the earth; and as the lower bowls are larger and better than the top, and more certain to remain on, it is highly advantageous to encourage early growth, and lower limbs.

We usually "lay bye" crop about middle of July to 1st of August latterly. Some 8 or 10 years since, seldom worked as late as 10th of July. Our land then was not infested with purslain and crab grass.

Log Hall, Miss., Jan. 9, 1842. M. W. Philips.



IMPROVED SHORT HORNED COW "STELLA"—(Fig. 24.)

OWNED BY J. M. SHERWOOD, ESQ., AUBURN, N. Y.,

Which obtained the first Premium at the Fair of the New-York State Agricultural Socicty, at Syracuse, Sept. 29, 1841.

"Stella" was bred by F. Rotch, Esq., Butternuts—is mostly white, with red ears, and a few red spots on her neck and legs. She was calved July 20, 1836. Sired by "North Star," Herd Book, 2382.

Dam,	Stately, by Young Denton, *H.B.*	963		N. Star, sired by Young Denton, *H. B.*	963
G. "	Harriet by Young Denton,....	198		Dam, Tuberose by North Star,.........	460
G. G. "	Henrietta by Comet,.........	155	G. "	Tuberose by Cripple,............	173
G. G. G. "	Hannah by Henry,..........	301	G. G. "	Tulip by Comet,................	155
G. G. G. G. "	——— by (Danby,).......	190	G. G. G. "	——— by (Landrom,)..........	353
G. G. G. G. G. "	——— by grandson of Favorite.		G. G. G. G. "	——— by (Danby,)............	190

In a note accompanying her pedigree, Mr. Sherwood says of Stella:—"She calved on the 31st of July last, when our feed in this county was all destroyed by the drouth, yet she milked far better than I expected, both in quantity and quality—in quality she is very superior. For aptness to take on flesh, she has few if any equals, thereby combining the two valuable properties which are so much required in this country, milk and flesh. For *coat* and *handling,* I am vain enough to think that she would stand a comparison with *the* celebrated English herd."

Correction—The two last lines of the pedigree of Archer's dam, p. 34, should have read as follows:

G. G. G. G. G. Dam,	——— Punch,.......	531
G. G. G. G. G. G. "	——— Hubback, ...	391

In the pedigree of Rolla, for "Old Red Nose," read "Old Red Rose."

CULTURE OF MUSTARD.

Messrs. Gaylord and Tucker—Permit me to call the attention of farmers to the cultivation of mustard seed. I believe it is not generally known how large a quantity of this seed is annually consumed. It is imported from Holland and the more southern parts of Europe, and sold in our atlantic markets at from three to four dollars per bushel. It is also raised in England and manufactured for the table, in which state it is exported to this country in large quantities. I believe that farmers who have soils suited to the growth of this seed will find it much more profitable than any other crop. It requires a rich, clean, moist soil; should be sowed about the time of other spring grains. Four quarts of brown seed will stock an acre sown broad-cast. It is sometimes sown in drills and hand hoed. It usually ripens quite uneven, and should be cut when it is sufficiently green to prevent waste by shelling, and stacked upon canvass, the top being thatched with straw to protect it from the weather. It should remain in this situation till it is thoroughly cured. By this treatment, the unripe seeds will be sufficiently nourished by the stalk to render them plump and sound. It should be threshed upon canvass, as there would be considerable waste by removing it to a threshing floor. Particular pains should be taken in cleaning the seed. It will ordinarily yield from ten to twenty bushels per acre. Several individuals in the town of Denmark, Lewis county, N. Y., raised small patches last season which yielded at the rate of twenty bushels per acre. Messrs. French & Davis, mustard manufacturers of this city, offer to contract with farmers for what they can raise at $3.50 per bushel for brown seed. The yellow seed is less valuable for manufacturing purposes. For this description of the culture of mustard seed I am principally indebted to interviews with English farmers and mustard manufacturers.

Albany, Jan. 1842. N. R. French.

Editors Cultivator—I observe in the excellent agricultural address published in your 12th number last year, page 199, a material error, touching the dividing meridian of the equal portions of the eastern and western population of this State. Twenty years ago and backwards, the north and south line, equally dividing our State population, was traveling fast westwardly, but since the rage for emigration became so great, it became stationary, and is now traveling east, as will be seen by comparing the position of that meridian by the census of 1830, to that of 1840; and in looking on the map of the State, and seeing where that line now is, that is, east of Utica, it will seem a good while yet to come before it gets to Auburn, 80 miles west, as is there intimated. It is also stated that the *revolving* rake was invented by a colored man. The *common* horse rake was, *not* the revolving Yours, &c. W.

TRAVELING MEMORANDA—No. 8.

Editors of Cultivator—While in New Jersey I learned one fact that I was not aware of, but I am not certain but I may have mentioned it in my last letter, that the Peach tree which has heretofore afforded such a large income to the cultivators in this state, has almost entirely failed. This is a great loss to the people—for it seemed as though this tree flourished better than any other crop upon their light sands. It is impossible for those unacquainted with the fact, to conceive what an advantage the owners of such land have derived from marl. Some of the most valuable land opposite Philadelphia is that upon the "reclaimed meadows," from which the tide has been dyked out at great expense, and which requires great care and sometimes great expense to keep in repair. Mr. Benjamin Cooper, at Camden, informed me, that one break in his embankment, cost $500 to repair. I hope if there are any who may envy those who live in situations that seem better adapted than their own to make farming profitable, that they will bear in mind that the most favored locations are not always the most profitable, for there are a great many out-goes, that the small farmer of the interior would not only find burdensome, but ruinous. For instance, the cost of the fence and dykes on Mr. Cooper's farm, would buy an equal number of acres where I live, of better soil, and fence, plow and sow the whole to wheat, and put up comfortable farm buildings. If we could see and know more of one another, we should learn to be more contented and happy in our humble situations.

It was lamentable to witness the waste of land and wreck of fortunes around Philadelphia, which the Morus multicaulus mania produced. Patches of the trees are yet to be seen on many farms, but little that looks as though the owners ever intended to convert them into their only proper use, the feeding of silk worms.

Fifteen miles above Philadelphia, on the banks of the beautiful Delaware, I saw another great waste of wealth, in Mr. Biddle's "great forcing house," [not the bank] where he boasts that he can produce grapes every month in the year. Such vast outlays of money upon such objects, are not so creditable to the owner as many of the small and almost unknown improvements in farming and farming implements that we find in every neighborhood. For instance, at Camden, I saw a new drill barrow, lately patented by Mr. Jones, which I consider preferable to any other that I have seen, and which will prove of more advantage to the cultivators of the soil, than all Mr. Biddle's acres of glass hot houses, although he can boast that he raised the finest grapes in the world. Again, the improvements that Mr. Edmund Morris of Burlington, has made in the manner of feeding silk worms, will be the means of producing more real wealth and happiness in the world, than all the "forcing houses" [banks included] in christendom. His manner of destroying the vitality of the worm in the cocoon is so simple and easy, that I am surprised that it is not universally adopted, as it must be known to most silk raisers. In the roof of his cocoonery he has a large window, enclosed by a small close room, in which the cocoons are placed, and the heat of the sun is so great as to kill the grub quite as effectually and with less trouble than baking in an oven.

Mr. Morris is one of those worthy friends of improvement that deserve to have their names kept before the readers of all agricultural papers. And the way that he knows how to welcome a friend, is the same that I have found in so many hundred instances during the summer of 1841, and which has tended so much to make me feel proud of

"My own native land."

Burlington is one of the most delightful towns in the United States—And reader, I beg you to remember why! Every house has its garden, and every street its shade trees. And now, as you hope to have your name remembered with a blessing by future generations, promise me that ere another summer sun comes, parching up the earth, that you will make one little green spot where you have planted at least one tree.

At Trenton, I saw, to me, a new kind of crop. Cayenne pepper is cultivated to considerable extent, and being dried is ground in a common grist mill, put up in barrels, and brings about 20 cts. a pound. The grinding costs one ct. a pound. Even at the present low price, it is found a very profitable crop, easily cultivated, and will grow upon any rich soil.

From Trenton to New-York, I had a night ride over that much traveled rail-road, as my anxiety to be at the State Fair at Syracuse compelled me to push forward, leaving many of the beauties of New Jersey unseen; but as a Sunday intervened, I took that only opportunity to visit a most delightful spot, and met with a most hearty welcome from that excellent friend of agricultural improvement, Mr. Charles Downing of Newburgh. A beautiful work upon Landscape Gardening, lately published by his brother A. J. Downing, has rendered the name familiar to the lovers of rural scenery in this country. I had not the pleasure of meeting the author, but from what I saw of his excellent nursery, and tasteful mansion, I was satisfied that he was such a man of taste as would confer lasting benefits to the country, if he and those like him would write much more for the gratification and information of their fellow citizens. From my acquaintance with Mr. Chas. Downing, I am confident that those who desire to order trees from his well filled nursery, will be well satisfied to be assured of finding him a gentleman of integrity, and that they will find the trees exactly as he recommends them, which is a small matter of information that may be useful to some of your readers, and one that I hope the lovers of good fruit may profit by.

In passing along the North River, the eye of the lover of delightful country residences, meets with constant pleasure.

It ought to convince us of the folly of crowding our sons into "a genteel situation" in a city, to see such a large portion of them make a wreck of all happiness, and sink in poverty into an early grave, while the few whom fortune favors with the mass of wealth that would not suffice the mass of citizens if equally distributed, are to be found escaping from the city and spending their wealth in ornamenting the banks of this beautiful river; thus proving that in looking for real social enjoyment of life, the country is ever preferable to the city. There is much food for reflection and profitable application in that trite old proverb, that,

"Man made the town, but God made the country;" and those that love Him, ought to love to cultivate, improve and beautify the works of his creation, and to be more happy and contented amid the gorgeous beauties of nature, than in the artificial atmosphere of a crowded city.

And now, Mr. Tucker, I come to the time when I first had the pleasure of meeting you face to face, although we had long been acquainted—and although it may not be particularly interesting to you, it may to some other of those acquaintances of mine who I am in the monthly practice of meeting in your columns, to describe some of the things with which you are already familiar.

I will therefore address myself to them—I landed at Albany, upon one of those delightful days in the last of September, for which the autumn of our country is so justly celebrated, for affording the most beautiful weather imaginable.

After depositing my baggage, (and here let me observe that I am one of those old fashioned men who do not scruple to "carry my own bundle,") and reading a few letters from that place which I am never able to forget, and which every man that has "a home" should ever remember, I undertook to find some one in this strange place that was not altogether a stranger to me, although I was personally unknown to all. It was no easy matter, for all my agricultural friends seemed to be actively engaged in busy preparation for the approaching carnival at Syracuse. Mr. Tucker had took himself off from his office, and was as busy among bulls and boars, and horses, hogs, sheep and cows, superintending their embarkation on board the rail-road cars, as though to that vocation he had been "well bred." After seeing "all right" for an early start the next morning, I soon found myself quite at home in his house, where we were soon joined by Mr. Bement, and at peep of day were seated in a cab ordered over night to take us out to the rail-road at the top of the inclined plane, a mile or more from the city; for be it known that the Albanians have not the most convenient rail-road arrangements in the world.

Our trip to Syracuse was a proud one—twenty-four cars loaded with stock, and to which was attached a passenger car occupied by Messrs. Tucker, E. P. Prentice, Van Bergen, Bement, Chapin, and several other gentlemen who owned the stock, or were interested in some way—the day very pleasant, and the novelty of such a train exciting more interest and attention than perhaps ever was bestowed upon any train that ever passed over the route, and our company all being in a high flow of spirits, without being excited by ardent spirits, all tended to make the trip one to be long remembered.

Another fact that should be remembered is, that the rail-road companies between Schenectady and Utica, and between Utica and Syracuse had tendered the use of the roads to the State Society, and all the agents and conductors seemed to evince a most laudable zeal in getting their unusual fare safely through. I am satisfied that this praiseworthy effort of those gentlemen of Albany and vicinity, who exerted themselves so much in getting up this show, will tend much to wake up the sleeping energies of the country, to the importance and benefit of paying more attention to agricultural fairs.

Of the proceedings of the fair, it is not necessary to speak, as that has already been published, but the reception that I met with there was such as to convince me that the labor of those who devote themselves to encourage their brethren in the spirit of agricultural improvement, will be sure to meet with an ample reward from them whenever they have an opportunity to show their respect.

One of the marks of respect of which I feel justly proud, was one of the most elegant pitchforks that ever I saw, and which has been universally admired by the thousands who have seen it, that was presented to me by and in the name of the State Agricultural Society of New York, by H. S. Randall, esq., Cor. Sec'y of the Society, of Cortland Co., where it was manufactured, by Mr. Lewis Sandford. I also was presented with one of Barnaby & Moore's premium side hill plows, which has also been much admired by all who have seen it since it has been in my possession. I was also presented with another premium plow, but as I failed to receive it before I left Buffalo, I will take another occasion to speak of it when it arrives. The Side Hill Plow is already described in the Cultivator, and I have no doubt will supersede all other plows for that purpose; this one also working admirably in all kinds of plowing.

Although some appeared to be disappointed in the quantity of Stock that was exhibited, I think that, considering this was the first effort of the State Society, all ought to be well satisfied, as the great object was gained in the strong interest manifested among ten thousand people who were present. No doubt that another year will produce one of the greatest fairs ever had in this country, if the same enthusiastic spirit then manifested continues to exhilarate the mass of New York farmers, of which you may well be proud, for I fully believe that no section of our country can make a display of such a mass as was seen at Syracuse, of more respectable "well-to-do-in-the-world" looking people.

There are a great many small matters that I might dwell upon, and which would prove interesting, but I find myself getting over the ground so slowly, that I must needs pass them over for the present, and again take my seat in the car attached to the great stock train, upon the evening of the first day of October, spending a very cool night upon the road, and arriving in Albany for breakfast, on my way to Boston.

Although time and space are almost overcome by rail-road facilities between distant places, yet now time and space forbid me from giving a description of Mr. Prentice's farm near Albany, and the beautiful stocks of Short Horns and South Down Sheep, which I saw there; but I will assure my readers that if they wish to purchase they will find Mr. P. a gentleman whose word may be depended on, and his stock exactly what he may recommend. Solon Robinson.

Lake C. H., Ia., Jan. 15, 1842.

WOBURNS versus BERKSHIRES.

Messrs. Gaylord & Tucker—In your December No., A. B. A. accuses me of using petty and disingenuous arguments. His style is overbearing, but I let that pass, as I suppose it is his manner.

It was a *grand idea* and *ingenuously* stated, that the Berkshires would have beaten (that is would have been kept cheaper than) the Woburns, if they had been fed upon the shipstuffs, and the Woburn upon corn. In plain English, if 4½ bushels of shipstuffs had been given to the Berkshires, and only one bushel of corn given to the Woburns, though the bushel of corn cost as much as the shipstuffs, yet the former would have beat the latter. How candid!

The effort to induce the belief that it was unfair to give only that part of his experiment in which the corn was mentioned, is another proof of *his fairness!* Why should I have mentioned the shipstuffs? The Woburns got none of it.

The experiment of feeding Marion was detailed as an answer to a plain and direct question, (from A. C. of Gainesville, Ala., see Cultivator p. 117,) which I was requested to answer by the editors.

I had a *right* to belive his statement, (which was minutely detailed by Mr. A., the quantity used, the cost of each article, the argument and conclusion,) was all correct. But as Mr. A. *himself tries* to make it *doubtful*, I shall say no more upon the subject.

It shows *great fairness* to bring pigs fed in the summer time against those fed in the winter. Mr. A. can but know there is at least a difference of 25 per cent. in favor of spring and summer feeding. This difference between warm and cold weather was strikingly illustrated in feeding my pigs last winter. The first twenty days were warm for the season, and Bernice gained sixty-one pounds, being an average of over three pounds a day.—The next ten days were very cold, the thermometer ranging from 3 to 20 degrees, mostly 7 and 8 degrees, and her gain in ten days was only eight pounds. Here the difference in favor of warm weather was more than 250 per cent.

When several trials had taken place between the Woburns and Berkshires, and many of the advocates of the Berkshires admitted that the Woburns would gain fastest, they still contended that they were the greatest consumers. I determined they should not avail themselves of this argument, unless they could *prove* it.—And accordingly proposed in the Kentucky Farmer, a trial by measure. This proposition was taken by Mr. Duncan. (See Ky. Farmer, vol. 4, pgs. 315 & 332.) It was also taken by J. F. Taylor. I selected Patience and Courtenay, two Woburns, to be fed against Caroline Scott and Belinda, two Berkshire sows. It was not my fault that Caroline Scott was not fed; and if there were two Woburns, did not the Berkshire have a better chance of beating one of them.

Marion was fed upon old, hard, whole corn, and the sows fed by Mr. Weathers had the same kind of corn.

The Berkshire sow in this experiment (though beaten so far by the well Woburn), yet gained 21 lbs. in ten days, fed upon less than 5¼ lbs. corn a day; while Mr. A.'s sows, fed (as amended) upon seven and a half lbs. of corn a day, were losing flesh! Belinda weighed when put up, 302 lbs., so that although she had the benefit of a stall, she had 52 lbs. more flesh to support out of her allowance. Courtenay weighed 425 lbs. which is 175 lbs. more than Mr. A.'s "supposed average."

The statement about my keeping "the poor, miserable, stinted Berkshire boar, to show off against my fat Woburns," is as "petty and disingenuous" as it is malicious and destitute of truth.

Mr. A.'s apology for Mr. Fanning shows *great fairness* in wishing to make it appear that his pigs were very small. Mr. Fanning says, "the pigs are the largest Berkshires of this vicinity, of their age," and "are very superior."

I now come to the most extraordinary part of Mr. A.'s letter. He says, "But for my own part I am yet to learn what the Woburns are." So it seems he knows nothing personally and practically, of the Woburn hog!! And while every experiment to decide their relative merits has resulted in their favor, he still undertakes *to write them down.* If Mr. A. had not been known to be the *fairest* and most *disinterested* person, some might have thought there was *envy* or *selfishness* in this.

I regret that we have not had more trials of the relative value of the different breeds of hogs. It is a matter of great importance to the agriculturist. I have made many experiments myself, and am satisfied that a proper course of experiments would be of great benefit to the country; but if I were to give those that I have made, it would be said by the advocates of other breeds, that I was partial and in favor of the Woburn. Well, I acknowledge such preference; and would still prefer the hog that will beat them.

If the advocates of the Berkshires had been willing to risk the reputation of their hogs, we might long since have had this matter settled. Some of them *write big bantering* letters to their correspondents, but *they never come up to the trial*.

I agree with Mr. A. there are many hogs called Woburn, but this neither increases nor lessens the value of the variety which I have.

To take Mr. A.'s statement as amended, I should not want more than seven and a half pounds of corn for each one, to prepare a lot of 200 Woburns for market, in six weeks feeding, and each hog would give an increase of 100 lbs. in an open lot.

Mr. A. intimates a willingness to feed Windsor Castle. Now this is the right spirit, I hope he is in earnest.

I propose putting my white Berkshire boar *Albion* in the hands of some disinterested person, to be fed against the Black Berkshire *Windsor Castle*. Mr. A. and his brother have done much to prejudice the public against this hog. Now let them come *fairly* and *honestly up to the test*, and see which which will give most flesh for food consumed.

Although we have never had such trials as I could have wished and proposed, yet we have had enough to establish some *facts*, a few of which I will give you, and will at the same time observe, that the advocates of the Black Berkshires or Kennilworths, can have opportunities of making more experiments with the Woburns.

1st. It is a *fact*, that in the only trial I have known to determine this matter, the Woburn *Patience* was *proved* to be a smaller eater than the Berkshire *Belinda*.

2d. It is a fact that in the trial between J. Barclay's Woburn and Wm. Barclay's Berkshire boar, that the Woburn boar beat the Berkshire, fifty pounds in thirty days feeding.

3d. It is a *fact* that in the trial with Mr. Fanning, my pigs gained forty lbs. more, in sixty-one days feeding, than his did, in one hundred and twenty days.

4th. It is a *fact* that my pigs weighed nearly two hundred pounds heavier than Mr. F.'s at six months old.

5th. It is a *fact* that Mr. Fanning said his pigs "are very superior," and "the pigs are the largest Berkshires of this vicinity of their age."

6th. It is a *fact* that in the trial between Courtenay, (Woburn) and Belinda, (Berkshire) that the Woburn gained nine pounds most, in ten days, upon the same allowance of corn.

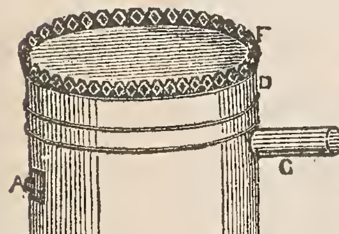
7th. It is a *fact* that *Patience*, although made sick by trying to eat as much as did the Berkshire, still gained as much in ten days, upon the same allowance of corn.

From the above *facts* it is *proved*, (in the case of Patience and Belinda,) that the Woburns are the smallest consumers, and that they and their crosses, will nearly double the Black Berkshires in growth and fattening.

I confess that I am not able to write with the host of writers by whom my hogs are assailed, but my hogs have been able to defend themselves, and are not "afraid to *fash* their beards beside even a Kennilworth."

Colbyville, Ky., Dec. 1841. SAM'L D. MARTIN.

ECONOMICAL USE OF FUEL.



(Fig. 25.)

EDITORS OF CULTIVATOR—The above drawing will enable those who have never seen one, to form some idea of an AIR-TIGHT STOVE (fig. 25). Its horizontal section is an ellipse; the transverse diameter is 23 inches, and the conjugate diameter is 18½ inches in length; the distance D E between the upper and lower plate is 28 inches; the depth D F of the perforated hoop on the top is two inches; (this hoop is of course solely for ornament;) the distance E G from the lower plate to the under part of the pipe is 19 inches; the diameter of the pipe is 5 inches; length of pipe 16 inches; the hight of the lower plate E from the floor is 5 inches; the damper B is 2¼ inches square; and the feeding door A is 6½ inches square; the bottom of B is 2 inches, and the bottom of A is 12 inches above the lower plate; the hoop F D at the top I have represented as perforated with diamonds. The whole is made of Russia iron; and the cost of the stove and pipe complete, ready for setting in operation, is $6. Its *advantages* are, 1st, its cheapness; yet it is neat and ornamental in its appearance; there is no patent on it; any mechanic can make them. 2d. The little trouble they occasion; they ought to be supplied with wood in the morning, just before dinner and at tea time; this is amply sufficient. The ashes need not be taken up oftener than twice a week; its surface being smooth, it is easily kept clean. 3d. Its freedom from danger; there is no danger from sparks or from coals falling out on the floor. If the family wish to leave the room, they can close both dampers and nothing can take fire till their return, when they will have a warm room to come to. 4th. The economy of fuel; this is its crowning glory. I fully believe that it will take one fourth less wood than any stove now in existence. One armful of wood in common winter weather, without wind, will keep a room warm 18 feet square, and with a western aspect.

The *theory* of the stove is simple. The combustion can be kept up just in proportion to the wants of the room, irrespective of the quantity of wood in the stove, by means of the damper B; both A and B slide upward and downward in grooves; and when closed, their bottoms also shut into grooves; and the stove is perfectly air tight. A being closed, no air can enter it except what is admitted through B. Then by raising or lowering B, we can perfectly regulate the supply of air, and thus limit the combustion to the actual wants of the room, and ensure a perfect equilibrium of temperature through the day. When the wood is reduced to coal, B may be entirely closed, and a powerful heat will be thrown out for some time without waste of fuel. This equilibrium of temperature cannot be maintained by other stoves, nor can they burn the fuel so economically, because they are not air tight, and because they admit air above the body of the fire; hence the combustion cannot be regulated at will.

In order to use the stove after it is set up, throw a good coat of ashes on the bottom to prevent the floor from being heated, put in a quantity of wood, and throw in a shovel full of coals, close A tight, and let B be half open; in 5 minutes you will have a fire without the aid of chips or the bellows. If the fire is too hot, lower the damper or close it entirely; if not warm enough, raise it. When going to bed put in two or three sticks and close the damper; the chill will be kept off the room all night; and in the morning open the damper, and the room will be warm in 5 minutes. Although farmers do not generally buy their fuel, yet the chopping and hauling and cutting up at the door forms no inconsiderable item in his labors, which they would be glad to abridge or dispense with. It is with this view that I send you the foregoing for publication in the Cultivator.

12th month, 17th. This day being a cold snow storm, I selected it to test the capacity of the stove. The wind blew strongly from the N. NE. until 12 M.; then N. until 4 o'clock, when it returned to N. NE. The stove consumed 129 lbs. of half seasoned white oak wood from ½ past 7 o'clock A. M. till 11 o'clock P. M. The average temperature of the open air during that time was 16.85°, and the average temperature of the air in the room was 67.28°; these averages are deduced from horary observations through the whole time. The thermometer in the open air had an *eastern* exposure. That in the room was horizontally distant from the stove 10 feet 6 inches, and 6 feet 4 inches above the floor. The temperature in the room did not vary 4° during the whole day. The room in which the experiment was made is 18 feet square, 7½ feet high; it has a western aspect, with two windows; 4 doors open into it; and the house being old, there are many fissures and crevices for the wind to get through. The stove was in operation 15½ hours, which shows the hourly consumption to be 8 lbs. 5 oz. of wood; and that this quantity thus consumed kept the air in the room 50.43° above the temperature of the external air.

18th. Strong NW. wind till noon, then it became more calm; temperature of air 14.66°; air of room 67.81°; quantity of wood consumed 114 lbs.; time of burning from 7 A. M. till 11 P. M., or 16 hours; hourly consumption 7 lbs. 2 ozs.

19th. Temperature of air 25.33°; temperature of room 73.27°; wood consumed 86¼ lbs.; time of burning 14 hours; hourly consumption 6 lbs. 1 oz.; wind N. but very light.

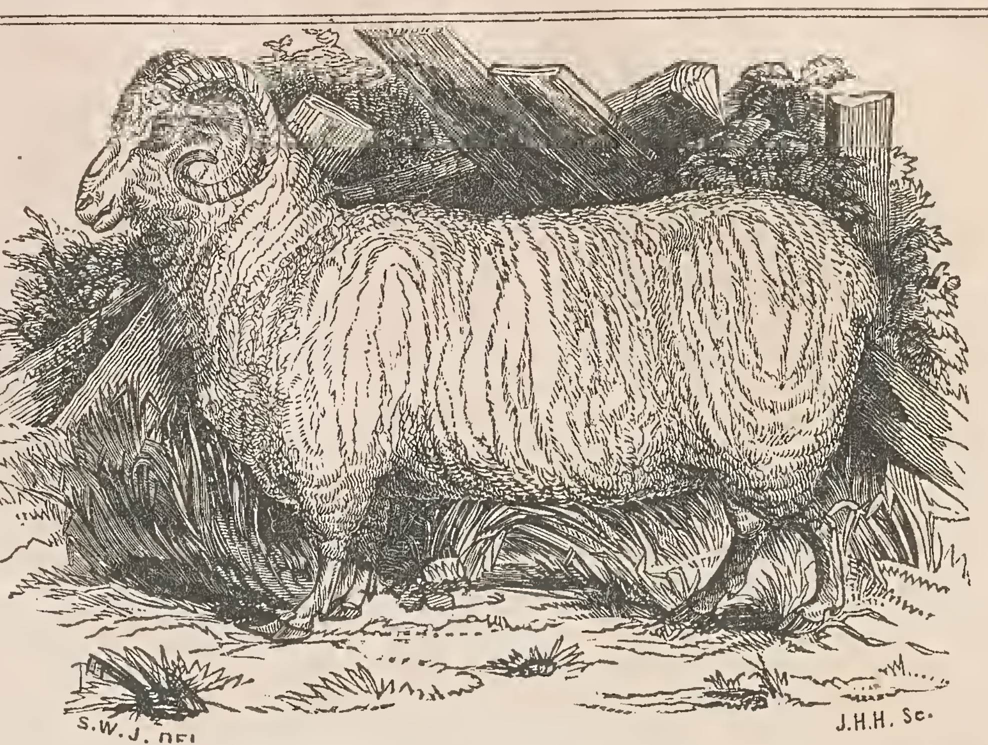
These extracts, from the journal of my experiments, will suffice to show the capacity of the stove. It was partly my intention in making the experiments, to ascertain the ratio between the quantity of wood consumed and the temperature of the external air; but I find this cannot be obtained; because at the same temperature the stove will require a great deal more wood in a windy day than in a calm day. Thus, the temperature on the 18th was 2.19° colder than the 19th; yet the hourly consumption was 1 lb. 3 oz. less on account of the *cessation* of the wind after 12 o'clock M.

N. N. D.

P. S. Perhaps the above statements in the following form will be more generally intelligible. White oak wood, according to Marcus Bull, weighs 3,821 lbs. when perfectly dry; green wood weighs 42 per cent more. The wood I used was about half seasoned; therefore, add 20 per cent to 3,821 and we shall have 4,585. Then one cord of wood would keep a room warm as follows:

35 such days as the 17th,
40 " " 18th,
53 " " 19th. N. N. D.

Stockport, 12th mo., 1841.



MERINO BUCK—(Fig. 26.)

MESSRS. GAYLORD AND TUCKER—The subject of the inclosed drawing is a merino buck, the property of William Lame of Cornwall, which sheared last June, thirteen months old, six and a half pounds of washed wool. At just eighteen months old he weighed one hundred and twenty-eight pounds. I think you have a good delineation of this tup, which is stout, long and woolly—even down to his fetlock; his form is far better than merinos commonly are. I am the owner of its sire, now three years old, which served one hundred and thirty-five ewes last season, and sheared last spring just twelve pounds of washed wool. This buck originated from that celebrated Paular stock of William Jarvis of Weathersfield, this state, which he imported when consul to Spain. A good drawing of this *perfect* sheep I have sent by request to the corresponding secretary of the New-York State Agricultural society, which may soon appear in a work that is to be issued by that Society. S. W. JEWETT.

Weybridge, Vt., Dec. 1841.

COMMENTS ON THE NOV. AND DEC. NUMBERS OF THE CULTIVATOR FOR 1841.

ONCE more, Commentator presents his compliments to Messrs. Gaylord and Tucker, and wishing them a happy new year, together with a continual increase of that popularity to their excellent paper which it so well deserves, he will resume, with their permission, his comments on such articles of the Cultivator as have particularly attracted his attention. Several circumstances, which it is needless to mention, have interrupted his volunteer criticisms for many weeks past. To make up, therefore, for "lee way," he will include in one communication all he has to say in relation to both the last two numbers of your paper for the by-gone year.

—

THE first article in your November number gives us an interesting account of the last cattle show and fair of your State Agricultural society; and the specimens of the speechifying uttered on that occasion are very creditable to the speakers. I was particularly pleased with the remarks of your ex-lawyer and senator—the Honorable Micah Sterling, in regard to the folly of parents forcing so many of their sons to become lawyers and doctors—at least in name. If he could possibly cure them of this most pernicious infatuation, or could even mitigate it in some degree, he would well deserve the thanks of his country. This state show and fair, considered in connection with the other numerous exhibitions of a similar character, which took place in your state during the last autumn, is highly gratifying to all the true friends of American husbandry everywhere. But it must be so especially to you New-Yorkers; for it clearly proves that in your state, at least, if nowhere else, the true spirit of agriculture "is abroad," as well as "*the schoolmaster*."

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THE next article upon which I will offer a few remarks is the drawing of "Barnaby and Mooer's Premium Side Hill Plow." It will probably be deemed very presumptuous in me to offer a single objection to an implement which has already received two premiums, and each awarded by several farmers together, who, probably, were all far better judges than I am. But still I will risk it—nay, I have two objections, if the drawing be correct. The first is, that although the new fixture of the coulter saves a second mortice through the beam, it is the best contrivance I ever saw to cause the plow to choke—if that be desirable—as it often is to a lazy plowman, tired of walking. The next objection is, that the front end of the beam, being nearer to the earth than the hinder end, the plow has no pitch nor draught, as some workmen call it; and without a proper elevation of the front end of the beam, the force applied has a constant tendency to lift the point of the share out of the ground; as the line of draught, about the middle thereof, will always be bent downwards.

THE facts which you have given in relation to India are enough to rouse every true friend and lover of his country to a serious consideration of the dangers with which, at least, two of our great staple products are threatened from British competition. It cannot be long before the vast possessions of the English in that country will yield such enormous quantities of cotton and rice as to supply nearly every market of the civilized world where these articles are consumed, and at lower prices than our countrymen can afford to make them. I know not that there is any remedy for this impending evil; but most surely, if there is, it never will be found whilst our law-makers spend nearly their whole time in attempts to make and unmake presidents of the United States, instead of devoting themselves—heart and soul, to the great, the vital interests of the nation.

OLD'S corn planter seems to be somewhat too complicated to be well understood from an engraving. But it suggests a remark which I have often had occasion to make in witnessing the trials of many similar implements. I have never yet met with one that would answer well, unless the land was free from stumps, stones and clods of earth, as well as grass and dead weeds, that were but partially covered by shallow plowing. In land deeply plowed and smoothly harrowed, there are several corn planters which will do their work very well and save much labor. Page's is the best that I have seen.

I RETURN my grateful acknowledgments to Mr. Calvin Butler for his friendly recommendation of the white daisy, which, I am sure, from his description, must be what we call camomile daisy, from the close resemblance of the blossom to that of the camomile in every thing except size. But I can assure him, in perfect sincerity, that although grass, properly so called, is at all times rather a scarce article with us, our cattle are animals of such bad taste that they will not touch these plants which Mr. Butler's cattle appear to esteem such delicate eating. This I can affirm to be true of *our* cattle; for I have watched them in the midst of daisies, and never yet saw one take a bite. I am willing to admit that their obstinate rejection of the white daisies, or rather their abstinence therefrom, proves clearly that they—poor things! know not what is good for them. But it seems to me a hopeless case, unless, indeed, we were to import a Connecticut bull or cow to teach them better. Many of our countrymen, I hear, are importing French cooks to teach *them* to eat certain things which they never before imagined were fit to eat, and I can see no good reason why we, should not do the same good part by *our cattle*, after first taking care of ourselves.

MR. LEVI DURAND's recommendation to cut up corn without stripping the blades or cutting off the tops, may suit very well with such early varieties and comparatively small crops as are cultivated in Connecticut, and the states farther north. But in Maryland, and more to the South, where the larger and later varieties of corn are always planted for the principal crops, and where corn is the chief staple, the grain will very generally become mouldy in long spells of wet weather, which are common in the fall, before the crop can be housed.

MR. J. N. SMITH's letter on "The South Downs" reminds me of a remark which I have often been prompted to make by numerous other communications relative to different kinds of farming stock; but heretofore I have neglected it. I now submit it with great deference, and beg leave to address it by way of a general quere to your stock raising correspondents. It is this: Do not cattle, hogs and sheep occupy rather an undue proportion of the pages of the Cultivator? If they do, I am aware, gentlemen, that it is not your fault; your correspondents themselves must apply the remedy; and I sincerely hope a little consideration of the matter will induce them to do so. It is simply to diversify their future communications occasionally, by giving us a little more of their remarks and experience in regard to the general improvement of soils, the various modes of tillage, the best culture, management, and relative value of the different kinds of crops which are most common in our country, together with particular descriptions and comparative trials, as far as they have been made, of all the most approved agricultural machines and implements. All this I am sure they might do, to the great advantage of your readers; for they write so well on the subject of stock, that they would hardly fail to write well on the several matters to which I have taken the liberty to invite their attention; and without a competent knowledge of which, as well as of breeding or managing farming stock, no man can justly be called a good farmer. Far be from me the wish to banish from your paper all, or even the greater part, of the numerous communications on the subject of cattle, hogs and sheep; for many of them are very instructive and interesting. But there may possibly be rather too much even of a good thing; and I must confess, that when my eyes are searching over the pages of the Cultivator, as they always do once a month, in the almost certain expectation of finding one or more such treats as they rarely fail to find, if they happen to fall upon an account of somebody's big, fat calf or pig—instead of what I am so busily looking for, my disappointment is greater than I can well describe. COMMENTATOR.

(Comments on Dec. No., next month.)

Domestic Economy.

WINTER BUTTER.

MESSRS. GAYLORD & TUCKER—The difficulty of churning and making butter in the winter, is well known to all dairy women. Besides the difficulty of converting the cream into butter, it is very light colored, crumbly, tasteless, and generally considered unfit for the table. This is usually attributed to the manner in which the cows are kept, being fed on dry food, but from a series of experiments I have lately instituted, I am convinced it is more from the management of the milk than from any other cause. I am aware that the milk of cows, at this season of the year, is not as rich, nor so flush in quantity, as when in pasture, on good grass in June; still I am well convinced from the experiments I have lately made, much more cream can be obtained, and of a much superior quality by the "hot water bath" process, than any other method I am acquainted with.

From Mr. Merrifield's success in obtaining the society's second premium, and from some experiments tried in England, I was induced to cause some experiments to be tried in my dairy.

In the statement of Mr. Merrifield, he says—"in winter our milk stands twelve hours; is then removed to the stove and scalded over a slow fire to near boiling heat; the pans removed to the cellar to cool, the cream only churned." The process of extracting cream from milk, adopted in the county of Devonshire, England, by which a superior richness is produced in the cream, had long been known by the name of "clotted" or "clouded cream." They use a four-sided vessel formed of zinc plates 12 inches long, eight inches wide, and six inches deep, with a false bottom one half the depth. The only communication to the lower part is by a lip, through which it may be filled or emptied. A plate of perforated zinc, is placed in the bottom, which is equal in size to that of the false bottom, with ringed handles, by which means the whole of the cream can be lifted off in a sheet without remixing with the milk. The milk, fresh drawn from the cow, is strained into the pan, and remains at rest for twelve hours, when an equal quantity of boiling water is poured into the lower compartment, through the lip; it is then permitted to stand twelve hours more, when the cream will be found perfect, and of such consistence that it may be lifted off with the finger and thumb. In a trial of twelve successive experiments with the above apparatus, the following results were obtained; from four gallons of milk treated as above, produced in twenty-four hours, four and a half pints of cream, which after churning only fifteen minutes, gave forty oz. butter. The same quantity of milk treated in the common mode, in earthen ware pans, and standing forty-eight hours, produced four pints of cream, which after churning ninety minutes gave thirty-six oz. butter. The increase of cream was twelve and a half per cent. and of butter eleven per ct.

From the above suggestions, I caused a pan to be made six inches deep, to receive one of one-half the depth, which was set into the other, resting on the edge of the lower one, and carefully soldered together; near the top of the outer pan, a tube one inch in diameter was inserted, to admit the hot water, and on the opposite side a small hole was made to let the air escape when pouring in the water. With this double pan I tried several experiments, and the results, though varied, were very satisfactory.

In one instance, eleven pounds milk, fresh drawn from the cow, and after standing twelve hours, boiling water was introduced into the lower pan, and stood thirty-six hours more, when it was skimmed and twelve hours after the cream was converted into butter, with a spoon and bowl, in seven minutes, and produced five oz.

In another trial, eleven and a half pounds of milk, subject to the same process, except it stood only twelve hours after the hot water was put in; skimmed and churned immediately, which took only *one minute* to convert it into butter—produce seven oz.

In the next case eleven pounds of milk was conducted in the same manner as before, except standing twenty-four hours after the hot water was put in; skimmed and churned in eleven minutes, and produced six oz. of butter.

Several other trials were made, with a view of ascertaining the best time to let it stand after the introduction of the hot water, and the result was that in some cases it took four-seven, ten and a half, eleven and fourteen minutes to churn, and the quantity varied from eight to twelve oz., and in no instance did the quantity of milk exceed twelve and a half pounds, which was the most successful as to quantity, giving one oz. of butter for every pound of milk, which rates at one pound of butter from six quarts of milk, which is equal to the celebrated "Haskin's cow," the reputed mother of Col. Jaque's "Cream Pot" breed, as noticed in Mr. Colman's Fourth Report. The milk with which the above experiments were made, was taken from a two year old heifer, a cross of the Durham and Ayrshire, seventeen days after calving, and a heifer's milk is never considered as rich as when more advanced in years.

Allowing that we get, as we did in the last trial, one oz. of butter for every pound of milk, which will average twenty-three pounds daily, would be over ten pounds of butter per week.

From the foregoing experiments I have arrived at the following conclusions:—that the most profitable method is to let the milk stand twelve hours—then add the boiling water, then stand twelve hours more, then skim, and churn the cream from the evening and morning's milk at the same time.

An improvement may be made in having the pans separate, but fitted tight where they come together, by which means they can be much easier cleaned and dried; as in the above method it would be more difficult to dry them when together.

I am inclined to think too, that the same pans may be made useful in the summer when the weather is very hot, and the quantity and quality of the cream much increased by filling the under pan with cold well or spring water, previous to putting in the milk. C. N. BEMENT.

Three Hills, Feb'y, 1842.

TO MAKE HENS LAY PERPETUALLY.

EDS. CULTIVATOR—I never allow cocks to run with my hens, except when I want to raise chickens. Hens will lay eggs *perpetually*, if treated in the following manner. Keep no roosters; give the hens *fresh meat*, chopped fine like sausage-meat, once a day, a very small portion, say half an ounce a day to each hen, during winter, or from the time insects disappear in the fall, till they appear again in the spring. Never allow any eggs to remain in the nest, for what is called *nest eggs*. When the roosters do not run with the hens, and no nest eggs are left in the nest, the hens will not cease laying after the production of twelve or fifteen eggs, as they always do when roosters and nest eggs are allowed; but continue laying perpetually. My hens always lay all winter, and each from seventy-five to one hundred eggs in succession. There being nothing to excite the animal passions, they never attempt to set. If the above plan were generally followed, eggs would be just as plenty in winter as in summer. The only reason why hens do not lay in winter as freely as in summer, is the want of *animal food*, which they get in summer in abundance in the form of *insects*. The reason they stop laying and go to setting, after laying a brood of eggs, is the continual excitement of the animal passions by the males. I have for several winters reduced my theory to practice, and proved its entire correctness. It must be observed that the presence of the male is *not* necessary for the production of eggs, as they are formed whether the male be present or not. Of course such eggs will not produce chickens. When chickens are wanted, the roosters must of course run with the hens. B.

TO MAKE WHITEWASH.

Half a bushel of unslacked lime, slack it with boiling water, covered during the process. Strain it, and add a peck of salt, dissolved in warm water, three pounds of ground rice boiled to a thin paste, put in boiling hot; half a pound of powdered Spanish whiting; and a pound of clear glue dissolved in warm water. Mix, and let it stand several days. Let it be put on with painter's or whitewash brush, as hot as possible.

Another mode—Make Whitewash in the usual way, except that the water used should have two double handfulls of salt dissolved in each pailful of the hot water used. Then stir in a double handful of fine sand, to make it thick like cream. Put on hot. Coloring matter can be added to suit fancy. A.

TO PRESERVE BACON FROM FLIES.

MESSRS. EDITORS—My simple mode of preserving Bacon may be of use to some of your readers. I lay it down in charcoal, and find it preserved from the fly and kept perfectly sweet, without any further trouble than putting the coal between the several layers. I do not even pound the coal up fine, but take it from the coal heap just as it comes, coarse and fine together. When I want a cut of bacon, I take it off, and put the remainder back, or throwing some of the fine charcoal on the fresh cut surface, hang up the remainder, and so cut from it until it is all consumed. The flies will not touch it. The coal dust is easily washed off before cooking, and the coal in which it has been packed, is as good for burning as ever. RUSTICUS JUNIOR.

PRESERVING EGGS.

THERE is a patent in England for preserving eggs; the composition used is as follows, and by adopting the method, it is said, eggs have been kept two years:

"One bushel of quick lime, thirty-two ounces of salt, eight ounces of cream of tartar. Mix the whole together, with as much water as will reduce the composition to such a consistency that an egg, when put into it, will swim."

TO WASH BLACK WORSTED OR WOOLEN HOSE.—If new, soak all night; then wash in hot suds, with beef's gall, a tablespoonful to half a pail of water. Rinse till no color comes out. Then stretch on stocking frames, or iron them when damp on the wrong side.

Silk Culture in the United States.

UNITED STATES AGRICULTURAL SOCIETY.

WASHINGTON, 1st Jan., 1842.

MESSRS. GAYLORD & TUCKER—I have to request, in the name of the Board of Control of the United States Agricultural Society, that you would, at your convenience, should you deem it to be a matter of sufficiently general interest, publish the accompanying correspondence on the subject of silk. Very respectfully,

Your ob't serv't, J. S. SKINNER.

LETTER TO DR. WHITE.

BOARD OF CONTROL, U. S. Ag. Soc., 22d Dec. 1841.

SIR—I am instructed by the Board of Control of the United States Agricultural Society, to acknowledge the receipt of your letter of this date, in reference to the culture and manufacture of silk in our country. The Board sees the importance into which this branch of industry may grow, if suitably fostered, and appreciates accordingly the motives and the value of your remarks as connected with it—but this Society has been so recently organized, and its means and prospects are as yet so imperfectly developed, that it is not yet perceptible, in what way it can best contribute to obviate the difficulties disclosed in your communication. All that can be said now is, that your further suggestions on that head will command respectful attention, and I am instructed to solicit them as much in detail, as your leisure will permit you to draw them out.

It is in contemplation, if circumstances will permit, to have an exhibition in Washington, in May next, where inventors and manufacturers of agricultural and labor saving machinery, will be invited to exhibit the fruits of their ingenuity, and their contrivances to economize labor and material. Few things would attract more interest, or be regarded as of more value, than any machinery or information which promises to promote the growth and manufacture of another, and a most important article of agriculture and of domestic use and consumption—one which is procured too, as silk is from a nation whose government imposes the most onerous duties on some of the most important products of American husbandry. The Board directs me to express their wish that your invention may be exhibited on the occasion referred to, and will gladly assist in spreading the knowledge of its peculiar advantages.

In the mean time, if you can indicate any particular means within their reach to further our independence of foreign countries, for our supplies of this costly commodity, the favor will be duly esteemed.

(Signed.) J. S. SKINNER,
Cor. Sec'y U. S. Ag. Society.

To Dr. THOMAS WHITE.

DR. WHITE'S ANSWER.

Washington, Dec. 27, 1841.

To J. S. SKINNER, Esq., *Cor. Sec'y of the U. S. Ag. Soc'y.*

SIR—Your communication of the 22d inst. is received, and contents noted. It gives me much pleasure to learn that the Board of Control feel disposed to entertain the subject of my last communication, and to give it a favorable consideration. The project of growing and manufacturing silk in this country, is one that has claimed the attention of the patriot and the philanthrophist from the earliest period of our history to the present day, many of whom have made heavy sacrifices in order to get the business introduced and established on a firm basis. The result of their labors it is presumed is known to you all. It is only left for me to present a statement of the facts as they now exist in relation to the business; and suggest a plan or mode of operation which in my opinion will enable us to overcome all the impediments that have existed, or that do exist, in the way not only of our supplying ourselves with the article of silk, but of our soon becoming exporters of this valuable commodity to a large extent. In presenting my views in detail for your consideration, if I should draw too heavily upon your patience, by being over prolix, you will please accept the only apology I am able to offer, (viz.) the great anxiety I feel for the success of the business, and the general prosperity of our common country has induced me to do so.

It is unnecessary to consume time in order to establish the fact, that we are susceptible of becoming a silk growing nation; that fact is fully established—nevertheless as there are some misgivings and doubts in the public mind as to whether it can be made *a profitable business*, it may be proper to present you with a few items on that head. Within the last half year I have traveled extensively through the States of Tennessee, Alabama, Kentucky, Indiana, Ohio, Pennsylvania, Maryland, Virginia, New Jersey, and New-York, and do not recollect passing through a county in any one of those states without meeting with one or more successful silk growers, who were fully satisfied with the result of their experiments. I will not trouble you with a detail of all the particulars, but simply cite a few cases as demonstrative of the general result. The following is the statement of Wm. P. Campbell, of Franklin, Williamson county, (Tenn.) published in the Tenn. Agriculturist:

"My worms were healthy throughout, but from their crowded situation, many of them were small, and consequently made imperfect cocoons. I am of the opinion I would have made more silk with half the number of worms; and I am fully persuaded, from the experiment I have made, that silk is destined to be one of our best staples; provided however, that we can find a market for our cocoons near our doors. I do not believe the people will go at it generally, until *filatures are established through the country*—reeling will scare them. Give us a market for cocoons, and I believe that in less than five years our people will make them for $2.00 per bushel, rather than make cotton at six or seven cents per lb."

The Hon. H. P. Murray of the same county, informed me a few days before I left Tenn., that his cocoons did not cost him one dollar per bushel to raise them; that he intended giving up raising cotton and extend his mulberry grounds so as to employ his whole force at raising silk, provided he could find a market for it. In Frederick city, (M'd.) Dr. Jenks and a gentleman associated with him in the business, whose name I have lost, raised the past season 134 bushels, fed from a lot of Italian or common white mulberry trees, at an expense of about $80. In this case there were two of them interested in the crop, which made it necessary to keep a strict account of the expense, a statement of which they exhibited to me amounting to about 60 cts a bushel. The most expensive crop I met with in my tour, was a lot of 11 bushels, raised by Mr. Mat. Price of Newark, (N. J.) which cost him $85. It is always attended with more expense in proportion, to raise small lots than it is to raise larger ones. Throughout Pennsylvania, the silk growers have been able to draw as much from the state treasury, in the character of premiums as paid the expense of raising the cocoons. Nevertheless I find them almost every where discouraged, not only in that state, but elsewhere, because they can neither sell their cocoons or reel it so as to make it avail them any thing of consequence when done. The greater portion of them adopt the language of Mr. Campbell, and say we must have a market for our cocoons. We must have filatures established or we must decline the business. This appears to be the great and perhaps only difficulty in the way of our triumphant success. From the best information I have been able to obtain, I am induced to believe, that much the larger portion of the silk raised the past season, is now lying in a perishing state in the hands of the producer, in consequence of the great difficulty that exists in obtaining the aid of skillful reelers, throwsters and tramers.

To remedy this, I propose that your society adopt measures as soon as convenient, to establish a filature for the purpose of instructing the youth of our country in the art of preparing silk for the loom. I cannot entertain a doubt, if congress was addressed from so so respectable a source, having the facts connected with the business collected and laid before them, that they would hesitate a moment in extending the fostering hand of government to aid an establishment of the kind. I know of no source better calculated to produce the effect than through the medium of your society. You can add this branch of industry as an appendage to the other great objects you have in view, and then apply to have the whole connected as an appendage to or a part of, the Smithsonian Institution. It cannot be doubted that congress would act on the most liberal principle in aid of such an establishment, if there is nothing in the will to bar against it. The institution can be established upon true national principles, giving each section of the Union an equal participation in its benefits in proportion to their representation in congress. The members from each district, could bring with them, one, two, or three of the youth of their respective neighborhoods annually, and by the time the session would be over they may return fully instructed in the art of preparing silk suitable for the finest fabrics. The price of instruction should be fixed by law, and be in proportion to the amount appropriated, and the number instructed. By instructing two or three individuals from each congressional district annually for five or six years, we will furnish the country with a supply of efficient and skillful hands, that will be able to take the silk from the cocoon and put it in the best condition for any market, either American or European. While we are appropriating so many millions annually in aid of our commerce, that very commerce too that is draining the precious metals out of our country, to pay for an article, that with a little aid from government we could produce ourselves at an expense far below what it now costs us, I am unable to see any reason why a few thousands might not be appropriated to establish our real independence, so far as the article of silk is concerned at least.

In the common mode of preparing silk for the loom, we have to pass it through four distinct processes, (viz.) reeling, winding, throsting (or twisting,) and traming (or doubling and twisting.) In the first state it is called raw silk, and is seldom worth more than five dollars a pound when done in the best manner. There is but a small portion of what is reeled in the United States that could be sold for that price; most of it will not bring more than half that sum, consequently is not worth as much as it was in the cocoons. Mrs. Everson and Mrs. H. Lee, of Ithaca, Tompkins county, New-York, produced fifty pounds of this kind of silk the past season, and exhibited it at the fair of the American Institute, for which they obtained the highest premium, (a gold medal,) yet there was not a pound in the whole lot that could be made into organzine, consequently it was only suited for making sewings. In the third state it is called singles, and is worth from six to eight dollars a pound. In this state it would bear exporting if we fail of a home market. In the fourth state it is called organzine, and is commonly worth from eight to ten dollars a pound; sometimes from twelve to fourteen dollars in the European market, the price always being governed according to the manner it has been reeled in the first instance. If the two ladies above referred to had reeled their silk at from eight to ten of the worms' threads to the strand, and throwed and tramed it, it would have been worth at least four hundred dollars, and would have made one thousand yards of good substantial goods.

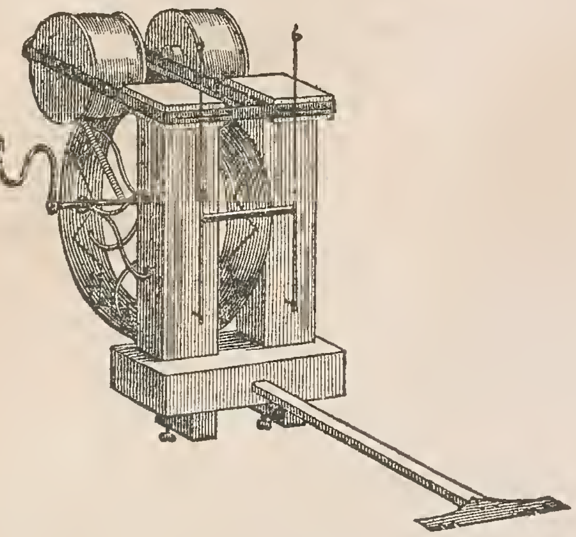
In the first case it is not likely we will be able to raise silk for export, but if we succeed in making good organzine, silk will become the greatest staple of the nation at no distant day, owing to its being susceptible of profitable production from the St. Lawrence to the Sabine. The machine you so kindly invite me to exhibit at your next meeting, and tender me your services in making its advantages known, performs the four processes above noted, in but little more time than it commonly takes to reel alone. Thus putting it in the best marketable condition, without ever subjecting it to loss or tanglement until it is finished. Mr. A. Linsey of this city, has one in operation; he has instructed me to invite all who feel an interest in the business to call and see it, which I cheerfully do. The interest I feel for the success of the business has induced me to proffer to waive my claim (secured to me by patent,) in the machine, so far as it may be needed in the filature, provided one is put in operation, and it should be preferred by the Board.

It may be thought premature and visionary for us to think of exporting silk, but, sir, there is nothing to prevent our commencing that trade within five years of this time except the lack of skill in the art of reeling, throwsting and traming. If we can by any means succeed in remedying this defect, it will save the nation more millions in less than twelve years than it will cost thousands to effect it. The vast amount that is annually paid for foreign silk is known to you all; it is unnecessary to invite your attention, or the attention of congress to that part of the subject. But it is presented to our view in another and more serious light, one that I should think ought to claim the most solemn attention of every patriot and statesman in the nation. It is well known that England is making an energetic effort to supply herself with cotton, independent of our planters; that they have succeeded the past season in producing three hundred thousand bales, which is three times as much as they have ever produced before; and that according to the report of their agent, they anticipate furnishing a full supply for their factories in a short time; if I am not misinformed within two years. If they succeed, which it is most probable they will, (if there is any truth in their own reports,) I would ask, what are we to pay for our imports with? By what means are we to pay the interest of our state debts, to say nothing of the principal, if we do not turn our attention to the production of some other new and valuable staple, by a judicious division of our labor, and the diverting a portion of it to the production of silk? This is a subject that every portion of our country is or ought to be deeply interested in. If the southern planter fails of a market for his cotton, where will the north find a market for their handycraft: their hats, shoes, harness, coaches, and the thousands of other things that give employment to tens of thousands of their inhabitants. Or where will the west find a market for their horses, mules, grain and pork? If the value of our present great staple is destroyed, andwe are unprovided with a substitute, every portion of our country will feel the shock: every citizen, no matter where located, who deals in cotton, or in any thing that cotton is made the means of payment for, either directly or indirectly, is as much interested in the success of that trade as the planter is himself, provided we have no substitute. If the north be unable to sell they will be unable to buy. The issue is one of serious import that every friend of this country must feel deeply interested in. I am aware there are those who think, or affect to think, that the issue exists between the free labor of the north and the slave labor of the south; but this idea can only be entertained by men of small souls, who are incapable of viewing and understanding the general connection of our multiplied system of trade, change, and exchange. This they will be able to understand better in a few years, if the English succeed in supplying themselves with cotton, and we fail to get the silk business established. They will then see that the true issue exists between foreign labor and American labor, regardless of how or where that labor is performed.

Taking into consideration the adaptation of our country (especially a very large portion of the south and southwest,) to the growth of silk; the existing difficulty in preparing our silk for market when produced; the immense tax imposed upon us by our importing so largely of the article, with the strong probability that at no distant day our cotton, the most valuable staple we now have, will be checkmated in the European market, I cannot admit for a moment, that our statesmen will fold their arms and look on with indifference without making an effort to meet the crisis. Now, supposing there was no difficulty likely to arise in relation to our cotton trade, I humbly conceive that the other branches of the subject are of sufficient importance to merit the serious consideration and liberal action of the representatives of this great nation, provided the facts connected with the business were collected and properly laid before them. This, as I before observed, can best be done through the medium of your society. Nevertheless if my humble services can be of any advantage to the cause, they shall always be at your command. You will please accept my thanks for the honor you have conferred upon me.

Yours truly, THOS. WHITE.

For Mr. Morris' method of destroying the worm in the cocoon, see "Traveling Memoranda, No. 8," page 50, of this number of the Cultivator.



JONES' PATENT SILK REEL.—(Fig. 27.)

Messrs. Gaylord & Tucker—The great desideratum in getting silk into skeins from the cocoon, is to preserve an even, smooth thread, and so to join the skein as to remove the liability of tangling or losing the end, in case the thread breaks in the operation of unwinding, thus providing against a loss of stock, in a stage of process of making silk in which by far the greatest portion is incurred. To promote the interest of the silk grower in this fundamental branch of the operation, I wish, through the medium of the Cultivator, to exhibit to the public a Silk Reel, entirely novel in its construction and mode of communicating motion, having for this purpose neither gearing, belting or banding, and hence no ways liable to get out of order. Its simplicity and compactness is unparalleled, the whole machine being less than one cubic foot. It can be readily attached to a table, by a thumb set screw. For its neatness and elegance, both in form and workmanship, it is peculiar, forming a piece of ornamental machinery that would grace a lady's parlor. The operation compares well with the appearance, its movements are smooth and regular, diminishing greatly the liability of the thread breaking. It winds the silk from cocoons on to small barrels; it runs two threads at a time, which cross each other between the first and second guides, and is then spread upon the barrels by a lateral motion of the second guides, precisely like the Piedmontese Reel. When dry the silk can be slipped off from the barrels in small circular skeins, which will preserve their shape, to be packed and transported any distance, and can at pleasure be unwound with as much facility as yarn is taken from the ball, and without any liability of breaking or losing the end; it thus virtually performs the two fold operation of reeling and spooling at the same time, as it is doubled and thrown immediately from the barrels or the small circular skeins. Its great advantage in this respect over the reels which form long skeins, will be intuitive to those who have manufactured sewing silk from the long skeins, and have witnessed to their vexation and sorrow, the tangling of skeins, losing of ends, resulting often in the total loss of almost whole skeins, and not unfrequently ruining whole spools by losing the end. Another recommendation of this Reel is the expedition and consequent cheapness with which it reels; a mere child whose services may be had for six cents per day, can easily turn it. This machine, with specimens of sewing silk, made from its reeling, were exhibited at the late fair of the American Institute, both of which received the silver medal. It was also exhibited before the New England Silk Convention, recently held at Northampton, and the following report was made. "The Committee appointed to examine the Silk Reel presented by Mr. A. B. Jones of Manchester, Ct., report, That they have examined the above Reel, and are greatly interested in the neatness, simplicity and compactness of its structure, and the accuracy with which its movements are regulated. The committee judge that this Reel is peculiarly fitted for family operations and for establishments where the silk is manufactured as well as reeled. In behalf of the Committee, J. R. Barber, Chairman. This report was unanimously adopted." It has been universally admired by all who have witnessed and proved its operation the past season, who unite in giving it their decided preference to any other which they have used or seen. Those engaged in growing silk will find it much for their interest to become possessed of this Reel. A. B. Jones.

Buckland's Cor's., Hartford Co. Ct., Jan. 15, 1842.

Veterinary Department.

BLACK LEG IN CALVES.

Editors of the Cultivator—I have seen in the Cultivator of the eleventh month of the past year, a communication from Jos. H. Merrick, regarding the sudden death of some Calves, in which he asks for information of the cause of the attack, and for its remedy. When in England, the complaint frequently came under my notice; it is there known by several names, as Black Leg, Black Quarter, Quarter Evil, Joint Murrain, and some others. I have seen it most frequently attack calves, which, from being kept in a paddock where there was scarcely any grass, and where they were supported on milk or whey, had, on their being deprived of their usual support, been removed into a field of fine fresh clover: this circumstance has induced me to believe that the sudden change of food might probably be the cause of the complaint. I have not in the course of my experience known it affect any cattle that have attained the age of two years. I have known a great many nostrums applied to arrest the progress of the complaint, but uniformly without success, every animal having died in the course of about two days from the visible commencement of the disease. I have therefore hitherto considered it incurable. For further information I refer your readers to White's Veterinary Dictionary, where the complaint is treated of at great length. Your friend, John Weatherald.

Puslinch, near Guelph, Canada West, 19th 1 mo., 1842.

Messrs. Gaylord & Tucker—In one of back Nos. of the Cultivator, Mr. Js. H. Merrick inquires respecting a disease, his calves are afflicted with. It is well known here, and is called vulgarly the "Black Leg." I never knew any animal attacked with it to recover, because an animal is rarely found alive after the attack, on account of its killing them so quick. It generally seizes on calves that are well fed, as Mr. M. stated his to be. I have known it to attack older cattle, but this is rare. The preventive is easy and sure; it is nothing more than to salt them at least three times per week.

P. S. The above preventive is we believe infallible.

Walnut Grove, N. J. D. Y. O.

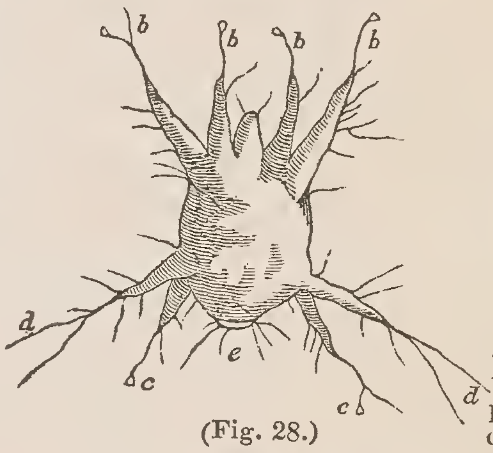
SCAB IN SHEEP.

Among Sheep there is no disease so common, or productive of so much injury, certainly not in the United States, as the Scab, or as it is called by some, the Itch. A sheep infected with this disease is restless, rubbing itself violently against posts, fences, or whatever is in its way; biting and tearing out the wool with its teeth, and exhibiting every sign of intense irritation. On examining the sheep the skin will be found red and rough, with usually an extensive cutaneous eruption, or an accumulation of small pimples or pustules, some of which have broken, and the matter discharged has formed patches of crust or scab, from which the common name of the disease is derived. The fleece on a sheep diseased with the scab will be irregular in its growth, and the quality inferior; and if the complaint is severe, or long continued, the health is impaired, and the animal pines away rapidly till relieved by death. The rot may be more immediately fatal, and produce greater losses in Europe, but here the scab is more injurious perhaps than all other diseases put together.

The scab is one of the most infectious of diseases, and if introduced into a flock, unless the diseased animals are immediately removed, the farmer may depend on the whole flock being infected, and both sheep and wool greatly lessened in value. The shoulders and the back are the places usually first and most seriously affected; but unless checked, it will spread till the whole surface is diseased or the animal perishes; or such is the usual course of the disease. The infection seems to spread in two ways: by actual contact with diseased animals, or by means of the places where infected sheep have rubbed themselves or lain. As pay for sheep infected with scab, and sold for sound, cannot be collected in Europe, or may be recovered, much attention has been paid to the time that elapses after the infection, before the disease appears. About the twelfth day it is stated by Youatt, the pustules begin to appear, and the rubbing of the animal shows the irritation has commenced. In four days more the pustules break, and the matter escaping forms the crust or scab.

After it was found that the itch in the human race was caused by an insect, a species of *Acarus*, it was supposed that similar cutaneous diseases in animals might arise from the same source. M. Walz, a German, was the first to establish this point and fully investigate its character, and numerous subsequent examinations have proved the correctness of his opinions. He found that the scab, like the itch, mange, &c., is caused by animalculæ; that the irritation caused by his burrowing in the skin, forms the pustule, and that when this breaks, the acarus leaves his habitation and travels to another part of the skin, and thus extends the disease, or it may be left on the rubbing post, or the wool of an animal coming in contact. When one of these acari is placed on the wool of a sound animal, they quickly travel to its roots, where the place of burying themselves is shown by a minute red point. About the sixteenth day the pimple or pustule breaks, and if the acari is a female it appears with a multitude of young. These immediately set to work on the skin, bury themselves and propagate until the poor animal is irritated to death, or becomes encrusted with scab. M. Walz satisfactorily traced the parasite through all its changes, and by experiment discovered its mode of action, and method of infection. He found that when the male acari was placed on a sheep, it burrowed, the pustule was formed, but the itching and scab soon disappeared without the employment of any remedy. Such was not the case where the female acari was placed on the sound skin; as with the breaking of the pustule from eight to fifteen little ones made their appearance. M. Walz found that the young acari kept in a dry place, dried and crumbled to dust; but when old, that it would retain its life through the whole winter; thus proving the necessity of not relying on the season for their destruction, but on preparations of active medicine when the disease shows itself. Of the origin of these insects, we of course can know nothing; it is enough that we are certain when they make their appearance they can be met and destroyed.

Various remedies have been recommended for the cure of the scab, but although the sheep acarus is very different in form, size, and color from the human acarus, the application that will destroy one will prove fatal to the other. The remedy is the destruction of the acarus. A strong decoction of tobacco, of hellebore, or a solution of arsenic will cure; but the difficulty with washes is, that the burrowed insect sometimes goes untouched, and unless the washing is repeated, some are apt to escape, and the disease is continued. Owing to this it has generally been deemed a safe and more expeditious mode to use the mercurial ointment. When used too strong, it will salivate lambs or ewes. Where the cases are very bad the ointment may consist of one part of mercurial ointment or *unguentum*, with three parts lard; but for ordinary cases of scab, one part of the mercurial ointment to five of lard will be sufficiently powerful. The wool should be separated, a small quantity placed on the skin, and carefully rubbed in. The extent of the application, and the quantity used, will depend on the spread of the disease, from half an ounce to two ounces being demanded. A decoction of tobacco or hellebore will cure, but as before remarked it may be necessary to repeat the washing. Arsenical applications are effectual, but dangerous, unless great care is used. Where an animal has been washed, or ointment applied, infection is generally prevented; but whenever the scab appears, and is supposed to be cured, examinations at the end of every few days should take place, particularly if any symptoms of itching or irritation appear. The sheep grower should pay strict attention to the health of his animals, and such care and attention will be abundantly repaid. Below we give figures of the acari that produces the scab, as delineated by M. Walz.



(Fig. 28.)

Fig. 28.—The female, of 366 times the natural size, larger than the male, of an oval form, and provided with eight feet, four before and four behind.

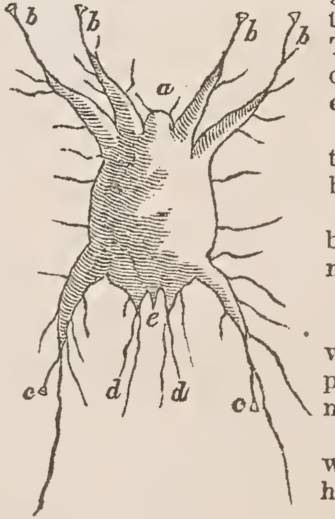
a—The sucker.

b. b. b. b.—The 4 anterior feet, with their trumpet-like appendices.

c. c.—The two interior hind feet.

d. d.—The two outward feet, the extremities of which are provided with some long hairs, and on other parts of the legs are shorter hairs. To these hairs the young ones adhere when they first escape from the pustule.

e.—The tail, containing the anus and vulva, garnished by some short hairs.



(Fig. 29.)

Fig. 29.—The male on its back, and seen by the same magnifying power.

a.—The sucker.

b. b. b. b.—The fore-legs with their trumpet-like appendices, as seen in the female.

c. c.—The two hind legs, with the same appendices and hairs.

d. —The rudiments of the abdominal feet. *e.*—The tail.

"DISTEMPER" AMONG DOGS.

J. C. Robertson, Esq. of Springfield, Elizabeth City Co., Va., accustomed, as he says, "to the healthful sports of the field and the chase," has requested some information as to a distemper which has occasioned him the loss of some of his best dogs, and the best method of cure, if any is known; and also, whether the disease is infectious," &c.

Circumstances have never made us familiar with the habits or diseases of dogs, although we can fully appreciate their fidelity and attachment, and, with our correspondent, believe their diseases worthy of notice and cure. Blaine, in his great work on Rural Sports, which is high authority on all matters relating to dogs and horses, thus speaks of the disease called by our correspondent the distemper:

"Few young dogs escape the *distemper;* and if they do escape in their youth, three-fourths are attacked by it afterwards, as it is by far the most common and fatal disease of the dog. It generally attacks them before eighteen months old, although it may appear when quite young, or after several years. Greyhounds are very subject to it, and it is more frequently fatal to them than others. Moist eyes, dulness, wasting, cough, and sneezing, are the symptoms of its approach. In some cases it commences by purging, in others by fits, and frequently ends fatally in the latter way." For cure, Blaine gives the following directions, in substance:

On the first attack of the disease, give emetics; they are very useful. A large spoonful of common salt, in three spoonfuls of warm water is good, the quantity to be increased according to the size of the dog, or the difficulty of making him vomit. If the dog remains strong, such an emetic every third day is not too much. Active purging must be avoided, but the bowels must be kept open. If scouring is present, the best remedy is balls made of equal parts of gum arabic, prepared chalk, and conserve of roses, with rice milk as food. Two or three grains of James' powder may be given at night, where the bowels are not affected, and where the discharge from the nose betokens putridity, balls made of Friar's balsam, gum guaiacum, and camomile flowers, in powder, will be useful. Dogs in every stage of the disease should be well fed. Setons we have not found as useful as some have supposed. If the nose is much stopped, rubbing tar on the upper part is beneficial. If there is great insensibility and stupidity, or the head seems much affected, a blister on the top of the head is useful.

The disease is *very contagious*, though it sometimes appears where no cause of contagion exists. The diseased dogs should be at once separated from the rest of the pack, to avoid the danger, as far as possible, of spreading the disease.

DISEASE OF COWS AT TROY.

Messrs. Gaylord & Tucker—In the Cultivator for Sept. last, I perceive an article by Mr. Bement, respecting a very fatal disease among Cows at Troy, N. Y.

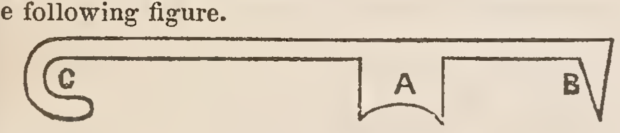
Permit me to state my opinion upon the subject. From the symptoms there stated, I have no doubt that the seat of the disease was in the lungs, and the cause probably from inhaling a specific poison, or miasma, in those low grounds situated on the banks of a large river, which, from the extensive drouth had been unusually low. The immediate cause of death must have been congestion of blood in the lungs, or mortification of that important organ. If the disease had arisen from any thing taken into the stomach, the symptoms would have been very different. Allow me at the same time to return my thanks to Mr. Bement for his kindness in thus recommending me to the notice of the public.

Geo. Wright, V. S.
No. 80 Hamilton-street, Albany.

The Garden and the Orchard

A GRAFTING KNIFE AND CHISEL.

Messrs. Editors—I send you a description and drawing of an instrument, made and used by my brother last spring when grafting. It is a small thing, but nevertheless very convenient. I don't know where it originated. It would be best made of steel; but any hard iron will answer the purpose. Its form is represented by the following figure.



The part marked A should be made 2 inches or more in length, with a sharp edge. It is used for splitting the *stock* after it is sawed off and pared. The edge should be made with a slight curve, as in the cut, that the bark, when splitting, may be cut first. The *wedge* on the end marked B, is used for opening the stock to prepare it to receive the cions. The end marked C, is made in the form of a *hook*, that it may be hung on the twigs of the tree while sawing and paring the stock.

Berlin, Ct., Dec. 17, 1841. R. North, Jr.

CUTTING CIONS—GRAFTING, &c.

Messrs. Gaylord and Tucker—I have paid considerable attention to propagating fruit trees, and would remark that apple cions cut as soon as the leaf falls in autumn will keep if buried in the bottom of any ordinary cellar, provided it is not wet, just as well as though they were cut in March. I have cut cions on the 12th of October, carried them 70 miles, buried them in my cellar, set them in July following, and they did as well as those cut at any other time. Pear cions will not do as well, as they are liable to turn black and die. Peach trees, budded during the last half of August, do better with me, lat. 41° 30m., than at any other time. The tree has then nearly done growing for the season and can be budded high up, and yet there is sufficient action in the sap to make the bud adhere.

New-York, Jan. 5, 1842. Enquirer.

THE GARDEN.

There is one great principle which with the farmer should have due weight allowed it, and that is, looking for happiness at home. To ensure this, all the appliances and additions necessary to secure such a result should be attended to; and perhaps there is no one thing, *out of the house*, more conducive to this, than a well arranged and well cultivated garden. Into the minute details of gardening we cannot be expected to enter; for these, we must refer such as wish to become acquainted with the minutiæ of gardening, the cultivation of flowers and plants in all their varieties, to those works on the subject, such as "Bridgman's Gardener's Assistant," where these matters are treated amply, and in detail. The farmer, however, should remember that every tree, shrub and flower he cultivates, constitutes a new link of attachment to bind him to his home, and render that home more delightful. They multiply our means of enjoyment, they make additions to our stock of knowledge, they invite us to a more intimate communion with nature, and they prevent the concentration of the mind on wealth, and the narrow selfishness that is too often its attendant. The garden is a place where many experiments may be advantageously made. It is a farm in miniature, where the different varieties of plants, their adaptation to our climate and our soils, and the merits of particular modes of culture may be tested. Most farmers are not able, nor is it desirable they should attempt experiments on a large scale; they have neither the time, or capital, to expend where the result may be doubtful to any extent; but in the garden the case is different, and failures can never produce serious losses.

For the farmer's garden there may be a few general rules laid down, which will apply to their construction, management, and general cultivation. The soil is one of the most important considerations, and the first that demands attention. If naturally good, a very great point is gained in the outset; since if this first requisite is not present, nothing can be done to advantage. The garden should be of a deep rich loam, not too dry or porous, as plants would be liable to suffer from drouth; but a still worse fault is excess of moisture, since this renders land cold and heavy, difficult of cultivation, and wholly unfit for many of the most valuable garden plants. If too wet, it must first be drained effectually, then heavily manured, and by the spade, or trench plowing, made loose and friable to the depth of eighteen inches or two feet. If inclining to clay, or containing so much as to beat down and set hard on the surface after heavy rains, the application of sand will be of essential service, or still better if sandy marl can be used. The soil should be such as to work easy, retain sufficient moisture for plants, allow all that is superabundant to flow off easily, and be kept constantly rich. The garden should also have a good fence about it, to secure it against the encroachments of animals. Many a farmer has had the mortification of seeing a flourishing garden destroyed in a single night by a neglect of his fences and gates.

Many farmers fail in having good gardens, even where the soil is good, from not performing the culture as it should be; not selecting good seeds; not planting them at suitable times; or not giving them their proper position, as to sun, shade, &c. Avoid as much as possible having trees about those parts of your garden where you grow roots, vines, or any plants that require the full warmth and light of the sun. There are few trees of which the drippings are not positively injurious; and besides, their roots exhaust the soil around them. Trees may be advantageously planted on the north, west, or east side of gardens, as they break the cold winds from those quarters, and the ill effects of their shade is little felt. Thick hedges, or copses of evergreens, on the most exposed sides of gardens are useful, and their appearance adds much to the general effect of the buildings, and agricultural improvements.

To ensure the germination of seeds when placed in the earth, the earth should be brought in close contact with them. This is necessary to secure the requisite moisture, to exclude light, and to furnish a hold for the young roots. Seeds should never be placed too deep in the soil, nor is deep planting necessary to secure a covering, if the earth is properly rolled or pressed around the seed. Corn does not demand more than a covering of 2½ or 3 inches in thickness, if the earth is properly pressed over the seed; yet in the ordinary way of planting, it oftener gets a covering of 5 inches than 3. Small seeds are often lost from this cause. They are planted so deep that the young plant cannot force its way to the upper air; it is literally buried alive. A light covering, well rolled or pressed down, is far better for all seeds than a deep one, not brought in contact with the seeds. There are some seeds that will germinate much better if soaked in warm water previous to planting. The shell, or envelope, becomes so very hard by drying as to prevent the germination, unless nature receives aid in the way suggested. The onion, the beet, and many of the smaller flower seeds, will succeed better if treated in this way than if planted without preparation.

All plants cultivated in our gardens, that are natives of tropical climes, feel every variation of the weather and depression of temperature more sensibly than others, and consequently require additional precautions in planting and in cultivation. A cold rain will frequently prove fatal to the Lima bean, while the common garden bean is unhurt. So, too, the cucumber, tomato, melon, pepper, egg plants, &c., will feel a frost which the pea or cabbage would wholly escape. There are many plants which are called hardy; such as the parsnep, onion, asparagus, parsley, pea, &c., which may be planted early without fear of rotting, or in general without failure of germination; and many plants which at first require considerable moisture are much better planted early than late. The carrot, celery, onion, spinach, &c. are of this class; and if the sowing of them is delayed until hot, dry weather comes on, good plants can hardly be expected. The lettuces, too, may be sown whenever the ground is free from frost and sufficiently dry, since should it germinate only, it rarely suffers from frost, although its growth may be retarded. For this reason, many farmers as well as gardeners are in the habit of preparing and sowing some beds of lettuce in the fall, that this plant may be in season for early salads. It should be remembered, however, that the rapidity of germination is mainly depending on the temperature. Thus, at the same temperature, the bean will sprout as quick as the pea; but if the temperature is low, the bean would rot, while the pea would retain its germinating power, and be ready to take advantage of the first favorable increase of temperature to vegetate.

Where it is desirable to procure early vegetables, it has become quite common to use hot beds or forcing frames; and the process of constructing and managing these has been so simplified and rendered so easy, that every farmer or owner of a garden may avail himself of their use. Occasional failures will indeed occur, but with reasonable care, not oftener than in open culture; and a supply of early vegetables is so conducive to health, not to speak of them as a luxury, that we think few will regret the trifling expenditure such hot beds will occasion. In our northern climate, the use of such beds enables us to procure a supply of early or summer cabbages, early radishes, early lettuce, tomatoes, peppers, egg plants, &c., for transplanting, as well as for the table. At page 38 of the Cultivator for 1840, is a description and drawing of a hot bed made in a permanent frame or box, and which an experience of several years enables us to pronounce an excellent fixture. By reference to that article, it will be seen that the construction and management is quite easy; and we have the pleasure of knowing that many of our friends who have constructed beds on that principle have been well satisfied with the results. Hot beds made in that way, or in a close box, do not suffer as much from drouth, or require as much watering as when made open, or in such a manner that evaporation can take place from all their sides, as is the usual practice. But such box hot beds are unfit for purposes in which a continued heat is required for a considerable time, as no additions of fermenting manures can be made to them, as may be to those without such covering to the sides. We have found, however, that the heat generated in the first mass of manure is fully sufficient for ordinary vegetables, and they may require some regulation to prevent its becoming excessive, particularly when aided by the heat of the sun in the middle of the day. In very dry porous grounds, it will be better to have the bed sunk some two feet in the earth, as it will suffer much less from drouth, and require less attention than if wholly on the surface of the garden; but if the soil is retentive and wet, such a pit would retain water, and of course prevent all fermentation. The following directions, which we copy from the "Young Gardener's Assistant," are very correct, and explain the method of making the common hot bed very intelligibly:

"It may be necessary to remind my readers of the necessity of being always prepared to sow cabbage, lettuce, tomato, and egg plant seeds, [we would add peppers and radishes] in hot beds the last week in February or early in March; for this purpose, let some fresh stable dung and some rich compost be engaged beforehand. Some gardeners make their beds on the level ground, but it is always safest to make them in pits from eighteen inches to two feet deep; in order to do this, the pits should be dug in autumn, or a heap of dung may be deposited on the ground intended for the beds before the frost sets in, and good earth may be obtained from the pits without difficulty.

"The frames should be made of good sound planks; the back plank may be two feet wide, and the end ones may be so sloped as to make a fifteen inch plank do for the front. A frame calculated for four sashes of three feet in width by six in length, as above described, should be nearly thirteen feet long, and about six broad at the top.

"The frame being set over the pit and properly fastened, the fresh dung should be spread regularly in the pit to the depth of twenty or twenty-four inches; if the dung be in a good heating condition, cover it with six or eight inches deep of mold, then lay on the sashes, and protect the beds from the inclemency of the weather. In two or three days the rank steam may pass off; it will then be necessary to stir the mold before the seed be sown, to prevent the growth of young weeds that may be germinating; then sow the seeds, either in shallow drills, or broadcast, as equally as possible, reserving a small quantity of the warm mold to be sown or sifted over the seeds. This description of a hot bed is intended expressly for the raising of spring cabbage, lettuce, tomatoes, and such other plants as may be required for early planting. Beds made earlier in the season, or for forcing, will require a greater abundance of manure."

In the ordinary method of cultivating the farmer's garden, or the common vegetable garden, there is, in our northern states, little more than preparation for coming months that can be advantageously performed in March. The manure may be drawn upon the garden and piled in heaps for spreading preparatory to plowing. It is always better that fine rotted manure or compost be used for the garden, as the straw mixed with fresh stable manures renders the working of the earth into beds difficult, and prevents the fineness of mold so necessary for the germination of the smaller seeds. Where the condition of the soil will admit, a few beds of carrots, lettuces, peas, and similar hardy plants may be put in for early use, although it would not be best to plant all intended for the year at this time. Asparagus beds should now be cleared off, the litter put upon them at the beginning of winter removed, compost spread over the beds to the depth of three or four inches, and well worked in with a strong fork, avoiding disturbing the crowns of the roots as much as possible. This is one of the most delicious of vegetables, and is deserving of far more general cultivation. There is an impression that there is something mysterious and difficult in the growth of asparagus; but this is all idle, as there are few plants cultivated with more ease and certainty. It is idle, it is true, to think of growing fine asparagus where the soil is wet or compact to within a few inches of the surface; or where there is no richness to give vigor to the plant. Asparagus requires a soil permeable to the depth of at least two feet, as the roots, like those of most other perennial plants, run deep; and on the richness and good condition of the soil, the size and quality of the shoots will mainly depend. It may be cultivated either by roots transplanted or by seed; and in either case, when properly performed in the early spring, success may be considered as certain. A few potatoes may be planted in March, and early varieties should be selected. If the seed end, or that end containing the greatest number of eyes, is selected for planting, the product will come to maturity some ten or twelve days earlier than when other parts of the root are used. The Lancashire gardeners, who mainly supply the London market with potatoes, are very careful to observe this rule.

The New-York Market.

MONTHLY REPORT FOR FEBRUARY, 1842.

(*Prepared for* THE CULTIVATOR.)

COTTON—There has been little activity or change in the market during the month, and at the last dates the daily expectation of advices from Liverpool, rendered it very quiet—both buyer and seller being disposed to wait for their reception. The sales from the 22d of January to the 23d of February, amounted to 19,850 bales. The total imports from the 1st to 22d of the month was 16,003; and the exports from the 1st to the 16th, was 8,759 bales. The receipts up to the 16th were about 100,000 bales more than during the same period year before last, which was the greatest Cotton year before known. The quotations are as follows:

	February 1st.	February 23d.
New Orleans,	7 1-2 @ 11	6 3-4 @ 11
Mobile,	7 1-4 @ 10 1-2	6 3-4 @ 10 1-2
Upland and Florida,	7 @ 9 1-4	6 @ 9 1-2

FLOUR AND MEAL—Most of the articles coming under this head have been characterized by an excessive dulness. In the first part of the month, there was a tendency to advance, but of late there has been a disposition on the part of holders to submit to a decline of 12 1-2 cts ⅌ barrel, and prices now are about the same as at the close of January. The supply is moderately large. The quotations on the 23d were as follows:—Michigan $6; Ohio $6 @ 6 12 1-2; Baltimore Howard-street, $6 @ 6 12 1-2; Richmond City Mills $7 50. Rye Flour $4 12 1-2 @ 4 25; Jersey Corn Meal $3 @ 3 25; Brandywine in bbls. about the same, in hhds. $14 50 @ 15. This is an advance of about 12 1-2 cts. on the prices of last month. Rye Flour is plenty, and in moderate request. Corn Meal scarce and wanted.

GRAIN—At the first and middle of the month, there was considerable activity in every description, but more particularly in wheat. Of late, however, a greater degree of dullness has prevailed, and prices are nearly the same as at first of the month. Wheat is scarce and in demand, at $1 24 @ 1 25 ⅌ bus. for Ohio and Genesee, and $1 20 for Southern. Rye, little in market, Northern is quoted at 72 @ 73 ⅌ bu.. Barley, 74 1-2 cts. and nothing doing. Oats, Northern 50 @ 53; Southern, 45 @ 47 cts ⅌ bu.; the demand being confined to the retail trade, and receipts light. Corn comes forward very slowly. The demand for distilling is light, and export has subsided. On the 2d of the month, 4000 bus. N. river Rye were shipped to England on experiment. Northern and Jersey Corn is worth 61 @ 62 cts.; Southern 58 @ 59.

PROVISIONS—The transactions in all descriptions are extremely limited, and the market is dull and heavy. There is a large stock on hand, especially of Pork, of which there has been large receipts from New-Orleans. Since the first of the month prices have gradually declined, and on the 23d the quotations were as follows:—Beef, 7 50 @ 8 25 for mess, and prime at $4 25 @ 4 75; Pork $7 12 1-2 @ 9; and prime $5 25 @ 7 25. Lard is in fair demand at 4 a 6 1-2 ⅌ lb. In Butter there is but little doing and prices are 18 cts. for prime; ordinary to good 12 @ 14 cts. The stock of Cheese is light, and prices are 7 @ 8 1-2 cts. ⅌ lb. Smoked Hams, plenty at 8 1.2 @ 8 3-4 cts. ⅌ lb. Smoked Beef 7 1-2 @ 8 cts.

TOBACCO—During the month there has been little inquiry for any description, and parcels forced on the market sold at very low prices. The new crop is dull of sale, and being generally cured unusually early is of inferior quality, quite below the average. Prices are but nominal, at the same rates as at the close of the month, with two or three exceptions, viz: Richmond and Petersburgh, 3 @ 5 1-2. North Carolina, 3 @ 5; Kentucky, 3 1-2 @ 9 1-2; St. Domingo, 11 1-2 @ 20c. In other descriptions prices remain without change, viz:—Cuba, 12 1-2 @ 20 c.; Manufactured, No. 1, 12 @ 15 c.; No. 2, 10 @ 11 c.; No. 3, 7 @ 16 c., 32 lumps, 16 @ 20 c.; Ladies Twist, 16 @ 20 c.; Cavendish, 10 @ 40 c.

DOWNING'S BOTANIC GARDENS AND NURSERIES, NEWBURGH, N. Y.

THIS establishment contains at present one of the largest collections of Trees and Shrubs to be found in the United States; and, from its peculiar position near the Highlands of the Hudson, its productions are found to possess a great advantage in point of hardiness, when transplanted, over those raised further south.

It is constantly the aim of the proprietors to conduct the business of the establishment in the most scientific and careful manner; and all persons ordering trees or plants, are assured that no pains are spared to insure the genuineness of every article sent out.

Especial attention is paid to Fruit Trees, and a collection is offered comprising all the finest varieties that are worthy of cultivation. Also, a great variety of Ornamental Trees, flowering shrubs, herbaceous plants, and a large stock of the most beautiful hardy roses, dahlias, &c. &c.

For hedges a large quantity of the Newcastle (N. J.) thorn, an American species, better adapted than any other to this climate, is offered.

Priced Catalogues will be furnished gratis on application by mail, and all orders, *post paid,* will receive prompt attention. Trees and plants will be carefully packed for transportation to any portion of the Union. A. J. DOWNING & CO.

Newburgh, N. Y. Feb. 1842.

WOBURN PIGS.

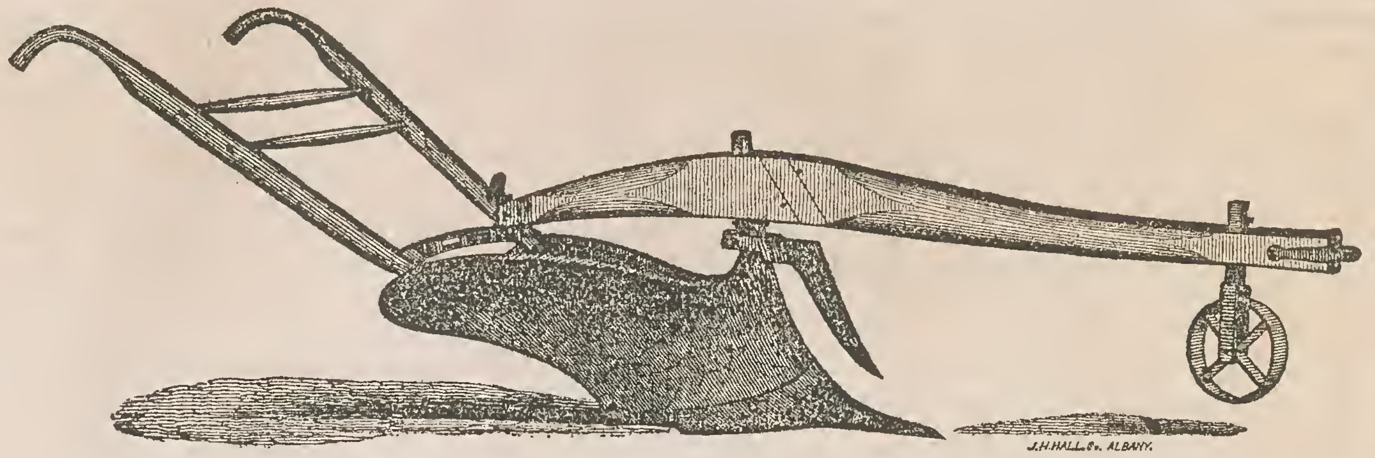
THE subscriber informs those wanting pigs of this valuable breed, that he will be prepared to execute orders during the months of April and May next, from choice stock and pure blood.

As the demand last fall far exceeded the supply, the advertiser would suggest to those wanting Woburns to order early and secure the supply.

The price is uniformly fifty dollars per pair delivered caged in New-York; the money to be paid on delivery when not accompanying the order.

The subscriber can also furnish Berkshire pigs from some of the choicest stock selected in New-York state. Price, delivered as above mentioned, twenty dollars per pair. Orders by mail to be directed to Mendham, Morris county, New-Jersey.

February 21, 1842. CHARLES STARR, Jr.


J.H.HALL Sc. ALBANY.

BARNABY & MOOER'S PATENT SIDE-HILL AND LEVEL LAND PLOW,

TO which was awarded the first premium, a silver *Cup*, by the American Institute at their plowing match for 1840, having on that occasion to compete with the best plows from nine different states.

Also, the first premium, a *Gold Medal*, by the same Institute, at their annual plowing match for 1841; having some of the best common or horizontal plows in the country as competitors for the prize medal.

It was also awarded the *Honorary* premium, and equal to the first of $30, by the *New-York State Agricultural Society*, at their annual Fair and test of plows at Syracuse for 1841.

The State Committee on plows, say in their report, "they have a most arduous duty to perform. Near twenty of them (plows,) were presented for our inspection, and the Committee are free to say, that they never have seen so great a number of remarkably excellent plows together before."

The undersigned having been for the fourteen years past connected with a furnace and machine shop, and being a practical mechanic, has devoted much of his time during that period to the improvement of the *Plow*, believing it was, and still is, one of the most important implements used in agriculture. In the spring of 1839, in connection with Mr. Ambrose Barnaby, we conceived the plan of making a plow which would serve for "general purposes," and relieve the farmer from the inconvenience and expense of having *one* plow for level land, and *another* for side-hill.

Subsequently, I purchased of Mr. Barnaby one-fourth of the patent, which made me proprietor of three-fourths of the whole; since that time, which is about eighteen months, until recently, I have intentionally confined it to narrow limits, knowing although the main or new principle, had been obtained, it still would require time, actual use, and continued experiments in plowing in various kinds of soil. and under different circumstances, to attain and combine the three most important points requisite to make a *good* plow, viz. 1st. Lightness of draft. 2d. Elegance of work done. 3d. Strength and durability. In this I have been assisted by a dynamometer, to ascertain the exact power required to draw the plow; and having appropriated considerable time for the express purpose of experimenting and testing plows, with some of the best plowmen and scientific farmers in this section of country, and several suggestions made by them have been useful to me. The above testimonials (and many others might be added,) and the honorable source from whence obtained, show how far I have succeeded in the object sought.

The cut above is a very good representation of the plow in its present form, showing the whole of one side and a portion of the mold-board on the opposite side. Both sides of the plow are precisely alike. The standard by which the plow is drawn, is a continuation up of one of the mold-boards, and is round, allowing the beam to revolve between the handles, and on the opposite side of the same, is projecting from the standard, and cast fast to it a flange, or short land side, to which the other mold-board is firmly bolted, and the points of the mold-board coming together, the share which is in the shape of a V covers them, and by one bolt and nut on each side is made fast to the same. This arrangement gives the plow great strength forward, and where it is most required. The mold-board which is cast with the standard, forms the cutting edge, and when a coulter is not used, and as can be seen from the engraving of the plow, that part which is most liable to wear out, is a piece inserted and held on by the share, which when worn can be replaced by a new one at a very trifling expense.

The curvature of the mold-board is so formed that a straight edge or stick applied, placing one end at the point of the share, the other extending back, will lay flat to the mold-board at any place from the bottom, half way up to the top, or usual depth of plowing. This part of the mold-board makes the land side when used as such. When the hind end of the beam is near one of the handles, it brings it then parallel or in line with the share and mold-board on that side, and *that side* is then land-side, and the opposite side or mold-board at the same time turns over the furrow. In coming round to plow back, the plowman touches with the foot the hold-fast, passing through the socke at the end of the beam, pressing on it in the same manner as done on a thumb latch to open a door, which disengages the hold-fast from a catch on the back side of the cross-piece between the handles, the team moving round at the same time carries the end of the beam to the opposite handle, where the hold-fast by a spring behind it is forced into a catch as on the other end of the cross-piece, confining the beam there unti removed, as above described. The catches referred to, are placed into a groove on the backside of the cross-piece and can be moved, the object of which is to make either a wide or narrow furrow. To make the furrows wider or take more land, the catches must be moved towards and nearer the handles; for a narrow furrow the opposite direction, or nearer together. In this manner the furrows can be made to vary from eight to eighteen inches in width.

The advantages of this kind of plow over any other now in use, are several and important. Among them are,

1st. The field can be plowed without going round lands, beginning on one side, turning the furrows all one way, avoiding dead furrows and leaving the ground level and in good condition, especially for seeding down.

2d. The arrangement already mentioned, admitting of a much wider or narrower furrow, as the condition of the ground may require.

3d. By placing one of the catches in a hole made for that purpose in the center of the cross-piece, to confine the beam there, it is then a "*double mold-board plow,*" throwing the furrows both ways at the same time, adapting it to the use of plowing between rows or drills, making ditches, *digging* potatoes by plowing deep and splitting the rows, and making ridges to plant upon by throwing two furrows together.

4th. If the farmer has side-hill to plow, with one of these he is prepared for it at once, and I hazard nothing in saying that as yet it has not even a competitor.

5th. The peculiar construction of the mold-boards which this principle admits of, renders it possible to make a plow of lighter draft, than on any other plan heretofore discovered. Late experiments made with the dynamometer and the results published, fully sustain me in my opinion.

I am at the date hereof, the sole proprietor of the patent right of the above named plow, for the following states:—New-Hampshire, Vermont, Massachusetts, Rhode Island, Pennsylvania, Virginia, Kentucky, Maryland, Delaware, Illinois, Indiana, Michigan, Tennessee, Alabama, Louisiana, Mississippi, Missouri, Arkansas and South Carolina. Of the territories of Wiskonsan and Iowa; also of the following counties in the state of New-York:—Broome, Madison, Oneida, Herkimer, Montgomery, Fulton, Saratoga, Clinton, Washington, Essex, Franklin, Warren, Rensselaer, Albany, Schenectady, Schoharie, Greene, Sullivan, Orange, Rockland, Dutchess, Columbia, Westchester, Delaware, Ulster, New-York, Richmond, Kings, Queens and Suffolk. Also the undivided half and joint owner with Justus Slater, of the counties of St. Lawrence, Jefferson, Hamilton, Lewis, Oswego, Cayuga, Cortland, Tioga, Chemung, Steuben, Allegany, Livingston, Cattaraugus, Chautauque, Erie, Niagara, Orleans, Wayne, Monroe, Genesee, Wyoming and Seneca. All of which I offer to sell the right of patent, either by states or counties, and in all cases if wanted, furnish the patterns for the different sizes, and a sample plow.

Orders from farmers and others for plows, directed to me at Ithaca, Tompkins county, N. Y. will be promptly attended to, and plows forwarded subject to charges of trasportation, to any of the above named territories, while they shall belong to me.

The sizes I now make, are, No. 3, weight 70 lbs.—price $10; No. 4, weight 80 lbs. $10·50. No. 5, 90 lbs. $11 Coulter if wanted, laid with steel, $2. Wheel $1. Extra shares, 50 cents and extra shin pieces 12 1-2 cents each.

February 4, 1842. HENRY MOOERS.

DURHAM BULLS.

FOR SALE—Four Durham Bulls, viz: two, two years old the coming spring, and two, one year old the coming spring.

Auburn, Feb. 16, 1842. J. M. SHERWOOD.

GREAT SALE OF BLOODED STOCK.

HAVING disposed of my farm, I shall sell by public auction on Tuesday, 29th of March, at my residence in Greece, adjoining the Erie canal, six miles west of Rochester: 90 Head of cattle, 14 Horses, 300 Sheep, 50 Hogs, which will embrace all my choice Durham, Short Horns; a fine selection of grade animals, 30 prime Milch Cows, some very superior Horses, both as to blood and action, several thorough-bred improved Leicester Bucks, with a fine flock of Ewes in Lamb. Also several exellent Leicester and Berkshire Hogs; 3 superior Stud Horses sired by imported Turk.

A liberal term of credit will be given to purchasers.

Rochester, Feb. 21, 1842. THOMAS WEDDLE.

FRUIT & ORNAMENTAL TREES & SHRUBS, GREEN HOUSE PLANTS, &c. &c.

THE subscribers are prepared to execute all orders for Fruit and Ornamental Trees, Shrubs, Green House Plants, Bulbous Flower Roots, Double Dahlias, and all other articles in the the nursery line, on the most moderate terms.

Persons who are about establishing new nurseries, or who wish to act as agents for the sale of any of the above articles, will be very liberally dealt with; and all such are requested to communicate their intentions to us immediately.

Where several persons in the same neighborhood are desirous of procuring trees, they will do well to have their several orders forwarded by one person, to whom a commission of 10 per cent will be allowed where the whole order amounts to $50 or upwards; this method will save considerable trouble and expense.

All who wish trees for planting, the ensuing spring, should transmit their orders as early as possible, so that they may be forwarded in due season; spring planting should be performed as soon as the state of the earth and weather will admit.

It is requested that all orders be accompanied with a remittance or satisfactory reference in Rochester or vicinity.

Priced Catalogues will be sent *gratis* to all applicants. Address (post paid,) all letters, orders, &c. to

ELLWANGER & BARRY.

Mt. Hope Botanic Garden and Nursery, Rochester, N. Y.

ISABELLA GRAPE VINES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over 10 years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, [provided their locality is not too far north.] All communications, post paid, addressed to R. T. UNDERHILL, M. D. 400 Broadway, N. Y. will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, all the Western, Middle and Southern states.

IMPROVED YORKSHIRE PIGS.

J. & E. A. HARLAND, wish to inform the breeders of hogs that they will have a number of their Improved Yorkshire Hogs ready for shipment at the opening of the navigation. The Improved Yorkshires have obtained the best premiums at all the public shows where they have been exhibited, and J. & E. A. H. believe themselves fully warranted in pronouncing them equal, if not superior to any other breed of hogs on this continent. The price per pair, at the age of two months, is $25, free on board steamer at the head of Lake Ontario.

Guelph, Canada, 1 *mo.* 19, 1842.

MULBERRIES FOR SILK, &c.

WILLIAM R. PRINCE offers for sale, at the Linnæan Botanic Garden, 100,000 Mulberies of the finest kinds for the silk culture, which will be sold at low rates, and at a credit that will enable the purchaser to pay therefor from the silk produced. They consist of the New Circassian, Multicaulis, Alpine, Moretti, Elata, Broussa, and Expansa varieties. Also, the usual immense assortment of Fruit and Ornamental Trees and Shrubbery, Green House Plants, Bulbous Roots, and splendid Dahlias. The new priced Catalogues will be sent *gratis* to every one who applies post paid. On all orders enclosing cash or a good draft, a discount of ten per cent will be made.

Flushing, near New-York, Feb. 10, 1842.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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These volumes, it is believed, form a better Farmer's Library than be procured in any other form for double the cost.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

PREMIUMS OF THE N. Y. S. AG. SOCIETY.

WE wish to call the attention of the agricultural public to the list of premiums on agriculture, horticulture, &c., published in the last and the present numbers of the Cultivator. It is believed to be far the most liberal and extensive of any list of premiums yet presented in the United States, and will secure, we cannot doubt, an active and spirited competition. The list, it will be seen on examination, embraces almost every subject of agricultural or horticultural excellence or utility, and the field of competition is open to all who choose to avail themselves of, it. Cattle of all ages and breeds, working oxen, fat cattle,—horses and mares of all ages and kinds,—swine,—sheep, long wooled, middle wooled, and fine wooled,—farm implements of all kinds,—silk,—silk reels,—butter and cheese,—field crops,—maple sugar,—discretionary premiums, &c. &c. For the list of premiums on horticultural products see the present number of the Cultivator.

We would in particular invite the attention of chemists to the liberal premium of $100, offered for the best popular treatise on agricultural chemistry. The subject is one of great importance; and though several most valuable works on the subject have appeared within a few years, so rapid has been the progress of this science as connected with agriculture, that much new light may reasonably be expected as the result of further investigation. We have the satisfaction, also, of knowing that we have in this country several gentlemen whose pursuits have led to much consideration of the chemical relations of vegetables, and have thus qualified them for the elucidation and investigation of the subject for which the premium is offered.

The liberal premiums offered on the several subjects, —of the rotation of crops best suited to the soils of this state; the general management of the farm; on the introduction of new agricultural products; and the management and application of manures; together with the intrinsic importance of the matters named, will, we hope, call out from the many practical farmers of the state, or the country, who are qualified to discuss these topics, essays of permanent utility to the agricultural community.

☞ An error occurred in our last number in relation to the time when the essays for which prizes were offered should be forwarded to the society. It should have been "*January* 1, 1843," instead of "June 1, 1842," as it was printed.

The attention of all who propose becoming competitors for any of the premiums is particularly directed to the rules and regulations adopted, which may be found in the last number of the Cultivator, as a close adherence to them must be very desirable and necessary. It will be seen that the premium list is equal to about two thousand dollars; and it will be the endeavor of the Executive Committee to carry out fully the objects of the society, in encouraging and promoting the great interests of agriculture in every form, and in rendering the annual fairs and shows of the society worthy of the great state of New-York.

WORK FOR THE MONTH.

REPAIRING and putting in complete order every fence on the farm, and particularly road and division fences, is one of the first and most essential of spring labors. If it has not been done in March, don't neglect it in April. Good fences prevent eructations of bile among neighbors, contribute much to the good appearance of the farm, prevent the destruction of crops, and check in the bud that disposition to live at large which exists in most animals. Our winter winds make sad work with our worn, unstaked fences; and too frequently the rails blown off, lie the whole year buried in grass or weeds, decaying thrice as fast as they would if occupying their proper places on the fence. Common rail fences are best secured by perpendicular stakes placed at the corners, and secured at the tops by caps. Stakes of durable materials so placed will keep a fence in its place for years.

It will prove injurious to a soil to plow it when so wet as to smooth over and render compact the surface moved by the implement, as it dries into a kind of unburnt brick, fatal to all hopes of a good crop until again pulverized by frost. Clay soils, and those undrained, are most apt to suffer from this cause, which locks up all manures, and renders the part consolidated impervious to all atmospheric agency. Loamy or sandy soils may be plowed without danger of being rendered compact; and there are a few soils so constituted, that though they may exhibit a smoothed surface on plowing, they become friable and fall to pieces as soon as wet after drying. Such soils belong to the class called marly. One improper plowing on compact clay soils, undrained, will render useless all cultivation for the season.

As a general rule, the farmer will find it to his advantage to put in his spring grains, such as wheat, barley, oats, &c., as early as the soil can be fitted for their reception. The grain from early sown crops, when properly put in, is always more valuable than from later ones; being better filled, heavier, and of a finer quality in other respects. It suffers less, also, from the injurious effects of our dry summers, by which the later sown is prematurely ripened.

The pea is one of the crops which should be put in as early as possible, particularly if intended to be followed by wheat. The ground for this crop should be in good condition, not too heavily manured, but such as would be suitable for a wheat crop. We have known fine crops of peas grown on land turned over in the fall neatly, harrowed smooth and fine in the spring without disturbing the sod, and sown with peas as early as the season would admit. This course left the ground very clean, and the peas and rotted turf form a very good preparation for wheat.

Manures may now be drawn upon the fields for the crops to which they should be given. These should be corn, potatoes, and other roots, all of which will bear high manuring; while if the manure is applied to the grains directly, the product is very apt to be more straw than berry. There is scarcely any one thing in which farmers are more deficient than in the management of manures. Mr. Haggerston, the manager of Mr. Cushing's farm, near Boston, finds by experience that a compost made of two-thirds swamp muck and one-third stable manure, fermented together, makes a manure as valuable, and produces as good crops of hay, grain, and roots, as if stable manure alone was used; yet how few there are who ever used a load of muck to enrich their lands, when perhaps they have thousands of loads on their premises. Stable or barn-yard manures, when put unfermented upon land, should be covered, that the earth may absorb the fertilizing gases evolved during the process of decomposition. If they are made into compost with muck or vegetable earth, and decomposed in that state, they will be sufficiently incorporated if spread on the surface and mixed with such earth with the harrow. Compost manures are the most proper for top dressing and renovating pastures or meadows, where plowing cannot be well adopted; but its application should be accompanied with fresh seeding, and a thorough harrowing.

Potatoes require a loamy soil; one abounding in vegetable matter, and moist rather than dry. Gen. Barnum, who has raised greater crops of potatoes than perhaps any other man in the United States, attributes much of his success to his not disturbing the plants in hilling after the rootlets for the tubers begin to form; his method of performing that operation being to bring rich earth in a horse cart, the wheels of which pass between the rows, and from this dropping a shovel full upon each hill. This furnishes a bed of rich, fresh earth for the tubers, and avoids all interference with the roots.

The kitchen garden will require much attention this month; as all plants which are not liable to suffer from spring frosts should now be set out or sown. By beginning in season, we may secure two or three crops of many valuable vegetables in a single season, even where no hot or forcing beds are employed. Salads, radishes, cabbages, potatoes, peas, &c., may now be planted or sown. The earliest varieties of each should of course be selected for the first planting. Asparagus and strawberry beds should be cleaned off, dug over, and manured. None but compost manures of the best kind should be used for such purposes.

If the ghosts of starved-to-death animals were permitted to haunt the men who have so cruelly used them, we have some men in our mind's eye who would have little quiet sleep about these days. Domestic animals were not given to men to be maltreated and starved; and no man has a right to undertake to keep more than he can supply amply with food. Accident or disease may, however, cause the occasional loss of an animal; and when such is the case, don't draw it out into the field to invite the dogs and crows, or leave it by the roadside to offend the olfactories of the traveler; but take it to your field and throw on a few bushels of lime, and cover the whole with earth. Decomposition will take place with little or no offensive exhalation, and the mass used as manure will rival the most powerful. There is not a more disagreeable sight to a good farmer, or one more indicative of an unthrifty one, than to see the apple trees around the barn decorated with dead lambs, or the adjoining meadow strewed with the defunct carcases of older sheep. If an animal is weak or sick, save it if you can; but if it dies, bury it where it will still profit you. Last year we were walking over the grounds of a farmer in company with the owner, and he pointed out a spot in a field of very badly killed winter wheat, where for some twelve or fifteen feet square the wheat was as large and as thick as it could well grow, and very fine ears. It would attract instantly the attention of any one who looked at the field. The owner assured us he was for a long time unable to account for the appearance of the spot, until he recollected that about a dozen years before, the then owner lost a horse and drew it to that place. Several crops of other kinds of grain and of grass had been taken from the field, and had all exhibited the surprising effect of decomposed animal matter in the growth of crops, previous to the one then upon the ground.

We hope all our readers will remember the advice that has been given in the Cultivator to farmers, *not to sell their ashes*, and act upon it. There is scarcely any kind of soil on which ashes do not produce a decided benefit; and for the grasses which require so much silicate of potash to the formation of their stems, some alkali is indispensable. Mr. Putnam, of Mass., has lately given the public an account of some experiments, made by him to test the comparative value of ashes and lime in making compost. He made two masses of compost, one of peat earth and 50 bushels of ashes, and the other of peat earth and 50 dollars worth of lime. The first fermented readily, made a fine compost, and proved excellent for every crop to which it was applied; while that made by lime did not ferment or decompose well, and its application in no case seemed to produce any effect. We therefore again urge farmers to keep and use their ashes on their own farms. It is a good plan to sow plaster and ashes on your lands as soon as the vegetation has received sufficient start to be acted upon by them.

Don't allow your boys, or your neighbors' boys, or any biped who calls himself a man, to be strolling about your fields and orchards with a gun, popping away at the beautiful little birds that are such effectual aids in extirpating or checking the progress of the whole race of millers, worms, bugs, grubs, &c., that commit such depredations on the farmer. If you allow this vile slaughter of birds, do not be surprised if your apple trees are stripped by the canker worm, your apples destroyed by the larvæ of the codling moth, your plums by the curculio, your cabbages by the black grub, and your peas by the pea grub. These little birds are the farmer's best friends. True, they occasionally take as a reward for their labor some of the fruit or seeds they have been so active in preserving; but this is no more than equal and exact justice. The person who could dispense with the early carol of the song sparrow, the merry song of the bobolink, or the sweet notes of the brown thrush, may possibly be an honest man, but he has no ear for the fine melodies of nature; "he has no music in his soul."

New-York State Agricultural Society.

MEETING OF THE EX. COMMITTEE.

At the meeting of the Executive Committee on the second Wednesday of March, the Premium List for the next Fair was completed, and the committee appointed at the previous meeting to select the place for holding the Fair, reported that they had examined the several grounds to which their attention had been called, but would not be prepared to report definitely until the next meeting of the Board, which is to be held at the office of the "The Cultivator," on the *Second Wednesday* of April, at 10 o'clock A. M. A full attendance of the members is particularly requested at this meeting.

ANNUAL EXHIBITION FOR 1842.

(CONTINUATION OF PREMIUM LIST.)

ON FLOWERS.

For the greatest variety and quantity, $5.
For the second greatest, ·· $3 | For the third greatest, ···· $2
For the best Floral Ornament, $5.
For the second best, ······· $3 | For the third best, ········ $2
For the best Seedling Dahlia, ············ $3
For the second best, ··················· 2
For the best twenty-five varieties of Dahlias, $5.
For the second best, ······· $3 | For the third best, ········· $2

ON FRUITS.

For the greatest variety of table *Apples*, $5.
For the second greatest, ·· $3 | For the third greatest, ···· $2
For the best twelve sorts, not less than three of each, $3.
For the greatest variety of table *Pears*, $3
For the second greatest, ··············· 2
For the greatest variety of *Winter Pears*, $2
For the best twelve *Quinces*, ·············· 2
For the best twelve *Peaches*, ··············· 2
For the best twenty-four *Plums*, ·········· 2
For the best six bunches of *Native Grapes*, 2
For the best six bunches of *Foreign Grapes*, 2

ON VEGETABLES.

For the 6 best stalks Celery,	$2	2 best purple Egg Plants, ··	$1
3 best heads Cauliflower, ··	2	Best half peck Lima beans,	1
3 best heads Broccoli, ·····	2	Best half peck Windsor do.	1
12 best white table Turneps,	1	Best bunch double Parsley,	1
For the 12 best Carrots, ····	1	For the 3 best Squashes, ···	1
For the 12 best table Beets,	1	For the largest Pumpkin, ··	1
For the 12 best Parsneps, ··	1	12 best ears seed Corn, ····	1
For the 12 best Onions, ····	1	Best ½ peck table Potatoes,	2
3 best heads of Cabbage, ···	1	For the second best half peck table Potatoes, ···	1
For the 12 best Tomatoes, ·	1		

Discretionary premiums will be awarded on choice garden products, not enumerated above.

DOMESTIC MANUFACTURES.

Best pair woolen Blankets,	$5	For the best 12 yards Kersey,	$3
Best 10 yards of Flannel, ··	5	Best 15 yards rag Carpet, ··	3
Best 12 yds. ¾ woolen Cloth,	5	Best 15 yards tow Cloth, ··	3
Best 15 yards wool Carpet,	5	For the best men's and boys' cloth Caps, 2 each,	3
Best double carpet Coverlid,	5		
For the best 10 yards Linen,	5	Best pound sewing Thread,	2
Best 12 yards linen Diaper,	5	Best pair knit Stockings, ··	1
For the best hearth Rug, ··	3	Best pair wove Stockings, ·	1

HORTICULTURAL IMPLEMENTS, &c.

For the best assortment of Horticultural Implements, ·····	$10
For the second best, ································	5
For the best cast iron Vase, ·························	5
For the best metal Fountain to stand uninjured through the winter, ·····························	10

TO ARTISTS.

For the best Design of Diploma for the New-York State Agricultural Society—*A Gold Medal.*
For the best Plan of Farm House, Barn and necessary out buildings—*A Gold Medal.*
For the best specimen of Floral Painting—*A Silver Medal.*

☞ The Designs for a Diploma must be forwarded to Luther Tucker, Rec. Sec'y, Albany, by the 1st of July, 1842. The other Designs on or before the 1st of January, 1843.

NEW-YORK COUNTY AG. SOCIETIES.

Cayuga.—The winter meeting of this Society was held in Auburn, on the 1st of Feb. at which time one of the most valuable Addresses which such meetings have called out, was delivered by David Thomas of Aurora. We should be glad to give the whole of this Address, but must content ourselves with the following extract on Tillage:

"The celebrated Tull, observing the extraordinary effects of high culture, concluded that plants fed on mellow earth, and Duhamel adopted the same notion. Their philosophy was *coarse*, but their practice was *fine*. If we were to follow their example, making plenty of fine earth for the plants—not to *feed on*, but to *drink from*, our crops might be greatly increased. One of the chief errors of our husbandry is to cultivate too much land, because it is only half done. Half the quantity with double the work on it, and double crops would be found more profitable.

"I have long believed, however, that no part of the system required reformation more than our management of manures. Manure has been called the wealth of the farmer. When it is taken out in the spring, it is commonly scattered over the ground in large lumps: the plow comes along and covers them or not, as the case may be. If covered, they intercept the ascent of the moisture from below, especially in dry seasons. If not covered, they lie wasting on the ground—of very little value. Indeed some excellent farmers have satisfied themselves that strawy manure is unprofitable for summer crops.

"I am far from holding that opinion, however. The erorr consists in not applying it to the soil in the best manner. In the spring of 1840, I had no ground for field beets, but a small lot where corn had grown for two years in succession. It was unfit for such a crop without manure, and I had only fresh manure from the stable, which has long been considered most unfavorable to the beet. My necessity, however, prevailed against opinion, and I took the responsibility. From each line where the beets were to grow, two furrows were turned so as to leave a wide dead furrow. Into this the manure was thrown from the wagon, each fork full touching the one just behind it, till the row was completed. It was well covered by turning two furrows together over it, which *held it down* while the harrow was passing four times in succession, breaking, pulverizing, and mixing it intimately with the soil. Again two furrows were turned together over the row, and the harrow passed twice more—in all six times. By this process the ground was reduced to a fine tilth; and if there were any better beets in the county, I did not see them.

"To me, it was a most instructive experiment. I have often seen manure applied to corn fields, but never in any case where it was so completely incorporated with fine earth. Even in the driest part of that season, the ground was always moist and mellow.

"I am satisfied that we have been too saving of our harrows. Thirty years ago, there was a method of plowing in this country called 'cut and cover.' It was plowing, not to the *shares*, but the *halves*—the furrow slice covering the space where a furrow ought to have been. I am apprehensive that our ideas of harrowing were learned in the same school. When grain is sowed is it not the prevailing opinion that it is harrowed enough when the seed is covered? I had a narrow land harrowed sixteen times in one day, and was satisfied that the labor was well applied.

"For beets, or corn, or potatoes, what would be the effect of plowing in a heavy dressing of stable manure, harrowing twice, and repeating the operations of the plowing and harrowing four times more, adding each time to the depth of the soil? I have not yet performed the experiment, but the nearer I have approached it the finer has been the crop. Thorough culture would seem to require that every little lump should be broken, so that the roots could wander freely in every direction, and that every drop of a summer shower, should be caught and retained for future use. Hard land and thin soils have some resemblance to a dish bottom upwards."

Seneca.—We have received a neat pamphlet of some 20 pages, containing the Constitution, By-Laws and Proceedings of this society for the year 1841, including the Addresses of G. V. Sacket and A. B. Dunlap, Esqs., at their fair in October last. The officers for this year, are —G. V. Sacket, Seneca Falls, Pres't—N. W. Folwell, Lodi; T. Boardman, Covert; Wm. R. Schuyler, Ovid; John D. Coe, Romulus; J. Y. Manning, Varick; John Johnston, Fayette; Joel W. Bacon, Waterloo; M. W. West, Junius; Jason Smith, Tyre; and Jacob Kishler, Seneca Falls, V. Pres'ts—A. B. Dunlap, Ovid, Rec., and Samuel Williams, Waterloo, Cor. Sec'ys—Jas. Stevenson, Jr., Waterloo, Treas.

We are much gratified with the spirit which our friends in Seneca have manifested in support of their Ag. Society. That they have met with the success which must ever attend such efforts, will be seen from the following extract of a letter from a friend in that county:

"We have worthily done up the duties of our agricultural society for the last year, and will improve upon it, this. We passed resolutions at our organization to divide $300 in premiums; we did so, and after publishing our pamphlet, [a copy of which is to be placed in the hands of every farmer in the county,] we have, through the liberality of our farmers, over $100 in the hands of our treasurer for next year's operations. We held our meeting last week to arrange for next year, and have agreed to divide $500 in premiums. We think this looks well for the little county of Seneca."

The Addresses of Messrs. Sacket and Dunlap, from which, did our limits permit, we should be glad to make liberal extracts, are well calculated to awaken an increased interest in the affairs of the society; and we think they have acted wisely in placing a copy of their pamphlet in the hands of all their farmers. That of Mr. Sacket gave a very interesting sketch of the early history and statistics of the county; while that of Mr. Dunlap treats of the "Nobility of Agriculture, and the means by which it can be elevated."

Oneida.—The annual meeting was held at Whitestown in Feb. last, when the following officers were appointed:—Pomeroy Jones, Westmoreland, Pres't—Dr. T. Goodsell, Utica; Harvey Bradley, Whitestown; Geo. L. Brigham, Augusta; Lewis Eames, Lee; Dr. S. Case, Vernon; Jno. Townsend, Westmoreland; Henry Rhoades, Trenton; Chauncey Fuller, Paris; A. T. Tyler, Florence; Col. B. P. Johnson, Rome, V. Pres'ts—Elon Comstock, Lee, Cor., and R. S. Doty, Rome, Rec. Sec'y's —J. E. Southworth, Vernon, Treasurer. It was resolved to raise one thousand dollars the present year, aside from the grant of the state, to be paid in premiums at the next fair, which is to be held at Rome, Oct. 12 and 13.

Monroe.—The annual meeting was held at Rochester, Feb. 19, when the following officers were elected—Henry Colman, Prest.—Wm. Garbutt, Wheatland; L. B. Langworthy, Greece, and Wm. C. Cornell, Henrietta, V. Prests—H. M. Ward, Cor. and M. B. Bateham, Rec. Sec'y, Rochester. A Board of Managers and Town Committees were also appointed, and the following resolution adopted:

"*Resolved,* That measures be taken by this Society for establishing an Agricultural Museum in the city of Rochester, and that a committee of five be appointed to make inquiry respecting a room for the purpose, and to send a petition to the Governor and Legislature for a set of the specimens of Natural History collected by the Geological Surveyors, and to report at the next meeting of this society."

Delaware.—We have received from the President of this Society, Samuel A. Law, Esq., the Address delivered by him at the meeting of this Society in January last. It is a timely and spirited appeal to the farmers of that county, and his arguments are so applicable to those in many other sections of the state, that we should be pleased to transfer the Address entire to our columns. We have room, however, only for one extract. After a glance at the condition of Agriculture in the county, and the necessity of entering upon the work of improvement at once, Mr. Law proceeds:

"Your densest, darkest forests are capable of being converted into exuberant meadows and pastures. And where now owls hoot and wolves howl, may anon be heard the shepherd's pipe, and the milk maid's song.

"And, come faster or slower,—this advanced state of improvement will surely come.

"With us, with you, with the present inhabitants, the risen and rising generation, it rests, and, peradventure, in an eminent degree, with this Society it may rest, to *hasten* the arrival of this advanced state of improvement.

"Up and be doing aright—and every one may help; every man, woman and child. None so great, none so small, if up and wide awake and doing aright, but may help.

"The humblest farmer who can make *two* spears of *grass grow* where but *one grew before*, can double his crop. He is a giant. Let his shoulder but touch the wheel and it goes. Every man who can make and introduce an improvement; set a beneficial example and induce others to follow it; who can economically raise a better crop; who can most improve his stock, horses, cattle, sheep, hogs and what not—and most cheaply breed, and raise the most and best of any or all; he and they, all *can* help. Every one, young and old, rich and poor, can help improve and enrich his country, his county, his town, and (what is last, though not least, with many a one,) himself." * * *

"But,—digression apart,—what can this Agricultural Society do? Much every way,—if they but persist and persevere.

"I have told you what individual energy may do. I add, that combined energy may do much more.

"Proceed then and persevere and prosper. As may well become an Agricultural Society, in every way practicable encourage improvements in farming. Diffuse information. Awaken attention. Proffer, and where well deserved, award premiums. Seek and find, and recommend the most economical and best modes of tilling lands; same as to manuring lands; ascertain and recommend the preferable kinds of crops; encourage the introduction and breeding of improved stock of all kinds; commence the draining of over wet lands. The produce of many portions of our farms may be doubled by draining. Set examples of irrigation. On thousands of pieces, every where scattered, the produce may be four folded by irrigation. Consider well, and especially encourage leading and staple commodities. Butter, obviously, should be our grand staple. Wool, or perhaps more probably, the raising of stock, may stand as second."

Rensselaer.—At the annual meeting held in Troy, in Feb. last, after an Address by D. L. Seymour, Esq., officers were chosen, as follows:—Joseph Hastings, of Brunswick, Pres't—Joseph Coons, George T. Denniston, Z. P. Burdick, Isaac Akin, J. A. Fonda, Samuel W. Hoag, Henry Hull, Clark Baker, Wm. Van Vechten, James H. Jones, Jacob A. Ten Eyck, Henry W. Koon, Daniel H. Gardner, Richard P. Hart, Henry Burden, V. Pres'ts—Giles B. Kellogg, Sec'y—James M. Stevenson, Treas.—George Vail, W. P. Van Rensselaer, Martin Springer, Alexander Walsh, Henry D. Grove, Wm. A. McCulloch, David L. Seymour, A. D. Spoor, Samuel S. Fowler, Matthias P. Coons, Ex. Committee. Their fair for 1842, for which a liberal Premium List has been made out, is to be held at Lansingburgh on the first week in October.

Ontario.—We have received the List of Premiums to be awarded by this Society at its next Fair, which is to be held at Canandaigua, on the 12th and 13th days of Oct. next. It embraces a great variety, the prizes amounting to 164 in all.

Wayne.—Officers for 1842:—Samuel E. Hudson, Palmyra, Prest.—E. T. Aldrich and J. A. Miller, Arcadia; Cullen Foster, Lyons; Wm. Walmsley, Rose; John Baker, Macedon; John Borradaile, Williamson, and Wm. Swales, Sodus, V. Prests.—Cyrus S. Button, A. Fairchild, T. Heminway, A. L. Beaumont, and P. G. Price, Ex. Com.—D. M. Keeler, Rec. and Stephen Culver, Cor. Sec'y.—Jos. A. Miller, Treas.

Tompkins.—Officers for 1842:—Nicol Halsey, Ulysses, Pres't—Nathan Benson, Groton; William Carman, Hector; Luther Gere, Ithaca; Joshua North, Lansing; H. Nurse, Danby; Henry R. Morrell, Caroline; George Jones, Newfield; Warren Phelps, Enfield; Robert C. Ellis, Dryden, V. Pres'ts—Nathan T. Williams, Treas.—Lewis A. Morrell, Lansing, Cor., and George P. Frost, Ithaca, Rec. Sec'y.

Steuben.—At the last annual meeting, the following officers were appointed for 1842:—Lazarus Hammond, Pres't—Otto F. Marshall, Israel R. Wood, and Lyman Balcom, V. Pres'ts—Ziba A. Leland, Cor., and Theron Loomis, Rec. Sec'ys—Henry Brother, Treasurer

Answers to Inquiries, &c.

SIXTEEN INQUIRIES.

The following inquiries from "J. A. S.," of Reading, Vt., embrace almost the whole circle of agriculture; and to answer them fully would require a volume, rather than the limited space we can give them.

"1. On light loamy land, inclining to sand, is it necessary to plow in the fall?"

We think not. Heavy clay soils are the ones most benefited by fall plowing, as the frost aids in pulverizing such lands; a process not necessary in sandy ones. Fall plowing is admissible on heavy retentive lands, or where worms, such as the grub or wire worm abound; as late fall plowing aids materially in destroying these. In other cases, spring plowing is best.

"2. Is it best to omit breaking up in the fall where you intend to plant corn or potatoes?"

If turf land, intended for such crops, is covered with long manure, and then carefully turned over in the fall, rolled down and harrowed, a top dressing of compost, and a thorough harrowing, is all that is necessary to fit it for seed in the spring, and a good crop may be expected.

"3. How will it do to break up, and stock down the same year with oats, turning the manure under the sod?"

Well. We have done this many times, with the exception that we have generally used barley or spring wheat instead of oats. Generally, however, when manure is applied to the soil, a crop of corn or roots should follow, and the seeding down take place the next year with spring grain.

"4. What will be the effect upon the land and crop?"

Good on both. The manure and the turf rotting will enrich the soil, while the crop will scarcely fail of being a good one.

"5. What manure is best adapted to such a course?"

Long barn-yard or stable manure is to be preferred. Compost manures are best applied to the surface, and only harrowed in; not turned under.

"6. What is the most speedy mode of rendering productive old meadows, impoverished by bad cultivation?"

Two modes may be adopted, either of which will be successful. If the land is fit for the plow, manure with barn-yard manure, invert the sod, and re-seed without cropping. If the plow cannot be used, manure the surface liberally with compost manure, scatter grass seeds on the land, and harrow until the surface earth is thoroughly stirred. It will give new life to the old roots, and establish the new ones.

"7. Does land 'leach,' or do the gases of the manure evaporate, or both? If the former, how prevented?"

Coarse, porous soils of gravel or sand undoubtedly leach, or allow the soluble parts of manures to sink with the water that passes off so quickly. In most soils, leaching can be prevented by the addition of clay, as that is strongly retentive of water, and holds that and the soluble salts for the use of plants. That the gases of manures pass off by evaporation, the nose gives conclusive testimony. Mixing such manures with earth, muck from swamps, &c., will prevent this loss.

"8. Is there any way to renovate old pastures that are so steep and rocky that they cannot be plowed?"

None that we know of. Such pastures may be benefited by sowing upon them ashes and plaster. Renovation is scarcely possible without the use of the plow.

"9. What are the best grasses for permanent pasture?"

In this country, a mixture of Timothy, red top, or Herd's grass, orchard grass, and white and red clover, has been found the best for meadow or for pasture. On the best managed farms at the present time, permanent pastures are not admitted. The whole farm is made capable of producing any of the cultivated crops, and all parts are in turn subjected to tillage, meadow and pasture.

"10. What is the effect upon the soil, and succeeding crops, of cutting over a piece of wood land, and letting it lie three or four years without burning?"

In most districts, the effect would be to fill the land with weeds of all kinds; Canada and common thistles, bur weeds, johnswort, everlasting, &c. &c. The best way in our opinion is to clear the land and seed it, letting it lie until the roots are rotted so as to admit the plow.

"11. What is the comparative value of common barn-yard manure, and manure or compost composed of stable manures, swamp muck, &c.?"

We have used comparatively little compost manure in farming, preferring to apply the barn-yard and stable manures at once to the soil; but Mr. Haggerston, the manager of the celebrated Cushing farm at Watertown, Mass., says that a compost made of one-third manure and two-thirds muck, has never failed with him to produce better crops of all kinds of vegetables than clear manure; and for the last five years he has thought it wasteful to use manures without being mixed with muck. The compost manure which he uses for plowed land is made of two-thirds muck and one-third manure.

"12. In the present depressed state of stock, is it as profitable to feed out hay on a farm where there are good resources for making manure, as to sell it for ten dollars a ton?"

The difficulty with farmers usually is, that when they have sold their hay for ten dollars a ton, they are loth to pay out their dollars for manure; and the consequence is, their farms and crops go unmanured. It is doubtless, many times, better to sell hay and buy manure, than to feed it out; but the resources and the cost should be well calculated before a farmer allows the materials of manure to leave his farm.

"13. Why will not beech wood ashes make as good soap as ashes of any other kind of wood?"

Admitting what is stated to be fact, we are unable to account for it; but we very much question the correctness of the implied opinion, that beech wood ashes will not make soap. The following table of the relative properties of oak, elm, and beech, taken from the experiments of the superintendent of the national works at Paris, will show they are not destitute of potash:

Oak gave in 915 pounds of wood, 12 pounds of ashes, and 1 pound, 6 ounces, 4 grains of potash. Elm gave in 1028 pounds of wood, 24 pounds of ashes, and 3 pounds, 15 ounces of potash. Beech gave in 887 pounds of wood 5⅓ pounds of ashes, and 1 pound, 4 ounces, 6 grains of potash. Fir gave in 730 pounds of wood 2½ pounds of ashes, and 7 ounces of potash.

We think if "J. A. S." will use beech ashes, put plenty of caustic lime at the bottom of his leach, and see that his lye floats an egg well, he will have no difficulty in making soap from beech ashes.

"14. How can poison ivy be exterminated?"

This is a plant with which we are unacquainted, but presume that digging it up, "root and branch," would be the death of it.

"15. Is it not better to keep stock at the barn late in the spring, rather than permit them to feed down meadow land?"

Certainly. Farmers err much in allowing their cattle to run over their meadow lands or pastures before the ground is settled or the grass started. Animals should be fed at the barn till there is a pretty fair bite of grass, or they will fall away rapidly.

"16. Upon what soil do potatoes do best?"

Upon those that are moist, rather than dry, and abounding in vegetable matter or mold. A heavy, compact soil is unfit for potatoes, as the young tubers cannot find nutriment, or room for easy expansion in such earth. Compost is the best manure for potatoes; and dunging in the hill with long or stable manure is not advisable.

We have never tried sowing corn broadcast for fodder; but if "J. A. S." will turn to the 12th page of the current volume of the Cultivator, he will find the result of an experiment made by Mr. Ellsworth, which was very successful, and would seem to justify a repetition. Corn fodder is excellent for all animals to which we feed it, and maintains them in fine health and condition. To be good, however, they must be saved well, and not put up wet and moldy, as is too often the case.

PREPARATION OF CORN FOR MARKET.

The subject to which the following inquiries of our correspondent C. L. B. of Ohio, relate, is one of very great importance, and we hope some of our friends who are practically acquainted with the process of kiln drying corn, and preparing it for market, will, at an early day, respond through the Cultivator to the inquiries. There can be no good reason, we think, assigned why, at the present low price of corn in the western states, it might not be profitably put up for exportation. If so, a very important point in the commerce, as well as agriculture, would be gained, and the heavy balance of imports against our exports proportionably diminished. The ability to export corn successfully would add much also to the prosperity of the West, morally as well as agriculturally, since, says our correspondent, owing in part to the "present low prices of corn, *all our distilleries are in full operation.*" But to the inquiries:

"The principal difficulties to be overcome in preparing corn for market are, the liability of Indian corn to heat while lying in bins, or during its transit to the coast, the cost of transportation, and the want of a knowledge of the process of drying corn, and putting it up for the market. How are the kilns constructed? May heated cylinders be used for this purpose? And if so, how are they constructed? In what manner, and of what materials should the casks for packing be made? Of what wood, and how hooped? For what ultimate purpose in the course of this trade may they be designed?"

DISEASES OF BEES.

At page 76 of our last vol. we inserted an inquiry from Mr. Quimby, relating to a disease which destroyed the larvæ or grub of the bee in the cell. Mr. Weeks and Mr. Hall responded to Mr. Quimby. As every thing relating to the management of bees is of consequence to the Apiarian, we give another communication from Mr. Q. in hopes that a remedy may be discovered for the disease of which he complains.

"Mr. Weeks says, in answer to my inquiries on bees, that cold chills the young brood, and the remedy he proposes, is to close up the bottom board, leaving only room for the passage of the bees. This is the very thing I have done for years during the spring months; though I did it to prevent robberies, placing under the hive a board similar to the one described by him. When managed according to his directions, he warrants them free from dead chrysalis. Mr. Weeks appears to misunderstand me; for dead chrysalis is not what I inquired about; (I never had but one hive in which they suffered, and was satisfied at the time that cold was the cause,) but the dead larvæ or grub is what I complain of, before its change to the chrysalis state. There is certainly a difference in the two stages of the insect. Mr. Hall says that cold is one cause, filth under the hive another, dampness another, &c. I can assure him, I know to well the value of their labor to allow any such thing to remain in their way. I long since ascertained that the care of the apiary was as well paid as the care of the garden or the farm, and a little better, notwithstanding one hive in fifteen on an average is diseased. But I cannot think cold to be the cause, for the following reasons: Some of my neighbors in the month of March have their hives an inch from the board, and let them remain so through the season, escaping healthy. Swarms even the first season are not exempt, (though old hives are the most liable.) I had two or three the past summer affected. I think it will not be pretended the chills of spring caused the disease in these.

But what is the cause? That, with me, is the question. Will any of the patent hives be warranted to preserve bees exempt from disease if I use them?

Coxsackie, 1842. MOSES QUIMBY.

GESTATION IN ANIMALS.

MESSRS. EDITORS—In the January number of the "Agriculturist," published at Nashville, I read the following remarks on gestation. As the period here assigned to the animals named, particularly the cow, differs somewhat from the commonly supposed one, I will thank you to state the time fixed by such authorities as you may be able to lay your hands upon:—"The cow, from the time she takes the male till she drops her young, goes almost 280 days. We have never known them vary three days over or under. The sow goes about 112 days, but varies from one to five or six days. The ewe goes about 5 months. The mare goes about 11 months, but varies sometimes 30 days." OHIO.

In a recent German publication of great research and accuracy, the period of gestation and incubation in nearly all the domesticated animals is given, from which we select a few included in the inquiry of Ohio.

Animal.	Shortest period.	Mean period.	Longest period.
Mare,	322 days,	347 days,	419 days.
Cow,	240 do.	283 do.	321 do.
Sow,	109 do.	115 do.	143 do.
Ewe,	146 do.	154 do.	161 do.

According to the report of M. Teissier of Paris, who had charge of the experimental farm established by the government of France, of 582 mares which received the male but once, the shortest period was 287 days, and the longest 419; making the extraordinary difference of 132 days.

The most satisfactory experiment with cows, on record, is that made by order of Lord Spencer, in which the period of gestation in no less than 764 cows was carefully noted. From this, it appears that the shortest period in which a live calf was produced was 220 days; but no calf produced at a less period than 242 days could be raised. The longest period of gestation was 313 days. From Lord Spencer's tables, as given in the Journal of the Royal Agricultural Society, it appears that 314 cows calved before the 284th day, and 310 calved after the 285th day; so that the probable period of gestation in the cow must be fixed at 284 or 285 days.

The results of M. Teissier's experiments on cows does not vary greatly from those of Lord Spencer. His tables show the following terms in 575 cows:

21	cows calved	between the	240 and 270th	day.	Mean,	259½
544	do.	do.	270 and 299th	do.	do.	282
10	do.	do.	299 and 321st	do.	do.	313

Prof. Johnson remarks, "that any calf produced at an earlier period than 260 days must be considered decidedly premature; and any period of gestation exceeding 300 days must also be considered irregular; but in this latter case, the health of the produce is not affected."

PAGE'S PORTABE SAW MILL.

In answer to the several inquiries which we have received in relation to this mill, we copy the following from the American Farmer of the 9th of last month:

"We witnessed on Saturday last the trial of a new Portable Saw Mill, propelled by a *Portable Steam Engine*, at the factory of Mr. *George Page*, of this city, which we learnt was built by him for a company of gentlemen in Virginia. The trial was made with a view of testing the perfection and strength of the mill, as well as its capacity for labor, before delivery. To say that we were gratified at its performance, is to speak not only our own sentiments but the unanimous voice of every one present.

"The mill cut, after it got into perfect operation, a board 11 feet 8 inches long by 14 inches broad, which is equal to 13½ feet board measure, in 50 seconds.

"If we take this as the measure of its competency, it is capable of cutting 11,644 feet in one day, allowing 12 working hours, and if allowance be made for contingencies, we think it fair to assume, that with a power equal to 10 horses, it can with ease cut 10,000 feet in a day.

"As this mill will be removed in a few days to its destined home in Virginia, it strikes us that the government at Washington would do the country good service by having it set up at some convenient point in the capitol, where its wonderful powers could be made manifest to the assembled wisdom of the nation. The mill could be set to work in less than a day after its transportation thither, and from our knowledge of Mr. Page, we have no hesitation in saying, that he would not only consent, but afford every facility to render the exhibition interesting.

"In every section of our country such a mill is valuable; but in all newly settled parts where timber abounds, it would prove invaluable. Such being the case, we think it due to the people that their representatives should have an opportunity of judging of its merits, in order that their constituents may profit by their knowledge."

SEEDING DOWN LANDS.

"A. W. S." of Hempstead Harbor, is informed that the method he has proposed of manuring, plowing and seeding lands to grass, without a crop of grain, has been practiced in some parts of New-England with great success, and is highly recommended by Mr. Buckminster of Boston, and other practical farmers. Where the soil is sufficiently rich and in good condition otherwise, we should turn over the turf, manure on the surface, and put on some spring grain with the grass seeds; but on light, or partially exhausted lands, simple re-seeding is to be preferred.

There will be no difficulty in seeding the side hill to which our correspondent alludes; as grass seeds thrown upon such a soil will scarcely fail of vegetating. If the soil is very dry, the young plants will not make much headway the first season; but when once rooted, such places make very good pastures.

Orchard grass seed may be obtained, we presume, at any of the city seed stores. The principal point in which it differs from the ordinary cultivated grasses, is the facility with which it grows in the shade of trees; making a fine sweet pasture, or good hay, in orchards or other places where the common grasses will not flourish.

RENOVATING OLD MEADOWS, &c. &c.

L. Durand inquires "whether old meadows, where the grass is bound out by moss, cannot be restored by harrowing well in the spring, and sowing on plenty of grass seed before harrowing?"

Such a process will succeed, and the result will be still better, so far as the moss is concerned, if a liberal dressing of ashes precedes the harrowing. Some good farmers, however, prefer turning the turf of such meadows over, and then either taking off a crop of some grain with which grass seeds are to be sown, or seeding down at once without cropping. If a crop is taken, compost manure should be harrowed in; otherwise a partial impoverishment of the soil will take place.

We have never tried harrowing winter wheat or rye in the spring; but in the wheat districts of Western New-York it has been tried with success. Generally, soils that will admit of spring harrowing are those that do not require it, as harrowing is intended as a remedy for freezing out; and on dry, porous ones, grain rarely suffers from such a cause.

For an apple nursery, the ground chosen should be deep, rich, and perfectly free from all stagnant water to as great a depth as the roots will usually penetrate. The seeds may be sown in rows four or six feet apart. In the latter case potatoes may be planted between them the first year. The ground must be kept clean, and the trees thinned out so as not to crowd each other. If the growth is a good one, they should be grafted the second or third year, as this is the only mode of securing the choicest fruits.

In planting forest, or ornamental trees, we have been the most successful when we have clipped the natural crown of the tree quite close. The young shoots have been more vigorous, and a handsomer head to the tree has been the result. If, in transplanting, the roots with the earth attached could be removed, as recommended by Mr. Stuart in his Planters' Guide, a removal of the top would be improper and unnecessary. If the top is left on transplanted trees, the wind operates on them with more force, and they should be guarded against it. Trees will do better when removed not to be placed deeper than they originally stood in the forest or nursery; as deep planting, or a partial covering of the trunk, is very injurious.

NICKING HORSES.

"Colonus" makes the following inquiries as to the mode of nicking horses:

1. What season of the year is best for this purpose?
2. What is the best method of operating?
3. What should be the after treatment?

While we enter our protest against nicking, pricking, or other mutilation of the tails of horses, as barbarous and unnecessary, we shall, as the practice demanded by pride will probably be continued, give a few plain directions as to the best manner of performing the operation.

The tail has three set of muscles; one elevating it, another depressing it, and a third set for the side motions. The depressing muscles seem to act more constantly and powerfully than the erector muscles; and thus in some cases, the tail is constantly bent down close to the buttocks. It is to overcome this tendency, and give that elevated position to the tail supposed to indicate energy and spirit, that nicking is intended. Very hot, or very cold weather is unsuitable for nicking horses; as in the first case flies are troublesome, and in the other severe cold operates injuriously to fresh wounds. Still, nicking may be performed at any time, suitable precautions being used.

In operating, the best way is to cast the animal. The hair at the end of the tail is doubled and securely tied for the purpose of attaching a weight to it. The operator holds the tail firmly, ascertains the center of one of the bones from two to four inches from the root of the tail, according to the size of the animal. With a sharp knife, the muscles are divided deep from the edge of the tail on one side to the center, and the incision is continued across the tail making it as deep on the other side. This may all be accomplished by one steady, rapid stroke of the knife. For a blood horse, one incision is considered sufficient; but where a cocktail is required, three incisions or cutting the muscles are made, care as in the first case being taken that they are made midway between the joints of the tail. Considerable care is requisite to separate the muscles equally on each side of the tail; else it will be carried sideways. Pledgets of tow must now be introduced deeply into each wound, and confined, but not too tightly, by a bandage. Too tight bandaging frequently has a bad effect; swelling and inflammation, and sometimes death, ensuing. Twenty-four hours after the operation, the bandage must be wholly removed.

To prevent the divided mucsles from again coming in contact and uniting, the wounds must be kept open; and this is accomplished by keeping the tail curved back for some two or three weeks. To do this, a cord is attached to the hair of the tail some two feet in length, and to this a double cord is fastened, each division going over a pulley at the back of the stall some few feet from each other. To these cords weights are attached, sufficient to keep the tail elevated, and the incisions open. Let it be remembered, however, that the elevation is given by the depth and number of the incisions, and not by the weights; and no more should be added than is necessary to keep the incisions open; more than this is tormenting the horse unnecessarily. The dock should not at first be brought much higher than the back; but it may gradually be raised to an elevation or curve of 45 degrees. Taking out of the pulleys, and gentle exercise, should be practiced once or twice each day; but the pulleys cannot be dispensed with until 12 or 15 days after the incisions are healed, as the divided parts will have a disposition to contract, and render useless the operation for some time. If there is much inflammation, the tail must be washed and fomented with warm water; and to prevent the loss of the hair, it should be unplatted and combed every fourth or fifth day.

SOWING CORN BROADCAST.

A correspondent asks the quantity of corn that should be sown broadcast on an acre, where it is intended for soiling, and for winter provender.

We have never sown any corn broadcast; but we think there is no way in which a greater amount of valuable food could be obtained from an acre than this. At page 12 of the current volume of the Cultivator is the history of an experiment made by Mr. Ellsworth, of Washington, that was eminently successful. He sowed *four and a half bushels to the acre*, and he estimated the first crop to weigh over 100 tons when cut. The second crop the same season was but little inferior. It is evident the weight of the crop would greatly depend on the kind of corn used, (the southern varieties producing much the greatest bulk,) the time of cutting, and more than all, on the richness of the soil.

HEMP.

J. King, Esq., of Dubuqne, Iowa, inquires as to the best soil for hemp; its preparation, the period of sowing, quantity of seed, &c.

Hemp succeeds best in a rich vegetable soil; but any soil that will grow good wheat or corn will also grow hemp. Low lands occasionally flooded, swamps when thoroughly drained, as these contain large quantities of decomposed matter, produce fine hemp; but there is scarce any land that will not produce this crop when made sufficiently rich.

Soil intended for hemp should be plowed so as to reduce it to a fine tilth, free it from root weeds, and fit it for covering the seed. Old meadows are good for hemp; but the turf should be turned in the fall, well levelled, and the surface rendered fine by repeated harrowings. Hemp is more liable to be injured by frost than flax; consequently, should be sown a little later—say from the first to the middle of May.

The quantity of seed should be from two to three bushels, according to the richness of the soil, the average being two and a half; and the seed is sown broadcast. It is better that too much seed rather than too little should be given; as when well seeded, the stalk will be slender, and the hemp of better quality than if the stalk is large and coarse. The hemp is fit to cut when the male hemp begins to wither, and the seed of the other plants is formed, but has not become hard. If the land is rolled at the time of sowing it will assist the germination of the seeds, and render the process of cutting or cradling more complete and easy.

BEET SUGAR.

"J. C. C." at Fairfield, Ia., inquires for some "information on the subject of the manufacture of beet sugar."

We are sorry to say, that after all that has been said or written on the subject of sugar from the beet in this country, we have not learned a single instance where the success of the method adopted was such as to justify hopes of rendering the manufacture profitable. To what cause this is owing, we are unable to say; whether to want of skill in the operations, or of saccharine matter in the beets; but we are inclined to attribute it to a deficiency in the latter. In one instance we have known a farmer carry a few bushels of beets to a cider mill, grind them, press out the liquor or juice, and boil it down at once. A very respectable sweet, partially grained, was the result; and this process, simple as it was, was the most successful we have yet heard. If any one of our friends are practically acquainted with any process, simple and yet successful, we should be pleased to lay such a method of making beet sugar before our readers.

MOOER'S PLOW.

Our correspondent "C. L. V.," of Flushing, will find his inquiries relative to this plow answered by the advertisement of the patentee in the last Cultivator. Its method of working, prices and its advantages over other plows, are there fully detailed. From the excellent work done by this plow, and its ease of draft, we are inclined to think that the most celebrated plows of the country will find in the side hill plow of Mooers a formidable rival.

VERMIN ON POULTRY.

"A Subscriber," who inquires "whether there has been any successful remedy for the extirpation of vermin on fowls," is informed that in this case prevention is better than cure; that a plentiful supply of food, roosts free from filth, and a box of ashes and sand for them to dust or wallow in, will keep vermin from fowls. We know no method of cure, that is certain, where the fowl is infested as they sometimes are; though it is probable an effectual washing in some of the steeps so fatal to vermin on other animals would succeed with these. It is said that the water in which potatoe skins have been boiled is an effectual cure for most kinds of vermin.

FAT SHEEP.

E. S. Hinman, Esq., (New-Haven, Vt.,) has furnished us with the weight of mutton and tallow in a sheep killed by him last November. The sheep was a wether, bred from a three-fourths merino ewe, and a one-half blood Saxon buck. The ewe giving little milk, the lamb was raised by hand on cow's milk; or was what is called a cosset. It run with the cattle, never had any other feed than grass or hay, and was 5 years old the last spring. The weight of tried tallow was 43 pounds; the weight of the quarters, with the kidneys in, 79¾ pounds. The sheep was not larger in bone than common wethers whose quarters will weigh 50 pounds. Mr. H. says—"I do not know as this yield of tallow is anything extraordinary, but have met with nothing in this vicinity that has equalled it."

ARTIFICIAL WATERING PLACES.

We have received from our correspondent, L. Durand, of Derby (Ct.) an account of experiments made by himself and his friend G. Smith, Esq., in the formation of watering places on the plan recommended by Mr. Robertson, of Fishkill, in the July number of the Cultivator. The experiments were made in the extreme drouth of August, on a dry loam soil, and were both failures. We have never been able to see how water should be obtained in that way, except in soils that were strongly retentive; and we think that all efforts to obtain permanent supplies of water by Mr. Robertson's method, in soils that are porous, sandy or gravelly, will be unavailing.

PERMANENCE OF BLOOD IN ANIMALS.

There are few farmers who are unacquainted with proofs of the singular tenacity with which the peculiar characteristics of any kind of animal will cling to the race in spite of crossing or skillful breeding; frequently appearing after several generations, and sometimes when the origin of the peculiarity had been forgotten. This perpetuation of singularities in conformation is not confined to brutes. There is a family in England in which for a great number of generations a tendency to disease (it can be called nothing else,) has existed, which in the individuals affected, covers them with a kind of scales. Sometimes in the branches of the family no one is affected for years, and the tendency seems to be lost; when suddenly it reappears, and several scaly individuals follow in succession. We are acquainted with a very respectable family from one of the New-England states, in which the monstrosity of the fifth finger, with some intermissions has been continued through many generations; disappearing in one branch of the family, apparently, only to appear in another. In a late number of the Maine Farmer is a statement respecting Mr. F. Wingate's stock, from which we gather the following curious particulars: 42 years ago Mr. W. moved into Hallowell, and brought with him a polled cow and bull. The bull was sold and driven away; but a bull calf was raised from the cow, which lived till he was two years old, when he was shot in the evening for a bear—being without horns and black. This was some 35 or 36 years since; and since that time no polled bull has been with his stock, and yet they have always had animals of the polled breed. Mr. Wingate has a cow that has raised two calves that had horns; last spring she brought a fine polled bull calf. "In this instance, none of the polled breed as sires have been with Mr. Wingate's stock for nearly 40 years," and yet the polled blood continues to show itself among the calves. Since it is thus difficult, if not impossible, to eradicate the constitutional characters of animals, breeders cannot be too careful in their selections, and in their crosses, as good or bad points will show themselves sooner or later.

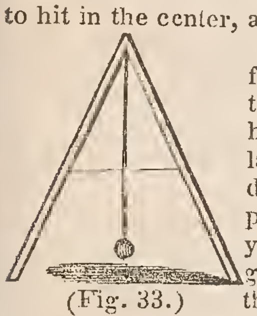
Original Papers from Contributors.

AGRICULTURE OF VIRGINIA.

Messrs. Gaylord & Tucker—Inclosed you will receive a five dollar Virginia bill, for which you will please send me six volumes of the Cultivator for the present year. Four of these I in end distributing among my neighbors gratis, provided they will not pay me for them, as I think it will improve the agriculture of the neighborhood. It is useless for me to say that you are ahead of us in improvement. We cultivate too much land, and improve too little. Tobacco is the principal staple of Eastern Virginia; consequently, all of our best lands are cultivated in that plant. If we were to raise less tobacco throughout the United States, we could get as much for the quantity raised, and have more time for improvement, as a large portion of our labor is devoted to that crop from the time of seeding until it is ready for market, which is from 14 to 16 months.

I am of a different opinion to some of your correspondents in regard to the size of farms. I think, where the force is sufficient to keep the fencing in repair, that a large farm may be improved cheaper than a small one, taking size into consideration. Land that has any soil will produce clover or grass. Every farm should be divided into 4 or 5 shifts (as we Virginians call it.) No. 1 cultivated first year in corn, roots, or tobacco, as the case may be, and sowed in small grain, clover or grass, the ensuing fall and spring. No. 2, second year cultivated as number one, and so on, until all have been cultivated. If the fields have more land than can be tilled well, the balance should remain in clover or grass, and occasionally sowed in wheat, oats or rye. All briars, bushes, &c., should be kept under and grazed but little. A farm managed in this way will improve yearly; as each shift will have a rest of 2 or 3 years, which is equal to a light dressing of manure, besides the labor of hauling, scattering, &c. Experience teaches me that it is best to scatter manure broad-cast, as all the land will receive nearly an equal portion: whereas, if it is put in the drill, the crop will nearly exhaust it; and the crop of small grain will be more uneven. If land is once made rich, and managed in the 4 or 5 shift system, it will improve yearly, provided it is not grazed too close, nor suffered to wash away.

There is one subject which I have never seen mentioned in the Cultivator; that is, cutting hill side ditches. They not only keep the land from washing away, but preserve the flat land from being too wet, without it is a very wet season, if the water is carried off in the right place. Every farmer who has broken land should have a level, (fig. 33) and trench his hill sides. The construction is very simple; it is nearly in the shape of a rafter. Take two pieces of plank about 10 feet long, 3 inches wide, half an inch thick, and square the ends you design for the top, nail them together; also nail a piece across 3 or 4 feet below—equal distances from each end—fasten a plumb to the centre of the top, place your level on a level floor, change it until you get the plumb to hit in the center, and you have a level.



(Fig. 33.)

Half an inch fall should be allowed for every 10 feet. The cheapest way to cut a ditch of this sort, is for one hand to take the level and one a hoe; lay off the place where you want the ditch made, make chops at every place where the level stands until you get through them with a Daggon plow, following the chops; throw the dirt down hill for several furrows, then with the hoe scrape out the loose dirt, and you have a hill side ditch. If the land is much broken, several ditches are required. Pyrant Easley.

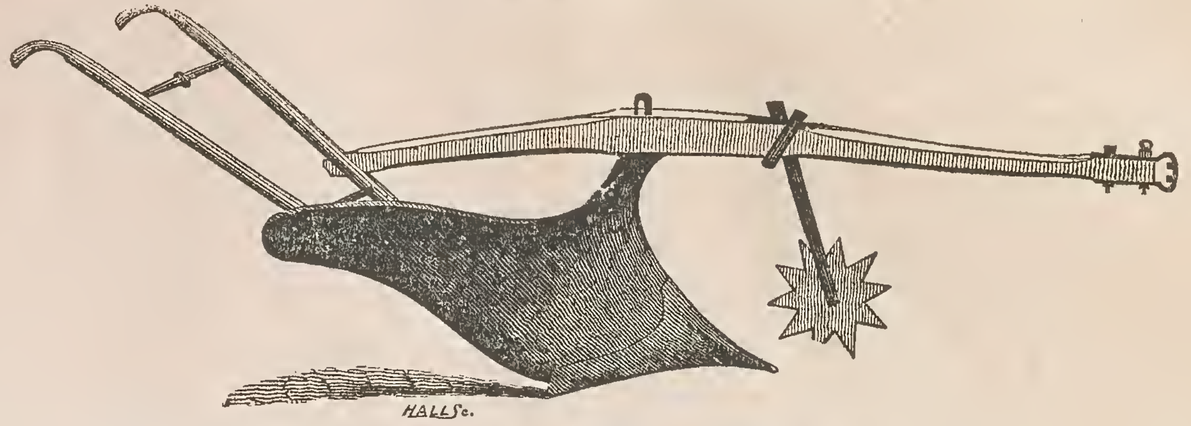
Pittsylvania Court House, Va., Feb. 5, 1842.

CORRECTION—MANURES.

Messrs. Gaylord & Tucker—There is an error, either of mine or thine, which I deem necessary to be corrected. In the rotation crops of my farm, as given in your February number, Field No. 3 stands there represented as rye, when it ought to be oats. This is somewhat material in my opinion, as the principle of two crops of one description immediately succeeding one another in the same field, I have always considered bad. I therefore trouble you with this communication, and beg to add my experience of preserving manure through last summer; kept inside of barn (a frame barn very open,) under a temporary shed, and in the open air. Having only had sufficient time to get out about one-half of the winter manure of 1840–41, in the spring, contrary to my wish, in consequence of continued unfavorable weather during the early part of last season, I took the part from the south end, or the most exposed, and covered the remainder in yard and shed with a thick coat of straw left after the winter was over; having during the winter kept sufficient straw in yard, &c. to absorb urine. In the fall, when removing same to field for wheat, I was most agreeably disappointed in finding the exposed manure with its coating of straw in perfectly good order, having not undergone the least appearance of fermentation; that in the shed, partially so; and that in the barn, altogether deprived of its best properties, although there was no floor of plank, but lay on ground; and that in the north end of barn which had no underpinning.

P. Falconer.

Conewango, Warren Co., Pa., Feb. 1842.



THE LIVINGSTON COUNTY PLOW—(Fig. 34.)

To which was awarded the First Premium of the New-York State Agricultural Society in 1841.

Messrs. Gaylord & Tucker—I find that the plow is beginning to claim that attention with the practical farmer that its importance demands. In the first place, unless the soil is well plowed, no man can expect to raise a good crop. Again—plows should be so constructed as to do the work well, with the least possible labor to the team and holder. Also, the cheapness and durability of the article is to be taken into account with the farmer. During thirty years' experience in farming, with all the great varieties of plows in our country, I have never found one that combined the above qualities so fully as the Livingston County plow, (fig. 34) invented by T. Wiard. This opinion appeared amply sustained from the fact, that at the trial of plows at the agricultural fairs in the counties of Ontario and Onondaga, and several other places, it received the first premiums in 1840.

Again, I find that it won the first premiums last fall at the same place—also in Tompkins county: and at the late state fair held at Syracuse, the first premium of $30 was awarded to H. Delano for the same plow. Our soil in this county is uniformly heavy and hard, requiring a good plow and strong team to do the work well. And I find that I can do as much work with the Livingston County plow with a third less team than any other plow I have ever had on my farm, and with much less labor to the holder. I believe the plow can be manufactured and afforded to the farmer in any part of the country from $6 to $10. The difference of price will be in the cost of the material. The whole weight of the plow does not exceed 100 pounds.

The above are some of my reasons for recommending said plow to my agricultural brethren throughout the country, believing it to be as near perfect as an article of the kind can well be made. Hollis Knowlton.

CHEMICAL MANURES.

Messrs. Editors—If it would not savor too much of presumption in one who, but a few weeks ago, was anxiously seeking direction from *you* and others, as to the best method of making chemical manures, I would undertake to correct some of your statements to "Farmer Hodge" upon the manufacture of urate; and as I deem correct information upon this subject of immense importance to agriculture, with your permission, I will make the effort. You remark in answer to some inquiries from "Farmer Hodge"—"when ammonia comes in contact with plaster it is absorbed by the plaster, and the plaster rendered more fertilizing than before." *

This is a mistake. Hear what Prof. Liebig says: "carbonate of ammonia, and sulphate of lime, (gypsum) cannot be brought together at common temperatures without mutual decomposition. The ammonia enters into combination with the sulphuric acid, and the carbonic acid with the lime, forming compounds which are not volatile, and consequently destitute of all smell."

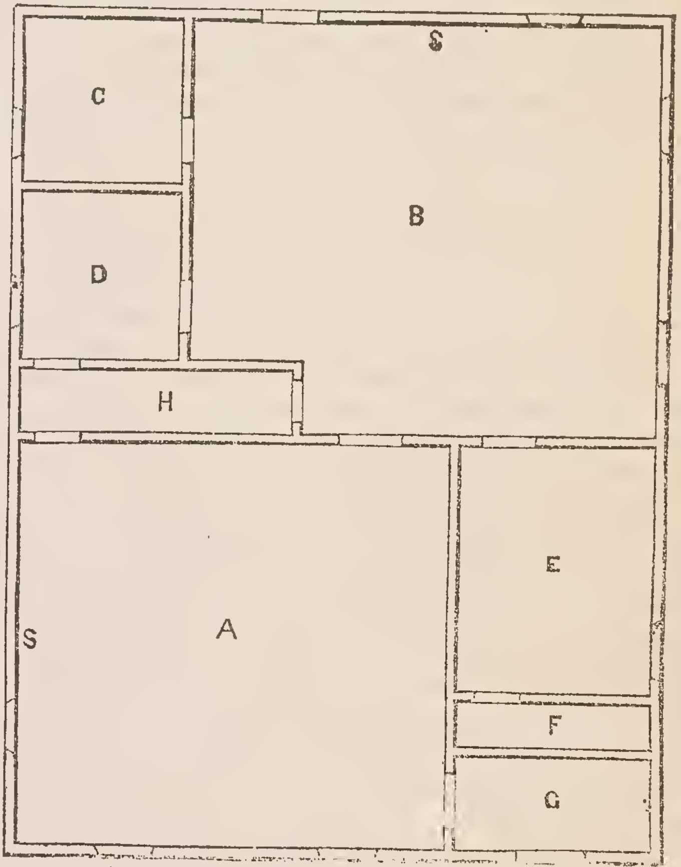
From this extract you will readily detect your error. As far as decomposition takes place, there is only a change of acids; but if the urine is evaporated upon the plaster, and the mass pulverized, it will be rendered a powerful fertilizer, because the sulphate of ammonia and other valuable salts would be mixed with the plaster, but not "absorbed by it." This is a very important distinction to make. If the plaster "absorbed the ammonia and combined the other salts of the urine," the manufacturer would be ready to throw off the liquid excrements as worthless, and dry the plaster for sowing. After the chemical action takes place, nearly *all, if not all*, the valuable salts are still held in solution with the urine, and must be evaporated upon the plaster, or distributed to the soil in the liquid state. I had well nigh sustained considerable loss from falling into this error myself, and was saved from it only by consulting a practical chemist.

The well intended effort of your correspondent "Wm. Partridge," in the November number of the Cultivator; upon a more careful examination, I am sure he will correct some errors into which he has fallen, especially where he recommends the use of caustic lime in the manufacture of sulphate of ammonia. * Lime has no affinity for ammonia; and when the sulphate of ammonia has been actually formed, the moment it is brought into contact with lime, will be liberated and driven off.

Any one feeling an interest in this subject may make the following chemical experiment, and they will be convinced. Take a small quantity of carbonate of ammonia, procured from the shops, dissolve it in a glass of water, add sulphuric acid slowly, until effervescence ceases. By this process all the carbonate of ammonia will be converted into the sulphate of ammonia, which has no volatility, and is completely deprived of smell. Add to this a small lump of unslacked lime, and when it slacks, ammonia will be given off, which will be readily detected by its pungent smell. The whole of his two last paragraphs are both inexplicable and erroneous. I will close this number by giving the following quotation from Pro. Liebig. [The extract, want of room compels us to omit.—Editors.]

I have been engaged for about six months in the manufacture of manure from human excrements; and as I believe I am now making them in the most approved manner, I propose in another number (if it should be deemed of sufficient importance,) to give you a short account of what I am doing.

Richmond, Va., Jan. 21, 1842. Geo. Woodfin.



PLAN OF A CHEAP HOUSE—(Fig. 35.)

House, 23 by 30 feet—A, parlor, 15 by 15—B, kitchen, 15 by 16—C, pantry, 6 by 7—D, sink-room, 6 by 7—E, bed-room, 8 by 9—F, closet, 2 by 8—G, entry, 4 by 8—H. stairway—S, stoves.

Messrs. Gaylord & Tucker—As plans of low priced houses have not been very numerous in the Cultivator, I inclose one, which you may make use of if you should think it worthy of a place in its columns.

It will be perceived there are two chamber doors; one opening out of the parlor, the other out of the sink-room; they are to swing, especially the one in the parlor, down to the floor, and not in the usual awkward way, on the first step of the stairs. The back kitchen door is calculated to open into the wood-house, where there might be a summer kitchen if circumstances should permit. The other outside door should be protected by a small portico outside; or it may be omitted, and a window placed in its room if desirable.

This is calculated for a story and a half house; but as I know of no particular use in giving side views and end views, I have omitted them altogether. In making the drawing, I have supposed the location to front the south. If it should front the east or north, I would reverse the order of the house; that is, place the rooms on the opposite sides. Cyrus Ingalls.

New-Hartford, Jan., 1842.

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* *Note by Editors.*—The remark, here alluded to by our respectable correspondent, was made on the authority of the following extracts from Liebig:

"If a field be strewed with gypsum, and then with putrified urine or the drainings of dunghills, all the carbonate of ammonia will be converted into the sulphate, which will remain in the soil." "If we strew the floors of our stables from time to time with common gypsum, they will lose all their offensive smell, and none of the ammonia which forms can be lost, but will be retained in a condition serviceable as manure."

We should have said "*combined*," instead of "*absorbed*;" as the former expresses the operation that takes place, converting the carbonate into a sulphate, which mere absorption would not do.

The subject of the chemical preparation of manures is one of such vast importance to the country, and there is so little practical knowledge of the matter abroad, that we are pleased to have an error, whether committed by ourselves or others, promptly corrected. We are glad to learn that our correspondent has succeeded in his experiments in preparing chemical manures, and we hope he will not forget to give the promised account of what he is doing.

SALMAGUNDI—No. 4.

Messrs. Editors—I was among the fortunate number that attended the late annual meeting of the New-York State Agricultural Society; and so many pleasing impressions were made on that interesting occasion, that I cannot forbear placing them, with your leave, on record. During the whole week in which it occurred the weather was sunny, and the temperature mild and delightful, which caused a large number of the hardy sons of the soil to assemble, and not a few of them from remote parts of the state, which clearly demonstrated the increasing interest felt in that great object, for the advancement of which the society exists. But in the throng, first and foremost, were seen the little Spartan Band which, for years upon years, has met to show to the world, *on paper*, that the Empire state had an agricultural society. It was sneeringly called a "body without a soul." This was wrong. It was *all soul* and no body; for that indeed it was—the body not yet having been formed and animated with vigor and usefulness. Yes, these indomitable spirits would annually gather together, sometimes twenty, sometimes ten, and again a still smaller number, with heavy hearts, but hopes not yet extinguished. I can fancy them on these occasions, chilled with continued disappointment, perseveringly striking at the flint in order to kindle the fire which would blaze, illumine, and vivify the highways, byways, and remote corners of the state. At length, after very many unavailing trials, one bright particular spark was elicited; it lighted the torch, which was forthwith carried to the legislative halls, where it enlightened and animated its occupants; and the appeal to them to grant fuel that the cheering flame might continue to burn, was successful. With this slender aid, gathering a few sticks here and a few there, they kindled the first bonfire at Syracuse, which illumined far and wide. Another will be kindled at Albany the ensuing fall, which will diffuse a still more glorious light; and yet another at Rochester the succeeding year, and then will this mighty agricultural state, in all its parts, be effectually aroused; and then, too, the era so long devoutly wished by this small but courageous band will be consummated. Are not these noble spirits deserving of more than ordinary honors? Verily, they are. The memories of Van Rensselaer and Buel are already embalmed in grateful hearts; and bright are the leaves which are growing to weave chaplets which will crown the memory of each of this band as he departs. The names of Van Rensselaer, Buel, Beekman, Walsh, Van Bergen, Bement, Rotch, Randall, Grove, Nott, Vail, Allen, and Viele and others, will not, cannot be forgotten in this state, while agriculture holds its station among the honored and necessary pursuits of man.

Like some others, I was disappointed on account of the little competition on *butter* and *cheese;* but on reflection, not so much disappointed either, when all things are considered. The canal was locked up, the rail-road leading into the interior of the state is prohibited from carrying freight, and there was no sleighing; and consequently, how could farmers, without great trouble and inconvenience, get these articles to the place of exhibition? It was next to an impossibility. But the display was good, very good, for a beginning; and how many thousand great things were of necessity small and insignificant at their beginning. 'Tis the fate of all *enduring* and *useful enterprises* at the commencement of them; whereas, all that *blow out* are characterized by the Bombastes Furioso at the start; so none need despond because of the paucity of competitors at the late fair. The competition must and will be larger hereafter; and instead of twenty samples of butter and cheese, we shall have ten times twenty, and perhaps a still greater proportion than that when the society is enabled to enlarge the premiums, and give some eight or ten grade premiums on the same article. In addition, will be the sale of samples, which must attract all the lovers of those two great luxuries, and consequently good prices will be obtained. Let farmers reflect upon this, as well as act upon it, and so limited a display will not again occur.

Not the least among the interesting scenes that I witnessed was the award of the premiums. The recipients were none of your *parlor farmers,* who wear squeaking boots; no, they were the real "frock and trowsers" sort; all grit, workers, practical farmers—the class which I hope will always merit and receive premiums. And is it doubtful that they were very happy? By no means; for I closely marked the countenances of every one of them, and of one in particular, who, after shoving home the real "mint drops," he slapped his hand on his pocket, to be sure that they were safe, and if ever eyes spoke, his did at that very moment. "Will not these yellow chaps make my wife and daughters feel very happy, and proud too?" Yes, his eyes spoke these very words; and they had a just right to feel happy and proud, for better butter never slid over a Virginia hoe-cake, or a Jersey buckwheat slap-jack. There is no denying it; to draw a premium, touches a certain particular spot in a man which tickles most exquisitely. *I know it* to be so.

If I was a little disappointed on account of the paucity of the samples of butter and cheese, I was absolutely so, nay chagrined, at the few reports presented of crops. But the cause of this, undoubtedly, is to be found in the unfavorable season; the drouth of the last summer having been severely felt in every part of the state, which, of course, materially reduced the quantity of every crop; and consequently farmers were afraid, and perhaps ashamed to compete. Nevertheless, some of the crops reported were very large, and hard to beat, the best of seasons, which must have resulted in a good measure from superior cultivation; and therefore greater is the credit which redounds to those who produced them. But the manner in which the reports were drawn up, with several exceptions, were unsatisfactory, imperfect, and informal, as has already been stated by the chairmen of several of the viewing committees. The suggestion in the report of the root committee, that the Executive Committee draw up blank forms, and publish them in the several agricultural papers in the state, is a good one, which will, I hope, be carried into effect. Correct reports, duly certified, and entering into the most minute details of cultivation, is of paramount importance to promote the grand object of the society; and without this, it must be shorn of half its usefulness. Farmers should know that their reports, no matter whether they are premium crops or not, are to be published in a volume as part of the proceedings of the society; and will not all feel proud to see their names appended to statements which will reflect credit on their skill and knowledge of their profession? If they are ambitious, go-ahead farmers, they will; if not, not. I hope to see 500 of these reports another year, and will try very hard to have one of my own among them.

For the life of me, Messrs. Editors, I cannot keep out of my head *that bonnet*—the beautiful little Manilla bonnett presented before the society; and you must indulge my whim to say something in addition to what has already been said in the amusing and gallant discussion on that occasion. When it was held up to view for our admiration, the inimitable scene of Sir Peter Teazle and the little French milliner flashed upon me; but it soon appeared that it came there *legitimately.* It was purchased of a firm in New-York, and of them it was ascertained that it was the handy work of an ingenious American fair one, and therefore an article of *American manufacture,* which was enough to prompt the patriotic and kind hearted "A. of the North" to purchase it and present it to the society for a premium; or rather its countenance and approbation. A premium of mere dollars and cents, with many others, I objected to then, and would object again and again. Give money to woman as *the* proof of your approbation when she does wisely and well! Fie upon it, gentlemen; you that advocate such a course know little of her nature if you estimate her by such a standard. Nature's great bard of Avon never put the love of money into the souls of any of his inimitably drawn female characters. No, it was a man, or rather a very devil in man's shape, that said "put more money in thy purse;" it was the detestable Iago that said this. Woman's soul in its purity is high above placing value upon "trash which has been mine, and his, and slave to thousands." That which she prizes are the treasures of the heart—the affections—and if we pour these out without stint, she will gather them up and build monuments of kindness and gratitude, which will be seen at every angle and curve of our domestic walks. But thank heaven, the fair one who made the beautiful bonnet was not degraded by giving her money; there were enough of *us* married gentlemen present to turn the scale aright, and it was therefore decided that she should receive our warmest affectionate approbation as her reward. And if the amiable gentleman who brought this tasteful article of American manufacture before us, conveys it to her in such language as his kindest of hearts will naturally dictate, she will prize it above gold or even rubies. Give plate in the form of tea pots, cream, or sugar cups, or even bamboo cradles, but never money; that they will spend. I respectfully say to the young and gallant general of Rensselaer, right wheel into *our* ranks, and then he will forbear longer to estimate woman by tens and twenties, but by a higher and holier standard. There, "them's my sentiments."

Another of the very interesting sights witnessed by myself and a number of others, was the stock of Messrs. Prentice, Corning and Bement. And first, that of Mr. Prentice. His are altogether, if my memory serves me right, pure Durham short horns; his beautiful flock—as I understood them to be—of South Downs, having recently parted with to Mr. J. McDonald McIntyre, which I regretted not being able to see. Mr. P.'s barns and stables form, with the gate way, a hollow square; an admirable arrangement to exclude cold winds. The construction and convenience of the whole elicited commendatory remarks from many; and I take the liberty of suggesting to him to furnish a diagram of it for the Cultivator. The stalls were spacious and well littered; and the herd, numbering about forty or more, were in capital condition; and this, with their beauty of form, so characteristic of the breed, made the most attractive scene I have witnessed this many a day. "Nero," whose fame was extended by his visit at the late fair at Syracuse, was there in all his glory; but Mr. P. has another coming on, pure white, name forgotten, which bids fair to eclipse him. Other breeders may look out a year or two hence for an ugly customer at the state fairs. Let all who wish to be either gratified or to purchase short horns, look at Mr. P.'s admirable herd; his urbanity will be sure to please, as well as his stock. A word more. Mr. Prentice is a wealthy, retired merchant; and on a high, commanding eminence, about a mile distant from the city, he has about completed a mansion, imposing for its size, and truly elegant for its architectural taste, where, in the evening of his days, he is hoping to enjoy what the farmer does through a whole life; rural pleasures and happiness. May his hopes be fully realized.

My notice of Mr. Corning's stock must be brief. Mr. C.'s barns and stables are fac similes of Mr. Prentice's. The herd in general showed good keeping, and the breed is evidently hardy, and calculated to make good workers. "Matchless" was there, and a matchless queen of a cow she is. It was too late in the day to see the flock of Cotswold sheep.

On the following day—and a charming one it was too, for January—I sat out to visit Mr. Bement's stock, accompanied by himself, Mr. H. S. Randall and Mr. Colman, the present editor of the New G. Farmer. Mr. B.'s farm is distant about three miles from the city, in a westerly direction, and the ride to it in the summer season must be delightful indeed, passing on the route many elegant seats in the suburbs of the city. The first thing we were shown was his poultry house and yard, the construction and fixtures of which correspond with the description given by Mr. B. in the last volume of the Cultivator. The fowls were of various breeds, several of which were truly beautiful and new to me, and appeared to be fond of their whereabout; indeed, we were informed that it was rare to see them out of the yard. This is a proof of good keeping, and this is right; for few things pay better on a farm than a flock of well managed and well fed fowls. He has several varieties of the duck; but the queerest "dickie" that presented itself was a Chinese goose, and what is still more queer, she is now, in mid winter, laying eggs. When told of this, it immediately reminded me of the prolific hen described by the menagerie man. "This," said he, "ladies and gentlemen, is the Siberian hen, which you all know is in New-Holland; she is distinguished for her prolific, spicy and odoriferous qualities; she lays from two to three eggs a day, and Sundays she slides a nutmeg."

The stock of cattle in general looked right, saving a want of flesh, which Mr. B. observed was owing to being overstocked, and are mostly Durhams with crosses, together with several Ayrshire cows, which I thought ordinary in form, but said to be rare milkers, which, in general, seems to be characteristic of that breed. Some of the calves appeared uncommonly fine, and of great size for the age. But the greatest attraction was the pure short horned bull "Astoria," which took a prize at the late fair at Syracuse, and a portrait of which appeared in the Nov. number of the Cultivator. That portrait is correct, except too much swell in the buttocks. Since his trip to Syracuse, he has increased much in size, and his handling cannot be surpassed. Indeed, I know of but one his superior, taking him all in all, and that is the majestic and lordly "Archer," belonging to Col. Sherwood of Auburn. There may be others, however, superior to Astoria besides Archer, but I have not seen them.

Mr. Bement has a flock of about 50 South Downs, and among them were several "crack" animals.

It is generally known that Mr. B. is famed for his superior Berkshire swine, on which he ran away with the chief prizes at the late state fair. His present stock is very attractive, showed good keeping and good management, save in one thing; and this is, want of *litter.* I say, friend Bement, get straw honestly if you can, but get it somehow; for with it you can make manure enough with your piggery to pay for straw at the rate of 20 dollars per ton. It is too bad for farmers, having had the example of the late Judge Buel, and living under the eyes and nose of the Cultivator, and yet setting at nought its precepts. When we bush-whackers visit the establishments of any of our "crack breeders," we expect to see everything in "apple pie order," and the best means adopted to make and save manure. There, I have done scolding. In conclusion, I shall take the liberty to recommend to the admirers of good stock to "look in" at Mr. Bement's, and they will not be disappointed. He has my sincere thanks for his hospitality and attentions, which I shall be very happy to reciprocate.

The address by the worthy and energetic president, delivered at the capitol, fulfilled the estimation in which he has long been held by his friends, as a classical scholar, and an eloquent man. The main subject, although by no means new, yet the manly delivery, chaste language, and well turned periods constituted it a treat rarely participated. But—and was there ever anything of man's creation that had not a little, middle size, or big *but* to it? No, never. Well, then, but it had *nothing of the practical about it.* This was a great fault, very; and I am by no means singular in making the exception. It was made by all who expressed an opinion in my hearing. Let his successor and successors please note this. It is indeed quite superfluous, at this time of day, to come before an assemblage of farmers, and tell them that their vocation is at once the most dignified and respectable that engages the attention of man; that our paths are scattered with roses and no thorns; that we have much virtue and independence; that we are the nation's body guard in the hour of danger; in short, that we are the happiest fraternity in existence, for we know it already; and not only we, but the lawyers and doctors have found it out, and shown their manners by standing a little back, in order that they "may see just as well." But notwithstanding, it does not signify, Messrs. Editors, we do like to be told the above now and then, especially when told so eloquently as it was by Mr. Nott. Verily, I was so tickled and flattered, that peradventure I had been possessed of a piece of cheese, as was the crow, most certainly like the said crow, I would have dropped it, and the fox would have run away with it. Let our presidents hereafter attempt to instruct rather than flatter us. Farmers are never better satisfied than when reading or hearing *practical knowledge,* if applicable to their profession. The late Judge Buel knew this right well, and he practiced upon it.

There were some capital things said in the speeches of Governor Seward, Rev. Mr. Colman, General Leland, Alderman Joy, General Viele and others, at the temperance supper, partaken by the members of the society; but my paper is already too long to notice now their sayings; I may advert to them hereafter, for they were profitable to the farmer.

The annual meeting of the New-York State Agricultural Society of 1842, will long be remembered by many others besides myself. There was harmony, enthusiasm, and a determined, *all soul* energy, constituting a sure pledge that it will continue to be, as it already is, the pride and glory of the "go-ahead" farmers of the Empire state.

Lansing, Tompkins co., N. Y. L. A. Morrell.

COMMENTS ON THE DEC. NUMBER OF THE CULTIVATOR FOR 1841.

Your December number commences with a statement of some accurate experiments made by your intelligent English correspondent—Mr. John Hannam—to prove that it is best to cut wheat some time before it is perfectly ripe. This fact, I believe, is now very generally known to the wheat growers of our own country; at least, so far as relates to wheat which is to be ground. But it is the opinion of the best farmers I have ever known—confirmed (as many of them have told me,) by actual experiment—that wheat designed for seed should be thoroughly ripe before it is cut. Indeed, many assert that it is still better if it be kept a year before it is sown; as it will then yield more grain in proportion to the straw, and be less liable to smut or blight.

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In your notice of the Edinburgh Quarterly Journal of Agriculture, you have given us some amusing specimens of the truly absurd and ridiculous superstitions of the olden time. But I think we can nearly match them, even in this year of our Lord, 1842. For instance, what think you of farmers who believe firmly in lucky and unlucky days?—in almanacs, as infallible weather prophets?—in the power of the moon to shrink the meat of animals killed during the decrease? and in the blood of a coal black cat's tail, as a sovereign remedy for the disease called "the shingles?" Yet such things certainly are—even in this our day of so much vaunted enlightenment. Would it not then be well if you yourselves, and some of your numerous sharp shooters, would occasionally take a shot at them? Such things, I know, are hard to kill; but there are marksmen among you, I think, who would effect it in good time, if they would only undertake it in earnest. Before, however, I quit this topic, I must do the present generation the justice to say, that the last mentioned superstition is in a great measure defunct. But I well remember seeing, when a boy, a poor black cat nearly as tailless as a modern dandy's pony; and upon inquiring the cause of this most extraordinary mutilation, I was seriously told that "*it was to get blood to cure the shingles.*" —

Your article in favor of agricultural schools is one after my own heart. Indeed, there is nothing I should like better, (if I were well qualified,) than to superintend one, if it were connected, as such establishments always should be, with an experimental farm. Most heartily, therefore, do I approve of every word that you have quoted on the subject from your Alabama correspondent. But he, as well as all other true friends of the cause, may rely upon it, that *we never shall obtain them* until the people generally will elect genuine, patriotic farmers and planters, instead of mere party politicians to represent them. —

Under the head of "Profits of Farming," you have said so much to the purpose, and so perfectly demonstrative of the facts which you aim to prove, that I will not add a word of my own, lest I might weaken its force, farther than to make one most earnest appeal to the sceptics upon this subject, should any be left after reading what you have urged. It is to entreat them—should they still have any doubts—to try—if it be only for *one* year—to keep an accurate account with their farms, so as to credit them not only with the money which is left after all expenses are paid, but with the account of the expenses themselves, provided they have been paid for out of the proceeds of the farm, together with the value of the bread stuffs, vegetables, and meats consumed by the family, which surely ought to be credited, although it is rarely ever done. No man who would do this, I think, could ever doubt again. None could hesitate to believe that the farmer's life, even as a source of profit, is greatly to be preferred to all others, especially when we take into consideration all its other concomitant advantages. —

In regard to the "*state of the laboring classes in Europe,*" (which is your next article,) I believe it to be quite as wretched as you represent it to be. Indeed, it is far worse, if we may credit recent accounts, particularly in England, Scotland and Ireland. Difficult as it may be to assign all the causes of so deplorable a condition of society, the grand one of all, the source from which the whole of the pitiable sufferings of those classes appear to me to have originated, has been too much interference on the part of their governments between the various professions and callings into which every civilized society naturally divides itself. This has proved the Pandora's box, out of which have issued all the evils incident to such interference; and let *our* government beware in time, not to follow their disastrous example. But for this, England probably would never have had any corn laws to encourage the extravagance and licentiousness of the rich; never any excess of investments in manufactures to make the rich richer, and the poor poorer; and never any such a degree of pauperism as annually to sweep off her thousands by the horrible death of starvation. —

The remedy to prevent weevil in wheat, which is recommended by "The Tennessee Agriculturist," will not suffice, at least, in latitude 37 or 38; for the heat which it undergoes in the stook is not enough to detroy the embryo of the fly contained in the grain. But if that be threshed out as soon as practicable, well cleaned, and thrown into bulk, it will there soon become so hot that no weevil will ever hatch, unless upon the surface of the heap. Care, however, must be taken, if the grain be wanted for seed, not to heap it until is is thoroughly dry, lest its vegetative quality be destroyed.

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Your remarks on "The Agricultural Fairs of 1841"—on "The New-England Agricultural Societies"—and on the "Fair of the American Institute," are, in the highest degree, interesting to all the true friends of American husbandry; and I sincerely hope they will excite our brethren of the middle and southern states to far greater exertions than they have ever yet made to get up shows and fairs equally worthy of our admiration. I must, however, respectfully offer *one* objection to the principle upon which most of them offer premiums. It is, that they aim to procure extraordinary products from the land, and marvellous farming stock, without sufficient attention to the cost of production. Whereas, it seems to me that premiums should always be so ordered as to encourage the greatest results which can be produced at the least expense. This would cause our brethren to bestow their attention more equally on all their farming operations, and to study the most economical methods of managing the whole, rather than to give an undue proportion of their care, their labor and means of improvement, to the particular articles for which premiums are offered. In most of these cases, they appear to me—but with all due deference be it spoken—to "*pay too dear for their whistles.*" —

I have read with pleasure all the communications of your intelligent correspondent Mr. L. A. Morrell, but must beg leave to make one exception to his universal anathema against sheep's tails. I would save from amputation, if I could, those parts of the broad tail—Tunis and Cape—sheep, as I can assure him that they are great delicacies for the table; and in regard to the narrow tail kinds, I would barely inquire whether it is at all probable, if these appendages are altogether useless? nay, worse; that Nature would ever have made sheep with any tails at all? Why they were made, it is not for me to say; although I really think, in consideration thereof, that since we find them stuck on, we might safely spare to the possessors some 4 or 5 inches.

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Mr. F. Burt, I perceive, has made another attack upon the National Agricultural Society and its friends, which, to say the least of it, betrays a marvellous ignorance of what these friends have actually said in its favor; considering that (as he asserts) "he has carefully perused all the communications of Messrs. Garnett, Robinson and Gordon, as well as your own." Now I also have read all those communications, and have probably "conjured my brain" about them quite as much as he tells us he has conjured his. But I cannot find a single line, or even a word, to justify Mr. Burt's insinuations about "log-rolling" or "lobbying" with members of congress, although this, I believe, is the second time he has thrown them out against the friends of a National Society of Agriculture. In close connection with these disparaging innuendoes, Mr. Burt introduces one of his discoveries which is at once so novel, profound and important, that the jurists and political economists of our country ought to be forever grateful to him; although I must confess that I cannot discover the least relevancy that it has to the object of his piece. He thus announces it: "*My opinion is, that government is constituted for the protection of all; for the favoring of none. Therefore, I cannot see* (nor indeed can I,) *what right government has to tax me to pay my neighbor a premium, because he has reared a bigger calf than I have.*" This would truly be a home thrust, a complete demolisher of all the friends of a National Society of Agriculture, had they ever asked government thus to interfere in any such calfish competition. But it so happens that not a solitary man of them has ever, so far as I know and believe, uttered the slightest wish of the kind. No motive therefore can easily be assigned for the introduction of the above opinion, unless indeed it was to prove that Mr. Burt's knowledge of government was quite equal to his knowledge of all other subjects upon which he undertakes to write. Let me give you another quotation to illustrate his comprehensiveness of acquirement. He says—"*If I understand the Smithsonian legacy right, it was left to the government to establish a national university.*" Now the will itself bequeathes the money to erect within the District of Columbia an institution which was to be called "The Smithsonian Institute," which, according to the express words of the will, was to be—"*an establishment for the increase and diffusion of knowledge among men.*" Whether these words mean a "*national university*" or not, I shall leave it to others to determine. To others also I will leave to decide, whether an agricultural school, wherein all the numerous sciences connected with agriculture would be taught, and an experimental farm on which the pupils would be instructed in all the most approved practices in husbandry, would not well fulfil the intentions of Mr. Smithson, as far as they can be understood from the language of his bequest.

Mr. Burt's comparison of the National Society "*to one of the double geered thunder shower saw-mills that go to kill,*" may be very witty and appropriate, for ought I know to the contrary, having never yet seen one that went "*to kill*" anything. I must therefore plead ignorance of its applicability. I am equally ignorant of what he can mean when he talks of government furnishing funds to keep up the society; unless, indeed, he confounds, with his usual alacrity at such work, the Smithsonian legacy with *these funds;* although it no more constitutes any part of them than his own private property. But even if the legacy really belonged to the government, not a cent of it will be asked to support the National Society of Agriculture. It is solely to support an agricultural school and farm that the friends of the society will seek to obtain it. Mr. Burt, it seems, could not conclude his attack upon this society without verifying the old proverb—"in for a penny, in for a pound." Witness his contemptuous remarks on all other societies of the kind throughout our country. But pity it is, for his own sake, that he had not kept to himself the anecdote of Dr. Franklin's, telling Thomas Paine that—"*he who spits in his own face, spits against the wind.*"

Commentator.

CORN—SOUTH AND NORTH—JUDGE BUEL.

Messrs. Gaylord & Tucker—I have had the pleasure of reading occasionally a valuable sheet published at Columbia in South Carolina, called the "South Carolina Temperance Advocate and Register of Agriculture;" and in that paper of the 6th of January, I notice a communication signed D. on the subject of corn. From this, with your leave, I propose to make a few extracts, and append a few remarks. The text on which the writer hangs his communication, is an estimate by Judge Buel in the Cultivator, volume 1, page 38 and 9, (and also in his Farmers' Library,) of the quantity of corn that will grow on one acre, when planted in rows or drills, at different distances, of which distances and modes of planting he gives examples. After copying Judge Buel's table (in which the third method, as printed in the S. C. T. A., is incorrect, as it should be 3 feet by 2½, instead of 2 feet by 2½,) and describing the manner in which the results as to quantity were gained, "D." adds, that his object is to persuade a former correspondent of the Carolina paper, "not to suffer the arithmetical chimeras, and useless theories of Judge Buel (or any other man who is so ignorant of corn planting as to suppose that an acre of ground could be made to produce 170 bushels—plant it as he may,) to bother his brain, so to make him lose another crop. As for the calculations of Judge Buel," he says, "I regard them as of no sort of practical utility to farmers. *For the Judge never saw nor heard of even 75 bushels of corn being obtained from one acre; much less, 170.*" * * * "The second method quoted will give 75 bushels 2 pecks and 4 quarts, *which no lands that Judge Buel ever owned, ever did or ever will produce.*" * * * "I would ask Judge Buel, when before did it enter into the imagination of men to plant corn as thick as his last, or even his *third method (3 by 2½ feet) proposes to plant it?* Who, that ever cultivated an acre of land in corn, does not know that corn planted according to his 6th, 5th, or ever 4th methods, would not only have no corn at all, but the stalks themselves would literally burn and shrivel up, during the best seasons we have, in any kind of land, however rich?" * * * "For Judge Buel's benefit, therefore, as well as that of my friend C. C., I will give the result of my experience in the method of planting, hoping it may do no harm if it does no good. Corn planted in rows 3 feet wide and drilled 2 feet, is thick enough for any land; and if it is a dry season it is too thick; but if seasonable, and plowed four or five times, (only one way) and hoed once or twice, good land will produce a gill, or perhaps a gill and a half to the hill. If one gill, there being 7260 hills in one acre, it will yield 29 bushels, 3 pecks and 5 quarts, *which is enough for any man to make from one acre.* If, however, the land is not so strong, I would always prefer planting 4 by 3, which will make 3588 hills, and have one stalk in a hill, *which,* in an ordinary season, will yield fully 2 gills to a hill, and a better grain than if the stalks were thicker, which would give 28 bushels; quite enough for common land, well manured."

My object, Messrs. Editors, is not to defend the character of Judge Buel, as an agriculturist, from the flippant attacks of men so profoundly ignorant of the state of agriculture in the country as "D." evidently is; he cannot need such defence; but I wish to invite attention to the difference between what is considered a good crop at the North and in the South. We at the north do not consider 29 bushels as much as a man ought to make from an acre; and the man whose corn crop does not very greatly exceed that quantity, is thought, and deservedly, a miserable farmer; and I trust the time is very distant when the northern farmer will think 28 bushels "quite enough for common land well manured."

Further; "D." says Judge Buel "never saw or heard of 75 bushels of corn from an acre; much less, 170." I make the following extract from the Cultivator, volume 1, page 39. "The 5th method, [one of those which D. so positively affirms would produce no corn at all,] I have tried. The ground was highly manured, and the crop twice cleaned. The entire acre was gathered and weighed accurately the same day. The product in ears was 103 baskets, each 84 lbs. nett, and 65 lbs. over. The last basket was shelled and measured, which showed a product on the acre of 118 bushels, 10 quarts." In the same place reference is made to the premium crop of the Messrs. Pratts of Madison county, of 170 bushels per acre. What will be the nature of the emotion felt by every one who knew Judge Buel, towards the man who could make the reckless assertions quoted from "D.," or what name shall be given to the assertions themselves?

"D." asks when it ever entered into the head of a man to plant corn 3 feet by 2½? I answer; corn is so planted every year in multitudes of instances at the North. I planted it myself in that way last season; and notwithstanding the severe drouth, got more than 60 bushels to the acre; and in the same way have frequently had from 70 to 80 bushels per acre.

The only mitigating circumstance in the paper of "D." is to be derived from his evident ignorance. The man who does not know that Judge Buel long since descended to the grave, universally revered and lamented, cannot be expected to know much of the agriculture of the United States. The truth clearly is, "D." knows nothing about the culture of corn at the North. He is ignorant of our soil, our climate, our varieties of corn, our methods of planting and cultivating; and he deems any deviation from the standard adopted on the worn out sand plains of his state an impossibility. "D.," I trust, is one of a number which is daily decreasing in that section of our country. It cannot be there are many planters in the South who think that 28 bushels per acre of corn is enough, when that quantity may easily be doubled. The excellent journal from which I have quoted is proof to the contrary; and before the citizens of our broad country undertake to assert so dogmatically what can and what cannot be done in another part of it, a little acquaintance with facts, and the state of things there, would seem to be desirable.

An Onondaga Farmer.

Onondaga County, N. Y., 1842.

POTATOE OATS.

Editors of the Cultivator—I have been requested by several respectable gentlemen concerned in horses, to call the attention of farmers to the bad quality of potatoe oats for horse feed. They state that a very large portion of them pass through the animal undigested; so much so, that their horses began to decline very much in flesh while feeding on them before the cause was suspected. They say that the chaff covering the grain is so firm and impervious that digestion is impossible. I cannot agree with them in the cause of the evil, however correct they may be in their observation of the evil itself, which I of course do not doubt. We all know that all kinds of oats, as well as other grain, will pass through the horse unchanged, unless it be crushed by the teeth; as nature has provided all grain with a skin that the juices of the stomach cannot dissolve. If, therefore, more of the potatoe oats pass undigested than of other kinds, it must be because of their being more difficult to masticate. Whatever be the cause of the evil, however, the evil itself cannot be questioned; consequently, no one that keeps many horses here, or at least, no one that I have seen that pays proper attention to them, will now purchase potatoe oats at any price. I have consulted several, and they all concur in opinion. The purchasers of forage for the army horses here will not purchase them at all. I have therefore thought it advisable to caution farmers against their cultivation.

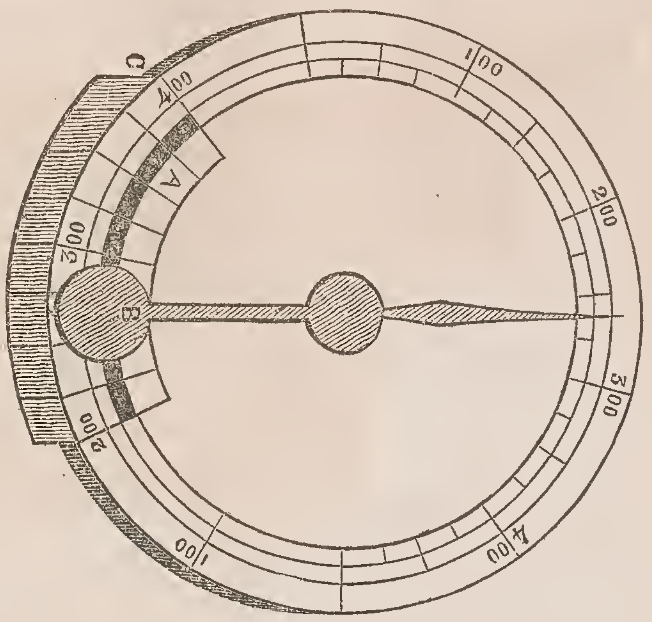
Baltimore, Feb. 1, 1842. G. B. Smith.

VALUE OF AGRICULTURAL PERIODICALS.

The value of the sciences as applied to agriculture, the necessity of a more extensive diffusion of intelligence among farmers generally, and the importance of agricultural papers as a means of promoting an improved husbandry, are things so universally admitted by all whose opinions are worthy of notice, that we have long since ceased to occupy the pages of the Cultivator to any extent, with papers relating to these topics, as they may be considered settled, and beyond argument. At the request of a friend, however, we give place to the following extract relating to the subject before us.

"But methinks I hear some one say—'I never thought there was much to be learned from books and papers about farming. Those that write on the subject know very little about it in my opinion. They are not practical farmers; they never used a plow or hoe in their lives; their theories may appear well enough on paper, but you can never reduce them to practice. In fact, sir, I have not much opinion of book farming.' But to such a one I would say—Friend, you are, I fear, prejudiced. Go and subscribe for the Cultivator one year, and my word for it, you will alter your mind; and if you don't get the worth of your money, make the fact known to the publisher, and I am sure he will refund the same. An examination of the papers from some three or four hundred contributors, will show that a vast majority of the writers are practical farmers, and speak from their own personal knowledge. And not only to such an objector would I say—subscribe for an agricultural paper, but I would say to all engaged in the business of farming—go and do the same. Think not that you know all that is necessary to be known on the subject of agriculture. Seek to be successful, and eminent in your profession. Look upon it as not only most pleasant and useful, but also most honorable. *Make farmers of your sons.* Imbue them with a love for rural pursuits. In short, use every means in your power to improve yourself in your profession, and elevate the standard of agriculture throughout the land.

"*West-Hartford*, 1842. X."



DYNAMOMETER—(Fig. 36.)

A, a slat pierced through the dial plate to correspond with the division on the opposite side, of from 2 to 400 lbs. traction. C, a drawer sliding under the dial, divided into cells corresponding with the pointer on the dial plate. B, a cup, containing about a cubic inch of sand in the form of the upper half of an hour glass, with a close cover.

The working part of the instrument to be constructed in the usual form; its extreme action to be from 0 to 500 lbs. upon a half circle. When prepared for operation, the cup being filled, the pointer would stand at 0, and the cup at 500; the sand would consequently be retained until the resistance of the plow brings the sand cup to 200 or more, when it would continue to empty itself in the cells corresponding with the number of pounds draft exerted; like the hour glass, it would discharge itself in a given number of minutes. The drawer being taken out, the quantity of sand in the gradated cells would determine the average quantity of power expended.

The trial should be made with the same team attached to all the plows to be tested, and upon the same description of soil, and driven by one person, and at the same speed.

Messrs. Gaylord & Tucker—I am far from being convinced that we have as yet arrived at the right form and construction of that most important of all farming implements—the plow.

The Scotch plow or some of its congeners are, in my opinion, nearer the truth for greensward plowing than any other now in use; but their unwieldy form renders them objectionable to many of our countrymen, partly from prejudice, and partly from the stumpy and uneven surface of our newly reclaimed lands.

There is but one form of the operative part, that is, strictly speaking, just and correct; and that form is the one that will *perfectly invert the furrow with the least expense of power.*

In passing through our farming country from Georgia to Maine, you can hardly find one form of plow to prevail for a greater distance than one day's travel. Almost every community, especially if they happen to have a foundery in the neighborhood, have some form peculiar to themselves, and frequently of the most absurd and unphilosophical construction; and yet they all have their users and apologists, who will die in the last furrow to maintain that they are the best in the world, from ignorance of better kinds, and from the *esprit du corps* of particular communities.

It strikes me that this important point can be settled without a very great exertion of personal attention or mechanical ingenuity.

It is unfortunate that horses are not gifted with the powers of speech, or their owners would be better advised on the subject of the variable draft of different plows.

A span of horses will draw a body out of a well (by a rope traversing a pulley) weighing from 10 to 1400 pounds. The power required to perform ordinary greensward plowing varies from 250 to 400 pounds; a required power so much less than the power of the team, that the faulty construction is not so apparent to the driver as it would be if the rate of power was greater; consequently, a body of that weight descending into a well would cause the plow to perform its required task.

The form of the plow should vary with the *quality of the soil, the speed of the team,* and the *kind of work* required to be performed. A tender clover ley requires a form of moldboard of slacker twist, or more elongation, than the firmer and more tenacious greenswards; and cross plowing may be performed with a short moldboard, that cannot do good greensward work. An ox team can do good work with a moldboard, that a quick team would entirely fail to perform; and I think it must be admitted that the best greensward plows are not the best for cross plowing.

For more than 20 years past, my attention has been particularly called to the construction of the cast iron plow, from having been engaged in the foundery business; and having early introduced the article among the farming community, and during the existence of the former law patronizing agricultural societies, I constructed a *dynamometer* for the use of the Saratoga society, where I then resided; from the trials of which, I became convinced of the difficulties in the way of settling with anything like accuracy, the different degrees of traction required to perform the process of plowing with the various articles experimented upon.

The instrument being attached between the motive power and the resisting body, it has to be observed while in motion, and the variable resistance from roots, stones and inequality of surface, render the index so fluctuating that it is next to an impossibility to arrive at any satisfactory conclusion. It was remarkably exemplified at the trials at the state fair at Syracuse, as the committee engaged in that service will freely admit.

Since I have had the honor to preside as the president of the Monroe County Society, I have been so repeatedly called upon to endorse the *things* of various constructions, that I am more and more impressed with the necessity of having some unerring test of their qualifications.

At the suggestion of our friend Solon Robinson, (from whom I had the pleasure of a call on his return to his log cabin at the Far West,) my attention has been particularly turned to the construction of of a *self-registering* dynamometer, that shall of itself give a true average final result of the required power to turn a given width and depth of furrow in any soil, with any speed, and with any plow.

How I have succeeded you will be enabled to judge by the drawing (fig. 36,) I herewith inclose, with a description of its construction and operation. If you think it deserving an engraving, you may thus dispose of it, or you may subject it to the examination of the principal officers of the institution, and other competent judges.

L. B. Langworthy.

Handford's Landing, Monroe Co., N. Y. 1842.

ON EARLY HARVESTING OF WHEAT.

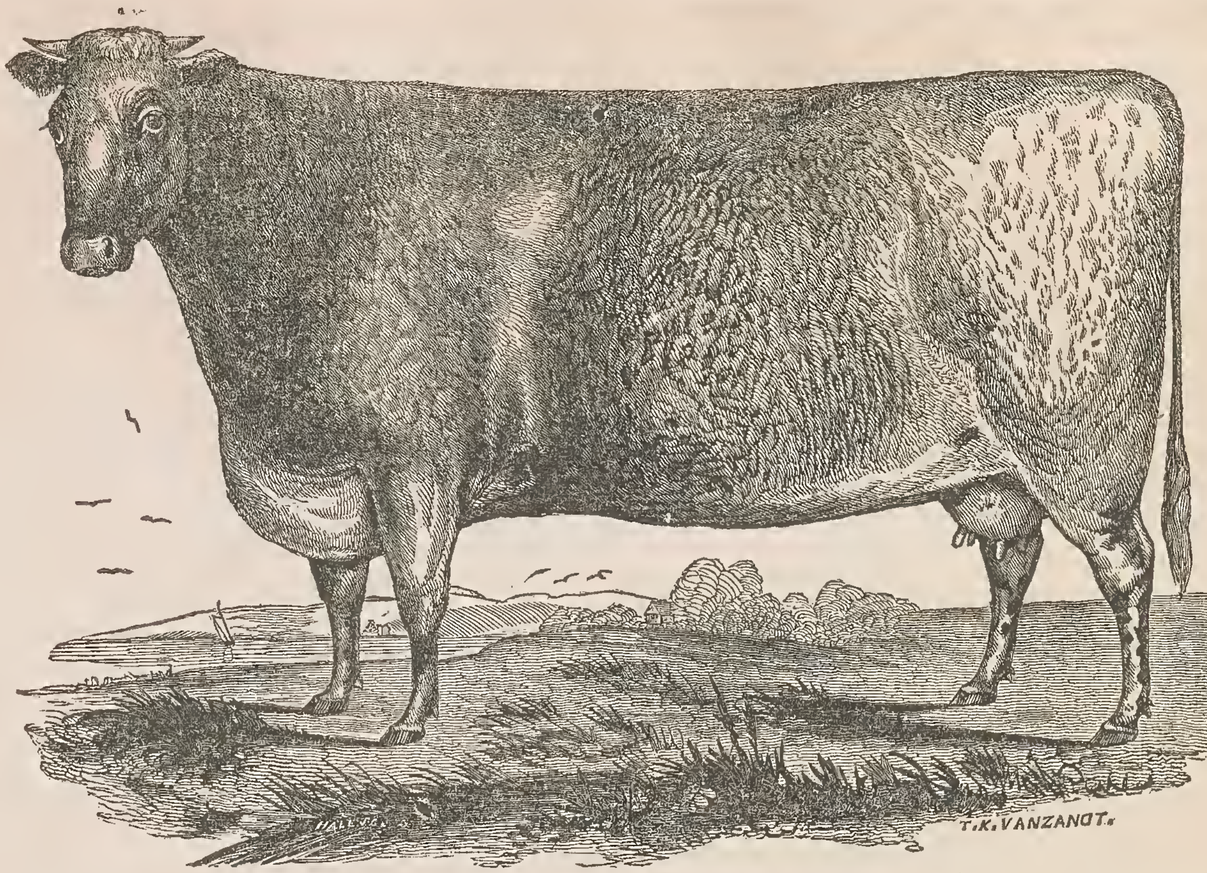
I am much surprised to perceive that your correspondent, (John Hannam, Esq.) should claim the advantages gained by cutting wheat in a green state to be a recent discovery, for I remember hearing when I was a little boy, (say twenty-five years ago,) farmers speak of its being advantageous to cut wheat previous to the time of its having arrived at what some people call maturity; and I know, from personal observation, that in the East Riding of Yorkshire and the North of Lincolnshire, as long as twenty years ago, a person allowing his wheat to stand until it was dead ripe, would have been considered to possess very antiquated notions of farming. I can, however, add my testimony to Mr. Hannam's that the practice of cutting wheat in a raw state, is attended with a favorable result. The cause of my noticing this subject, was to caution such of your readers as may adopt the practice of cutting wheat in the state recommended, against binding it in large sheaves, as in such a case will infallibly mold in the center of them. I have known persons who have sustained great loss from this cause, and I have known others commit the great error of leaving it laid in the swath, by which means the sap contained in the straw is suddenly dried up, and the grain being thus deprived of its support, becomes lean and shriveled. The best plan is to form it into small sheaves as soon as it is cut, and be careful not to bind them so tight as to prevent the air taking effect upon them.

I am, yours, &c., J. Harland.

ON REARING CALVES.

Messrs. Gaylord & Tucker—D. B. C., in the first number of ninth volume, wishes information on the treatment of calves for the butcher or for rearing. I do not say I know the best way; but from some experience I can inform him of a good one: for the butcher, I let them take all the milk they will from the cow (and if one does not give enough I give them more) till they are five or six weeks old, keep them in a close dark place, clean and dry, and they never fail of being good. For rearing, I take them from the cow soon after they are dropped, and feed them new milk two or three the first weeks. I then set my milk from morning till night, take off the cream, boil potatoes or beans and mash them fine, and put with the milk with very little salt. I feed them with that food till they are twelve or thirteen weeks old, when I begin to wean them by reducing the quantity, at the same time put a trough in their pasture where I put dry oats, and they soon learn to eat them; one pint per day each through the summer. In the fall, or first of foddering time, I feed them that mess morning and evening. Through the winter, feed hay, corn fodder, oats in sheaf, and when the weather is not extremely cold, give them a few potatoes, carrots, or turneps, with plenty of clean water and salt, and be sure to protect them from all inclement weather. In the spring, I turn in pasture with other cattle—no extra care. My heifers never fail to come in at two years old as large as my neighbors' are at three; be the feed what it will, feed plenty. If my cattle from any cause get troubled with lice, I have a remedy I have never seen in the Cultivator. I keep a box with fine dry sand in my barn, and if I discover any lice on them I put it on from back of the horns the whole length of their back a few times; it has never failed to effect a cure. It may be observed that cattle, or any animal that has free access to the ground, are seldom troubled with lice in summer. If you think the above remarks worth notice, they are yours. I have used many words to convey a few ideas, but I could not make them plainer with less. I have been for several years a careful reader of your paper, and surely I have derived much benefit from what I have learned from others' experience.

Glen's Falls, Feb. 14, 1842. Lewis Numan.


T.K.VANZANDT.

MOSS ROSE, AN IMPORTED SHORT HORNED COW,

Owned by Ezra P. Prentice, Esq., Mount-Hope, near Albany.

The above is a very correct portrait of Mr. Prentice's "Moss Rose," one of the four cows imported by him in October last, from the yard of Mr. Whittaker, Yorkshire, England, and was there valued at 100 guineas.

Moss Rose is a beautiful roan, four years old last spring, and though of fine form, is chiefly remarkable for great substance, with very light bone and offal. She came out, stinted to the "Sir Peter," a son of the "Sir Thomas Fairfax," by "Porcia," and calved on the 11th Jan. last. The produce is a red and white bull calf, from which Mr. P. has high expectations, justified alike from its appearance and pedigree.

Her sire was "Barden," 1674, 3d vol. *Herd Book.*

Dam,	Viola, by Young Collins,	1843
G. D.	Viola, by Remus,	550
G. G. D.	Pink, by Sudbury,	1424
G. G. G. D.	Beauty, by Hollings,	2131
G. G. G. G. D.	Lingcropper, by Partner,	2409
G. G. G. G. G. D.	Lady, by Mr. Hutton's bull	2145
G. G. G. G. G. G. D.	Lingcropper, by Marsk,	418
G. G. G. G. G. G. G. D.	Lofty, by R. Alcock's bull,	19

LETTERS FROM MR. PETERS—No. II.

London, January 1, 1842.

Messrs. Gaylord & Tucker—As too much cannot be said upon those subjects, which are of the first importance to the farmer, I shall confine my remarks to what more particularly relates to the agricultural interest.

I have been to-day, for the second time this week, through the warehouses, examining butter, cheese, lard, beef and pork, from various parts of Europe, the United States, and from every place almost in the kingdom. Every facility was given me for a thorough examination of every kind; and nowhere in the world can be found a greater variety than here.

I saw tons of American cheese that is not worth the duty, owing to the bad condition it is in, from a want of proper knowledge as to the best method of putting up for a voyage. Out of the immense quantity I examined in these stores, I am sorry to say very little will pay the shipper a profit. Unless one has seen the different kinds, and tasted them over and over again, been among the retailers, and seen the kinds they sell at best prices, he cannot form any idea of the great defects in our cheese. We have, however, one thing to console us. Those defects can be easily remedied with care; and we can send into this market cheese as good in every respect as the best here. Our cheese must be uniform in size, and of a different, and I think better proportion. As I remarked in my last, ours are too flat or thin, according to their weight. No cheese should be made of less thickness than 6 inches. Great care should be taken to press them well, and to cure thoroughly, so that the rind will be thick and tough. Cheshire cheese is yellow. It is colored by rubbing down on a stone some annatto, about one ounce to the cwt. of cheese, and mixing with the milk while warm. It is usually rubbed into the milk through a linen cloth. The temperature of the milk when set for the curd is from 90 to 96° Far. If too cold, the curd is soft and retains its whey. If too hot, it is hard and tough. No person should attempt to make cheese without a thermometer. It is of the first importance that the cheese in the dairy should be as uniform in size, taste, and appearance as possible. Some of our dairies are not surpassed by the best here; but there is in general a great lack of uniformity; and the taste and size is almost as various as the dairies. It is no merit to say that we possess every requisite to equal the whole world in the perfection of our butter and cheese. We must do it; and what is more, we will do it. The time is not distant, thank Heaven, when our sons and daughters will think it quite as important to be able to make good cheese or good butter, as to play well upon the piano. And the conversation of the parlor will not only be about the latest fashion, but also the best method and latest improvements in butter and cheese making. The time has gone by for the American woman to be the frivolous, useless toy that an erroneous system of education has heretofore made her. Her destiny is a high one; for upon her, in a great degree, depends the future prosperity of our country, and the perpetuity of the republic. But excuse this short digression, if so it can be deemed.

Butter may at some time become an article of export; but it must be the very best. You meet in this market every shade of quality. The best fresh butter comes from Holland, Ireland, and the interior. The best Dutch butter is slightly salted, and is not intended to keep long. It is usually sold during the first week after its arrival. Their very best butter, however, is not better than some I have seen from Orange county, and Goshen in Connecticut. Indeed, I have eaten as good butter at farmers' tables in New-York, Pennsylvania, Ohio, Indiana, Michigan, and Illinois, as the very best made in this or any other country. What the few farmers have done, the many may do if they will. All that is requisite is care and labor.

The best salt butter is the Kiel and Irish. The Irish is considered the best. The Irish owes its superiority to the care taken in the inspection. They make five different sorts; and it is put up in packages of from 70 to 80 pounds. The butter which they export to foreign countries is in pickle, and will keep in good order for a long time. In Ireland the butter dealer furnishes the farmer with the firkin, and it is filled at the farm. The coopers use none but the most thoroughly seasoned oak timber for making up the firkins. If well seasoned, they say there is no danger of any woody flavor being imparted to the butter.

Their method of making butter I think worthy of adopting by our farmers. The milk is churned generally; and long and careful experience and observation has shown that, all things being equal, butter made from churned milk will keep much longer in good condition than that made from churned cream alone. I should recommend that method, by churned milk, to all persons keeping small dairies, or where the cream was not churned daily. The milk is strained into pans at night, and stands till morning. It is then put into stone jars, and so divided that the jars will hold three milkings. The morning's milk is put in at night, and the night's milk again in the morning. The whole is occasionally stirred with a thin, flat stick until it has become thoroughly curdled. It is considered best when it commences curdling at the bottom. The whole is then put into the churn, and churned with a rapid motion. The temperature of the milk is quite important; as if it be too cold or too warm it froths very bad; and warm or cold water must be added, as circumstances may require. The proper degree of temperature could be ascertained by a little practice. Churns are worked by steam, by sheep, dogs, and donkies, and the necessary machinery is put up at a very small expense. The butter when taken from the churn is washed in clear spring or well water until all the butter-milk is washed out. It is then worked over, and salted according to the season and the market. The best salt is that kind known as the "*Liverpool stored salt,*" which is very fine and dry. It is, however, made as fine and uniform as possible by rolling it on a table with a paste, or *rolling* pin. It is not considered fit to put into the firkin until it has stood a week or so, and been thoroughly worked over at least twice. Every particle of butter-milk is worked out. I consider it essential that cows should also have free access to salt.

I hope our farmers will turn their attention to this subject; as hundreds of thousands of dollars could be saved to them annually by a very little more care and attention in this one article. Let them try the experiment. The course pursued by some of the best dairies here, and which has been crowned with complete success, is certainly worthy of our serious consideration. Let us once get in the right way, and it will then be not only profitable but pleasant to go-ahead.

If I have been tedious, you must lay it to my anxiety to do good to the great interests of our country.

Sincerely yours, T. C. Peters.

EXPERIMENTS WITH SALT.

Messrs. Gaylord & Tucker—I with pleasure comply with your request, and give you the detail of my experiments in the use of salt as a manure. In the spring of 1838, we broke up 6 acres of sward land that had been mowed a number of years, intending to plant it to corn, but observed when plowing that the ground was infested with worms; (the yellow cut or wire worm, and black grubs;) as we had mostly lost our corn crop the year previous by having the first planting almost entirely destroyed by the corn worm, (above described,) we expected a like calamity would follow the present year, unless some preventive could be used to destroy the worms. And having frequently and unsuccessfully used all the recommended remedies to destroy the corn worms, we were induced, at the suggestion of an English laborer, to try salt. After the ground was thoroughly harrowed, 5 bushels per acre was sown broadcast, leaving a strip of near half an acre on each side of the field, to satisfactorily test the experiment. The whole was then planted to corn and potatoes. The corn on the part where no salt was sown was mostly eaten up by the worms, and was replowed and planted to potatoes. The potatoes on the whole lot were a good crop, but decidedly better where the salt was applied. I regret that we did not ascertain by measurement the actual result. There was a very perceptible difference in the appearance of the vines during the whole summer. On the part where the salt was sown they grew larger and were of a darker green color, and continued green longer in the fall than the others. In the spring of 1839, we spread on a good coat of manure and planted it all to corn, except about half an acre of the salted land, which was planted to Rohan potatoes. The Rohans were the best crop of potatoes I ever saw. Seed planted—2½ bushels, produced over 300 bushels. The largest potatoe weighed 4¾ lbs. The corn was a heavy crop, but was not measured. The summer was very dry and hot; but the corn on the salted land did not appear to suffer at all from the drouth, while the other was considerably injured. The salted land appeared always moist, and the growth of everything upon it was very rapid. We found great difficulty in keeping the weeds down. After three successive hoeings, we were obliged in August to give it a hand weeding. Spring of 1840, intended to have stocked the land down for meadow; but thinking it too rich for oats, planted potatoes without manure. Crop good. The effects of the salt still very apparent. Adjudged to be one-third more potatoes where the land was salted.

Spring of 1841, sowed a part of the lot to oats, the remainder to potatoes and onions without manure. The onions were a great crop. The summer was very dry, but they did not suffer, while other crops in this neighborhood on similar soils were nearly destroyed by the drouth. The oats were a heavy crop, and much lodged on the salted part. The clover grew well and produced a fine crop of fall feed. This I cannot account for, except by supposing that the salt kept the land moist, or attracted moisture from the atmosphere, as I know of no other piece of land in the town that was well seeded last year; it was almost an entire failure; and the most of the land stocked down last spring has been, or will be plowed up in the spring to be re-seeded.

We sowed salt the same spring on a part of our meadows. The grass was evidently improved, the result satisfactory, and we shall continue to use it on our meadows. I shall not at this time force upon your readers any opinions of mine respecting the manner in which salt operates beneficially upon vegetation or the soil. The following quotations from English authors, if you see fit to publish them, will show that the subject is not a new one; and perhaps your readers may glean some information from them.

In Europe much has been said and written to prove and to disprove the utility of salt as a manure. Without entering at all into their ideas of the modus operandi, we may judge from the effects of experiments. I may say, however, that it has been supposed beneficial in small quantities, by its tendency to promote putrifaction, and injurious in large proportions, because it then exerts its antiseptic powers. It has been supposed of benefit by destroying snails, grubs, moles, &c., in the ground.

"It is observed by Dr. Darwin, that as it is a stimulus which possesses no nourishment, but may excite the vegetable absorbent vessels into greater action than usual, it may in a certain quantity increase their growth by taking up more nourishment in a given time, and performing their circulations and secretions with greater energy. In a greater quantity, its stimulus may be so great as to act as an immediate poison on vegetables, and destroy the motions of the vessels by exhausting their irritability. The reports of experimenters on the use of salt as a manure have been as different as the soils on which their trials were made; owing, in some measure, to causes which can never be forseen or controlled, and on which agricultural experiment so generally depends. In sandy soil, salt has been found to exert effects superior to eight out of ten of the best manures. A quantity of ground was prepared and divided into beds of forty yards in length by one in breadth. The beds were then sowed and manured by the following substances in the quantities mentioned:

No. 1. No manure.
2. Salt, half a peck.
3. Lime, 1 bushel.
4. Soot, 1 peck.
5. Wood ashes, 2 pecks.
6. Saw dust, 3 bushels.
No. 7. Malt dust, 2 pecks.
8. Peat, 3 bushels.
9. Decayed leaves, 3 bushels.
10. Fresh dung, 3 bushels.
11. Chandler's graves, 9 lbs.

With the exception of chandler's graves, salt was decidedly the best of those used. On a trial of compounds, the combination of salt and soot was the best. The substances were mixed in the following order, and the same quantity of each employed as when used singly:

No. 1. Salt and lime.
2. Salt, lime and sulphuric acid.
3. Salt, lime and peat.
4. Salt, lime and dung.
5. Salt, lime, gypsum and peat.
6. Salt and soot.
7. Salt and wood ashes.
No. 8. Salt and saw dust.
9. Salt and malt dust.
10. Salt and peat.
11. Salt, peat and bone dust.
12. Salt and decayed leaves.
13. Salt and pearl ashes.
14. Salt and chandler's graves.

Perhaps this superiority may be accounted for by the quality of saline substances to attract moisture from the air; for those beds where salt had been used were visibly and palpably moister than the rest, even for weeks after the salt had been applied; and the appearance continued until rain fell, when of course the distinction ceased. In several instances the crop of the land failed altogether, except on the part where the salt was applied."

In Hindostan and China, all the land on the coast is regularly treated with sea water; and they depend solely on this management for the increase and goodness of their rice crops. In Poland, salt is extensively used in the tillage of the land.

Many valuable communications on the use of salt as a manure have been made to the British board of agriculture. I may be allowed to mention two further experiments made on this subject.

To show the effects and advantages of salt properly applied to vegetables, the gardener of Lord R. Manners made the following experiment in an extreme dry summer upon a bare piece of pasture land, out of which the cattle had been taken for want of grass. He marked off four places, each of which was watered for nine successive nights in the following manner: the first with one gallon of spring water; the second with one gallon of the same water, containing one ounce of common salt; the third with the same quantity of water and two ounces of salt; and the fourth with the same quantity of water and three ounces of salt, which gave the following effects:

The grass in the second place grew more abundant and of a darker green than in the first; in the third place it grew only by spots; for part of it was killed where the greatest quantity of water fell; and the fourth was quite killed, for a greater compass than the third; by which it appears that an ounce of salt in a gallon of water had a better effect than the water alone; and that three ounces of salt mixed in a gallon of water was more than the grass could immediately receive; but the fourth place, in the ensuing spring, was the most fertile of them all.

The other experiment I shall notice is related by Dr. Holland, well known by his agricultural survey of Cheshire:

"After draining a piece of sour, rushy ground about the middle of October, he ordered some refuse salt to be spread upon a part of the land at the rate of eight bushels to the acre, and in another part sixteen bushels. In a short time vegetation disappeared totally; and during the month of April following, not a blade of grass was to be seen. In the latter end of the month of May a most flourishing crop of rich grass made its appearance on that part where the eight bushels had been laid. In the month of July the other portion produced a still stronger crop. The cattle were remarkably fond of it; and during the whole of the ensuing winter, (which is ten or twelve years since,) and to this day, the land retained and yet exhibits a superior verdure to the neighboring closes."

Schaghticoke, Feb. 8, 1842. JOHN C. MATHER.

COUNTRY DWELLINGS.

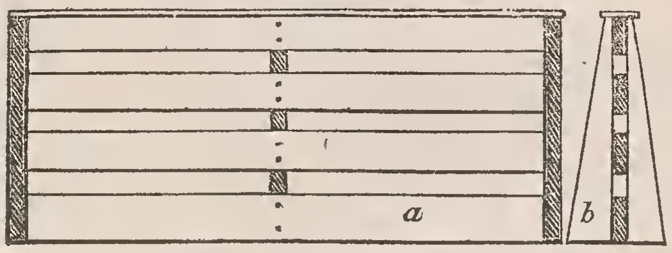
MESSRS. EDITORS—I lately received a letter from HENRY W. TAYLOR, of Marshall, Michigan, in which he says:

"Having been in a somewhat unsettled state for some time past, I had neglected to take the three last volumes of the Cultivator, which I procured lately to make my set complete. Should I build here, as I have now some intention of doing, I should consider your hints as to building, on the 59th page of volume 6, as of value to me far greater than the whole cost.

"I have been gratified with many of your other communications. There is a great deficiency in the design and *adaptation* of country dwellings in all our country. The same expense which is now incurred, if combined with architectural skill and good taste, would add doubly to the comfort of the great body of the people. I am glad to see that the Cultivator is becoming more and more interested in this great appliance to human comfort and happiness. In a country like this of Michigan, especially where all is new and fresh, and the taste and design of the present will probably govern for many years, not to say generations to come, it is greatly to be desired that a correct and sound judgment should prevail. It would be acceptable, I think generally, if the conductors of the Cultivator would devote a portion of that paper every month to this great neglected subject; and when not furnished with original matter and *drawings*, to select from the best English and American authors, such as Loudon, Robertson, Downing and others. Perhaps a hint from you might bring about such a change."

Schenectady, Feb. 26, 1842. D. TOMLINSON.

We find most of the plans of farm buildings given in foreign works, unsuitable for our country. They are not only too expensive, but their arrangements are not such as are needed by our farmers. Unfortunately, very little attention has as yet been given to this subject by our own architects, and we know of no source from which to obtain such plans of *farmeries* as are adapted to the wants of American farmers—those, we mean, who wish neat and tasteful dwellings, varying in cost from $1000 to $3000; and we shall be glad to receive designs for such buildings, together with barns and the other out buildings necessary to complete an establishment suitable for farms of one to two or three hundred acres. The plans should be accompanied with the necessary specifications and estimates of cost.—EDS.



IMPROVED BOARD FENCE.—(Fig. 38.)

MR. CULTIVATOR—Annexed hereto, I hand you a rough sketch of an improved mode of making board fence; and as it is on a plan entirely new, and perhaps not known to many, if indeed to a single individual, among your numerous army of readers, I take the liberty to send you a description of it, in the hope and belief that it may prove interesting if not instructive to them.

The boards are 14 feet long, and of such width as is generally used in constructing the common board fence. The posts are not set into the ground, but upon the ground, or rather upon a flat stone placed for the foot of the post to rest upon. The posts are made of oak plank two inches in thickness, and twenty inches in width, and four feet six inches long; these planks are split with a saw diagonally, commencing at one end two inches from one edge, and running out at the other end two inches from the opposite edge; thus making two posts, each eighteen inches wide at the bottom, two inches wide at the top, and two inches thick. These posts are now placed edgewise to the fence, and the boards are nailed to that edge, which forms a right angle with the bottom end; one post upon one side, the next upon the other side, and so on; the ends of the boards are joined to each other upon alternate posts, or by breaking joints, which adds to the strength of the structure. If a temporary fence is wanted, however, or one which is intended at any time to be removed or changed, then each length of 14 feet may be constructed complete in itself and independent of the rest, as represented by fig. 38, *a*. They may then be removed with very little trouble from place to place.

This fence occupies but little more ground than the common post and board fence, and is far superior to it in point of durability. Every one of your readers is aware how liable the latter is to be swayed out of shape by the action of wind and frost, and that but few years are required to decay that part of the posts under ground sufficient to let the fence down; while the posts of the improved fence, not being in contact with the earth, will last as long as any part of the fence. A strip of board five inches in width is nailed upon the top flatwise, which covers the whole and protects the upper ends of the posts from the weather; and if a good coat of paint is then added, it will stand a good chance to outlast the builder.

In the hope that your readers will be able to comprehend the plan from the above sketch and description, it is respectfully submitted to their notice and consideration.

a, represents a side view of one length of 14 feet. *b*, an end view, showing the shape of the posts.

Castile, Wyoming co., N. Y. 1842. J. HORSFIELD.

THE AYRSHIRE CATTLE.

MESSRS. GAYLORD & TUCKER—I find by your November number of the Cultivator, that A. B. Allen, Esq., of Buffalo, has returned from old England, and informs the readers of the Cultivator that they can make the Ayrshires here, by the thousand, by crossing Durham bulls on our best native milkers. Sir John Sinclair, Mr. Aiton, the duke of Montrose, and many other superior judges, esteem the Ayrshires as the very best dairy stock; yet they are of doubtful origin, and the most discriminating breeders do not agree as to their true origin. Some go so far back as 1740, to the herd of the earl of Marchmont; some ascribe to the Dutch cows imported by Mr. Dunlop, much to establish the present race of Ayrshires; while others think the Teeswater breed have done much towards producing the now existing, and much celebrated breed of Ayrshires. But why should we longer doubt their origin, when A. B. Allen, Esq., of Buffalo, has informed us how we can *produce them by the thousand?* If Mr. A. had ever perambulated the shires of Ayr, Lanark, Renfrew, or Sterling; or had he rambled among the farmers of old Monkland, Barony, Bothwell, or Cawdor; or had he spent but one afternoon, wandering along the banks of the Clyde, he would have seen many of the poor man's cows, as the Ayrshires are often called, and would never have hazarded the assertion that we can breed them by the thousand, and in the way proposed by him.

Is Mr. Allen well informed, as to the success of Col. Jaques, of the Ten Hills Farm, near Boston, in breeding Ayrshires in the very way proposed by him? The Col. has succeeded in getting up a stock he calls the Cream-pot breed. They are as much like the Ayrshires as a wild boar of the island of Mocha is like the improved Berkshire boar, Windsor Castle. (I have not seen Windsor Castle, but well know the old Berkshire mark, and I like the buff or sandy flecking.)

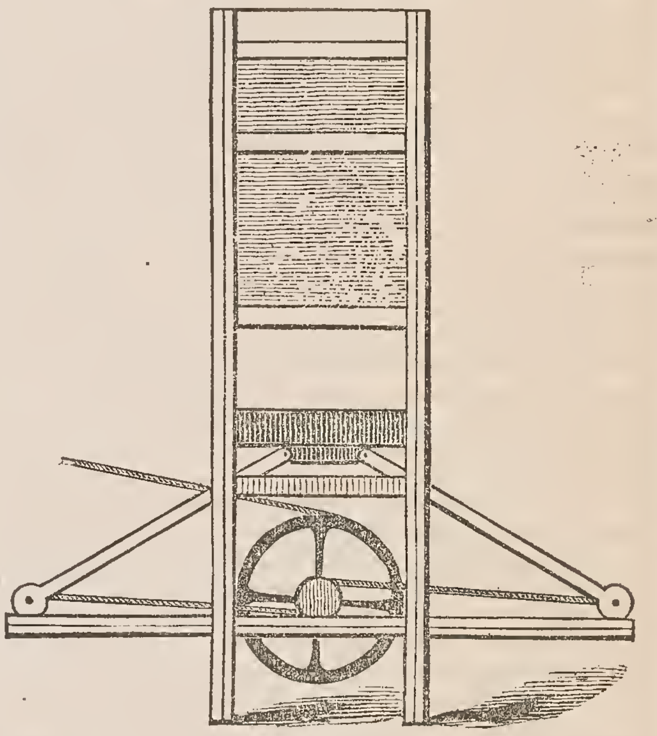
I will not apply to Mr. A. B. Allen the language that Festus did to St. Paul; but I will say, *I fear* a little experience as a breeder, and a *little trip to England,* has had a bad effect upon him.

In a few words, I will say to Mr. A. B. Allen, that he may as well attempt to engraft the black currant bush into the nose of the living sturgeon, and have it to produce fruit in all parts of the Hudson river, as to produce the pure Ayrshires in the way proposed by him.

I would not deter any one from crossing the best Durham bulls on our best native milkers. I would encourage it, and should expect an improvement.

It is much to be desired, that all persons writing for agricultural journals should give to the readers of those journals *facts, and nothing but facts,* on all subjects on which they write, and have no guess work.

New-Bedford, Feb. 5, 1842. GEO. RANDALL.



VAN HOSEN'S PRESS FOR HAY, &c.—(Fig. 39.)

MESSRS. EDITORS—The above cut is an illustration of the patent lever railway press, lately invented by Wm. C. Van Hosen, of Catskill, Greene county, state of New-York. The frame and box of this press are like those now in use. It will be seen by the cut, that the lower pannel is left out to show the follower or moveable bottom of the box with the end of the lever attached thereto. At the lower ends of the levers will be seen friction rollers, with a flange on each side to keep it on the track of the railway. Attached to the lower end of the levers are ropes or chains which are drawn in by the roller or shaft of the armed wheel. Upon the rim of this wheel is placed a rope, to which a horse may be attached, or carried to a capstan which is preferable; it will be seen by drawing in the lower ends of the levers, the follower is elevated, carrying up with it the article to be pressed; and when the greatest power is required, it is given without any additional draft of the horse. The portion of this press giving the power being made of wood is not so likely to break or get out of order as those made of cast iron. The travel for a horse in running up a bale, if attached to the rope on the arm wheel of 5 feet diameter, is 100 feet. If attached to a capstan, it is increased according to size of capstan and length of lever. While in a screw press, the travel is one mile and a half in running the screw up and down.

This press excels all others now in use for pressing hay, cotton, wool, rags, &c. &c., and will be warranted to perform well and do double the work that a screw press can with the same number of hands, with less than half the draft. A small boy can attend the horse, and the running back of the follower with perfect ease. The time required in running up the follower is about one minute. Six bales have been pressed to the hour with ease. Bales weighing over 300 pounds have been pressed by one man.

The construction of this power is such that it does not require a building expressly for it, as it may be placed in any barn or shed, and the horse may move in any direction or at any distance from it; and when the bale is ready for delivery, it is discharged instantly, and the follower gradually recedes as the hay is placed in the box.

The construction of this power is so simple that any man can make one or keep it in order. For a small expense it can be applied where the screw is now in use, and save much barn room and horse flesh.

There are several of this new style of press now in use in Greene county, and others building in different parts of the counties of Greene and Columbia. One may be examined at the residence of the inventor, Leeds, Greene county, and one at the farm of Judge Cooke, Catskill. The latter is sunken through the threshing floor, and the horse travels outside of the barn.

W. S. **Jacks.**

Catskill, March 5, 1842.

IMPORTATION OF STOCK.

Messrs. Gaylord & Tucker—No person knows the true value of good stock unless he enters into the improvement of it with a determined spirit to *equal any one*, and then he finds from experience there *is no end to it;* the more warmly he pursues, the more highly he is gratified. The nearer his stock advances to perfection, the more care and *judgment* is required to keep them up; and no one knows the *pleasure* that proceeds from *this care*, but the *real* and scientific breeder. His thoughts, his reflections, and his attention are all called into active and pleasing research; and from this, he finds there is much to learn, and much to overcome. He is laughed at by the *ignorant*, contradicted by sceptics, "*abused*" *by smatterers*, and envied by the wealthy and "*would-be-great.*" And why is this? Because, while constantly inventing plans to improve the body of the beast, in true hearted earnestness, he has *faith* in doing a good action. It adds value to his mind, and brightens it to mightier thoughts for the benefit and happiness of his noble station; for such a man must stand above. And if I may say it without *presumption—the good, thorough, practical breeder and tiller, when rightly known as such*, deserves the highest title under heaven. He adorns the earth *beautifully and substantially*, and is the foundation of useful and interesting knowledge.

Well do I remember ten years since how many "*old fashioned farmers*" in England ridiculed and "*abused*" *the better bred ones* for their spirit and enterprise, who could not *then* be persuaded to go out of their beaten track, but *now* see it in a very different light; but it was "ocular demonstration," and the *proof* of their neighbors' prosperity that weaned them from it.

If a person gave one hundred and fifty guineas for a bull, either Hereford or Short Horn; or from fifty to eighty guineas for a ram, either Cotswold or Leicester, he was by them considered "*a down right fool*" for his pains. The bigoted old farmers would meet together at the village public house, or on market day, and over their pipe and pot would go as far as to call him a common enemy, and *scandalize* him accordingly, because he was injuring their sales. They would go home to their family circle "*half groggy,*" and *cunningly* admonish their sons against this extravagance, who had probably been ("*out of patience*") driving their diminutive stock to several different fairs without sale or chance of it, at an expense each time; while buyers would come to the houses of their neighbors who had better bred ones, cheerfully give the best price, and rejoice at their bargain. I have many times seen cattle and sheep bred in the same parish, on exactly the same sort of soil, kept in the same manner, fed and sold at the same age, and to the same butcher; the mongrel cattle would go from fifteen to twenty pounds each, while the better breeders' (for which the demand was great,) went from twenty-five to thirty-five. The mongrel wethers, at two years old, would not fetch more in market than the good breeders' tegs at fourteen months. "*These ignorant knowing ones*" would read the market prices, and find "course and inferior beasts" selling from three and twopence to three and fourpence per stone, (of eight pounds to the stone,) when the prime quality fetched from four and tenpence to five shillings; making thirteen pounds, fifteen shillings difference (in the beef only) in the lowest and highest price, with a beast that weighed one hundred and fifty stones.

These circumstances, and many others *plainly visible*, at length opened the eyes of those who *exclaimed against the expense of good sires*. They found that *worth was worth;* and that their produce would repay it with interest and profit. Those who were so much prejudiced against giving such high prices for them, *now* spur on an auction with as much spirit as the "*best;*" and instead of calling such men *fools*, follow their example in everything, and acknowledge their own deficiency; and they found that prices grew larger, as better breeders became more numerous. When I see this, *as I have done*, I say I see a noble feeling at work; and it is my "*deliberate opinion,*" that good sires and dams, both of the Herefords and Short Horns, will always be in good demand, and at very high prices; the more they are known, the more they are appreciated.

I purchased the Hereford bull, Major, of Mr. Wm. Hewer. Had he lived, he would have been five years old this spring; he has taken seven first prizes at the different agricultural societies, viz: Hereford, Farringdon, and Cirencester, from a calf to the best bull of any age, contending against some of the best Herefords and Short Horns each time. He won as many first prizes of his age as any bull in England; and I have heard it remarked by many of the "*best*" judges, (some of them Short Horned men,) that he was as good a bull as England could produce. This I readily believe, and would have given my "*last shirt*" to have saved his life; for I think his loss is a very heavy one to this country. His offsprings, two year olds and yearlings, are getting nearly as conspicuous as he; two of each within the last two years have taken the first prizes at Cirencester, against many of the first breeders, both of Herefords and Short Horns; and I trust as they grow older they will give the "*best*" *a hard race to conquer.*

Major lived forty-two days on the vessel, amidst adverse winds, storms, and waves the most terrific; the last fifteen on nothing but what I gave him from a bottle. On the banks of New-Foundland he was committed to the deep. If one of my best friends had gone, I could not have felt more. I had anxiously watched over him night and day. No person could have had more attention; but all was useless; his hour had come. Such trials as these are designed to develop a noble spirit; therefore I must not give way, but try again. I have one consolation; we have four yearling bulls, six two year old, and two yearling heifers got by him, quite as promising as those I saw in England. I never saw the waves roll higher, or the wind blow harder, for thirty days in succession. And our long tried, experienced, and worthy seaman, Capt. E. E. Morgan, who has crossed the ocean 106 times, says he never had such a boisterous voyage. We had one wave strike the vessel, which shivered the bulwarks and galley, and upset the main boat. Had such a wave struck the wheel of a steamer, it must have disabled her; or had my stock been there, where I had previously carried them, they must have all been swept away. In the course of these trying storms, I lost Major, Cleopatra, (a four year old Short Horn cow—as good a one as I ever saw,) eight Leicester and three Cotswold ewes; they were worried to death by the continued rolling of the vessel. Venus, a four year old Short Horn; Columbus, a Short Horn calf, and the rest of my ewes stood the test well, and have improved much since the storms have ceased. I brought Cleopatra and Venus on purpose to show against those Mr. Allen is going to receive from his "*one breeder.*" Although I have lost the best, Mr. Hillhouse has Wildame from the same herd to take her place. Therefore, *spirit and courage must keep up* and doing.

The Messrs. Hewers' annual sale of rams last year averaged, with the rest of his sales, £17 17*s.* 6*d.;* one sheep making one hundred and sixteen guineas, or $580. And one of their wether tegs, fourteen months old, weighed fifty and a quarter pounds per quarter. This was without his head or caul; according to American weight would have been about 236 pounds. This teg was shown dressed at Stow fair, May the 12th, 1841.

There is now a fair and spirited contest between the Herefords and Short Horns, and *time only will prove* which are "*the best.*" The former have taken every one of the first prizes for fat oxen at Smithfield show this year.

The *best* breeds of Herefords and Short Horns never have been higher than at the present. The demand is greater the more they are known; and I do assure you the "*best*" are far between in England, although not confined to "*one breeder.*"

I would publish another very interesting letter from the "*Earl*" of Warwick, were it not for the *ill natured criticisms* of some of your *correspondents*. However, I will make some extracts from it in another communication. Though I do not fear it myself, I will not bring my friends under the lash of *the literati.*

Wm. H. **Sotham.**

Ship Hendrick Hudson, March, 1842.

CULTURE OF THE POTATOE.

Messrs. Editors—I this year planted about four and a half acres of the potatoe. The ground was a heavy sward, some part of it formerly quite wet; but drained last year, turned over late in the fall, subjected to the frosts of winter, and in the spring harrowed on the furrow without disturbing the sod, until sufficiently loose for planting. My Rohans last year pleased me so much that I determined to make my principal crop of them; but on the same ground I planted for table use the May-duke and white kidney for early potatoes, and the pink eye and Mercer for winter use, together with samples of several other varieties as an experiment, and some three-fourths of an acre of the Sardinia potatoe for the purpose of comparison with the Rohan. About three acres were Rohans. Part of the Rohans, with the early kinds, and those for experiment, were planted about the 20th of May; but the planting of the remainder of the Rohans, and that of the Sardinias, was not completed until the 9th of June. The severe drouth of the summer seriously affected the crop, nearly preventing some of the late planted Rohans from vegetating at all; and as the whole were on the top of the sod, they probably suffered more than they would had the turf been rotted more thoroughly. As it was, I obtained about 750 bushels; the Rohans first planted producing at the rate of about 200 bushels to the acre; while the late Rohans and Sardinias were about equal in productiveness. My experience this year, as heretofore, has gone to prove that the chances for a crop of potatoes are much increased by planting as early as the ground is in a fit state for their reception. There was no curl among any of the varieties grown this year, though it appeared among some of them last year, and although other farmers in the county have suffered much from that disease in their crop this season; but the roots were much injured by the wire worm; they seeming to find sustenance or harbor mainly in these.

I wish to mention here one circumstance respecting the potatoe crop of this year, which has come directly under my observation, and which, though inexplicable by me now, may hereafter help to explain the total and singular failure of Mr. Guthrie's Rohans last year. My Rohans succeeded so well last year that several of my farming friends were disposed to try their culture; and among others, T. Cowles, Esq., a careful and accurate farmer, took half a bushel. They were taken from the same bin in the cellar as those I planted, and at the same time; and were cut and planted on the same day he received them. As an experiment, and to test their comparative productiveness, they were planted with Sardinias on one side, and Mercers on the other; the length, number of rows, and number of hills, being the same. The Sardinias were planted whole; the Mercers cut like the Rohans. From the first coming up the Rohans seemed a failure; and while the tops of the others were vigorous and flourishing, there was scarcely a handful of vines on the whole of the Rohans. A few days since, he put into my hands the following statement of the crop at digging: Mercers, 17 bushels; Rohans, $1\frac{3}{4}$ bushels; Sardinias, $18\frac{3}{4}$ bushels. The explanation of such a total failure I leave for the reader to make.

Otiseo, Dec., 1841. H. M. **Gaylord.**

OPERATION OF SPAYING.

Messrs. Gaylord & Tucker—I have just read, in the Cultivator for this month, your mode for performing the operation of "spaying." A different mode is practiced in this neighborhood, at least by one operator, which in my judgment has some very important advantages over the one recommended by you. Instead of the incision being made "between the four back teats," it is made in the *side*. The operator provides himself with a bench or plank about a foot wide, elevated sufficiently to enable him to work easily, standing in an upright position. The animal is laid on the plank on her side, (usually her right side;) a leather strap is then passed under the flank and over her body, just behind her fore legs, and buckled down tight enough to hold her still; her head and hinder legs are held steadily by a couple of lads; and the operator, standing at her back, makes the incision in her side or flank, just between and a little below the hip and the short ribs. The balance of the operation is the same as that recommended by you. The advantages of this over your mode are the following: the suspension of the animal by the hind legs, which must be painful to it and prejudicial to its health, is avoided; the operation is less dangerous, and the animal being more steadily confined, there is less probability of the operator doing mischief from the contortions of her body; it is more speedily accomplished, and the ovary more conveniently reached, and easily excised; and the wound, being not so much exposed to subsequent injury, heals quicker; and the enlargement of the belly, caused by careless spaying in your mode, and consequent rupture, to which there is great liability, are entirely avoided. This practice has been used among my stock for the last five years with entire success. I have never lost a single animal from spaying, or had any disfigured, since this mode of operation was introduced on my farm. J. W. **Crisfield.**

Princess Anne, Md., Jan. 13, 1842.

A PRODUCTIVE FARM.

Messrs. Gaylord & Tucker—In your number for February, 1841, you take notice of a farmer named Thomas Oliver, within a short distance of Edinburgh, leasing for the last 20 years a farm of 150 acres at £10 10*s.* per acre, and renewing his lease for another term of years, which in Scotland is 19—not 15 years, as you state; and that from a poor man, Mr. Oliver has become rich.

Mr. Oliver's farm is peculiarly situated, and thereby possessed of advantages seldom falling to the lot of farms. It is distant about two miles from Edinburgh, and about the same distance from the sea. Through a considerable part, the common sewers from the southern districts of the metropolis are conducted by one ditch; from this, small canals are cut to every part of the farm, low enough for the water to flood. These canals are stopped or dammed up at intervals, whereby the ground is flooded with liquid *urate and poudrette;* when it is thoroughly soaked, the water is turned off that it may dry. A thick stock of very succulent grass springs up. This portion of his farm Mr. Oliver lets off by public auction every spring to the cow keepers, who supply Edinburgh with milk, in lots from one-fourth of an acre and upwards. The price per acre varies every season. It has been let as low as £20; and has brought £50. The medium is from £30 to £40 per acre.

In forward seasons they commence cutting the first week of April, and continue doing so until 15th November, when the term of possession expires.

Mr. Oliver has no trouble, farther than to employ a man to keep the canals clear, flood the ground regularly, and turn the water off when the ground is sufficiently irrigated. The grass is cut every third or fourth week, and causes a great flow of milk.

Mr. Oliver has several shallow ponds at the lowest corner of his farm. Into these the water is turned during winter, and deposits a rich sludge or mud. In the spring these are dried, and the manure, which is very rich, carted off to his fields, and the surplus sold at a high price to the neighboring farmers.

Mr. Oliver is a scientific farmer, of liberal education, and was a candidate with Mr. Low for the chair in the University of Edinburgh, now filled by the latter gentleman. Before he entered into possession of this farm he was in easy circumstances. These he has no doubt improved by his successful farming.

From the same source several thousand acres between Mr. Oliver's farm and the sea are also enriched, yielding equally heavy crops of grass, managed and sold in every way the same. And on the sea beach a large tract, that formerly consisted of sand hills, yielding only a few stinted furze bushes, has been leveled within a few years, canals cut all round, sown with grass, and now yields grass equal to any grown on Mr. Oliver's farm, and makes a handsome annual return to the proprietor.

I have been thus particular, not knowing but some farms in the vicinity of some of your cities may possess equal advantages as Mr. Oliver, without the proprietor being aware of the riches he is allowing to go waste.

Ascot, Lower Canada, Jan. 15, 1842. SCOTUS.

REPORT ON FARMS.

WE omit some communications already in type, to make room for the following interesting Report of the Onondaga Co. Ag. Society's Committee on Farms and Farm Crops, just received:

The committee would respectfully report, that the number of farms which they were called to examine was small compared with the number which will probably hereafter be offered in this county, when the attention of the farming community shall have become more awakened to the subject of agricultural improvement.

Your committee were first invited to examine the farm of Silas Gaylord, which is beautifully situated on the west bank of Skaneateles lake, and about four miles south of the village. This farm contains 145 acres, 25 of which are covered with wood. The 120 acres are all arable land, and suitably divided into fields, on which is pursued a course of crops. A large share of the western part of this farm was formerly so wet as to be unfit for tillage. This Mr. Gaylord has very properly reclaimed by underdraining, which is a very profitable operation on lands which are so moist as to be otherwise untillable. Twelve hundred rods of stone underdrain are already constructed on this farm. The buildings are well located and in good repair. The out buildings are extensive and convenient, especially the barn, which is very large, with cellar, shed or stabling, under the whole of it. This your committee believe is a great improvement, as it requires no additional roof and furnishes a place where stock can be kept comfortable in the most inclement weather, a convenient cellar for the preservation of roots, and a place for preserving manure from the great waste attendant on exposing it to the storms of winter and spring.

The farming tools are in good order, under cover and ready for use. The fences mostly in good order, and a large share made of posts and boards. The fields are generally in good order, and few weeds are allowed to perfect their seeds. All vacancies in the timber land are filled by transplanting locust trees, which are taken from a nursery on the farm. By thus keeping the locust tree shaded, Mr. Gaylord thinks he shall avoid the depredations of the borer. The stock on this farm consists of 33 neat cattle, all of which are full blood or grade Durham, 4 horses, 15 hogs, and 74 sheep, of the improved English varieties. The division of the farm the present year with the quantity of crops is as follows:

Wheat,	18 acres,	400 bushels.	Corn, 5 acres, much injured by wire worm.	
Barley,	10 do.	300 do.	Meadow, 30 acres,	60 tons.
Peas,	5 do.	100 do.	Pasture, 45 do.	
Oats.	5 do.	200 do.		
Potatoes,	2 do.	320 do.		

The farm of Mr. Gaylord exhibits the practical good sense and untiring industry of its owner, and is well worthy of a visit from those who are designing to raise stock or erect the out buildings which are necessary on a stock farm.

Your committee were next called to view the farm of Fletcher Woodward, situated on the turnpike, five and a half miles west of Syracuse. This farm contains 236 acres, 225 of which are under improvement; all tillable and in a high state of cultivation. This farm is naturally adapted to the raising of grain, and to this Mr. Woodward gives most attention. The course of crops which is produced is: 1st, corn or potatoes, on a clover lay, then oats or barley, which are followed by wheat, after one and sometimes two plowings; then sows 8 quarts of clover seed, 2 quarts of timothy seed, and 3 to 4 bushels of plaster per acre on the wheat early in the spring, and pastures one year after the wheat is harvested. Mr. Woodward sows from one and a fourth to two bushels of wheat per acre, according to the time of sowing; prefers sowing from 10th to 15th September. Never sows grass seed with any crop but wheat; general average of wheat crop per acre, from 20 to 27 bushels; has raised 48 bushels per acre on small pieces. Corn is invariably raised on green sward, with one plowing, harrowed down smooth, and struck out both ways; rows north and south, 3 feet 4 inches, east and west, 2 feet 8 inches apart. Plants early in May with plenty of seed, coated with tar, and thins at hoeing to 4 stalks in hill; plasters as soon as up, and again after second hoeing; uses the cultivator, hoes 3 times, and makes very little hill.

Barley is generally sown on pasture land with one plowing; general crop 30 to 58 bushels per acre; sows from 2 to 2½ bushels per acre. Oats are cultivated after corn; sows 2½ to 3 bushels per acre; general crop 50 to 80 bushels per acre.

Mr. Woodward's method of cultivating potatoes is to draw at the time of threshing wheat, (with a pair of horses and rope,) the straw, and deposit it in large bunches on a clover lay, leaving a narrow strip all around the field on which no straw is put. In the spring this narrow strip is plowed and harrowed fine. Then drops the seed once in two feet each way, covers about one inch deep, and keeps the surface as near level as possible. He then takes the straw adjoining this circle, around the field, and deposits it evenly on the ground already planted, to the depth of about 4 inches when settled together. This leaves another strip for plowing, which is treated in the same manner as the first, and so on, until the crop is ready to harvest, which is usually from 300 to 500 bushels per acre. This farm is divided into fields of the average size of 23 acres. The fence consists of 963 rods of posts and boards, 215 rods of full wall, and 180 rods of half wall, all in good order. For the convenience of passing these fences, 33 gates are already hung, and the committee were informed by Mr. Woodward that he had contracted for 22 additional gates to be erected this fall. The quantity of produce raised on this farm the present season is as follows:

Wheat,	88 acres,	1760 bushels.	Barley,	25 acres,	750 bushels.
Corn,	20 do.	1460 do.	Potatoes,	5 do.	1500 do.
Oats, injured by drouth.	33 do.	1320 do.	Meadow,	10 do.	20 tons.
			Pasture,	47 do.	

The stock kept on the farm consists of 12 horses, 28 neat cattle, 83 hogs, and 150 sheep.

Mr. Woodward has given a practical illustration of the fallacy of the idea which is so often advanced, that the farmer cannot afford to be nice in his farming operations, and that the profits will not pay for an outlay of extra capital in improving the soil and fence. One of the committee asked Mr. Woodward if he took an agricultural paper, to which he replied—"I do, and have for a number of years, and have found it of great use. And could I have had the Cultivator, with the present light upon the subject of farming, when I first commenced, (18 years since,) I think it would have been more than $1000 benefit to me."

The farm of Mr. Woodward exhibits in a favorable manner the beneficial effects of what is denominated the new system of husbandry. The antiquated customs of farming which our forefathers followed, are not so dear to him as to cause him to shut his eyes to the improvements which modern agriculturists are annually making in the science of farming. He is not so fearful of being called a "book farmer" as to refuse to take and read the agricultural publications of the day. He is not so fearful of being denominated a theorist as to refuse to try the improvements which are recommended in those publications; and his farm shows the consequence; it being well fenced, well cultivated, very productive, and very clear from weeds, none of which are suffered to seed. In short, everything shows that the operations on this farm are directed by an enterprising, intelligent, practical farmer.

Your committee were next called to examine the farm of Hiram Church, situated in the town of De Witt, 2½ miles northeasterly from Syracuse.

This farm contains 137 acres, about 100 of which are under improvement, and all suitable for tillage. It is divided by a good cedar fence into fields containing about 10 or 12 acres each. The produce of this farm the present year is—

30 acres	wheat,	679 bushels.	1 acre	potatoes,	150 bushels.
4 do.	corn,	200 do.	12 acres	meadow,	24 tons hay.
6 do.	oats,	360 do.	22 do.	pastured.	
3 do.	peas,	75 do.	22 do.	summer fallow.	

Mr. Church prepares his ground for wheat mostly by summer fallowing, plowing three times. His method of raising corn is much like that pursued by Mr. Woodward, except Mr. Church uses a small plow instead of a cultivator; consequently he makes some hill around the corn.

The stock kept on this farm consists of 9 neat cattle, 7 horses, 10 hogs, and 60 sheep. Mr. Church makes liberal use of clover seed and plaster, and this practice your committee would earnestly recommend to every farmer.

The farm of Mr. Church is newly improved compared with the farms of Mr. Gaylord and Mr. Woodward; but is naturally choice grain land, and we doubt not with the industry and enterprise which Mr. Church exhibits, it will soon show such a degree of neatness, and amount of produce as few, if any, farms can now exhibit.

Your committee also examined a field of corn containing 9 acres, cultivated by H. Fancher on the farm of Fletcher Woodward and in the same manner as reported by Mr. Woodward. It was well cultivated and would yield more corn per acre than any other field on the farm of Mr. Woodward.

Royal White of Onondaga called the attention of the committee to a field of wheat containing 4 acres and 52 rods, which Mr. White informed us yielded 167 bushels of wheat. Method of cultivation—broke up about the middle of June about ten inches deep, and immediately harrowed. Plowed and harrowed again the fore part of August. Plowed and harrowed the third time the 10th of September, and immediately sowed with 7 bushels of Canada flint and white flint wheat. Three-fourths of an acre of this piece of land was sowed with peas, and was plowed but twice.

Col. W. Abbott, of Otisco, presented a fine sample of spring wheat which he originated by a series of experiments from the bald flint, which is a well known variety of winter wheat. For an account of his experiments we would refer to page 138 of volume 9 of the old Genesee Farmer.

The committee would here state the quantity of produce which is given in this report, is in part given from ascertained facts and partly from estimates which the committee believe to approximate near to correctness.

The committee recommend that the first premium on farms be given to Fletcher Woodward. The second to Silas Gaylord, and the third to Hiram Church.

They also recommend that premiums be awarded to H. Fancher, Royal White and Warner Abbott.

The committee would farther remark that they have had a pleasant duty assigned them, and they regret that the number of competitors was not greater.

The committee would also return their thanks to the different competitors for the kindness and hospitality with which they have been treated.

All of which is respectfully submitted.

ENOCH MARKS, } Committee.
WILLIAM FULLER, }

Syracuse, September 29, 1841.

PITTS' IMPROVED BEE HIVE.

MESSRS. GAYLORD & TUCKER—Permit me, through the medium of the Cultivator, to call the attention of those who feel an interest in bee keeping to an examination of Pitt's improved hive.

The object of the improvement is to protect the bees from destruction by the bee moth, and other external enemies. The plan adopted by the inventor is very simple, and costs but a mere trifle, and has, so far as it has been used, proved effectual against the ravages of that wily and destructive insect—the bee moth. The hive is of the most easy and plain construction, consisting only of a simple box, set upon what is denominated the protector; and the bees are permitted to work on what is called the subtended plan, that is—when one hive is filled with comb, it is raised up, and an empty box or hive is set under it, with holes through the top board or cover of the box, through which the bees will descend and take possession of the lower hive, leaving the top hive with its contents to be taken away by the bee master at his own convenience, whenever circumstances will permit. By the adoption of this plan, there is no necessity for killing the bees to get their honey; and they are, in addition, provided with sufficient space below to always work downwards; which is in accordance with the natural habits and instinct of the bee.

To work bees on the subtended plan is not a novel idea. It has been adopted in France and Germany with the best success; and is also practiced by many apiarians in our own country, as the simplest, cheapest and most successful method of working bees that has as yet been recommended to their attention. The hive left at your office is of the usual size, and combines the whole improvement. In constructing the protector, the natural habits of the bee moth has guided the inventor, and enabled him to protect the bees from the worms or larvæ of the moth after the eggs are hatched. The miller or moth that lays the eggs which produce the worms, enters the hive for the simple purpose of depositing them in the vicinity of food adapted to the wants of the worm, before it is transformed into a winged insect—the real bee moth. The miller will of course be as well satisfied to lay its eggs in any other aperture immediately connected with the hive, offering equal accommodations to the young worms. The facilities offered the moth to pass into the protector in preference to going into the hive, are in such proportion that the moth will seldom, if ever, find its way in among the bees. The protector is easily kept clean of the worms without disturbing the inmates of the hive, and provides complete ventilation when the entrance to the hive is closed up.

Albany, March, 1842. H. A. PITTS.

WORCESTER PLOWS.

MESSRS. EDITORS—When in the city a few days ago, I was invited by Messrs. Pruyn, Wilson & Vosburgh, to step into their store, in State-street, and examine some plows, cultivators, &c., which they had just received from that well known establishment at Worcester, Mass., of Messrs. Ruggles, Nourse & Mason, who, I am informed, have appointed the above firm their agents for the sale of implements in this city.

I congratulate the farmers in this vicinity on this acquisition, and would recommend them to call and *see for themselves* before they purchase elsewhere; for I am fully persuaded that on an inspection of the plows, they *will be convinced* of the superiority of their construction: that they are far superior to anything of the kind we have had heretofore; and from the well known character of the establishment from whence they were sent, I am confident they will not be disappointed in the performance of their work, strength, and durability. They are *not* like "Pinder's razors—made to sell," but are made to perform well when sold. The first performance of plows that I had ever seen from the above establishment, I witnessed in October last at the plowing match of the Berkshire agricultural society, where I officiated as one of the committee to award premiums, and out of eighteen plows that started, three were of Messrs. Ruggles, Nourse & Mason's manufacture; and it is a singular fact, that notwithstanding these plows were all entirely new, and in the hands of persons who had never seen one of them until the day previous, two out of three premiums were awarded to the plowmen that used these plows; and they had to contend against Chamberlin's plows which had always been successful heretofore, and the plowmen accustomed to them.

I also noticed a small swivel plow for the purpose of plowing in grain, and which could be used also for a corn plow if necessary. There were other kinds, but I have not time to particularize them now.

Farmers, call and look at the plows; you will find Messrs. Pruyn, Wilson & Vosburgh polite and attentive.

C. N. BEMENT.

Three Hills Farm, March, 1842.

The Garden and the Orchard.

ORNAMENTAL TREES AND SHRUBS.

HAVING already given some notice of those trees and shrubs more particularly adapted for ornament in winter, I propose to mention some of the finest which are natives of this country, with a few of the more common exotics, whose chief beauty is exhibited in the summer season. Anything like a full enumeration is of course out of the question here.

Among native forest trees, the elms and maples are conspicuous. The common sugar maple is well known as one of the finest shade trees. The black maple, (*Acer nigrum,*) is less known; it exceeds the sugar maple in denseness of foliage, and in richness of appearance, and is perhaps, as an ornamental tree, inferior to none. The red or scarlet flowering maple, (*A. rubrum,*) found chiefly in swamps and wet places, is distinguished by its scarlet blossoms which appear early in spring, and by its glaucous leaves, which roll up in fine silvery masses in the wind.

The American or white elm, (*U. Americana,*) everywhere more or less abundant, is conspicuous for its graceful form, and when large, for its magnificent appearance. The *Ulmus racemosa* is of larger and denser foliage, but otherwise inferior in beauty to the former.

The *oak* is very justly considered as one of the most majestic and picturesque of forest trees, and may be largely introduced in all plantations of much extent. The species are too numerous to mention here; but among some of the most common and handsome natives are the white oak, (*Quereus alba,*) black oak, (*Q. tinctoria,*) scarlet oak, (*Q. coccinea,*) remarkable for its brilliant scarlet leaves in autumn; swamp chestnut oak, (*Q. prinus,*) and rock chestnut oak, (*Q. montana.*)

Among other of our forest trees may be named, as more particularly worthy of attention, the *linden* or *basswood,* distinguished by its large, dense foliage, and conical form; the *white ash,* by its broad, round head, and lightness of foliage, and by its dark purple hue in autumn; the *American aspen,* by the lively green of its early leaves, and their constant tremulous motion in the breeze; the *chestnut,* resembling the oaks in general character of expression; the *tulip tree,* (*white-wood,*) belonging to the natural order of the magnolias, and resembling them in its large, rich and glossy foliage, and stately growth; the *catalpa,* conspicuous for its broad leaves, its loose, spreading growth, and large panicles of beautiful flowers in summer; the shell-bark hickory, for its compact and handsome form, and dense foliage; and the *black walnut,* remarkable for a softness of foliage combined with massive boldness of form. Most of these are of the largest size, and are best introduced in extensive grounds, and sparingly in smaller.

Some of the smaller ornamental trees, more suitable for lawns of an acre or two, are,—the *horse-chestnut,* the finest of which by far is the common or *Æsculus Hippocastanum;* the *dog-wood,* (*Cornus florida,*) and Aronia, (*A. Botryapium,*) eminently beautiful from their profusion of early spring flowers; the *common* and *glutinous locust,* and the honey locust, (*Gleditschia;*) the *Siberian crab;* the *Chinese double flowering apple;* the *weeping,* and *golden ash;* the *weeping,* and *golden willow;* the *Cercis,* or Judas tree; the *mountain ash;* the *white poplar* or *Abele;* the *American,* and *European larch;* the latter inferior to no tree in beauty.

American and exotic ornamental shrubs are very numerous. The following list embraces only some of the finest, which are either natives of our forests and wilds, or may be obtained from most of our principal nurseries.

EARLY SPRING FLOWERING.

Daphne mezerum, dense pink flowers; berries poisonous.

Cydonia japonica, Japan quince; flowers numerous, large, and bright scarlet.

Amygdalus nana, double flowering almond; branches densely covered with handsome flowers.

Ribes aureum, Missouri currant; flowers yellow.

Shepherdia argentia, Buffalo berry; yellow.

LATE SPRING FLOWERING.

Lonicera Tartarica, Tartarian honeysuckle; flowers white, and light red; abundant; very beautiful.

Philadelphus hirsutus, large white flowers. *P. coronarius,* flowers smaller—(*Syringo.*)

Syringa vulgaris, common lilac. *S. persica,* Persian lilac; panicles larger, and the shrub of more airy growth than the common lilac.

Halesia tetraptera, silver bell tree; handsome pendant white flowers.

Azalea rudiflora, beautiful light red flowers.

Fothergilla alnifolia, white.

Berberis vulgaris, barberry; racemes of yellow flowers.

Robinia hispida, rose acacia; large, handsome, rose flowers.

Calycanthus glaucus, sweet scented shrub; flowers dark red; very fragrant.

Chionanthus virginica, white fringe tree.

Kerria japonica, Japan globe flower; flowers double; yel.

Spiræa hypericifolia; flowers small, white; abundant.

Ribes sanguineum; scarlet flowering currant.

EARLY SUMMER FLOWERING.

Viburnum opulus, snowball; its splendor well known.

V. oxycoccus, bush cranberry; large, white corymbs.

Vaccinium stamineum, a mass of white flowers.

Rubus odoratus, large, red flowers; dense rich foliage.

Spiræa salicifolia, dense, white, terminal panicles of flowers. *S. opulifolia,* numerous, dense, white corymbs.

Lonicera xylostrum, fly honeysuckle; yellow.

Rhus cotinus, purple fringe tree; very singular and beautiful, especially in autumn.

Colutea arborescens, yellow.

Cytisus laburnum, common laburnum; yellow.

Symphoria racemosa, snowberry; handsome white berries in autumn.

LATE SUMMER FLOWERING.

Hibiscus syriacus, (Althea,) single white, shaded with purple. The double varieties possess inferior beauty; the single and semi-double very handsome.

Magnolia glauca, large, fine white flowers.

Ceanothus americanus, white flowers, in short dense racemes.

Æsculus macrostachya, large showy spikes of white flowers.

Jasminum humile, yellow; the only species hardy here.

Spiræa tomentosa, flowers, pale purple; in a showy, dense, terminal raceme.

Roses also constitute a large and important class of ornamental shrubs. Long catalogues are given; but many named varieties differ only by very slight shades. Among a few of the finest and most distinct are the *tall, double white,* the *royal province,* the *scarlet Austrian,* (orange,) the common *moss, belle alliance,* (variegated,) *Harrison,* (double yellow,) Detroit, (*climbing,*) Labrador, remarkably fine and graceful in growth, &c. &c.

CLIMBING SHRUBS are not only eminently desirable from the constantly varying and graceful forms which they assume, and which may be given to them at pleasure, but also from the beautiful covering which they give when trained over otherwise unsightly objects, as wooden fences, stone walls, and rough out buildings. Among them are the following:

The *Detroit rose,* growing rapidly, and throwing out at mid-summer a brilliant profusion of showy flowers.

The *trumpet flower,* (*Bignonia radicans,*) with its dark, rich, large trumpet shaped corols.

The *native clematis,* (*Clematis virginica,*) common as a native in New-York; white flowers.

Ampelopsis hederacea, (sometimes called *five finger,*) grows luxuriantly, and often covers the trunks of our forest trees 60 or 70 feet high, presenting in autumn a splendid glow of bright scarlet from the color the leaves then assume.

Aristilochia tomentosa and *A. sipho,* are handsome, delicate twiners, with singular flowers.

Atragene americana, nearly resembles clematis; large purple flowers.

Menispermum canadense, a native of our forests, and a light, graceful twiner.

Periploca græca, flowers purplish brown; growth rapid and dense.

Celastrus scandens, (*bittersweet,*) highly ornamental in winter from its scarlet seeds.

The *honeysuckles* are some of the handsomest climbers; among the many may be mentioned as most desirable the Chinese, (*Lonicera flexuosa,*) the woodbine, (*L. peryclemenum,*) the native yellow trumpet, (*L. flava,*) and the scarlet trumpet, (*L. sempervirens.*) The latter is eminently beautiful; and its bright red flowers continue to appear plentifully through a large portion of summer and autumn.

The different *grapes* serve as excellent coverings for objects to be concealed; their rapid growth and dense foliage fitting them well for this purpose.

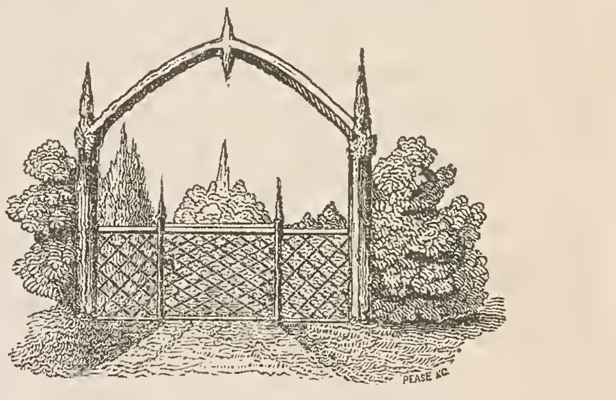
The English *ivy* (*Hedera helix,*) being an evergreen, would exceed all other climbers for this season, were it not too tender for our winters when elevated above ground

On the proper disposition of trees and shrubs, to produce the best ornamental effect, whole volumes might be written, and the subject remain unexhausted. A few leading rules may, however, be useful to those who have not given any thought to this point. It is a very common and erroneous opinion, derived from the first impression on seeing specimens of the natural and geometrical styles in planting, that the latter requires far more of art and study in executing it than the former, which is regarded as merely an accidental jumbling of parts together. But the fact is just the reverse. The *perfection* of art consists in producing a pleasing effect, while the art which produced it is concealed from the spectator. The painting of a raw student exhibits nothing but the most elaborate marks of the pencil, while their combined whole is perhaps stiff and formal. But the work of the master, though the parts were apparently dashed off with ease and rapidity, exhibits as a whole a beautiful combination; and strokes which appear rough and merely accidental, were really laid on with a most careful eye, and are perhaps absolutely essential to the fine expression of the picture. It is precisely similar in ornamental planting; and nothing but a close and careful study of the expression of the varied and endless groups, which may be composed from a large collection of trees and shrubs, can enable any one to arrange them to the finest effect. As a general rule, trees of an entirely discordant character should not be indiscriminately mixed, but those should unite in natural groups which possess some similarity of expression. This similarity always exists with those of the same genus or the same natural order; and often with a similarity of natural locality, as the elm and willow on low grounds, and the oak and chestnut on hills. So also groups and masses of dissimilar kind should not pass abruptly to each other, but by gradations produced by trees of an intermediate character. Downing's "Landscape Gardening" contains two excellent examples illustrating these remarks, which I here copy. "In the first case, suppose it is desired to form a group of trees, in which *gracefulness* or *elegance* must be the leading expression. The willow alone would have the effect; but in groups, willows alone produce sameness; in order therefore to give variety, we must choose other trees which, while they differ from the willow in some particulars, agree in others. The elm has much larger and darker foliage, while it has also a drooping spray; the weeping birch differs in its leaves, but agrees in the pensile flow of its branches; the common birch has few pendant boughs, but resembles in the airy lightness of its leaves; and the three-thorned acacia, though its branches are horizontal, has delicate foliage of nearly the same hue and floating lightness as the willow. Here we have a group of five rees, which in the whole are full of gracefulness and variety, while there is nothing in the composition inharmonious to the practiced eye."

"To illustrate the second rule, let us suppose a long, sweeping outline of maples, birches, and other light, mellow-colored trees, which the improver wishes to vary and break into groups, by spiry topped, evergreen trees. It is evident that if these trees were planted in such a manner as to peer abruptly out of the light colored foliage of the former trees, in dark, or almost black masses of tapering verdure, the effect would be by no means so satisfactory and pleasing, as if there were a partial transition, from the mellow, pale green of the maples, etc., to the darker hues of the oak, ash, or beech, and finally to the sombre tint of the evergreens. Thus much for the coloring; and if, in addition to this, oblong headed trees, or pyramidal trees, were also placed near or intermingled with the spiry topped ones, the unity of the whole composition would be still more complete."

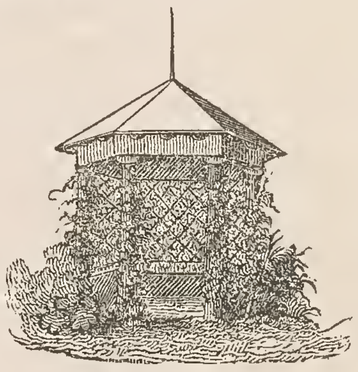
But the limits of such an article as this afford but little opportunity to examine the subject to any extent. An inexhaustible fund of instruction under this head may be found in a study of the beautiful specimens of natural groupings everywhere scattered among the fine scenery with which our country abounds.

The three figures accompanying are intended to represent some of the ornamental erections alluded to in the plan in the first number of the Cultivator.



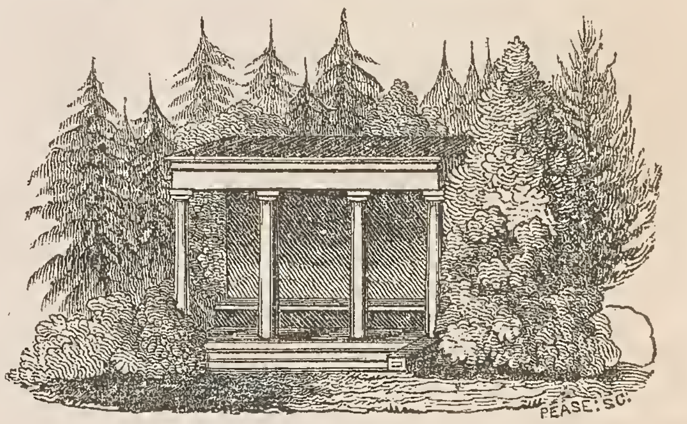
An Arched Gateway—(*Fig.*39.)

Fig. 39 is an arched gateway for a garden entrance, where the gothic style of architecture prevails in the house. It may be made of wood and painted, or of the rough trunks of trees with the bark on and thorougly whitewashed, and then covered with delicate climbing shrubs.



An Arbor—(*Fig.* 40.)

Fig. 40 is a covered arbor; the posts may be rough and round, and the roof made of unplaned boards, well whitewashed. The back side is covered with lattice-work. Climbers will render it sufficiently ornamental. Such an erection is well suited for the back corner of the garden, represented in the plan in the first number.



An Alcove—(*Fig.* 41.)

Fig. 41 is an alcove, to be placed facing the sun, and well sheltered by evergreens, and is intended as a covered seat in cool sunny weather. It may be situated at the back corner on the left of the plan, if the aspect is right; but if not, it may stand at the termination of the straight walk in the garden, if no green house is there. If in Grecian style, as represented, it may be made cheaply; but if the house be in the pointed style, that style should also prevail in the alcove, which would perhaps be more in keeping with the wild expression of the evergreen trees around it.

J. J. THOMAS.

PRODUCT OF A GARDEN.

EDITORS OF THE CULTIVATOR—Enclosed is a statement of the amount of produce from the *Retreat Garden* the last year.

The garden contains an acre and a quarter of land—

surrounded by a carriage road, and a border planted with evergreens, rose bushes and other flowering plants.

Lettuce, 1100 very large heads.
Cabbages, 1400 do.
Radishes, 700 bunches.
Asparagus, 250 do.
Rhubarb, 300 pounds.
Marrowfat peas, (in pod) 14 bushels.
Beans, (in pod) 40 bushels.
Sweet corn, from plantings at 3 different times, 419 dozen.
Summer squash, 715 dozen.
Squash peppers, 45 dozen.
Cucumbers, 756 dozen.
Cucumbers for pickles, 7 bbls.
Beets, ········· 147 bushels.
Carrots, ······· 24 do.
Parsneps, ····· 26 do.
Onions, ········ 120 do.
Turneps, ······ 80 do.
Tomatoes, ····· 40 do.
Early potatoes, 35 do.
Winter squash, 7 wagon loads.
Celery, 500 large heads.

These articles, estimating their value at the lowest price for which they were sold during the season, in this neighborhood, would have fetched $625; but I wish to add what is well known to those who reside in this vicinity, that they were of the *very best* and *earliest kinds;* and had they been carried to market and sold, instead of being mostly consumed by our large family, a much larger sum would have been realized. This garden has not only produced an abundant supply of these articles, for our family, averaging 130 persons, but more than we could consume; and we accordingly sold and gave away a considerable amount of rhubarb, lettuce, radishes, beets, celery, &c.

Several of the patients of this institution, for their amusement assisted in the cultivation of the garden; but our excellent gardener, Mr. Thomas Burns, assures me that he should consider it an easy task for one person to do all the labor required.

The land is good, but no better than the land in this region. It has been well manured every year; but no extra or unusual expense incurred.

I have believed that more might be realized with but little labor from a large garden in the neighborhood of this city than is from many large farms with much labor; and this account of the Retreat Garden must satisfy others of the fact, and I should be pleased if it induced farmers—not to neglect their farms—but to pay more attention to their gardens, not only for the comfort and enjoyment of their own families, but as a source of profit.

A. Brigham,
Superintendent of the Retreat for the Insane.
Retreat for the Insane, Hartford, Feb. 23, 1842.

ON THE CULTURE OF THE PEACH.

Messrs. Gaylord & Tucker—I take the liberty of offering a few suggestions on the culture of the peach. The many casualties with which the tree bearing this delightful fruit has to contend in country places, where a good market does not justify great care, are so discouraging that very few are willing to be at the trouble of rearing them; and yet, I conceive that the exercise of a little good sense in the choice of ground, and care of the trees, will insure a fair crop of delicious fruit in every average season.

In fact, the neglect to select the better kinds of peaches has caused this fruit to be greatly underrated by our farmers and gardeners in general. The luxury of a luscious peach is known to but few comparatively. I shall not attempt here to enumerate the various choice kinds which may be procured at all the good nurseries in the country, as printed catalogues can be obtained of the proprietors gratis.

In the choice of a site I would select a hill side, having a western or even a northern aspect, so that the morning sun would not strike the trees until an hour or two high. There is a general error that it is the frost which kills the tender kinds of hardy trees. It is the action of the sun, striking abruptly upon the frozen wood. This injury is generally effected in autumn or spring, when the sun has more power, and seldom in mid winter, when he has less. This law, so applicable to the wood, is equally so to the fruit buds. Another advantage in such a site is, that the situation being less favorable for early and late growth, the buds do not push so early in the spring, and vegetation ceases much earlier in the fall, so that the wood hardens or ripens, and prepares itself for hibernation. In confirmation of this position,—and the fact itself is valuable, where a few trees only are to be grown—I have observed that peach trees planted on the west or north side of a house or barn are less affected by frost, and fail of fruit only in extreme seasons.

Another enemy with which the tree has to contend is the grub. This is a serious one, but not invincible. Some gardeners, to obviate this difficulty, bud or engraft upon plum stocks; but phytology teaches us that trees so managed will be very short lived, and seldom will produce more than one crop of fruit. The only way is to go directly at the enemy. Every household produces weekly the very best remedy for this evil: that is soap suds. Let the suds, pretty strong, be applied once a month during the open weather, around the roots of the tree, taking care that the liquid does not flow off, and I will vouch that no grub will infest them. Even if they have commenced their work, remove the gum which issues from the wound, so that the liquid can fill it, and the grub will soon crawl out and confess the potency of the medicine by his instant death. The soap suds, too, is an excellent manure, which of all trees, the peach requires the most. No tree so soon exhausts the soil in which it grows; and manure, either liquid or solid, should be poured around or dug in about the tree every year.

The peach tree requires a light, dry and rich soil. It is very impatient of standing water, and delights to push its roots not only wide but deep. Good fruit can only be expected from thrifty growing trees. I have observed that cow-yard, or chip manure well rotted and mixed with a small portion of wood ashes—if leached, the portion may be greater—is better than stable manure.

The yellows is a disease to which this tree is incident, and for this, I know no remedy but immediate eradication. With regard to this disease, I have but little experience; but I am inclined to think it can be avoided by proper culture, and seasonable application of the necessary manures.

J. Dille.
Newark, O., February 25, 1842.

A REMEDY FOR UNPRODUCTIVE TREES.

Messrs. Gaylord & Tucker—In the last volume of the Cultivator, page 77, I noticed a recommendation for grafting apple trees that are "*shy bearers.*" That grafting is not a certain remedy, one instance I will mention will show. Two trees, standing not to exceed five rods distant from each other, were grafted on the same day with cions that were cut at the same time, and if not from the same tree, there was no difference in them to my knowledge. One of the trees commenced bearing the second year after setting, and continued to bear more or less yearly. The other grew more thriftily for four or five years without producing a blossom that I could discover. Having heard of ringing or girdling trees that produced no fruit, and considering this one useless and a fit subject to experiment upon, I took a ring of bark from about one-half of the branches as near the stem of the tree as convenient. The following year those branches operated upon produced fruit, and the others none. The next succeeding year, those which had previously remained barren, produced fruit; and those which had been operated upon, none. Before the season of fruit the next year, I left the premises, which was ten years ago, and know nothing of the production of the trees since that time. The kind of frutt, blue jilliflowers. On the premises which I now occupy are two trees, which were said to have been inoculated, and each producing the same kind of fruit, but different from the above mentioned. By the like operation, the same effect was produced for two succeeding years; since that time, both trees have produced bountifully once in two years, and in no season entirely barren. In the above cases, one-eighth or one-twelfth of an inch of the wood was laid bare, but cut wider at the surface for the convenience of taking off the bark. In the above instances the bark was taken off in the month of June, when the bark peeled easily. Branches operated upon grow larger above than below where the bark is taken off; and from this, I infer that a check is put to the too free circulation of the sap downward between the bark and wood. If that is not the cause, will you or some of your correspondents explain the subject.

Volney, Oswego Co., 1842. Joseph Sanford.

TRANSPLANTING FROM THE FOREST.

Trees and shrubs transplanted from the woods to open situations seldom grow. The cause of failure is, that they are taken from shade and moisture and exposed to the hot sun, which stops the circulation; the body of the plant perishes, and the root in consequence dies also. It is well known that if briars are cut in the heat of summer the roots generally decay and die. So with the trees and shrubs in question. To remedy this evil, it is suggested to cut off the tree or shrub close to the ground and plant the root only. The young shoots grow out with the spring, are naturalized to their situation, and soon attain a height and size as great as that which was cut off at planting. The fact that transplanted trees sometimes die at the top, and yet sprout from the root, proves the correctness of the above suggestion. The writer has been informed that the trial of this method has been made in another state with complete success, and recommends the experiment the ensuing spring. It is obvious that trees which do not sprout are unfit subjects for this process; such as pines, cedars, &c.

P.
New-Jersey, Feb., 1842.

GRAFTING A WHOLE TREE.

A neighbor of Van Mons, the celebrated Belgium horticulturist, having a good apple tree of some ten feet in height which he was obliged to cut down, Van Mons determined to make an effort to preserve it entire, by grafting it on one of his own, but of inferior fruit. A tree of the same size was selected, which was cut square off a little distance above the ground, the surface of both made smooth, and the graft or rather tree placed in its new position by the operation of pin grafting. Grafting clay was placed around the junction, earth heaped over the spot, and the tree strongly secured by stakes. A union between the parts was soon effected, and the second year the tree fruited as well as formerly.

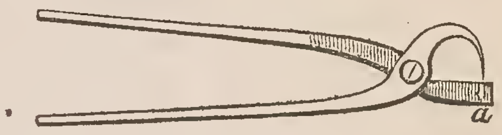
NEW MODE OF PROPAGATING FRUIT TREES.

The New-Hampshire Whig says—"Two of the best farmers within our knowledge secure their fruit trees thus: they dig at some distance from the body of a favorite tree until they find a root, which they cut off. The part disjointed from the tree is turned up so as to appear above ground. This sends forth shoots the first season, and bears in a few years fruit precisely like the parent tree. Let those whose trees are decaying, or who wish to increase good varieties, try the experiment."

Veterinary Department.

HOOF-CUTTER—(Fig. 40.)

Messrs. Editors—Our sheep in Vermont suffer much from the severity of our long winters, in freezing their feet, which causes their hoofs to grow to an uncomfortable length; which for the benefit of the sheep should be taken off (of some) as often as twice a year. I have seen some cut them with an axe, some with a chisel and mallet, and I have spent much time in cutting their hoofs with a strong knife, which is not very easy work for the hand. I have an instrument for cutting sheeps' hoofs, recently invented here, a set of which every wool grower should be the owner of, unless he has something that will do the work better. For the sake of a name, we will call them Hoof-Cutters; of which, the following is a rough representation.



The handles should be 12 or 14 inches long, coupled together with a bolt and nut, for the convenience of taking them apart to grind. The edge should be 2 inches wide, straight, and made of good steel. The opposite jaw, of the same width, should have a piece of copper dove-tailed into it at *a*, for the sharp edge of the instrument to strike upon. It should be made sufficiently strong in all its parts to stand the strength of a strong man.

The best time for cutting hoofs is after a rain sufficient to soften them. Sometimes small horns turn and grow into their heads, and often injure their eyes, which can frequently be taken off with the Hoof-Cutters better than with any other instrument.

Two men, one to catch and hold the sheep, the other to handle the instruments, will trim two or three hundred sheep in a day. Care is necessary not to cut so close as to touch the quick. They may be made by any blacksmith who can make edge tools. A large copper or cent, when drawn into proper shape, is sufficient to dove-tail into the lower jaw. Brother wool growers, if you have anything that is to be preferred to the Hoof-Cutters for doing this work (which I consider very essential in promoting the condition of our sheep) please communicate. If not, try the Hoof-Cutters; and my word for it, the benefit derived will well reward the experiment.

J. N. Smith.
Chimney Point, Addison Co., Vt., Feb. 9, 1842.

EPIDEMIC AMONG HORSES.

A disease has prevailed this season, very extensively throughout New-England, destroying many valuable horses. No name, so far as I have learned, has been assigned to this ail; it is, evidently, inflammatory. Its premonitory symptoms are lassitude, stiffness and swelling of the joints, loss of appetite, and occasional running at the eyes. These symptoms are followed, in severe cases, by swelling of the head and the glands of the throat, accompanied with considerable fever. The most successful treatment has been, bleeding in the neck, to the amount, at least, of one gallon; (this should be done in the forming stage of the disease,) and followed by one or more brisk cathartics of Glauber or Epsom salts. When this treatment sufficiently subdues the inflammation, the animal should be given, during his convalescence, a tea spoon full of crude antimony, daily.

Charles A. Savory.
Contoocookville, N. H., Feb., 1842.

TO STOP THE EFFUSION OF BLOOD.

Messrs. Editors—In answer to an inquiry in the last number of the Cultivator, respecting a remedy for stopping blood, I will relate two instances of the application of cobwebs, with instantaneous and complete success. The first was a cut just below the fetlock joint of a young horse, from which a stream of blood of the size of a knitting needle spirted very swiftly. A small wad of cobweb from the cellar was bound on, which *entirely* stopped the blood in an instant. At another time on bleeding a horse in the mouth, the incision was made deeper than was intended, letting more blood than was designed. After other remedies in vain, the above application was made with the same effect as in the first case.

H. Milton Hart.
Cornwall, Ct., Feb. 23, 1842.

HORSE RADISH FOR ANIMALS.

Austin Randall, Esq., of Paris, writes to us as follows: "I have seen in your excellent paper no notice of the value of the horse radish for cattle. I have found it very useful for them. If given to cows in doses of a pint at a time once a day, it will materially aid their appetite, and will prevent or speedily relieve cows of the disease called cake in the bag. I feed it freely to any animal of mine that is unwell, and find it of great service to working oxen troubled with the heat. I have had one ox that would eat greedily a peck at a time. Few animals refuse it; and if they do, it may be cut up and mixed with potatoes or meal." Mr. R. cultivates his corn without hilling, and his success with his last crop (73 bushels per acre) is a favorable commentary on the practice.

Silk Culture in the United States.

SILK CULTURE—By Gideon B. Smith.

THE COCOONERY—No precise rules can be laid down for the arrangement of the cocoonery, because every one must be adapted to the circumstances, the extent to which the business is intended to be carried, the location, the situation—high or low, the exposure, and even the climate. There are some general rules, however, that are applicable to all, and which cannot be departed from safely. These are, sufficiency of room for the accommodation of the worms intended to be fed, and for the free and convenient access of the attendants to all parts of the frames or hurdles. The frames should be set in ranges, as directed in the former article; and the passage between the ranges should be at least four feet wide. There should be a passage also two or three feet wide between the walls and the frames, and also between the ends and the walls. There should, if possible, be windows on all sides of the cocoonery; but at least, on the north and south sides. The windows should be provided with blinds, and the sashes should be hung on hinges, that the room may be darkened, or completely aired, or completely closed at pleasure. When a house is to be built expressly for the purpose, an invaluable ventilator may be made by leaving a space of eight inches open in the clapboarding immediately at the floor all around the room, with a board shutter hung upon hinges, that it may be opened or shut close at pleasure. This when open admits a free current of air through the cocoonery and under the frames, and in sultry weather will be found of immense advantage. One or two trap doors in the ceiling to admit of the upward passage of the air is also of great benefit. When the business is to be carried on in a small, domestic way, however, these things of course cannot be done; and such conveniences as the room selected affords for ventilation must be put up with. In such cases, where there is any choice, the room should be selected that affords the greatest facilities for ventilation. For example, a room that has windows on the north and south sides, or even a door on one and a window or windows on the other, should be preferred to one having windows or doors on the east and west sides. So also a room with a high ceiling should be preferred to one with a low ceiling; and a room in the second story, to one in the first. A room on the north side of the house is better than one on the south side, because it can be kept cooler, provided it has sufficient ventilators.

PAPER NETS—Besides the frames described in my former paper, I would recommend the preparation of *paper nets*, for the purpose of cleaning the hurdles. They are made by a punch as follows: the paper should be of a strong texture, and of the size of the frames or hurdles. Paper half the size of the hurdles may be used by pasting two sheets together. The punch is to be two-thirds of an inch diameter. I use one made by cutting off about three inches of the end of a gun barrel, and grinding the end to an edge from the outside, and a block of smooth grain wood to punch on. Half a quire of paper may be punched at a time by the use of a mallet. The holes should be in rows one-third of an inch apart; and the holes of each row should be diagonal in relation to each other. About three inches of the paper at each end should be left without holes, turned over, and the edge pasted down, to form a loop for a small, smooth rod to pass into to facilitate their removal with the worms on them. There ought to be about three sheets of these nets for every hurdle. The rods for the paper nets may be made of any light wood, about the size of a small broomstick, long enough to reach the whole width of the net, with six inches for a handle. The use of these paper nets will be described hereafter. I will now say, however, that in France they are considered an invaluable improvement in silk culture; and that the few who have used them in this country approve of them very highly. They are used in clearing the hurdles, removing and separating worms, &c. When it is desired to clean a hurdle, a net is spread over the worms before feeding in the morning, and a few fresh leaves spread over the net. In a few minutes the worms will pass up through the holes; and then the rods are passed into the loops at each end of the net, and the net with the worms raised and carried to a clean shelf. So, when you wish to thin the worms on a hurdle after each moulting; as soon as a portion of the worms revive, lay on a net with fresh leaves, and bear off to a clean hurdle all that have revived. This is very necessary at every moulting, because there are always differences in the moulting and revival of worms; and all that moult and revive at one time should be carried to one hurdle. But I shall have occasion to speak of this subject more at large hereafter. Thus much I thought it best to say now, that some idea of the value of the paper nets might be had, and that those who expect to engage in silk culture might thus be induced to prepare them.

I do not know that any other fixtures are materially necessary to a beginner; all others, or the few simple things necessary, will suggest themselves to every one as they progress. I shall, in my next, speak of the hatching and rearing of worms.

BOUNTY ON SILK IN TENNESSEE.

The legislature of Tennessee passed an act at its recent session granting a bounty of fifty cents per pound on reeled silk, and ten cents per pound on cocoons—the produce of that state. This is equivalent to *one dollar and fifty cents* on every pound of reeled silk; or about $33\frac{1}{3}$ per cent added to its value, and will just about pay the whole expense of production. G. B. S.

Domestic Economy.

ORANGE COUNTY BUTTER.

Messrs. Gaylord & Tucker—I am now in the region of the celebrated Goshen butter; and as I have frequently heard the question asked why Goshen butter sells for six or eight cents a pound more than that of other good butter regions, I have concluded to give you the result of my inquiries as to the method of making butter here.

1st. The milk house or cellar should be under ground, and entered through a door on the north or east, with a stone or earth bottom, and two or three windows, with such shutters as to entirely exclude the rays of the sun. A back cellar should be made, *dark and cool*, with one small window to keep the butter in. Thousands of tubs of good butter are spoiled for want of a good cellar to keep them in.

2d. The milk is put into shallow tin pans, with a pint of cold water in a pan, and *set on the bottom of the cellar*, where it remains till it is thick; so thick that when it is cut or broken whey will appear. *It must by no means stand till whey rises and stands between the milk and cream.* To a barrel of milk, one pail full of cold water is added. It is now churned, cold or warm water being added during the process to keep it at the right temperature. If the weather is too cool to allow the milk to change, a little butter-milk is put into each pan when it is strained. In very cold weather a small box stove is used to warm the cellar.

3d. The butter is taken out with a ladle, (the hands would warm it and make portions of it oily,) washed through cold water twice, and then salted with as much salt as will dissolve, and *no more*. Let it stand in the tray on the cellar bottom only till it is cool enough to work. Work the *milk* out. (This process must not be continued too long, till the butter becomes sticky or oily; for from this state it could not be recalled.) Pack it closely in the tub, and cover it well till the tub is filled. Then put a thin cloth over the butter and keep it covered with a strong brine till it goes to market. The butter cellar should have a little air admitted to prevent mold. To prevent the *firkins* from molding, they should be set so as not to touch the wall; and in a *very* damp cellar, on a board an inch from the bottom.

This is the result of much and careful inquiry; and whether this is the best method or not, the butter is certainly the best I ever tasted. The best Oneida or Chenango butter that I have seen is not equal to it. But why should it not be? The county is certainly as good. *Great care* must be used to make and preserve good butter in any place. Sixpence a pound will pay for this care. Why will not all our farmers strive to secure this sixpence? Yours sincerely,

J. Edmunds.

P. S. In kneading the butter, it should be simply pressed with the ladle, and not cut or rubbed. Pressing it will make it solid; while rubbing or cutting it will make it soft or oily. J. E.

A FARMER'S BREAKFAST.

Messrs. Editors—If you will permit me, I wish to give you a description of a farmer's breakfast. It will not perhaps be as *inviting* as those served up on city tables, but more substantial, and doubtless as healthful.

The first thing is the bread; for now, as in the days of Martinus Scriblerius, "bread, gentlemen, bread is the staff of life;" and during the winter months, our bread for the breakfast is mostly hot buckwheat cakes. Some complain that such cakes are unpalatable, and liable to become sour. It is true, some do not like the taste of such cakes at first, but I have seen no one who did not soon become fond of them; and there is no more necessity of sour buckwheat cakes than of sour wheat bread. I wet up my cakes in the usual manner, (a quart of flour for 7 or 8 persons, with lukewarm water sufficient to make the batter of the right thickness, with about a teacup of good sweet yeast—the yeast only necessary when you commence using cakes, or if the batter becomes sour and needs renewal,) set the stone jar in which I keep the batter where it shall be moderately warm until it begins to rise, when I remove it to a place where the temperature is low, and the fermentation is checked before the mass is sour in the least. This batter is baked in small cakes and placed on the table, hot; care being taken to leave enough in the pot to ferment the next wetting up, which should be done as soon as breakfast is over. A loaf of wheat bread is placed on the table to suit the taste of such as may prefer it to the cakes.

The preparations for the bread completed, the next thing is the meat. For this, I prefer beef of good quality—not the coarse, tallow loaded meat that is sometimes seen, but the fine grained flesh, well mottled with fat, tender and delicious. This should be kept frozen; and when wanted, a sufficient quantity chipped or sliced off, the thinner the better, and placed in the fryer on the stove; cover it, and do not hurry it in the cooking, or burn it. For a gravy, which is essential with cakes, I take a spoonful or two of flour, a sufficient quantity of butter and pepper, and work them well together in a dish. When the meat is properly cooked, I turn from the tea kettle hot water into the dish, stirring it constantly till the whole is incorporated and a rich gravy produced. This is turned on the meat, the whole boiled up and stirred, when it is placed in the dish ready for the table.

But a farmer could not make a breakfast without potatoes. One of the first things to be done, therefore, in getting a breakfast ready, is to select ten or a dozen potatoes, (they should be kept ready washed, but secured from light in a cool cupboard or cellar, as light is injurious to the quality of all roots,) pinkeyes or Mercers my husband thinks are the best, and place them in the stove oven, turning them occasionally to see they do not burn, and they will be done by the time the other parts of the breakfast are ready.

These are the *substantials* of a farmer's breakfast. But other things are necessary to give zest and relish to the meal. A bowl of apple sauce made with about one-third quince to two-thirds apples, the cider made from sweet apples, and reduced by boiling about three parts to one, may be considered indispensable; pickles, too, green, hard, and thoroughly penetrated with cayenne, or garden red peppers, will not be amiss. Coffee or tea, as the taste may determine, not too strong, as either may be injurious, with sweet cream and sugar, will furnish the drink for the farmer's morning meal. Mince and apple pies, with cakes and cheese, are ready for such as wish them.

The table is ready. The meat and potatoes, of right, occupy the center, flanked by the smoking cakes and coffee. Around are the sauces, the pies, cakes, &c. Industry and sweet sleep have given an appetite; and with the invoked blessing of heaven, the farmer's breakfast, plain and simple as it is, is not unfrequently better enjoyed than the late and sumptuous repasts of the rich and opulent.

Should you give a place to this, I may hereafter give you a picture of a farmer's dinner.

A Farmer's Wife.

WINTER BUTTER.

The following mode of making butter in winter is recommended by E. H. Derby, Esq.: The milk when taken from the cow is immediately strained into pans and set in the coldest part of the house. As soon as the frost begins to operate, a separation takes place; the cream rises in a thick paste to the top, and leaves the milk, without a particle of cream, frozen in the pan. The cream is not so hard but that it can be easily scraped off with a spoon down to the solid ice; it is then set aside till a sufficient quantity is collected for a churning, when it is warmed just so much as to thaw the cream; five minutes churning will convert the cream into good butter. A.

PINE APPLE CHEESE.

A lady friend of ours wishes to learn the method of making this kind of cheese, which seems at the present time to be rather a favorite article in the market. We hope that some of our dairy friends who are acquainted with the process of making this cheese will furnish us with a full account of the method adopted by them. A compliance with this request will be considered by us as a personal favor, and the information will doubtless be acceptable to many.

Notes for the Month.

A Good Cow.—Mr. S. Brooks, of Steuben, Oneida county, has furnished for the C. N. Y. Farmer an account of the product in butter of a cow for the year 1839 and 1840. He says—"I made from one cow, after supplying my family—consisting of three persons—with butter, and milk, in the year 1839, $300\frac{1}{2}$ pounds of butter, which I sold. In 1840, with the same number of persons in my family, I made 320 pounds of butter, after using for my family butter and milk as we wanted. The cow was fed $1\frac{1}{4}$ pecks of potatoes boiled, with the sour milk mixed with it, from 20th of September to the 20th of May. The cow had two calves during this time. She was a cross between the English and our common breed of cattle."

Effect of Plaster on Soils.—One of the most satisfactory answers we have seen to the charge so frequently made, that plaster exhausts the soil, is found in the following, which we copy from the N. G. Farmer: "Josiah Bardwell, of South Hadley, Mass., has four acres of pasture ground, and applies to it annually 1000 pounds of gypsum. The same application, and at the same rate has been made for 35 years in succession. On this lot he pastures annually one large yoke of cattle, one horse, two cows, and sometimes three cows. Prior to the use of plaster, Mr. B. says it required at least six acres of this land to afford as much feed as he has obtained from one acre by using plaster. He has also a piece of mowing ground which contains four acres. Two crops of hay are taken from it regularly. On this ground he uses plaster of Paris freely, and applies a top dressing of manure. His annual product of hay is fully 16 tons.

Castor Oil in the West.—According to the Alton Telegraph, some twelve or fifteen thousand dollars has been paid out at Edwardsville for castor oil beans, grown in the vicinity; and the oil mills are turning out about 100 gallons of oil daily. Experience has proved that these beans at $1 a bushel are as profitable a crop as Illinois can produce; and the demand is steadily increasing. Mr. Marsh of that city has commenced the manufacture of castor oil candles; and the light, on comparing them with spermaceti candles, was found to be much more brilliant than that given by the latter; and in burning, there was not the least unpleasant smell. Mr. Marsh says they can be afforded at one-half the price of spermaceti candles. Success, we say, to every new production and manufacture in the West.

"SPIRIT OF THE TIMES."—The 12th vol. of this splended sporting journal, commenced on the 5th March. As a chronicle of Field Sports, the Turf, Literature, &c. the "Spirit" will be most acceptable to gentlemen who take an interest in the subjects indicated, and may be considered unrivalled. The first No. of the new vol. was accompanied by a portrait of "*Monmouth Eclipse*," 13 by 16 inches, engraved on steel in the first style, by Dunnell, from a painting by Troye. This is to be followed by similar engravings of "Grey Eagle," and "Col. Johnson, the Napoleon of the turf. Price of the Spirit of the Times, $10 in advance. New subscribers who forward two years in advance will be entitled to the above, and receive ten splendid steel engravings of distinguished horses, actresses, &c. which have appeared in previous volumes. Address Wm. T. Porter, Esq. Editor, New-York.

THE AMERICAN TURF REGISTER, commenced a new vol. with the present year—64 pages octavo, at $5 a year. Also edited by Wm. T. Porter, Esq. Each No. is embellished with a steel portait of some celebrated horse. The March No. has a portrait of Ophelia, the dam of Grey Eagle, together with five illustrations on wood, of the "New Tale of the Tub."

EXHIBITION OF STOCK, &C. IN GEORGIA.—We received an account of the Exhibition of the Hancock Co. Ag. Society, immediately after it took place, in Dec. last, and it would sooner have been noticed, had not the paper containing it been mislaid. There was a handsome display of domestic products, and we are pleased to see that ten premiums were awarded to ladies. There was also a fine show of stock, including, horses, cattle and swine. We perceive that our enterprising friend and agent at Sparta, Capt. R. S. Hardwick, carried off no less than six prizes, and several others were awarded to stock bred from animals introduced into the country by him.

WESTERN AG. SOCIETIES.—The farmers of our Western States and Territories, notwithstanding the fertility of their soil, seem to appreciate fully the necessity of an improved system of husbandry, and are organizing Agricultural Societies and circulating Agricultural papers with as much spirit and energy as their brethren in the older sections of the Union. A Territorial Ag. Society has just been organized in Wiskonsan, which promises to do much for the promotion of the good cause in that Territory. An association has for some time existed in Northern Illinois, called the "Union Ag. Society," embracing several counties, which issues the *Union Agriculturist*, at Chicago, under the direction of J. S. WRIGHT, Cor. Sec'y, which is one of the best papers we receive.

"THE HERD BOOK."—Mr. Sotham has shown us a letter from Geo. Coates, Esq. editor of "The Herd Book," from which we learn that all the copies of the first and second vols. were long ago disposed of, and that it is his intention to have them reprinted. The price of the third vol. is one guinea. The fourth vol. will be published probably about the first of January next.

FAT CATTLE.—Mr. Tonkin, of Woodbury, New-Jersey, has seven fat cows,—one a full blooded Durham—one three-fourths, the other half bloods, bred by himself; which are spoken of in the New-Jersey papers as superior to any thing of the kind in the country, and well they may be, if we may judge from the description given of them. They are estimated to weigh 3000 lbs. each.

GOOD PIGS.—Mr. S. S. Robbins of Salisbury, Ct., informs us that he recently killed two pigs, 9 months and 21 days old, which weighed, dressed, 316 and 355 lbs. They were a cross between the Byfield and Berkshires.

A CHALLENGE.—During Mr. Sotham's recent visit to England, he published a letter in the Mark Lane Express, in reply to Mr. Allen's allusion to the "one man's herd," in his account of his visit to England, given in the Nov. No. of the Cultivator of last year; in which he challenges Mr. Allen to show 20 cows and a bull of this "one man's stock," against a like number to be selected from the Short Horned herd of R. Lovell, Esq. Edgecott Lodge, for fifty guineas each. The money to be deposited in the Banbury Bank; and the judges to be selected, one by Mr. Lovell, one by the "one breeder," and the two named to select the third.

INQUIRIES.

A Subscriber in Illinois, inquires for "portable mills for grinding corn for feed," where they can be had, and their cost.

A correspondent in Georgia wishes to know the "best method of drying and packing figs."

The same correspondent asks for a "correct account of Culvert and Crane's cotton gin, said to be used at the mill of the Lowell Co. (Mass.) and which is said to be superior to our common or Whitney gin. What is the cost and size of a gin that would pick 2000 lbs. of seed cotton per day? Any improvement in the cotton gin is of great importance at the south, and we want to know more about this one."

"I wish to enquire through the Cultivator for a strong sharp instrument to cut large bogs with a team. A full description of such an instrument, from which one can be constructed, will be thankfully received.

R. M. HART."

AG. SOCIETY OF THE U. STATES.

TO POST-MASTERS.—The Board of Control of the Agricultural Society of the United States request the various post-masters to make returns to the treasurer of the society, (as requested by the Circular,) before the first of May, of all subscriptions by them obtained.

ACKNOWLEDGMENTS.

Our thanks are due to the several donors for the following articles, received during the last month:

"*Lectures on Agricultural Chemistry and Geology*," by Prof. Johnston of the University of Durham—republished by Messrs. Wiley & Putnam, New-York, in a handsome duodecimo of 280 pages. From the publishers.

"*A Muck Manual* for Farmers, by Samuel L. Dana,"—published by D. D. Bixby, Lowell. 12 mo. pp. 242. From the Author.

"*Report on the Culture of Silk*," made to the H. of Rep. of Ohio, by A. A. Bliss, Esq. chairman of select committee on that subject—showing the importance of the silk culture, and the rapid progress it is making in that state. From the Author.

A beautiful colored lithograhhic portrait of the celebrated Improved S. H. Durham Cow "*Dairy Maid*," and her calves "*Leander*" and "*Allan a Dale*," owned by James Gowen, Esq. Philadelphia. Drawn on stone by Hoffy, from a painting by Woodside, and colored to the life. From Mr. Gowen.

Rev. Mr. Choules' Oration before the American Institute, at its last Fair. From Alex. Walsh.

Hovey & Co's. Catalogue of Seeds, Roots, Implements, Books, &c. Boston.—Catalogue of C. H. B. Breck, seedsman and florist, Boston.—Catalogue of Ellwanger & Barry's Mount Hope Botanic Garden and Nursery, Rochester. From the Proprietors.

Regular files of the *New Farmer's Journal*, and the *Mark Lane Express*, London, for January, from the Editors. Also the *Gardner's Chronicle* and *Farmer's Magazine*, from our London correspondents.

NOTICES TO CORRESPONDENTS, &c.

THOUGH some of our friends may perhaps be disappointed in not seeing their favors in the present No. of the Cultivator, we think all must be satisfied that we are disposed to give place to their communications as early as circumstances will admit. We publish this month articles from something over forty correspondents, (including inquiries,) and yet a number are left over which we had intended to have given in this paper. We have yet on hand, several which have been heretofore acknowledged, and have received during the past month, (beside those published,) communications from Wm. Edwards, Henry Watson, G. W., Rich. Taylor, A. Merritt, N. N. D., Solon Robinson, L. A. Morrell, T. C. Peters, George J. Horsfield, W. G. V. D. B., Magnolia, Anon, S. Moore, B. Chase, J. Buel & Co., Richmond, L. B. L., Anti-Homespathy, Un Fermier, A Subscriber, R. North Jr., Commentator, S. M. Pond, Yeoman of the South, H. A. P., Herd Book, L. Durand, G. Cook.

We shall be glad to receive from "*Pine Hill*," an account of his method of raising spring wheat.

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PITTS' IMPROVED BEE HIVE.

I HAVE made arrangements to supply those who may wish to purchase my improved hives at the machine shop of John A. Pitts, on Patroon's creek, Albany, N. Y., where hives may be obtained, made of the best materials, and in a neat and substantial manner. Three hives with the protector, including a small treatise on bee keeping, will be sold for five dollars.

Albany, March, 1842. H. A. PITTS.

ROCHESTER SEED STORE.

M. B. BATEHAM respectfully informs the agricultural public that he has now on hand a very large and superior stock of Garden, Field, and Flower SEEDS, which he offers for sale at *prices according to the times.* In addition to a full assortment of American Seeds, raised the past season by careful seed growers, he has lately received from England a large supply of such Seeds as are grown in greater perfection in that country, selected by his personal friends in the trade.

Thankful for the liberal patronage which this establishment has received for the past seven years, the proprietor hopes, by strict care and personal attention, to merit the continued confidence and support of the public.

All orders from a distance, (containing money or a city reference,) will receive prompt attention. ☞ *Catalogues gratis to applicants.* M. B. BATEHAM.

Rochester, March 22, 1842.

CLINTON COLLEGE AND FARM FOR SALE.

900 ACRES very rich land; 650 in Clover and Blue Grass; numerous excellent springs; good Orchards; valuable buildings of many kinds, &c. &c. I will divide to suit purchasers; and to suit the hard times, will give the best bargain ever offered. $10,500 for the whole; one-third down in cash or negroes, and the rest in two annual payments.

February, 1842. F. H. GORDON.

IMPROVED STOCK.

THE subscriber has now on hand for sale two Durham Bulls, 2 yeas old—1 yearling do.—1 three year old Bull, half Durham and half Ayrshire, (a beautiful animal,)—2 Cows, and 1 yearling Heifer, (Durham,)—5 South Down Bucks, (yearling,) and several Ewes of the same breed—Berkshire and improved China Hogs and Pigs. C. N. BEMENT.

Albany, April, 1842.

THE LIVINGSTON COUNTY PLOW.

THE cut given on page 61 of this paper, (fig. 34) is a fair representation of the Livingston County Plow. The circular coulter is the invention of H. Delano, which is an improvement on the straight one. The subscriber has purchased of the patentee the right of said plow for the United States, Ohio and Michigan excepted; and will sell the right of manufacturing and vending said plow, either by counties or states, and furnish patterns also for the two sizes, No. 3 and No. 4, if desired.

N. B. The patterns have been recently improved in such a manner as to admit the use of a wrought or cast shire.

Jordan, Onondaga Co., Feb. 15, 1842. S. N. NORTON.

RUGGLES, NOURSE & MASON'S PLOWS.

THE American Institute, at their Fair, held at New-York, for the whole Union, and the Massachusetts Charitable Association, at their Fair, held at Boston, each awarded to Ruggles, Nourse & Mason, Medals for the best and most perfect plows; and at the plowing matches of the Agricultural Society, in the justly celebrated Agricultural County of Worcester, in 1837, '38, '39 and '40, all the Premiums for the best work in the field, were awarded to competitors using Ruggles, Nourse & Mason's Plows.

A complete assortment of these justly celebrated plows received and for sale at the manufacturer's prices, by

PRUYN, WILSON & VOSBURGH, 39 State-st.

Albany, March 23, 1842.

MULBERRIES FOR SILK, AND OTHER TREES.

WM. R. PRINCE offers for sale at the Linnæan Garden and Nurseries, 100,000 Mulberry Trees of the finest kinds for the silk culture at $30 per thousand, and at a credit that will enable the purchaser to pay for them out of the silk produced.

They consist of the splendid New Circassian, Multicaulis, Expansa, Elata, Alpine, Moretti, and Broussa varieties. Also the usual immense assortment of Fruit and Ornamental Trees, and Shrubbery, Greenhouse Plants, Bulbous Roots, splendid Dahlias, and Garden Seeds. The new Catalogues with very reduced prices will be sent gratis to all who apply post paid; and on all orders enclosing cash or a draft, a discount of 10 per cent will be allowed.

Flushing, near New-York, March 7, 1842.

JONES' PATENT SILK REEL.

THE subscriber will furnish these reels (see description in Cultivator for March, page 54,) at $12, without charge for packing. Patent rights for towns, counties or states will be disposed of reasonably. All orders and communications, post paid, addressed to the subscriber at Buckland's Corners, Hartford Co., Conn., will be attended to.

The annexed testimony is from the Messrs. Cheneys, who are practical silk growers, and are now engaged in its manufacture: "We consider Jones' Patent Silk Reel, in every point of view, far superior to the Piedmontese, or any other now before the public, and the silk reeled on it worth at least fifty cents a pound more to the manufacturer. No silk grower should be without one. Manchester, Ct., Feb. 23, 1842. CHENEY & BROTHERS."

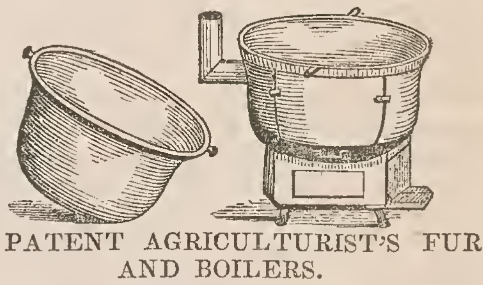
February 15, 1842. A. B. JONES.

VAN HOSEN'S PRESS FOR HAY, &c.

THIS press, of which a cut and description are given on page 66 of this paper, is one that must interest all who are engaged in pressing, as much time and labor are saved by it, as is testified to by those who have used it and are well acquainted with the business.

We, the undersigned, having witnessed the thorough operation of Mr. Van Hosen's Press, are prepared to say that it surpasses anything of the kind which we have heard or seen. We believe that we do not more favor the inventor than the purchaser, when we recommend it to every Farmer or Grazier in the country. William Salisbury, J. A. Cooke, Leeds; Henry Bronk, New Baltimore; Olney F. Wright, Barant Houghtaling, M. Hubbell, Coxsackie.

Applications may be made to W. S. JACKS, sole agent, Catskill, New-York. *March* 15, 1842.



MOTT'S PATENT AGRICULTURIST'S FURNACE AND BOILERS.

THE subscriber having rebuilt his foundery, (his former one with most of his patterns having been destroyed by fire in February,) is again prepared to execute orders for his invaluable Furnace. This article has been so well described in former numbers of this journal, and its usefulness so fully tested, a detailed description is deemed unnecessary. The experience of several who have kept an account, prove that this Furnace and Caldron cost less to get ready for use than sitting caldrons in brick work, when all expenses are included; these require only a piece of pipe. In making new patterns, the different sizes are classified by the number of gallons the Boiler contains, in lieu of by the barrel as heretofore. The sizes will not vary much from, and the prices will be as follows: ½ barrel, or 15 gallons, $11; 1 barrel, or 30 gallons, $18; common 1⅓ barrel, or 40 gallons, $21; extra 1⅔ barrel, or 50 gallons, $24; 2 barrels, or 60 gallons, $26; common 3 barrels, or 80 gallons, $35; 3½ barrels, or 100 gallons, $41; 4 barrels, or 120 gallons, $48; 5 barrels, or 150 gallons, $55—nine sizes.

Planters or farmers, by enclosing the amount by mail in bills of any specie paying bank, can have either of the above shipped as they may direct. All letters must be post paid. Address

J. L. MOTT, 264 Water-street, New-York, or
G. G. HEERMANCE, 5 Green-street, Albany.

P. S. Those who yet prefer setting in brick, can be furnished with Caldrons of either the above sizes, which may be hereafter fitted with the iron Furnace, should the brick setting be abandoned. *March*, 1842.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

CULT. VOL. IX.—No. 5. ALBANY, N. Y. MAY, 1842. CULT. & FAR. VOL. III.—No. 5.

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LUTHER TUCKER, PROPRIETOR.

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These volumes, it is believed, form a better Farmer's Library than be procured in any other form for double the cost.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW-YORK STATE AG. SOCIETY.

AT the meeting of the Executive Committee of the New-York State Agricultural Society on the second Wednesday of May, in the absence of the President, the chair was taken by the Vice-President of the third District, the Hon. ANTHONY VAN BERGEN.

Mr. Tucker reported that 4,600 copies of the Transactions of the Society for the year 1841, had been published by order of the Legislature, of which five hundred copies were for the State Ag. Society, and twenty copies were to be distributed to each of the County Agricultural Societies in the state.

On motion, it was resolved that the Recording Secretary be requested to prepare an index and title page for the Transactions, and have the copies belonging to the State Society bound in muslin covers.

On motion, it was resolved that a copy of the Society's Transactions for 1841, be presented to each of the contributors to the volume—to each of the officers of the Society for the last and present year, and to each person who contributed last year, or may this year, five dollars or more, to the funds of the society. Copies were also ordered to be presented to several Societies and Editors of Agricultural Journals.

The Constitution of the Agricultural Society of the United States having been read, and the propriety of sending a delegation from this Society to its annual meeting been discussed, it was, on motion of Mr. Tucker, unanimously resolved that twenty delegates be appointed to represent the New-York State Ag. Society at the annual meeting of the Agricultural Society of the United States, to be held in Washington city on the first Wednesday of May, 1842.

The following gentlemen were appointed delegates: James S. Wadsworth, Esq., President of the Society; Joel B. Nott, Esq., Hon. Anthony Van Bergen, Francis Roten, Esq., and Dr. J. P. Beekman, Ex-Presidents; Ezra P. Prentice, Rev. Henry Colman, Luther Tucker, Henry S. Randall, J. McD. McIntyre, Harvey Baldwin, Benj. P. Johnson, Lewis A. Morrell, John J. Viele, Micah Sterling, Lewis F. Allen, Henry D. Grove, L. Bronk, G. V. Sacket, and W. H. Morris.

Messrs. Prentice, Tucker and McIntyre, were appointed a committee to fill any vacancies which may occur in the delegation.

The committee to select the place for the Cattle Show and Fair, having reported, it was unanimously resolved that the exhibition be held on the grounds attached to the New Bull's Head Tavern, on the Albany and Troy turnpike, about half a mile north of Albany.

"YOUNG WALLACE," an improved Durham bull, bred by Wm. Pirnie, Esq., of Westchester county, N. Y., and which took the first premium at the fair of the American Institute in 1840, is now owned and in the possession of GEO. HEZLEP, Esq., Gustavus, Ohio, and bids fair, we are assured, to rival the best of his kind in that state.

WORK FOR THE MONTH.

MAY is a very busy month with the teams of the farmer, and they should therefore receive extra attention and care. In feeding animals, one fact should not be lost sight of; which is, that animals fed on vegetable fibre, such as hay and grass, receive the most carbon, and therefore take on fat and increase in bulk, as carbon is the base of all oils, fat, &c., while animals fed on grain receive the most nitrogen, which forms the base of the muscular part of animals, and gives them their power and endurance. The farmer who expects his horses or oxen to wear well in work must give them grain; otherwise, their flesh will be of a quality that will not endure; and however well they may look at the commencement of labor, their flesh, without muscular consistence and firmness, will go like a spring frost.

If you wish to raise your calves, you may do it without keeping them on new milk. Diminish gradually the quantity of new milk sucked by them, or fed to them, and substitute skimmed milk with a little meal stirred in. Treated in this way, very good calves may be grown, and the new milk saved for butter.

Farmers are too negligent as to the kind of cows they keep. There are many cows which do not pay to the owner the expense of keeping them, and occasion an annual loss. It costs no more to keep a cow that will average nine or ten quarts a day than one that will average only six or seven; and the difference in amount would in the course of the year be a handsome profit. If we estimate the cost of keeping a cow at twenty-five dollars, we shall find that if a cow gives six quarts per day the *loss* in keeping will be $4.75. If the yield is eight quarts per day, then the profit will be about $5. If the milk is ten quarts per day, the profit will be $11.75. Now is the time to ascertain whether your cows are worth keeping or not; and the farmer should look well to this part of his husbandry.

May is the month in which Indian corn should be planted; and the importance of this crop to the farmer should induce the greatest care to secure a good growth. It is generally planted in hills; and as this allows of culture both ways, it is commonly preferred; but a greater number of plants can be put on an acre if planted in drills; and most of the great crops which have been grown in the country have been produced in this way. Corn will bear heavy manuring; and to this crop and roots the barnyard manure should be applied, rather than directly to grain crops. Dunging in the hill is a bad practice, though corn may sometimes succeed when so planted. Many pieces of corn so planted failed entirely last year, as it will feel drouth much sooner than when the manure is scattered and incorporated with the whole soil. If the soil is deep and friable, hilling is worse than useless; but on hard soils, and those inclining to wet, hilling is advisable. These should never be made narrow, but broad and flat, for the benefit of the roots. Soaking in saltpetre, in vitriol, in copperas, tarring and plastering, and various other contrivances have been resorted to, to keep off worms, birds, &c.; sometimes with success, but perhaps oftener without. There is an advantage, however, in some of these preparations, particularly the saltpetre and plaster, as a more rapid and vigorous growth is imparted, which places the plant sooner out of danger. A bushel of lime, a bushel of ashes, and a bushel of plaster, mixed together, and a handful dropped in the hill at the time of planting is an excellent application, and will frequently save the crop from the worm, as well as add materially to the amount of the crop. The plants must be kept free from weeds, the earth between the rows light and loose; and for this purpose, the cultivator is one of the best of implements. The rows of corn, and indeed of all other plants where practicable, should be planted north and south; as in this way, the plants receive the benefit of the sun in more directions than one. The distance of the hills must depend in a great measure on the kind of corn planted. Our common northern varieties require about three feet each way, three or four stalks in a hill; in drills, the rows three feet apart, the stalks in the rows one foot apart, or two together at eighteen inches. There is less attention paid to the manner of planting corn than almost anything else; and the consequence is, some of the seeds are six inches deep and others not more than two, the corn comes up unequally, and a good crop can scarcely be expected. Not more than three, nor less than two inches in depth is the best for corn; and the earth should be pressed upon the seed with the hoe, as it will facilitate and equalize the germination.

Perhaps more failures from bad seed occur with corn than any other crop; and proportionate care should be used in the selection. It is a good plan, where any doubt or uncertainty exists, to test the seed by sprouting a given number of kernels; and there should always be a liberal supply of seed used, since all but the number required can, and should be pulled out at hoeing. The kinds of corn used at the South and West are the white gourd seed varieties. At the North, the smaller and earlier yellow and white kinds. The Dutton, Brown, Red Blaze, the several varieties of Canada whites and yellows, are all highly esteemed, and very productive. The earliest corn with which we are acquainted is the Canada Dwarf.

The sugar beet has of late received much attention and commendation as an object of field culture for feeding sheep and cows, and it promises to take the place of the turnep in our system of farming, the latter not being so well adapted to our hot, dry summers as the beet. The seed should be drilled in rows two and a half feet apart, the plants six inches apart in the rows—though this by some is considered close planting—kept clean, thinned if required, and the crop may be estimated at from 600 to 1000 bushels per acre. The sugar beet is good for all store animals, and for milch cows is probably unrivaled, increasing the quantity of the milk, and making butter of the best quality.

The carrot should be sown this month, or as early as the ground is fit for the seed. We have found carrots one of the very best roots for horses, keeping them in fine health and condition, and every farmer knows their value for fattening animals. Their cultivation is like that of the beet; and that man greatly mistakes his true interest who neglects the culture of roots in his mode of farming.

Everybody cultivates the potatoe; but there is a vast difference in the product and quality of this root, partly depending on the variety, partly on the soil, and partly on the culture. The best soil for the potatoe is one rather moist, full of vegetable mold, and loose and friable in its texture. Dry, sandy soils do not yield as good potatoes as moister ones, as the roots are not as thoroughly secluded from air and light a condition indispensable to their perfection. The hills for the potatoe should be broad and flat, the ground kept clean till the vines cover the surface, and the roots should not be disturbed in the culture, as it deranges the formation of the tubers. The Pinkeye and the Mercer are the best table potatoes; the Rohans, Sardinias, and Long Reds for field culture or for animals.

It is an excellent plan to remove the grass for a few feet from fruit trees, and with a spade to loosen the earth in the spring of the year. Trees will well repay care and attention, by the increase in the quantity and quality of the fruit. It is sometimes convenient to graft in this month; and if performed in the early part before the leaves are too much expanded, will usually succeed. If the stems of trees are washed with lye, or whitewash, a vast many insects or their eggs on the bark will be destroyed, and the tree proportionably benefited. Where the borer has made his appearance apple trees should be examined about the roots, and the grub hunted out and killed. The peach and nectarine should be looked to, to detect and destroy the grub so fatal to them, and which can now be found beneath the bark near the surface of the ground, or on the root. If your hens or geese have free access to your plum or cherry trees, they will materially aid in destroying the curculio, which will be now leaving its winter retreat in the earth to prey on the fruit. Don't suffer a caterpillar's nest to escape your notice, or destruction. It is easy to kill them while young; but when they leave their nests and scatter over the tree, they cannot be hurt, while the injury they do is immense.

Give constant attention to your animals, and do not imagine that care ceases when the stock goes to the fields. Do not be in too much of a haste to turn them to pasture. Better keep them on hay and roots until there is a good bite of grass, than have them, to satisfy hunger, gnaw the young grass and clover to the very roots. Pastures so fed will scarcely recover from the effect during the whole season.

May is a good month to sow plaster. Use it liberally; but for the sake of it, don't neglect the use or preparation of manures. Both should go together. On pastures, plaster may be used without. On meadows kept in grass, top dressings of manure should accompany its application.

We hope some of our friends will try sowing some corn broadcast for soiling or for fodder. That the process would succeed we have scarce a doubt; and where food for animals is scarce, summer or winter, such a resource would be invaluable. May is a very good month for draining lands, planting trees, and making such improvements as the situation of the farm, or the season demands.

CULTURE OF HEMP.

The vast quantities of hemp consumed in this country for cotton bagging, cordage and the use of the navy, are rendering the production of the article annually of more consequence, particularly as the greater part is exported from Russia; and so far, we are rendered tributary to a foreign power for an article which we are abundantly able to produce ourselves. At present, the quality of the imported hemp is superior in some respects to the American; but experience in its culture and preparation will do away this difference, and render the home article equal to the best grown abroad. We were expecting a paper from Judge Beatty of Kentucky on the culture of hemp, but we regret to learn from him that circumstances beyond his control have prevented the preparation of such an article, and he has referred us to his celebrated prize essay on the growth and preparation of hemp, which has been forwarded and received, as a full account of the manner which has proved most successful in Kentucky. From that, and other sources, we shall now collect such hints as will furnish the information necessary to those who propose attempting the hemp culture.

Seed.—One of the most essential things in the growth of this crop is a supply of pure and good seed; and to be perfectly certain on this point, every farmer will find it to his advantage to grow his own. Hemp seeds, like all those containing oil, are very apt to heat and become unfit for seed if kept over one or two years, and can scarcely be preserved in a state fit for vegetation unless spread on a floor and frequently stirred during the summer months. The best way is to grow in one year the seed which is to be sown the next. Judge B. recommends the richest ground for raising hemp seed. Highly manured land is better than newly cleared land; and old meadows, or land used a long time for pasture, is good for this purpose. Where turf land is used, it should be plowed in the fall, and if not rich, a dressing of manure should be given. The ground must be finely pulverized by plowing and harrowing, and then the seed may be planted in hills, or sown in drills. The first method is generally preferred, as the after culture, cleaning the ground, &c., is more easily performed when the seed hemp is in hills than when it is in drills, and the seed is thought to be more perfect. It is common to plant the hills five feet apart, to suffer four or five stalks to stand in a hill till the blossom hemp is removed, and then to reduce the number of stalks to two in each hill. There are other methods of planting; but the great object is room for a vigorous seed plant; and whatever plan accomplishes this, will succeed. The ground must be kept clean by hoeings or plowings. In order to give the seed bearing plants room to expand and perfect their seed, it is necessary to cut out the blossom or male hemp; but this cutting out must not be performed too early or too rigidly, as the pollen of these blossoms are necessary to the perfection of the seed. Judge B. recommends that as soon as the seed hemp has so far advanced that the blossom hemp can be readily distinguished, it should all be cut out except one stalk in every other hill and every other row. This will secure a sufficient supply of pollen to fertilize all the seed bearing plants, and render the seed certain of vegetation. After these male or blossom plants have discharged their fertilizing dust, they also may be removed, though this is not essential, where only one or two seed bearing plants are left in each hill. The seed for plants, from which seed is to be grown, should be sown as early as is consistent with safety to the young plants from frost. In Kentucky the month of April is preferred; in our latitudes the planting must be later. Planted early, it will be fit to gather for seed in September; and in cutting the plants, they must be handled or shaken as little as possible, as the seeds drop easily. The plants may be carefully set up in shocks until dry enough to thresh easily, which may be done on a tight floor, either by striking the plants on a plank, or by beating with a flail. The first method gives the best seed. When threshed, the seed should be cleaned at once, and then spread out in some safe, dry shelter until thoroughly dry, when it may be put in barrels with open heads or in bags until wanted. Rats and mice are very fond of hemp seed, and these must always be guarded against. Judge Beatty says—"Old seed will not generally answer for sowing. During the *summer* succeeding the year in which it was reared, it goes through a heat which destroys its vegetating powers. If, however, it were to be spread out thin on a dry floor before the commencement of hot weather, and kept thus spread out during the summer, there can be no doubt it would answer for sowing the ensuing year. But it is always safest not to trust to old seed, without having first tested it by planting a certain number of seeds, and thus ascertaining how many will vegetate."

Preparation of the Ground.—There are few crops grown that require so complete a tillage and pulverization of the ground as hemp. It must be as thoroughly reduced, and made as fine and as clean as possible; and the hemp grower may usually expect his crop will be in proportion to the care and labor bestowed in fitting the soil for the seed. The ground intended for hemp should be plowed deep in the fall, or very early in the spring, that it may have the benefit of the frosts in pulverizing the soil; and no animals should be allowed to go upon it, as all pressure or compactness is injurious. When the time for sowing arrives it must be again plowed and harrowed; and these operations, particularly the latter, must be repeated or continued until the surface is perfectly fine and level. The seed must now be sown and harrowed both ways, and then if rolled, the equal germination of the seeds will be greatly advanced, and the surface left smooth and even for the better action of the hemp cradle. In late sowings, or when the ground is destitute of the moisture necessary for germination, it will be safer to plow in the seed with a shallow furrow, or with shovel plows. This depth of covering will insure their coming up, unless the ground is very dry; in which case, it will be best to wait for rain before sowing. In Kentucky, the usual rate of seed per acre is one bushel and a peck; but where the ground is in first rate condition, and the proper degree of moisture to insure germination, Judge Beatty thinks from his experience that one bushel and one-eighth of seed will be sufficient. This is much less than has been generally used in this country, or recommended in the hemp districts of Europe. From two to three bushels of seed is the quantity most commonly preferred; but there is no question, that where the seed and the soil are both of the right kind, the quantity proposed by Judge Beatty would furnish as many plants as could grow on an acre. Experience shows that freshly manured lands do not produce as good hemp as those in which the manure has become fully decomposed and incorporated. Newly manured lands give a coarse stock and lint, which thoroughly prepared soils will not do. Old meadows turned over in the fall, that the sod may be partially decomposed, or pastures that have been used for sheep walks, are found to be excellent for hemp, the vegetable and animal matter in such soils being in the proper condition to insure its action on the plants.

Succession of Hemp Crops.—Hemp is one of the few plants which will admit of sowing for a number of years in succession on the same soil or field. This is important, as it enables the grower to keep his hemp fields much more easily clean, and in good order, than if a rotation was followed, or new fields annually taken for that purpose. There is another advantage. As the field when the hemp is taken off is destitute of all vegetation, there is no excuse for allowing animals to run in these fields, and consequently they are more easily kept light and mellow. Experience proves that hemp is a crop that deteriorates the soil in but a slight degree if at all. The Farmers' Guide states on good authority, that thirteen or fourteen successive crops were taken from the same field and that the last was the best; and Judge Beatty adds—"I have no doubt of the correctness of this statement, because it conforms to my own experience. A field containing 12½ acres, upon which nine or ten successive crops have been grown, produced last season 9809 pounds of hemp, equal to 789 pounds per acre. This was quite as good a yield, taking into consideration the unfavorableness of the season, as I have ever had from the same ground." It is evident, however, that unless hemp soils are originally exceeding rich in nutritive matter, or this matter is renewed by the overflowing of streams, as it is on some bottom lands, exhaustion and a consequent failure of the crop must eventually take place. To prevent this, some hemp growers apply, every second year, a dressing of compost manure to their hemp lands.

Time of Sowing.—According to Low, and the Russian practice, hemp should be sown about the last of April or the first of May. Judge Beatty says—"it may be sowed at any time between the 10th of April and last of May, when the ground is in a proper state for sowing; that is, neither too wet nor too dry." As a general rule, early sown hemp produces the best crop; the plant getting more of its growth, and greater maturity, before the hot dry weather of our summer commences. Frosts do not often destroy it, though a succession of frosty cold nights seriously retards its growth and injures the crop. This it does by making the plant shorter than it would be under favorable circumstances, and thus reduces the weight. The latest sown hemp will be the lightest, and afford the least profit, although it will mature in the middle states if sown as late as the 10th or middle of June. Where considerable quantities of hemp are grown, it is found advantageous to have the several fields come to maturity in succession, as this difference in ripening gives more time for cutting and securing the crop.

Time for Cutting.—According to Judge B., "the time for cutting or pulling hemp is indicated by the leaves of the male hemp becoming yellow, and most of them falling off. Upon a close examination about this period, it will be found that some of the blossom stalks will have entirely shed their leaves, and begin to turn of a dark color, having lost their yellow hue. When this discovery is made, no time should be lost in cutting or pulling the hemp. But it may stand a week longer without any material injury, except that the blossom hemp will not take so good a rot, and will be somewhat worse to break." Thus, in Kentucky, and we believe generally in this country, the blossoming and the seed bearing plants, or the males and females as they are sometimes termed, are all gathered at the same time. A different practice prevails in the hemp countries of Europe. There, the male or blossom plants are pulled as soon as the leaves and stalk are yellow and the flowers faded, while the females or seed bearing plants are allowed to stand some five weeks longer, thus making two hemp harvests. The two kinds are kept separate, and the first pulled is usually the first rotted and fitted for use. Whether this difference in the time of pulling may not produce a greater uniformity in the quality of each kind, and increase the value of the whole, we cannot say; but it appears probable such should be the result. In Europe, the practice is to pull the hemp; in this country, cutting it with the hemp cradle, (an implement like the grain cradle, except that the sythe, fingers, &c., are stronger and shorter,) is generally preferred. If the ground is made smooth at the time of sowing, very little lint will be lost, as the hemp can be cut close to the ground. Beside, the crop in handling will be much cleaner, and cutting is vastly more expeditious than pulling, which enables the hemp grower, with the same number of hands, to greatly increase his crop, without danger of its suffering for want of cutting or pulling.

Curing the Hemp.—On this point, Judge B. remarks—"When hemp is cut or pulled, it should be spread on the ground, keeping the but ends even, and should be suffered to lie till well cured; this will require a week, or somewhat less, if the weather is clear and warm. If it get a rain in the mean time, it will be an advantage, as it will cause the leaves more readily to leave the stalk." Mr. Allen, who was extensively engaged in the hemp culture in Lewis county, in this state, and who in 1832 received a premium from the American Institute for the best specimen of hemp exhibited, says—"The hemp when cut is to remain in the swath one day, and then is to be turned and remain one day, and on the third day to be bound near the butt in very small bundles with a small band of the hemp. Then to be set up on the butts in shocks until it becomes perfectly dry." When thoroughly dried, it may be put in ricks or stacks to remain till wanted for rotting. At the West, ricks are preferred, because in this way of putting up the hemp it is all secured against the weather with the exception of the roof, (if this is formed of hemp,) while in stacking, a portion of the hemp will always be more or less exposed. Some hemp growers, after the hemp is cured, sit it up in large shocks in the fields, the tops secured by close bands, and butts resting on the ground. If hemp stands long in this manner it is evident the butts must be partially rotted, and even the outsides of the shocks will be more or less damaged. These parts of the hemp when spread out for rotting, or when put in the vats, will be spoiled before the protected parts are sufficiently rotted to produce good hemp.

Rotting and Getting Out.—There are two methods of rotting hemp. One, by spreading it on the ground, where it is exposed to rains and dews until the lint separates readily from the stem; a process called dew rotting. The other is by steeping the hemp in vats or pools of water until the same effect of the separation of lint is produced. These processes are conducted on the same principles, and for the same ends, as the flax rotting, with which every farmer is acquainted. Grass ground, clean pastures or meadows, have generally been chosen for spreading hemp, where dew rotting is practiced; but some of the most successful hemp growers of the West, and among these Judge B., now prefer spreading the hemp for rotting on the same land that produced the crop. The reasons assigned for this preference are, that the labor of hauling the hemp is prevented, the ricks being made on the ground—the manure arising from the leaves, &c., is saved, as it will be kept on the ground—the hemp rots quicker and more evenly than on grass land—the ground is free from stock, and is benefited by being covered with the rotting hemp—and lastly, grass lands are injured by rotting hemp upon them. The following directions for water rotting are from the report of Mr. Allen, made to the Institute: "Vats are prepared near the mills of about six feet deep and eight feet wide; the length to be varied at pleasure, or the quantity to be rotted. The bundles of hemp are then to be carefully laid in lengthwise until the vat is full, and pressed down with any sufficient weight to keep it solid. Water is then to be let in on the top until the vat is filled, and is to remain for two days to saturate the mass, after which it is to be drawn off, and a supply of running water to be introduced until the vat is filled, which is to run off continually until the hemp is properly rotted. The time will depend on the temperature of the water, and will be from six to twenty days; the water is then let off, and after about eight hours the hemp is to be taken out and set up on the butts in the field, after opening the bundles, against a fence, or ropes running through stakes fastened in the ground for that purpose. When perfectly dry, it is bound up and taken to a dry house where it is to be kiln dried for about two days, from which it is to be taken to the mills for breaking and dressing." We believe that European or Russian hemp is invariably water rotted, which gives the fibre a greater degree of uniformity than dew rotting can do, and unquestionably is one cause of the superiority of the foreign article. In Russia, the hemp is rotted in pools formed in slightly running brooks, the water of which is exposed to the sun, and acquires a temperature favorable to a speedy fermentation and rotting of the stem of the hemp. Whether in pools or vats, the hemp must be wholly covered with water, but it should not be so loaded with weights as to press it closely upon the bottom. There is little difficulty in knowing when the hemp is sufficiently rotted. Judge B. says that when this operation is sufficiently advanced, "the stalks of the hemp lose that hard, sticky appearance or feel they retain till the process is completed. The lint also begins to separate from the stalk, and the fibres will show themselves somewhat like the strings of a fiddle bow, attached to the stalk at two distant points, and separate in the middle. This a certain indication that the hemp has a good rot."

Hemp is fitted for market by separating the lint from the woody fibre, and its value is in no inconsiderable degree depending on this process of dressing. It is sometimes prepared by hand in the same manner as flax; but this is a slow and tedious operation, although the quality of the article is usually good. Various machines for breaking and cleaning hemp have been put in operation in different parts of the country, and have materially lessened the labor of preparing this crop for market. Which is the best or most approved, we have no means of determining. Further attention we doubt not will still more improve the processes of hemp culture, and remove many of the obstacles which are at present in the way of producing a perfect article. When we remember that the naval and commercial marine of the United States requires annually some ten or twelve thousand tons of hemp, independent of the quantities required for cotton bagging, &c. &c., the importance of the hemp culture will be better understood and acknowledged, and the necessity of continued efforts in the culture more fully apparent.

Notices of New Publications.

TRANSACTIONS OF THE N. Y. S. A. SOCIETY.

By the 5th section of the "Act for the encouragement of Agriculture," passed May 5, 1841, it is made the duty of the Executive Committee of the New-York State Agricultural Society to examine all reports and returns made by the presidents of the County Ag. Societies, and arrange and report the same, together with a statement of their own proceedings, to the secretary of state, in the early part of each year.

The first report, made in consequence of this provision, is now before us, under the above title; and though possessing some defects incident to the nature of the subject, or rather a first undertaking, we think it will be received as a favorable indication of what the society has already done, and the great good we trust it is yet destined to accomplish. The report before us embraces—1. A brief account of the origin of the society in 1832, its reorganization in 1841, and the acts of the legislature in favor and in aid of agriculture. 2. The proceedings of the society for 1841, under the new organization, embracing an account of the several meetings of the society; the fairs at Syracuse and annual meeting at Albany; premiums awarded, and reports made to the Committee. 3. Reports of county societies. This part contains reports from the counties of Tompkins, Orange, Monroe and Steuben, Orleans, Oneida, Niagara, Washington, Jefferson and Onondaga, with some suggestions as to the manner in which the intentions of the legislature in granting the aid of the state may be best met in the future proceedings of the county societies. 4. Report of the corresponding secretary. By direction of the Executive Committee, the Cor. Sec'y opened a communication with gentlemen in different parts of this state, the United States, and Great Britain, on the various topics connected with agriculture, for the purpose of collecting information which would be useful to the farmer, both theoretically and practically. The call has been cheerfully responded to; and the following schedule of papers will show the auspicious result:

Agriculture of Cayuga county, by U. F. Doubleday and Ira Hopkins.
Agriculture of Cortland county, by Jesse Ives.
Agriculture of Dutchess county, by Henry Staats.
Agriculture of Herkimer county, by Aaron Petrie.
Agriculture of Madison county, by Alex. Krumbhaar and Thomas Mellen.
Agriculture of Ontario county, by Z. Barton Stout.
Agriculture of Putnam county, by Leonard Clift.
Agriculture of Queens county, by Albert G. Carll.
Agriculture of Saratoga county, by Howell Gardner.
Agriculture of Washington county, by Ahira Eldridge.
Agriculture of South Carolina, by Hon. Joel R. Poinsett.
Agriculture of Pennsylvania, by Wm. Penn Kinzer
Agriculture of Virginia, by James M. Garnett.
Agriculture of England, by John Hannam.
On Tillage, by Willis Gaylord.
On the Fruit Garden, by David Thomas.
On the Increase and Prospects of Silk Culture in the United States, by Gideon B. Smith.
On the Culture and best variety of the Mulberry, by Daniel Stebbins.
On the different Breeds of Cattle: the most profitable Breeds, by Henry S. Randall.
On the points by which Cattle should be judged—the best breed, by Heman Chapin.
On Cattle—Sheep—Root Culture, by Daniel S. Curtiss.
On Geology, as connected with Agriculture, by Willis Gaylord.
On Charcoal as a Manure, by John H. Hepburn.
On Wintering Horses, by Ezra Meech.
On the most profitable breed of Horses, by Wm. B. Ludlow.
On the History of Sheep, by Henry S. Randall.
On Merinos and Saxons, by William Jarvis.
On the Saxon Sheep—its value compared with the Merino, and with the English breeds, by Henry D. Grove.
On the Paular Merino, by S. W. Jewett.
On the Management of Sheep, by L. A. Morrell.
On the Construction of Fences, by H. S. Morse.
On the Culture of Hemp, by Joseph Sawyer.
On the Introduction of Italian Wheat into the United States, by Jay Hathaway.
On Domestic Poultry, by C. N. Bement.
On Feeding Swine, with Suggestions as to the best breed, by B. P. Johnson.
On the Grape, by L. B. Langworthy.
Letter from Samuel Lawrence, Esq.

We have room in this place only to invite the attention of the reader to the papers on the "Agriculture of England," by J. Hannam; the Fruit Garden, by David Thomas; "Different Breeds of Cattle," by the Cor. Sec'y; "Domestic Poultry," by C. N. Bement; "Management of Sheep," by L. A. Morrell; and "Feeding Swine, with Suggestions as to the best breed," by B. P. Johnson. The report contains fine engravings of several of the animals that obtained the premiums at the Society's fair at Syracuse. We do not deem it necessary to remark on the report farther in this place, as by the liberality of the legislature, ten times the usual number of copies were printed for the use of the house—500 copies for the State Agricultural Society, and 20 copies for each agricultural society in the state, thus wisely ensuring an extensive circulation. That it will be welcomed by the farmer, and be considered as a creditable and useful contribution to the agricultural stock of information, we do not doubt.

THE MUCK MANUAL FOR FARMERS.

Under this unpretending title, Dr. S. L. Dana of Lowell, Massachusetts, has presented to the agricultural public a work of sterling value, and deserving a thorough examination by every farmer, both for the theoretical and practical views it contains. Dr. Dana has long been connected with the extensive manufactories of Lowell as the chemist of the print department; and the extensive use of cow dung for the purposes of these establishments led him to a more thorough examination of its nature, with the expectation of providing a substitute, than had yet been made. This, of course, embraced its use as a manure; and some of the opinions of Dr. D. having excited considerable attention, the citizens of Lowell requested him to deliver a series of lectures on agriculture and its kindred topics before them. This was done; and he informs us this volume contains the substance of those lectures. No farmer can read this work without benefit, or being impressed with the importance of chemistry as applied to agriculture. The man of science may not be able to give in his adhesion, at once, to all Dr. Dana's views; but so well reasoned are his conclusions from his premises, that we think the grounds of dissent with any will be few. His explanation of the action of gypsum differs from that of Liebig; and he dissents from the position that rain or snow water contains free carbonate of ammonia, although he admits the existence, in both, of ammoniacal salts. The late hour, however, at which we have received the volume prevents our noticing it as fully as it deserves, and we shall return to it at an early opportunity. Meantime, we cordially recommend it, as a most valuable contribution to the great science of agricultural chemistry. D. Bixby of Lowell, publisher.

JOHNSTON'S LECTURES ON AG. CHEMISTRY.

There can be no question but that the scientific part of agriculture has received an astonishing impulse from the publication of Prof. Liebig. Chemists seemed disposed to rest with the conclusions to which Davy and Chaptal had arrived, and few were disposed to hazard any new investigations. Liebig's book disclosed at once the vastness of the field to be occupied, and an army of laborers have rushed to its occupancy. We have noticed above, the rich fruits which have been gathered by one of the distinguished men who are engaged in this important pursuit; and the volume before us is another contribution from an ardent and successful laborer in the same field. Every reader of agricultural works is familiar with the name of Prof. Johnston of the University of Durham in England. The volume consists of eight lectures delivered before the Durham Co. Ag. Society, and the members of the Durham Farmer's Club; and commencing with the simplest elements of Ag. Geology and Chemistry, conducts the reader to the consideration of the most important principles connected with vegetable growth, organization, and decomposition. The constituent parts of vegetables, the earthy salts, silicates, &c., the manner in which substances used as manures contribute to the growth of plants, and all the questions relating to vegetable physiology are passed in review, and discussed with the ability of a master. On some points, particularly those relating to the composition and action of animal manures, we consider him less clear and satisfactory than Dr. Dana, while the limit assigned by himself to the work of the latter did not allow so full an examination of the mineral or earthy constituents of the globe as has been done by Prof. Johnston. We need not say that we are happy to notice the publication of such works as these Lectures of Dana and Johnston. They will be read extensively; they will make farmers think; they will place agriculture in a new and more imposing light in the minds of thousands; since science in its complicated forms is proved to be but its handmaid and servant. Such works are magazines of facts, from which the farmer will draw conclusions aiding him in his pursuits, and the study of which will add materially to his stock of available and therefore useful knowledge. Messrs. Wiley & Putnam of New-York are the publishers of this, as well as of several other valuable agricultural works which we have lately had occasion to notice; and the farming public are certainly much indebted to them for their enterprise.

Address *before the N. Y. S. Ag. Society, at their annual meeting in Albany, January,* 1842. *By* J. B. Nott, *Esq.*

We welcome the appearance of the address of Prof. Nott before the public, in a form and manner suitable to the sound and patriotic sentiments it embodies, and the elegant and forcible style in which these sentiments are conveyed. Into the details of agriculture Prof. N. did not enter, and this may be deemed a practical defect by some, yet the reader on the whole will be apt to forget the omission, or visit it with the slightest possible degree of censure. The address gives a notice of the former agricultural societies of this state, alludes to their failure, traces the history briefly of some other societies, particularly the Scotch Highland, and the Berkshire Ag. Societies, inquires into the cause of the success of these, and suggests measures to insure the continued prosperity of that of New-York. The cause to which the address traces the success of the two societies we have named, is their cattle shows and fairs; and the conclusion at which he arrives is, that agricultural societies without these cannot long profitably exist. The suggestions respecting a Board of Agriculture, the necessity of placing the funds of the society on a permanent footing, the benefits of knowledge in the pursuit or practice of agriculture, and the advantages that would ensue from the establishment of agricultural schools, are all deserving, and will receive an attentive consideration.

DR. BULLIONS' THREE GRAMMARS.

The Principles of English Grammar; comprising the substance of the most approved English Grammars extant, with copious exercises in parsing and syntax, for the use of academies and common schools, on the plan of Murray's Grammar. Fourth edition, revised and corrected, by the Rev. Peter Bullions, D. D. Professor of Languages in the Albany Academy.

Also, by the same author, "Principles of Latin Grammar," and "Principles of Greek Grammar," constructed on the same plan, and comprising the substance of the most approved grammars extant for the use of colleges and academies.

The English grammar, whose title is given above, has been prepared with great care, and with special reference to the wants of common schools in the United States. The author's aim, as he states in his preface, has been to correct what is erroneous, to retrench what is superfluous or unimportant, to compress what is prolix, to elucidate what is obscure, to determine what is left doubtful, to supply what is defective in the books already in use, and to bring up the whole to that point which the present state of education requires. We use the language of men whose standing and scholarship is a guarantee for the truth of the statement, when we say that this English grammar is "at once, the most concise and the most comprehensive of any with which we are acquainted; as furnishing a satisfactory solution of nearly all the difficulties of the English language; as containing a full series of exercises in false syntax, with rules for their correction; and finally, that the arrangement is in every way calculated to carry the pupil from step to step in the successful acquisition of that most important end of education, the knowledge and use of the English language."

The Latin and the Greek Grammars, by the same author, are constructed on the same plan, and have received the highest commendation from the most competent judges. To use the language of the New-York Evangelist, in these works—"Dr. Bullions has aimed to express the principles of grammar which are common to the three languages in the same terms as nearly as possible. Thus he furnishes the scholar with the means of comparing the languages both in their points of agreement and difference. The value of comparative grammar as a means of mental discipline and enlargement has not been sufficiently realized."

SILLIMAN'S JOURNAL FOR APRIL, 1842.

This is a rich number for the man of science, and as usual contains a number of articles interesting to the general reader. The review of the N. Y. Geological Reports, though brief, is well written; and the paper by Prof. Maclaren of Edinburgh, on the Glacial Theory of Prof. Agassiz, will arrest attention, and well repay perusal. There is a fine engraving of a new trilobite, found in Ohio, in the strata that may be considered the equivalent of our Trenton limestone, by Prof. Locke. Published at New-Haven, at $6 per annum, postage paid by the publishers, when the money is sent in advance.

NORTH AMERICAN REVIEW, NO. 115, APRIL, 842.

This number of our favorite review contains 12 articles, all on interesting subjects and ably treated. Of these, the "Red Man of America," the "Early History of New-York," and the review of "Liebig's Organic Chemistry," will be read with interest. We are glad to perceive that a second edition of Webster's American edition of Liebig has been just issued from the press This speaks well for the diffusion of agricultural knowledge. Munroe & Company, Boston, are the publishers of the North American.

NEW PERIODICALS.

The American Botanical and Horticultural Magazine.—We have been favored with the first number of this magazine, which was commenced in New-York last month, and is hereafter to be issued on the first of each month. Each number is to contain at least four colored lithographic drawings of flowers, executed from nature by the most experienced and skilful artists, with 24 pages large octavo letter-press. The drawings in this number consist of the Primula sinensis, Siphocampylus bicolor, Cineraria Waterhousiana, and Chorizema varium. They, as well as the letter-press, are executed in the best manner—quite equal to any similar London work which has fallen under our notice. It is edited by Prof. J. H. Griscom, M. D., and published by Geo. S. Curry & Co., 167 Broadway, New-York. Price 75 cents per number, or $8 a year. We shall be rejoiced to hear that the work is liberally patronized.

The American Agriculturist.—This is a new agricultural monthly, to be published in New-York under the editorial direction of Messrs. A. B. & R. L. Allen, formerly of Buffalo, by Geo. A. Peters, 32 pages octavo, at $1 a year. The editors are well known as correspondents of several of our agricultural journals, and will no doubt make an excellent paper.

AGRICULTURAL STATISTICS OF THE UNITED STATES,

As Estimated by Mr. Ellsworth, for 1841.—Table I.

	States, &c.	Population 1840.	Bushels wheat.	Bushels barley.	Bushels oats.	Bushels rye.	Bus. buck wheat.	Bushels Indian corn.	Bushels potatoes.	Tons of hay.	T's flax & hemp.	Pounds tobacco.	Pounds of cotton.	Pounds of rice.	lbs. silk cocoons	Pounds of sugar.	Gallons wine.
1	Maine,	501,973	987,412	360,267	1,119,425	143,458	53,020	988,549	10,912,821	713,285	40	75	....	....	527	263,592	2,349
2	New-Hampshire,	284,574	426,816	125,964	1,312,127	317,418	106,301	191,275	6,573,405	505,217	28	264	....	....	692	169,519	104
3	Massachusetts,	737,699	189,571	157,903	1,276,491	509,205	91,273	1,905,273	4,947,805	617,663	9	87,955	....	....	19,843	496,341	207
4	Rhode-Island,	108,830	3,407	69,139	188,668	37,973	3,276	471,022	1,003,170	69,881	½	454	....	....	745	55	801
5	Connecticut,	309,978	95,090	31,594	1,431,454	805,222	334,008	1,521,191	3,002,142	497,204	45	547,694	....	....	93,611	56,372	1,924
6	Vermont,	291,948	512,461	55,243	2,601,425	241,061	231,122	1,167,219	9,112,008	924,379	31	710	....	....	5,684	5,119,264	109
7	New-York,	2,428,921	12,309,041	2,301,041	21,896,205	2,723,241	2,325,911	11,441,256	30,617,009	3,472,118	1,508	984	....	....	3,425	11,102,070	5,162
8	New-Jersey,	373,306	919,043	13,009	3,745,061	1,908,984	1,007,340	5,134,366	2,486,482	401,833	2,197	2,566	....	....	3,116	67	9,311
9	Pennsylvania,	1,724,033	12,872,219	203,858	20,872,591	6,942,643	2,485,132	14,969,472	9,747,343	2,004,162	2,987	415,908	....	....	17,324	2,894,016	16,115
10	Delaware,	78,085	317,105	5,119	937,105	35,162	13,127	2,164,507	213,090	25,007	54	365	352	....	2,963	....	296
11	Maryland,	470,019	3,747,652	3,773	2,827,365	671,420	80,966	6,998,124	827,363	87,351	507	26,152,810	5,484	....	5,677	39,892	7,763
12	Virginia,	1,239,797	10,010 105	83,025	12,962,108	1,317,574	297,109	33,987,255	2,889,265	367,602	26,141	79,450,192	2,40[illegible],117	3,084	5,341	1,557,206	13,504
13	North Carolina,	753,419	2,183,026	4,208	3,832,729	256,765	18,469	24,116,253	3,131,086	111,571	10,705	20,026,830	34,437,581	3,324,132	4,929	8,924	31,572
14	South Carolina,	594,398	963,162	3,794	1,374,562	49,064	85	14,987,474	2,713,425	25,729	......	69,524	43,927,171	66,897,224	4,792	31,461	671
15	Georgia,	691,392	1,991,162	12,897	1,525,623	64,723	542	21,749,227	1,644,235	17,507	13	175,411	116,514,211	13,417,209	5,185	357,611	8,117
16	Alabama,	590,756	869,554	7,941	1,476,670	55,558	60	21,594,354	1,793,773	15,353	7	286,976	84,854,118	156,469	4,902	10,650	354
17	Mississippi,	375,651	305,091	1,784	697,235	11,978	69	5,985,724	1,705,461	604	21	155,307	148,504,395	861,711	158	127	17
18	Louisiana,	352,411	67	......	109,425	1,897	......	6,224,147	872,563	26,711	......	129,517	112,511,263	3,765,541	881	88,189,315	2,911
19	Tennessee,	829,210	4,873,584	5,197	7,457,818	322,579	19,145	46,285,359	2,018,632	33,106	3,724	35,168,040	20,872,433	8,455	5,724	275,557	692
20	Kentucky,	779,828	4,096,113	16,860	6,825,974	1,652,108	9,669	40,787,120	1,279,519	90,360	8,827	56,678,674	607,456	16,848	3,405	1,409,172	2,261
21	Ohio,	1,519,467	17,979,647	245,905	15,995,112	854,191	666,541	35,452,161	6,004,183	1,112,651	9,584	6,486,164	....	....	6,278	7,109,423	11,122
22	Indiana,	685,866	5,282,864	33,618	6,606,086	162,026	56,371	33,195,108	1,830,952	1,213,634	9,110	2,375,365	165	....	495	3,914,184	10,778
23	Illinois,	476,183	4,026,187	102,926	6,964,410	114,656	69,549	23,424,474	2,633,156	214,411	2,143	863,623	196,231	598	2,345	415,756	616
24	Missouri,	383,102	1,110,542	11,515	2,580,641	72,144	17,135	19,725,146	815,259	57,204	20,547	10,749,454	132,109	65	169	327,165	27
25	Arkansas,	97,574	2,132,030	950	236,941	7,772	110	6,039,450	367,010	695	1,545	185,548	7,038,186	5,987	171	2,147	
26	Michigan,	212,267	2,896,721	151,263	2,915,102	42,306	127,504	3,058,290	2,911,507	141,525	944	2,249	....	....	984	1,894,372	
27	Florida Ter.	54,477	624	50	13,561	320	......	694,205	271,105	1,045	2¼	74,963	6,009,201	495,625	376	269,146	
28	Wiskonsan Ter.	30,945	297,541	14,529	511,527	2,342	13,525	521,244	454,819	35,603	3	311	....	....	25	147,816	
29	Iowa Ter.	43,112	234,115	1,342	301,498	4,675	7,873	1,547,215	261,306	19,745	459	9,616	....	....	......	51,425	
30	Dist. Columbia,	43,712	10,105	317	12,694	5,009	312	43,725	43,725	1,449	......	59,578	....	....	916	....	32
		17,069,453	91,642,957	5,024,731	130,607,623	19,333,474	7,953,544	387,380,185	113,183,619	12,804,705	101,181¾	240,187,118	578,008,473	88,952,968	200,683	126,164,644	125,715

TABLE II.—CENSUS STATISTICS OF VARIOUS ARTICLES FOR 1839, NOT EMBRACED IN TABLE I.

	States, &c.	Pounds of wool.	Pounds of hops.	Pounds wax.	LIVE STOCK.					Value of the products of the dairy.	Value of the products of the orchard.	Value of home made or family goods.	GARDENS.		NURSERIES.	
					Horses & mules.	Neat cattle.	Sheep.	Swine.	Poultry of all kinds, estimated value.				Value of produce of market gardeners.	Value of produce of nurseries & florists.	No. of men employed.	Capital invested.
1	Maine,	1,465,551	36,940	3,723½	59,208	327,255	649,264	117,386	$123,171	$1,496,902	$149,384	$804,397	$51,579	$460	689	$84,774
2	New-Hampshire,	1,260,517	243,425	1,345	43,892	275,562	617,390	121,671	107,092	1,638,543	239,979	538,303	18,085	35	21	1,460
3	Massachusetts,	941,906	254,795	1,196	61,484	282,574	378,226	143,221	178,157	2,373,299	389,177	231,942	283,904	111,814	292	43,170
4	Rhode-Island,	183,830	113	165	8,024	36,891	90,146	30,659	61,702	223,229	32,098	51,180	67,741	12,604	207	240,274
5	Connecticut,	889,870	4,573	3,897	34,650	238,650	403,462	131,961	176,629	1,376,534	296,232	226,162	61,936	18,114	202	126,346
6	Vermont,	3,699,235	48,137	4,660	62,402	384,341	1,681,819	203,800	131,578	2,008,737	213,944	674,548	16,276	5,600	48	6,677
7	New-York,	9,845,295	447,250	52,795	474,543	1,911,244	5,118,777	1,900,065	1,153,413	10,496,021	1,701,935	4,636,547	499,126	75,980	525	258,558
8	New-Jersey,	397,207	4,531	10,061	70,502	220,202	219,285	261,443	336,953	1,328,032	464,006	201,625	249,613	26,167	1,233	125,116
9	Pennsylvania,	3,048,564	49,481	33,107	365,129	1,172,665	1,767,620	1,503,964	685,801	3,187,292	618,179	1,303,093	232,912	50,127	1,156	857,475
10	Delaware,	64,404	746	1,088	14,421	53,883	39,247	74,228	47,265	113,828	28,211	62,116	4,035	1,120	9	1,100
11	Maryland,	488,201	2,357	3,674	92,220	225,714	357,922	416,943	218,765	457,466	105,740	176,050	133,197	10,591	619	48,841
12	Virginia,	2,538,374	10,597	65,020	326,438	1,024,148	1,293,772	1,992,155	754,698	1,480,488	705,765	2,441,672	92,359	38,799	173	19,900
13	North Carolina,	625,044	1,063	118,923	166,608	617,371	538,279	1,649,716	544,125	674,349	386,006	1,413,242	28,475	48,581	20	4,663
14	South Carolina,	299,170	93	15,857	129,921	572,608	232,981	878,532	396,364	577,810	52,275	930,703	38,187	2,139	1,058	210,980
15	Georgia,	371,303	773	19,799	157,540	884,414	267,107	1,457,755	449,623	605,172	156,122	1,467,630	19,346	1,853	418	9,213
16	Alabama,	220,353	825	25,226	143,147	668,018	163,243	1,423,873	404,994	265,200	55,240	1,656,119	31,978	370	85	58,425
17	Mississippi,	175,196	154	6,835	109,227	623,197	128,367	1,001,209	369,482	359,585	14,458	682,945	42,896	499	66	43,060
18	Louisiana,	49,283	115	1,012	99,888	381,248	98,072	323,220	283,559	153,069	11,769	65,190	240,042	32,415	349	359,711
19	Tennessee,	1,060,332	850	50,907	341,409	822,851	741,593	2,926,607	606,969	472,141	367,105	2,886,661	19,812	71,100	34	10,760
20	Kentucky,	1,786,847	742	38,445	395,853	787,098	1,008,240	2,310,533	536,439	931,363	434,935	2,622,462	25,071	6,226	350	108,597
21	Ohio,	3,685,315	62,195	38,950	430,527	1,217,874	2,028,401	2,099,746	551,193	1,848,869	475,271	1,853,937	97,606	19,707	149	31,400
22	Indiana,	1,237,919	38,591	30,647	241,036	619,980	675,982	1,623,608	357,594	742,269	110,055	1,289,802	61,212	17,231	309	73,628
23	Illinois,	650,007	17,742	29,173	199,235	626,274	395,672	1,495,254	309,204	428,175	126,756	993,567	71,911	22,990	77	17,515
24	Missouri,	562,265	789	56,461	196,032	433,875	348,018	1,271,161	270,647	100,432	90,878	1,149,544	37,181	6,205	97	37,075
25	Arkansas,	64,943	....	7,079	51,472	188,786	42,151	393,058	109,468	59,205	10,680	489,750	2,736	415	8	6,036
26	Michigan,	153,375	11,381	4,533	30,144	185,190	99,618	295,890	82,730	301,052	16,075	113,955	4,051	6,307	37	24,273
27	Florida Ter.	7,285	....	75	12,043	118,[illegible]81	7,198	92,680	61,007	23,094	1,035	20,205	11,758	10	60	6,500
28	Wiskonsan Ter.	6,777	133	1,474	5,735	30,269	3,462	51,383	16,167	35,677	37	12,567	3,106	1,025	89	85,616
29	Iowa Ter.	23,039	83	2,132	10,794	38,049	15,354	104,899	16,529	23,609	50	25,966	2,170	4,200	10	1,698
30	Dist. Columbia,	707	28	44	2,145	3,274	706	4,673	3,092	5,566	3,507	1,500	52,895	850	163	42,933
		35,802,114	1,238,502	628,303½	4,335,669	14,971,586	19,311,374	26,301,293	9,344,410	33,787,008	7,256,904	29,023,380	2,601,196	593,534	8,553	2,945,774

STATISTICS—STATE OF THE COUNTRY.

A knowledge of the products of the country, their separate values, the relation they bear to each other, the number of persons employed in each department of industry, and the various results arising from each, would seem requisite to all who would understand the true condition of the nation, or of each individual interest. Above, we give a general report of the productive wealth of the country, so far as the earth is concerned; and we now give some tables, most of which we find prepared to our hand by the accurate and indefatigable editor of the Tribune, which will show more fully than the former the relative values of these several products. Without such condensed tables, it is difficult to approximate to the truth in such matters; and the interest that makes the most noise, or the product that is kept most constantly before the public eye, is very apt to assume an undue importance in the estimate of productive industry, or the aggregate of a nation's wealth. Labor in some form, either in the production of the raw material, its manufacture, or its exchanges, is the only source of wealth; and it is time that this great truth was universally felt and acknowledged. The proceeds of labor in the United States, according to the last census, may be stated as follows:

Agriculture,	$694,453,000
Manufactures,	395,300,000
Mines,	59,868,000
Forests,	17,615,000
Fisheries,	11,206,000
Horticulture,	3,119,000
	$1,282,041,000

This is truly a surprising product, but there is no reason to believe it is overrated; if erroneous, the error most likely lies the other way. An annual product from these departments of labor, of *thirteen hundred millions of dollars*, one-half of which belongs to agriculture. Suppose we examine for a moment some of the items of this aggregate. 91 million bushels of wheat, 387 million bushels of corn. No one can estimate the value of these two items at less than 250 millions of dollars. Cotton comes next, to the amount of 64 millions of dollars. And here we may remark, that in the estimates made of the product of American labor, cotton is always placed at the head; and why? Not because of its actual value, but because other nations are graciously pleased to permit us at the present time to export the article; and hence the word cotton is continually before the eye. One fact will show that the relative position of cotton in the scale of value is wrong. The cotton crop "is less than *one-twelfth part* of the *agricultural* production of the United States; less than *one-sixth* part of the *manufacturing* products, and less than ONE-TWENTIETH part of the annual production of the United States." In actual value to the country, both wheat and corn are before cotton; and this fact should not be forgotten by political economists.

Cotton,	$64,142,000
Total of agriculture,	694,000,000
Total of manufactures,	434,000,000

The difference in the estimate of manufactures in this and the first table given is owing to the fact, that the product of iron is placed under the head of mines; when it should, with the exception of the value of the ore, have been placed to the credit of manufactures. It may be well in this place to give a few of the most important items of manufactures as shown by the census, as it will afford the means of comparing them with those already given of agriculture.

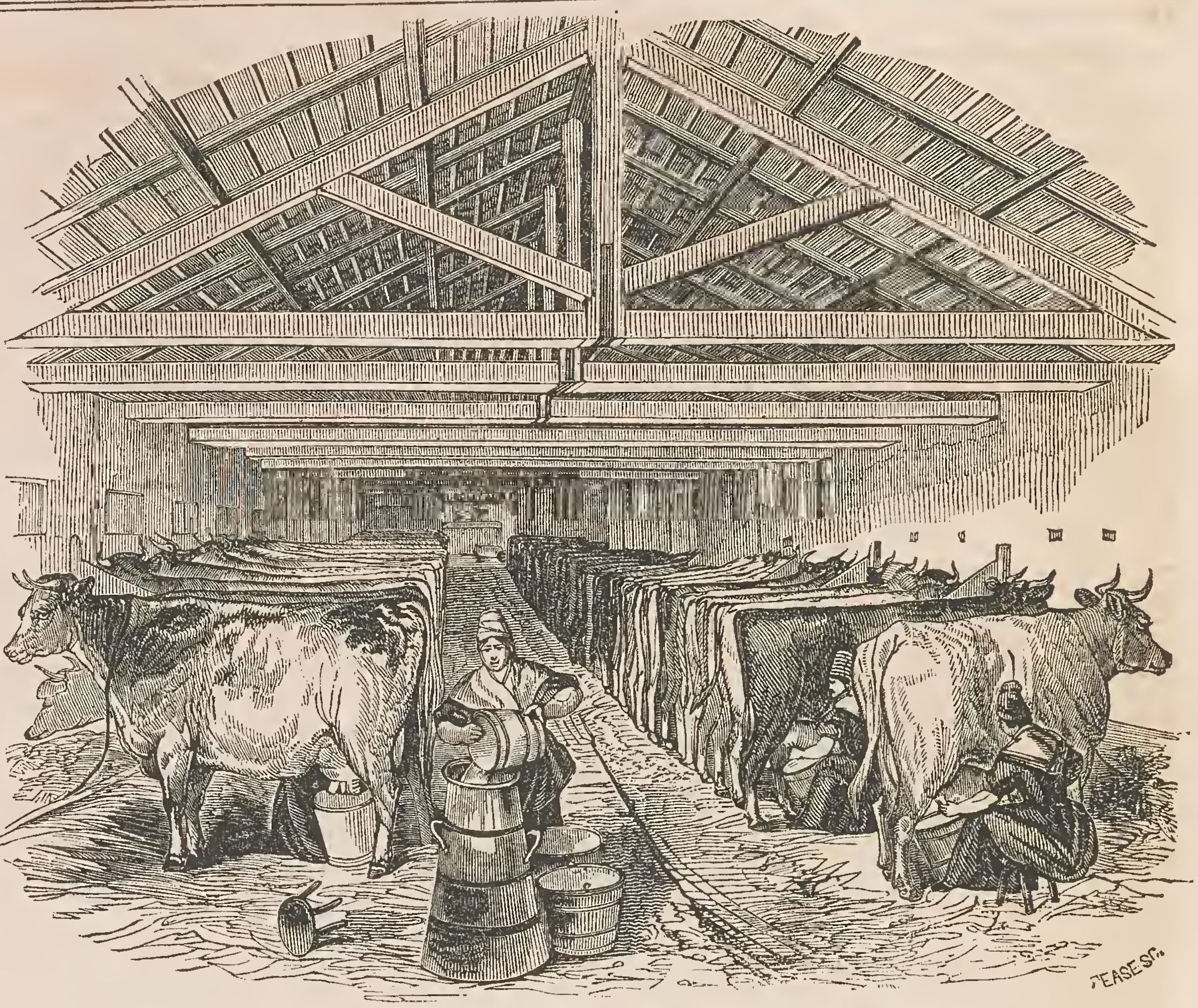
Cotton goods,	$46,350,000	Soap,	$2,400,000
Woolen,	20,696,000	Candles,	2,687,000
Flax,	822,000	Sugar,	3,250,000
Mixed,	6,555,000	Paper,	6,155,000
Machinery,	10,980,000	Furniture,	7,552,000
Hardware,	6,451,000	Cordage,	4,078,000
Leather,	38,176,000	Iron, bar & castings,	39,316,000
Hats and caps,	8,704,000		

A glance at our products will show that we have all the elements of independence and national prosperity among ourselves; and the fact of our indebtedness to other nations shows a disgraceful disregard to the most common principles of economy, or the encouragement of home industry. With such vast agricultural resources, with such an amount of the products of the soil, with the means of increasing these products to any extent, is it not astonishing that our imports so much exceed our exports? Is it not strange that instead of paying our foreign debts in our own agricultural products, and purchasing foreign goods in the same way, we allow ourselves to be drained of the precious metals, our currency deranged, and our prosperity seriously endangered! These things would be strange, were not the cause one which cannot be mistaken. It is useless to deny that we are hewers of wood and drawers of water to the manufacturers of other nations, and made so by *their* protective and restrictive systems. Confident in our capabilities and our resources, we have pushed our free trade principles to the verge of absurdity, if not of ruin; we have found that the free trade of the old world is like the handle of a jug—all on one side; that preaching such doctrines is a very different thing from practicing them; and that some system of reciprocity must be adopted, or the pressure and suffering the country is now experiencing must continue. All that Americans ask is equality of rights, a reciprocity in trade; that others would do by us as we are doing by them. That such is not the fact, the following table, showing the rate of duties charged on our principal articles of product in Great Britain, (and they are equally exorbitant in other European countries,) will prove; while at the same time their products, paying a duty merely nominal, are forced upon us by ship loads. Such a state of things cannot continue. Nations are like individuals—they are indeed only an aggregate of individuals; and the same train of causes that produce the ruin of the one will effect that of the other.

Duty on wheat,	100 pr. ct.	Duty on hay,	115 pr. ct.
do. Indian corn,	200 do.	do. cotton,	5 do.
do. oats,	300 do.	do. rice,	150 do.
do. barley, rye & buckwheat,	200 do.	do. tobacco,	900 do.
do. potatoes,	150 do.	do. timber, average,	250 do.
do. beef,	150 do.	do. sugar,	250 do.
do. pork,	150 do.	do. whiskey,	2500 do.
do. butter,	50 do.	do. fish, prohibited.	
do. cheese,	50 do.	do. fruit, average	100 do.

One moment's attention to the facts of the case will disclose the real cause of the distress under which this country is laboring. It is the want of reciprocity; the widely different footing on which we and other nations stand in regard to each other. The government may spend years longer in tinkering the banks, or regulating the currency, but it will do no good. The evil lies deeper. The experience of all commercial and agricultural nations proves that no sound currency can be maintained, no continued prosperity enjoyed, where the principle of reciprocity is departed from in their intercourse. A glance at the duties imposed on our products by Great Britain will demonstrate that in all these cases she has approached the verge of prohibition, with the single exception of the article of cotton; and the reason of her forbearance in this respect is evident. Cotton she must have; and at present, she can only obtain it in sufficient quantities from the United States. Would she receive it at the present duty could she produce it in her own dominions? This is a serious question, and one which the course of events is rapidly bringing to its answer. The rapid increase of India cottons as shown by the imports into Great Britain from that country; the vigorous and determined efforts of the government to extend and perfect the cotton crop of that region; and the exultation of the British press at the evident success of these efforts, demonstrate what that answer will be, when the time arrives for its utterance.

MILK FOR CITIES.



LONDON MILKING SHED—(Fig. 45.)

THE engraving given with this article represents one of the milking or cow sheds attached to the great dairy establishment of Messrs. Laycock & Co. at Islington, near London. Here, within one building, are six ranges of sheds; and along both sides of every shed are stalls, each containing two cows, and each shed so arranged as to accommodate 64 cows. When the hour of milking arrives, the milk maids, which are generally from Wales, appear with handkerchiefs bound round their heads, each with her wooden pail so white and clean, that one almost doubts whether it ever could be dirty. She sits down on her stool, leans her head against the side of the animal, and milks until her pail be full, or until the cow has yielded her supply. The number of milkers is proportioned to the number of cows, so that the cows, from 500 to 700 in number, may all be milked in the course of an hour or an hour and a half. Each maid milks several cows; these being fastened in the stalls, and remaining quiet during the milking. The milk thus obtained, leaves the dairy for distribution almost immediately. In some cases women, provided with wooden yokes, carry away the milk in pails; in others, the milk is put into tall metallic vessels and taken away in carts. This milk goes to the retail dealers, who find a profit in disposing of it to their customers.

The quality of the milk supplied to families in cities varies a great deal, according to the source from which it is derived. From the great London dairies all the milk is sent out in a rich and pure state; for the retail dealers carry it away in their cans in the same state, and nearly as warm as when it leaves the cow. In many cases, private families are supplied directly from the dairies; and to these the milk is sent out in cans, locked by the clerk of the establishment, so that no adulteration can be effected. The milk also passes into the hands of the retail dealers perfectly pure. What is done with it afterwards, and to what degree it is lowered and sophisticated is, in the language of Mr. Youatt, known only to these milk merchants. It has been estimated that about 12,000 cows are necessary for the supply of London and its environs with milk; that the average daily quantity yielded by each cow is about nine quarts—making a total of 40 million quarts per annum. The value of the milk is estimated at from four and a half to five millions of dollars.

A London magazine pleasantly observes, that milk is one of the few articles of consumption almost invariably taken to the customer, and not sent for by the customer to the seller. The cry of "milk!" will never cease to be heard in our streets. There can be no reservoirs of milk; no pipes through which it can flow to the houses. The more extensive the metropolis, the greater the demand, and the more active the exertion required to supply it. The old cry was—"any milk here?" It then passed into—"milk maid's below!" Was then shortened into—"milk below!" and finally into—"mio!" which has been interpreted to mean *mi-eau, (demi-eau,)* half water; a designation applicable to milk furnished other cities, as well as London.

The cows in these great dairies are frequently changed. Instead of keeping a cow as long as milk can be drawn from her, there is a minimum of supply, below which the cow is not deemed to yield what is required of her, or which is considered a fair return for her food. When this occurs, she is sent to another part of the establishment, where she is speedily fattened for the Smithfield butchers. In fattening, she is fed on grains, clover made into chaff, oil cake, and in some instances boiled linseed. Great dependance is placed on the oil cake, as it is found to possess a remarkable property of fattening cows in this situation. One of the great articles of food in these dairies is the grains or spent malt, resulting from the process of brewing. These are deposited in large brick vaults or pits, so as to secure a supply at all times. In these pits the grains are firmly trodden down, and when full, are covered with a thick layer of moist earth to keep out the rain and frost in winter. Thrown into these pits warm, and in a state of partial fermentation, there is, in the opinion of the dairymen, a further development of the saccharine and nutritive principle, and the grains are considered none the worse for being several years old. It is said by them that pits have been opened after having been closed nine years, and the grains found perfectly good. The owner of the Laycock establishment has two or three extensive farms in the country, where the turneps, mangel wurtzel, hay, and other articles of cattle food, are grown for the use of the dairy.

The arrangements for supplying cities in this country with milk differ mainly in not being on so extensive a scale. Boston is probably the best supplied with milk of any of our cities. About 150,000 gallons are delivered annually by the rail-roads from milk establishments from ten to thirty miles from the city. On this subject, we give the following extract from Mr. Colman's 4th Report:

"I believe there is no city supplied with better milk, or in a more cleanly condition, than Boston. The milkmen are in general a respectable class of men, and pride themselves on supplying their customers with good milk; and the Bostonians are in general equally particular in requiring good milk for their money. Several of the milkmen who come daily to town are substantial farmers, who have attended the market for forty years. A milkman who, in his visits to the city, should be found taking improper liberties with any well or pump on the road, would soon be likely to have some inconvenient questions put to him as to the breed of his cows, and his manner of feeding them. In New-York city, it is not so. With the exception of a few milk establishments, where a sacred pledge of pure milk is given, a system of fraud is almost universally practiced. The milk is twice watered; first in the udder of the cow, who is fed upon distiller's swill, of which she has two or three barrels per day, with only hay enough to form a cud for rumination; and next, after it is drawn, it is a very general custom to add one quart of water to every four quarts of milk. It is not easy to prevent this; as, where the proprietor is himself honest, the carrier, who may be otherwise, may be tempted to increase the quantity, that he may appropriate to his own use the proceeds of the amount sold beyond that for which he has to account. In the arrangement at the celebrated Harleian dairy at Glasgow, Scotland, the most remarkable establishment of the kind ever known, the cans were so constructed and fastened with a lock, (the key of which was retained at home,) that there was no possibility of introducing anything into them after they were taken from the milk house; and there such various checks were applied that it could hardly be done without detection. Indeed, I have been led into the secret, at New-York, of the actual manufacture of milk at a grocery store, where hardly real milk enough was used to "swear by;" and this compound was sold to the poor and the miserable for three cents a quart. The grocer, though he kept no cow, offered to supply the milkman with what he required, whenever his quantity was insufficient to meet the demands of the day. There is no such thing to be had in Boston, within my knowledge, as distiller's swill, the refuse grain after the whiskey has been extracted from it; but some use is made of brewer's grains, or the malted barley when they can be had. These increase the quantity of the milk, but injure the quality." * * * * "The best milkmen prefer good clover hay for cows in milk to any other feed. Potatoes and mangel wurtzel increase the quantity, without improving the quality of the milk. Carrots, parsneps, and sugar beets improve the quality of the milk." Mr. Colman says the ruta baga and all the turnep family give a bad flavor to milk; but adds, that a milkman of his acquaintance assures him, no inconvenience results from their use, if given to the cows directly after, and not before being milked. In this case, the turnep flavor and odor is lost before the next milking.

The quantity of milk given annually by cows varies much in different establishments; at least, the quantity reported differs materially. We have seen that the cows of the London dairies are estimated to produce 9 quarts daily; which it is believed is a greater average than most of our dairies would show. This is probable, when we remember that no inferior cows are kept in those establishments; and when they sink below a given rate, the cows are turned off at once. In a number of instances referred to by Mr. Colman, the products of dairies from good native cows averaged per annum from 5 to 7 quarts daily. The dairy and milk business is daily becoming more important in this country. Men are prone to leave the healthful air and employments of the country to congregate in cities; and the furnishing them with the products of the dairy—milk, butter, and cheese, will always constitute an important item in the records of agricultural industry.

COUNTY AGRICULTURAL SOCIETIES.

CORTLAND—We have received the circular of the Board of Managers of the Ag. Society of this county, containing the list of premiums which is to be awarded at their next Fair, to be held at Homer on the first Wednesday of October next. The premiums, though small, are numerous and appropriate; and the requirements and regulations are the best drawn up of any that we have yet seen. There is another feature in the management of this society, which is worthy of imitation by all the other societies in the state. Twenty-two "Experimental Committees," consisting of three members each, have been appointed, who are "expected, as far as the nature of the case will admit of, to institute accurate and well conducted experiments on the subjects committed to them," and to report the results at the annual meeting of the society in Jan. next. If these committees perform the duties assigned them faithfully, the society will obtain a mass of facts which will be of essential service to the cause of agriculture. The officers of the society for this year consist of Dan Hibbard, Pres't—Jos. Reynolds, David Mathews, Charles McKnight, and Hammon Short, V. Pres'ts—Rufus Boies, Treas.—Amos Rice, Homer, Sec'y—Paris Barber, Marshall, and an Ex. Committee of 16.

OSWEGO.—At the late meeting of this Society, an Address was delivered by the President, and the following officers elected:—Orville Robinson, Mexico, Pres't—D. F. Herrick, Oswego, and Samuel Allen, Jr., New-Haven, V. Pres'ts—Geo. Seeley, Oswego, Treas.—C. Ames, Scriba, Rec., and S. Y. Baldwin, Oswego, Cor. Sec'y. Their next fair is to be held in Mexico.

OTSEGO.—Officers for 1842:—Elisha Doubleday, Pres't—John W. Tunnicliff, Wm. A. Walker, Halsey Spencer, V. Pres'ts—Henry Phinney, Treas.—Cha's McLean, Sec'y.

CLINTON.—Officers for 1842:—Z. C. Platt, Pres't—Willetts Keese, Edwin Benedict, John North, R. O. Barber, V. Pres'ts—B. S. Roberts, Rec., and Jacob H. Holt, Cor. Sec'y—Moss K. Platt, Treas.

Original Papers from Contributors.

COMMENTS ON THE JAN. AND FEB. NUMBERS OF THE CULTIVATOR FOR 1842.

THE Jan. No. of your paper has so large a portion of it devoted to the description of the meetings of various agricultural societies, and these have been so numerous beyond all former example—so well conducted, and with such increasing spirit, as to afford great encouragement to all similar associations in their patriotic labors. What they *have done* and *are doing*, affords the best possible answer to all the carpings and cavilings of their enemies; and will perfectly satisfy the minds of all such rational men, (if there be any such,) as might have doubted, before they witnessed any of their operations, whether they would work beneficially or not. I must, however, say that most, if not all of their constitutions which I have examined with any care, appear to me to be defective in some respects. Although I have long had this opinion of agricultural societies in general, it has lately made a stronger impression on my mind than heretofore, in consequence of my reading recently the Dec. number of that valuable periodical—the Farmer's Register, by Edmund Ruffin of Petersburg, Va. It contains what the author calls—"*Plan and Constitution of a Working Agricultural Society*;" which Plan, or something on similar principles, would, in my humble opinion, soon make every agricultural society that adopted it what all such associations ought to be; that is—collectors and distributors of all facts which can contribute to the improvement of American husbandry.

The particular feature of this Plan, which renders it so highly worthy of general adoption is, that the Constitution requires each member who is a cultivator of land, annually to make as accurately as he can, and minutely to report the results thereof in writing, as simply and concisely as may be, to his own society,—at least three experiments, with a view to determine the same number of disputed questions in husbandry. The choice of these questions he may make himself; or he may choose three of such as the executive committee are required to prepare and recommend for trial. A fine of one dollar is imposed for each experiment that he fails to make; but one-half of the whole funds of the society is appropriated to premiums, to be awarded to such of those experiments as shall be deemed best and most carefully conducted. Another excellent constitutional regulation is, that the society shall co-operate with each and every other society having similar objects and general action, for the purpose of better forwarding their common design of inducing accurate investigation, eliciting useful facts, and exchanging and diffusing the knowledge thus acquired. This, indeed, would well deserve the title of "*A Working Agricultural Society*;" and could it once be tried, I hazard little in saying that such an excellent example would soon be universally followed.

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PERMIT me now to offer a few words on your article, headed "Pearl" and "Commentator." I assure your worthy correspondent that my observations on his former communication would have been entirely different in character had I supposed, even for a moment, that they would hurt his feelings in the slightest degree. I protest that I had no intention of the kind; but expected merely to draw towards a dry subject—as most agricultural matters are generally considered—somewhat more attention than it would otherwise receive. If in so doing I have excited any disagreeable feelings in him, I sincerely regret it; and, by way of atonement, would willingly and silently submit to any retaliation he might choose to make through your paper. But it seems that his charity and good humor have prepared for me a very different kind of "*drubbing*," which I will most joyfully receive, should I ever be so fortunate as to meet with him in his own state.

One word about "*Moisture Rising*." If "Pearl" will take the trouble to invert a glass tumbler on the hardest path, in the hottest and driest weather, and draw some loose earth around the bottom, so as to exclude the air entirely, he will soon see moisture collected on the inside of the glass. This will convince him that it *does rise*.

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ALTHOUGH I shall probably be "running against a snag," (as they vulgarly say,) to utter a word which even squints at finding fault with the "Dictionary of Terms used in Agriculture and its kindred Sciences," I must risk an objection to at least *one* of the author's definitions, or rather explanations, in this number of your paper. But I will first state a general rule, to the truth and propriety of which I presume the learned and intelligent author himself will agree. In explaining any word or term, no words or terms should be used that are less intelligible than that which is to be explained. Provincialisms, therefore, should always be excluded from explanations; for they themselves are the terms which most require to be rendered intelligible to the generality of readers. Yet the author of the Dictionary of Terms has used two in his explanation of the word "Hoove," or "Hoven," the meaning of which is as utterly unknown to a vast majority of the planters and farmers of the United States as if they were Hebrew or Sanscrit. Those words are—"*rowen or fog*."* I myself had to make a long search for them, but without success, until I happened to think of Marshall's Rural Economy of certain counties in England; and there I luckily found them. He states the first as one of the provincialisms of Norfolk, and the second of Yorkshire; but both meaning—"*after-grass*."

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YOUR intelligent correspondent, "Richmond," has stated a single fact in his interesting communication, upon which I will venture to offer a few brief remarks. He says—"Of late years, the cultivators of the soil in the neighborhood of New-York city use the unleached ashes, applying about a gill to a hill of corn before the first hoeing." Now that this practice is wrong, has been demonstrated, I think, to the entire satisfaction of any man who will take the trouble to read and reflect on the numerous comparative experiments which have been made and published between this partial application of ashes, or any other kind of manure, and using it broadcast. What has led to the error is, that it certainly hastens the early growth of any plant to which it is thus partially applied; but it is because the young roots have not yet shot forth beyond its reach. As soon as they do, and fail to receive this additional supply of nutriment, they suffer more for the want of it than they otherwise would do. It is like putting a man on half allowance after having fed him, for some time, fully and luxuriantly. The similitude holds good, particularly in regard to Indian corn, whose roots, as every corn-grower knows, soon extend several feet horizontally from the stalk, and in every direction around it. Now it is also generally known that all the nutriment which plants derive from the earth is first absorbed by little vessels, called "spongioles," at the very extremities of their roots, and thence conveyed to them through the main stems of the roots themselves. No manure, therefore, applied immediately around their stems or stalks, can be imparted to them where there are very few or no spongioles to absorb it. This is true of Indian corn, and all other plants that extend their roots to such considerable distances.

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COMMENTATOR begs leave to return his very sincere thanks to your worthy and talented correspondent L. A. Morrell, Esq., for the high estimate he has been pleased to make of Commentator's communications; and regrets much that he cannot give his real name consistently with his objects in taking upon himself the office of a Reviewer. Mr. Morrell will probably agree with him, if he will duly reflect on the following suggestion. Criticism, to be useful, should always come from some unknown author; since then only can it be tried on its own merits. Once let his name be made public, and his readers forthwith begin to try *him*, instead of trying *the subject* upon which he writes; and their merits or demerits become quite secondary objects, if indeed they are not entirely overlooked. This is the sole reason why Commentator has assumed, and intends to continue his present signature.

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YOUR humorous and very entertaining, as well as instructive correspondent, "A. of the North," has given us quite an amusing thing in his "Agricultural Thermometer;" but in the hands of one whose good nature and kindliness of disposition incline him so much more to praise than to blame, I fear he will not make it so generally useful to his brother farmers as if he would occasionally pour into the tube of his implement a few drops of tincture of quassia, and extract of capsicum.

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IN the description of Mr. Stone's stables by Mr. L. Durand, there is one thing which I have always heard objected to by those best acquainted with the management of horses; it is to such a descent to the stable floors. Two or three inches are deemed too much, as the horses stand thereon in an unnatural position, as it were up hill; and such descent is greater than necessary to drain off the manure.

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UNDER the head of "Plowing at Syracuse," there are some very sensible remarks by some person who signs himself a "Friend to Agriculture." It would seem by what he says of the plowing match on that occasion, as if *speed* had been more regarded than any of the other matters which were there required to constitute good plowing, although it surely ought to be ranked last. This misjudging in regard to the essentials of good plowing is a too common fault, and ought to be corrected, or the chief advantage of such competitions will be lost.

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I omitted to notice in its proper place Col. Wade Hampton's recommendation to the South Carolina State Society of what he calls "*Musquite Grass*," which he says is a native of Texas, although the seed that produced his was sent to him by a Mr. Carter of Alabama, who speaks very highly of it. Col. Hampton also gives it a high character. I will therefore take the liberty of suggesting to both these gentlemen, (should they ever see this article,) that many of their brother farmers, farther north, would probably thank them if they would send a bushel or two of the seed to that very zealous friend of agriculture, H. L. Ellsworth, commissioner of patents, for distribution. This would be the most effectual way of having the grass extensively tried.

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THE first article which engaged my attention in your February number was the interesting account of the annual meeting of your State Agricultural Society. The members are pursuing the true course to render this institution universally popular; and that is to procure the attendance of as many as practicable of the public functionaries of the state, and of gentlemen otherwise distinguished. When such men appear to take an active interest in these exhibitions, their example will always have a powerful influence on the general mass of our population. Indeed, if our public men generally, and the more wealthy and better educated portion of our citizens, could only be made aware of the great good they could accomplish merely by their attendance on such occasions, but especially by zealous co-operation, we should surely find many more of them than we do, among the leaders of every voluntary association, however humble, the object of which was to promote the general welfare; and such, in a pre-eminent degree, are all agricultural societies. May the amplest success attend them all.

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THE letter from London, of your correspondent T. C. Peters, is, upon the whole, so flattering to our national vanity, that I am sorry to differ from him in any respect. But there are two or three of his opinions which seem to me erroneous; although some perhaps may deem me presumptuous in thus expressing myself. For instance, he says—"As an agricultural people, we are not 30 years behind the people here." Now, although this may possibly be true of some small portions of the northern and eastern states, it will require a most extravagant degree of credulity to believe that 30, or even 90 years could bring the agriculture of a large majority of the United States to a par with that of England, which Mr. Peters himself says is "*but an enlarged system of gardening*." Two things must happen before such equality could be—even possible. The population of these states, (very large portions of which are yet wildernesses,) must be as dense as that of England, and labor as cheap.

Again, he says—"*At some time, I make no doubt, hedges will become necessary with us*," &c. This may happen around our large towns and cities, after the adjacent farms have been reduced to their smallest dimensions, so that their enclosures may be permanent. But the law of descents in all our states, and the practice now almost universal, of continually dividing and subdividing landed estates among the children of our families, which produces frequent corresponding changes of the enclosures, must forever render hedges unsuitable as a general system of fencing, unless indeed, these laws and practices should be changed; of which there seems to be not the most distant probability. But even if these two causes were removed, there are other obstacles in the way that appear to be very hard to overcome. In the first place, no hedge plant yet tried among us has succeeded perfectly anywhere; at least, I have neither seen nor heard of it. On the contrary, I have witnessed many trials, in about the latitude 38, of all the varieties of thorn—both imported and native—of the cedar, the non descript rose of South Carolina, and the honey-locust, or gleditschia triacanthos. All have failed with us, either from incurable diseases that kill the plants, which is the case here with the thorns and the cedar, or from unsuitability to the climate, which is the objection to the non descript rose, or from being altogether unfit for hedging, as the honey locust has been found to be. This latter plant was tried many years ago, as far north as Long-Island, by that distinguished gentleman, Rufus King, who told me that he had failed to make a good hedge of it. As to the thorns, they have been tried, I believe, more extensively in Delaware than in any other state. Yet, even there, a very intelligent and highly respectable farmer lately informed me that many of the farmers are cutting them down, and substituting moveable wood fences. The cedar is the least suitable of all; for it is subject to more diseases. In the second and last place, hedges are a much more expensive kind of fence than any fence of wood, where suitable timber can be procured at any price yet generally given for it. Of this fact, any reasonable man may satisfy himself who will take the trouble to make the calculation fairly and accurately. For instance, let him estimate the expense of the following indispensable prerequisites in making a hedge. First, the preparation of the ground; the purchase and setting of the plants; the making and keeping up of a protective wood fence for five or six years, since it takes that time to make a hedge effective against stock, even when the plants live; the annual culture of the ground for at least three or four of the first years; and the yearly pruning of the hedge forever thereafter. Then let him calculate the entire cost of a moveable wood fence, which I know from my own experience will last without repair for at least 17 or 18 years, if made of suitable kinds of timber; and if he does not deem the latter preferable on every account, I will agree that I know nothing about the matter.

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THE discontinuance of the agricultural survey of Massachusetts has surprised me more than any legislative act, —strange—most strange, as several of them have been in other states,—which has been passed in these topsy-turvey times. It surely could not have proceeded from any objection to the reports of the Rev. Mr. Colman; for they have been highly approved in other portions of our country. What then can it be? Has Brother Jonathan—the man heretofore famed, not only at home but abroad, for his public spirit—his "go-ahead," undauntable perseverance in all works of public utility—evaporated? Has he, too,—like the rest of us—become "weary in well doing?" Alas! for our country, when such backslidings are taking place—even in yankee land!

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UNDER the head of "Agricultural Journals, &c." you have enumerated so many as to excite a strong desire to know how many we now have in the United States. Such a catalogue would form an interesting item in our agricultural statistics; and would serve, in a great degree, to show at least the extent of our desire for information on all the different branches of husbandry, if it did not also afford a tolerably fair measure of the amount of our knowledge, and progress therein, since the publication of the American Farmer by Mr. J. S. Skinner, of Baltimore, in 1820. This, I believe, was the first paper of the kind published in the United States; and our subsequent improvement in agriculture has been greater, I am very confident, within this period of 22 years, than it was during the whole of the previous half century. Such has been the happy influence of *that*, and other agricultural papers since established, in stimulating the dormant spirit of husbandry in our country. Well, then, do these journals deserve the most liberal patronage that the whole body of our yeomanry can give them. That every farmer who could read, should not take at least one, has always been a matter of surprise to me, especially when all who do take such papers unite in testifying to their great value. Indeed, I have heard many, very many say that a single paper often repaid them amply for the whole of their annual subscription.

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* Commentator could have found both these words in Webster's Dictionary.—EDS.

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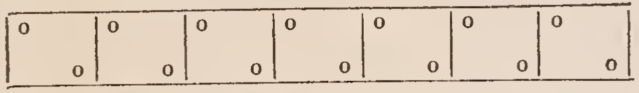
Your second quere, under the head of "Culture of the Grasses," is—"Method of Seeding." This induces me to recommend the most simple and cheapest of all the contrivances I have ever seen or used for the regular, equal distribution of any kind of grass seed that will readily pass through a small hole. The subjoined sketch is a bird's eye view of it.



These lines represent a box about 8 feet long, 4½ inches wide, and 4 inches deep, divided into seven compartments. Each of these has two holes bored through their bottoms in their diagonal corners. These holes are three-fourths of an inch in diameter, and have pasted over them strong pieces of paper, through each of which a hole is perforated large enough for the grass seed to pass readily through them. The whole box is made of very thin, light plank, say about three-eighths of an inch thick. Two straps are nailed to the sides, at a convenient distance from the ends, for the sower to hold by. He then passes a strap over one shoulder and under the middle of the box, which relieves his arms from the weight, and proceeds to sow by swinging the box to the right and left as he walks along at a suitable pace for the operation. No hand machine, even if fifty times the cost, could well sow either faster or with more regularity.

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Dr. Herman Wendell's liberal offer to present some of the new variety of Irish potatoe, called Kelseyan or perfectionists, to any gentleman who might wish to make trial of them, contrasts most honorably to himself, with the shameful and extortionate demands of all those individuals who—after puffing, in the most extravagant terms, any new thing which they may happen to possess—puffing it, too, until they believe that they have worked up the public credulity to the point of buying some of the marvellous and most precious article, at any price, rather than miss; then come out with a modest proposal to spare a small quantity—a very little of it, at the moderate and very reasonable profit of some 500 or 1000 per cent.

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The article headed "New Manures," reminds me of the old adage—"Wonders will never cease." What, though it may seem reasonable that the wondering propensities of mankind should diminish as the world grows older and gains more experience, yet the numerous marvels with which almost every day presents us, and the avidity with which so many of them are swallowed, would seem to contradict the supposition. Witness Mr. Bommer's "*New Method of Making Vegetable Manures by Fermentation*," secured by a patent, as all these wondrous discoveries are sure to be. I will not undertake to condemn it before I know what it is; but will only, most respectfully, suggest the following caution. Let us never believe that a patent for anything is conclusive evidence of its merit; for many almost worthless things are imposed on the public under that sanction. Again; let our precaution in buying be always proportioned to the degree to which the properties attributed to the patented article contradict our own experience and belief. Still, our scepticism should never be suffered so far to influence us in regard to new discoveries, however extraordinary they may seem, as to prevent us from attempting as thorough an examination of them as we are capable of making.

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Under the head of "Work for the Month," you say—"the most certain way of securing good fruit is by grafting; and the latter part of this month, (February,) is an excellent time to select and cut cions." The most experienced orchardists say—and my own experience confirms it—that grafting is best for seed fruit, such as apples, pears, quinces, &c.; but that inocculating is preferable for stone fruit, such as cherries, peaches, apricots, &c. As for the best time for cutting cions to graft with, the latter part of February is rather too late for latitude 38, and farther south.

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Your remarks on the Agricultural Society of the United States are very judicious; and I sincerely hope that the Board of Control will ponder them well. Although I agree with you perfectly in wishing them to be "*workers rather than talkers*," I should wish them to do, at least a little at talking also; for in our country, where the government itself is acknowledged, on all hands, to be a logocracy, there is no getting along with any public institution, even of a voluntary kind, unless the agents are allowed to speechify it, not only a little, but on all imaginable subjects whatever. With us, if in any nation under the sun, "words are things."

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I have read Mr. Alexander Bickett's letter with much attention, and confess that his comments upon Mr. A. B. Allen's assertion—that "*we can make Ayrshires by the thousand here, by crossing our Durham bulls on our best native stock*," appear to me to be perfectly just; although some perhaps may deem them rather more bitter than they need to have been. But be it remembered that this gentleman went to England, as it was generally understood, for the express purpose of improving our breeds of cattle in general, and not solely to improve any particular breed; in other words, to select the best he could find, be the breed what it might. Of course, all our cattle breeders, among whom he ranked as an excellent judge, were led to suppose that they might safely confide in his opinions as one who had no prejudices in favor of any particular breed to blind his judgment in making his selections from all others. The assertion, however, quoted by Mr. Bickett, in regard to the Ayrshire cattle, which the English and Scotch books describe as being a distinct breed, and quite as much so as any other, indicates in Mr. Allen—not only precipitancy in forming his opinion, but so great a prejudice against the Ayrshires, as to disqualify him for acting the part of a dispassionate, fair judge. It indicates, I think, something more; and that is, a strong partiality for the Durham Short Horns, of whose merits it is not my present purpose to say anything. This partiality, if I remember right, is not a feeling of very recent origin; that is, if Mr. A. B. Allen be the same gentleman who formerly spoke with so much asperity of an opinion which the Rev. Mr. Henry Colman happened to express in favor of some of the native cows of Massachusetts compared with Mr. A.'s favorite Durham breed.*

Let none conclude, from any of the foregoing remarks, that I am at all opposed to improving our native cattle by importing foreign stock. Far from it. But I must contend, however unpopular it may be, that the very large investments therein, which many of our farmers have been making, and at such enormous prices, cannot be justified by any calculations of profit and loss which prudent men are accustomed to make. It is true, that while the fashion lasts, the few will profit most marvellously, but the many must inevitably lose; as was the case during the prevalence of the merino fever, and the multicaulis mania. These moral epidemics inculcated lessons of such signal severity, as most persons would think might have sufficed for at least one generation to come. But it really seems as if we, the good people of these United States, can no more live without hobbies and humbugs of some kind or other, than we can breathe without vital air.

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The facts which you have stated in regard to the agriculture of Vermont ought to satisfy all farmers who own worn out soils, or such as are naturally poor, that they should never despair of rendering them very productive by industry, economy, and labor judiciously exerted in manuring and cultivating them; since the soil and climate of that state are as little favorable, generally speaking, to agriculture as those of any state in the Union. Much praise, therefore, is due to the Vermontese for the lead which they have taken in husbandry. It ought greatly to check, if anything can, the desertion of the Atlantic states for the "Far West." The emigration from foreign countries will fill up the new states fast enough, without depopulating the old ones for that purpose.

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The interesting letter of Mr. Solon Robinson—that true and intelligent friend of American husbandry—contains a statement in regard to peach trees from which I beg leave to dissent. In speaking of Dr. Thompson's orchard in Delaware, he says—"While viewing his peach orchard, I learned a fact well worth the attention of all peach growers. Let the trees branch as much as possible from the ground, and never cut off a limb that is broken down by an overgrowth of fruit. If it hangs on by wood enough to keep it alive, let it lay, and it will sprout up next year most luxuriantly, and then produce the finest kind of peaches." Such treatment in that climate may answer very well, for ought I can say to the contrary. But long observation and experience justify me in asserting, that in all parts of the United States with which I am acquainted, the best peaches will always be produced by trees that are judiciously pruned, and their limbs kept from breaking by forks placed under them, if loaded with fruit. That such broken limbs as Mr. R. speaks of will throw out sprouts which will produce fruit, and that unpruned trees will do the same, is certain. But it is equally certain that the fruit will neither be so large nor so highly flavored as that produced by pruned trees, in any situation wherein I have had an opportunity of comparing them. Another objection to unpruned trees is, that they cannot be cultivated near their bodies, on account of the numerous limbs which grow next the ground, although this culture is necessary—at least until the trees are in full bearing. Where peaches become a staple crop, and *quantity* rather than *quality* is the chief object in view, then perhaps it might be found most profitable to neglect pruning altogether; but I should doubt it even then.

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Mr. C. N. Bement's account of the sale of Col. Jacques "Cream Pot Cattle," suggests the following queries: Does not Mr. B'.s letter savor a little of exultation at the failure? Is he not a breeder of Short Horn Durhams for sale? Are not all importers and breeders of foreign cattle for sale, deeply interested in discrediting domestic breeds? If they are, will they not, even unconsciously to themselves, endeavor to do so whenever an opportunity occurs? As old Stapleton in Jacob Faithful would say—"*this is human natur.*"

Commentator.

LETTER TO SAMUEL A. MILLER.

Book knowledge useful in agriculture—Early experiment with plaster—Curing pork without salt—Fixed attention necessary in farming—Anecdote.

Oakland Farm, Southfield,
Staten-Island, (N. Y.,) March 12, 1842.

Mr. Samuel A. Miller, Shawangunk, Ulster Co.

Dear Sir—I rejoice to hear that you are earnestly engaged in agricultural pursuits, which I hope will promote your health and happiness as much as they have mine. Having been sometime on a farm with your uncle, you will not be so great a novice as I was when leaving professional pursuits to cultivate the soil. Apprehensive that my want of information would be detrimental, I endeavored to supply my deficiencies by reading, combined with practice, and I am satisfied that much useful information has been obtained from the writings of Kirwan on Manures, Chaptal, Davy, Loudon, and a recent German author of the name of Liebig, as well as others.

Scientific works on agriculture are generally too abstruse for farmers, and so technical as to be obscure to common readers. A friend of mine, residing on this island, procured a copy of Liebig's organic chemistry of agriculture, and derived no benefit from it, because, as he said, it was all Greek to him. And yet that publication contains the elements and science of practical agriculture; but it is a profound work, and requires study. There is, however, a valuable periodical published at Albany, in this state, containing practical information which all can understand, combined with as much explanatory science as to make it useful and agreeable to all who attend to "seed time and harvest." This work is entitled the "Cultivator;" and I advise you, by all means, to take and read it. I procured all the back volumes and perused them with attention and profit. Like a dictionary, they are constant sources of reference. Be not deterred by the title of "book farmer," which may be applied to you by some of your neighbors, who never look into a periodical or other book to add to the knowledge they possess of the art or employment they follow. Whence was it, but from books and scientific men, that a knowledge of the fertilizing effects of plaster of Paris was obtained?

Your grandfather was among the first to introduce it into Ulster county, and the first experiment was made on the farm whereon you reside. When the powdered plaster was shown to him, he found neither smell nor taste in it, and expressed his doubts as to its utility; observing that it would do no more good as a manure than so much dry saw dust. In the course of the ensuing summer, however, his attention was repeatedly attracted to a spot on the easterly side of the long and beautiful meadow in front of the old stone house where you now reside. This spot was uncommonly luxuriant, and the grass of a much better color, than in the other parts of the field. The old man could not account for it, and he pointed it out to all his visiters. When the proper time had arrived to explain the mystery, (which was an experiment made unknown to him,) your father and uncle invited your grandfather and several of his visiters to go into the field and examine the spot more particularly; when behold! they could trace the name of Ananias Miller, in large letters, and the date of the experiment, made by a growth of grass much more luxuriant than the surrounding vegetation!! This, said your uncle, is the effect of plaster. Early in March last, I traced my father's name on the sod with that article, and the result is before you. This experiment convinced your grandfather of the efficacy of gypsum or plaster of Paris, and he thence employed it as a fertilizer, and continued its use as long as he lived. As he was an industrious, prudent and thriving agriculturist, his neighbors gradually followed his example; and now, even those who are *not* "book farmers," in your part of the country, cannot do without it.

When your grandfather removed from Suffolk county on Long-Island to the valley of the Wallkill, some of the neighboring farmers could not cure their pork to keep through the summer, and were astonished at Mr. Miller's success in effecting so desirable an object. Some attributed their inability to preserve their meat to bad salt, and some to witchcraft. They were accordingly led to inquire into his process, and ascertained that there was no difficulty, no secret, no witchcraft; and provided they put *enough* salt on their meat it would keep. But one, and another, objected to wasting so much salt, and several years elapsed before some of them would adopt your grandfather's plan—still preferring to lose their provisions, rather than *to waste* so much salt. In the "Cultivator," you will find practical as well as theoretical information on curing beef and pork, as well as on almost every other subject connected with agriculture. But there is no recipe for curing provisions without salt.

I will mention another incident connected with the house and farm you occupy. Your Aunt Tempe has been noted, as long as I recollect, for making the best butter in that part of the country; and the first dairy sent from New-Hurley to the city of New-York by way of Newburgh, was made under her directions and supervision in your grandfather's old stone house. Since my first visit there, forty years have nearly elapsed, and I well remember what delightful butter your aunt then made; and I ascertained that she used clean coarse salt, reduced to powder by some of the family, and her butter was sweet and good, and would keep without spoiling, while others in that part of the valley of the Wallkill used fine Liverpool salt which, from its impurities, caused the butter made with it to become strong or rancid in a short time.

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* It was Mr. L. F. Allen who replied to Mr. Colman.—Eds.

Some of our friends in the city of New-York think that our occupation requires no attention in winter, and that we might spend our time more profitably and agreeably in the great emporium. But farming, like every other useful employment, has its cares and its duties to be attended to in the winter as in the growing season. A well established maxim, says—"*that which is worth doing, is worth doing well.*" If a farmer does not attend to his calling at all seasons, something will be neglected and losses sustained. He must in fact have his attention constantly directed and fixed upon the object in view. Let me illustrate this by an anecdote.

When a boy, I went in a small boat, on a fishing excursion, in the neighborhood of New-York, with an old gentleman who was extravagantly fond of the sport, and who frequently enjoyed it. We left the city with the early flood-tide, first dropping anchor on Shell Reef, then off Williamsburg, Grassy Point, and in succession the rocky shores about Hurlgate; at all which places he drew up the fishes with great glee, telling me what they were as soon as hooked, and before seeing them. Here comes, said he, a Sea Bass—then a Black Fish—then, perhaps, an eel, &c. It was astonishing to me that he knew every fish by its manner of taking the bait, and would hook them so readily, while I could not take a single one. My attention was directed to him and *his* line and not to my own; and when he saw me listless and discouraged, hanging over the side of the boat, he cried out—"My boy, you must put your attention upon the point of the hook, and then you'll catch fish." This remark has been practically useful at subsequent periods of my life, and is applicable to all pursuits which require *attention* to make them prosper. So with the farmer; if his attention be not constantly directed to the main object, if he be diverted from the "point of the hook," he must suffer by neglect; he cannot catch fish; he cannot thrive.

Hereafter I may give you an abstract of Liebig's work, which will save you some trouble in reading much of it you would not understand. RICHMOND.

RUST ON WHEAT—CLOVER SEED.

MR. CULTIVATOR—The volume of the Cultivator for last year has arrived, and I am now reading it with much satisfaction, and I hope profit. In the May number I noticed an inquiry of "A Subscriber," whether plaster sown upon wheat in the spring does not have a tendency to make the wheat rust? In your reply to the quere, you state it as your opinion that it does not. From observations made by myself the last three years in regard to this question, I have formed an opinion directly opposite to that of your own. I shall not undertake to say that plaster sown upon wheat will make the wheat rust in a good season; but I do believe that it will predispose the wheat to rust; and in seasons when rust prevails, those fields which have been plastered will be found rusted sooner than those not plastered, and in a much greater degree. As to the cause, my opinion is, that it may be ascribed principally to the accelerated growth given to the wheat by the plaster. One case, among others, which came under my observation I will state to you; and as your columns are crowded, I will be as brief as possible. In the year 1839, two fields of wheat were growing adjoining to each other, or separated only by a road four rods wide. The soil of each was the same; both were fallowed the previous season; one was sown on the 8th, the other the 9th of September; both same kind of wheat; and as similar in every respect as two fields could well be. In the spring one field was plastered liberally; the other not plastered. At harvest, the wheat which had been plastered was badly rusted—so much so, that the grain was not merchantable; while the unplastered wheat had a bright straw, fine, large, plump berry, and averaged thirty-three bushels per acre. True, the clover crop was a total failure in consequence of not plastering, but the crop of wheat more than made up the loss.

That season, it will be recollected, rust was very prevalent throughout Western New-York. In our town, but little wheat came in plump; and as far as my observations extended, such as did, proved to be—upon inquiry—from fields which had not been plastered. Your correspondent—"A Subscriber," asks what plan shall then be adopted to secure a good crop of clover? I will inform him of one which I have adopted, and he may do the same if he chooses; that plan is, to apply the plaster to the clover seed before it is sown. I have tried it, and the result was satisfactory. I prepared my clover seed by soaking it twelve hours in brine, and then rolling or stirring it with dry plaster until every grain is completely coated, when it was immediately sown. I believe that five pounds of seed prepared in this way will seed an acre as well as ten pounds sown dry. Try it, Mr. "Subscriber," and publish the result in the Cultivator. J. HORSFIELD.

Castile, N. Y., Feb. 1, 1842.

LETTERS FROM MR. PETERS—No. III.

London, Jan. 6, 1842.

MESSRS. GAYLORD & TUCKER—I hope you will not find my letters entirely uninteresting, if I do not give you an account of the tower ruins, or the thousand other sights which interest all who visit this great city. I have seen a few of the *sights*, and but a few. One day I clambered up to the top of the monument, and looked down upon the small portion of the city which was visible through the dark cloud that seems to envelop it at this season of the year.

I must plead guilty to the unsentimental. I was more pleased and interested in the cattle market, the corn exchange, and the provision and custom house ware houses, on the banks of the Thames, than among the time honored monuments which have clustered around them—the cherished memories of a thousand years. My mind has been entirely engrossed with the useful present. The mighty dead, the renowned living, the pomp and circumstance of royalty, and its splendid train of glittering nobility, have had no charms for me. I have turned away from the magnificent palace to look at the contents of the humble farm yard, and have had quite as much pleasure in looking at the beautiful cattle and sheep, and the farmer's improvements, as in rambling through the castle, and gazing at the rarest pictures of the old masters, any one of which would be a fortune to the owner. Think of $50,000 being refused for a piece of painted canvass, half as large as a barn door.

The only people I have seen here whose possessions I coveted, were those gentlemen who own the fine herds of thorough bred cattle, particularly the Durhams and Herefords, which are now considered the best breeds in this country.

Owing to misinformation, I did not get up to the city in time to attend the Smithfield cattle show for fat cattle, which takes place annually before Christmas. I saw some of the premium beef and mutton a few days after hanging in the Leadenhall market. Such a sight I never before beheld. The meat was beautiful, but entirely too fat to suit my notion, or the tastes of the great mass of the people. It could not be profitable or wholesome to the consumer, the fat was so entirely disproportioned to the lean. The first prizes for oxen and steers were taken by the Herefords; for cows and heifers, by the Durhams. I must confess that the beef which was pointed out to me as being from the Herefords, was in some respects superior to that of the Durhams; the meat being finer mottled or marbled. The Durhams seem to have laid on the fat more in lumps. The Herefords to have the fat and lean better intermingled; and this is considered one of the points where they excel the Durhams.

Breeding has become a regular science, and is carried on as systematically as any other. The secret is confined to a very few of the most successful breeders, and is not likely to transpire very soon. Competition between the breeders of the two favorite kinds of cattle and sheep is very keen, and no expense is spared to have the best; and thorough bred animals fetch higher prices now than ever before.

My own opinion as to the merits of the two breeds of cattle has been somewhat modified since I have been here, and had an opportunity to see for myself. I should prefer a herd of cows of the improved Short Horn Durhams, and a herd of working oxen of Herefords. For working cattle, I have never seen anything equal to them. Pure blooded, however, is very expensive, even here; it would be doubly so with us; and breeding from pure blooded animals is confined to comparatively a small number. I find the midland farmers generally prefer grade animals, being a cross between the two. They say that the grade cows give more milk on the one hand, and richer on the other, than the thorough bred of either; and their practice is to buy, or hire from the thorough breeder good bulls, and thus improve their stock at small expense. I would recommend to such of our farmers as wish to improve their stock at the least expense, to purchase good Short Horned bulls, and cross with our best common cows, and with the second or third cross use Herefords. Great improvement can be made in that way at small expense. And for all practical purposes to the farmer, as good, if not a better stock can be got up than to be at the expense of pure bloods. Let those who are able to import stock become bull breeders; and in a little time the whole country will come to reap the benefit of the improved stock. The great Durhams in our state, and West, are as fine animals as I have seen anywhere, for all useful purposes. The only thing is to keep them up to the proper point. I think this can be done best by crossing with the Herefords. Such at any rate will be my practice.

One of the best Hereford bulls I have seen, indeed one of the best I ever saw of any breed, is going out to Albany by the packet ship Hendrick Hudson. Major, was purchased by Mr. Sotham in person for the herd of Messrs. Corning & Sotham of your city. There is no better in England; and it's no disparagement to our best breeders to say that he has not his superior in the Union. He is four years old, has proved himself a capital stock bull, and I consider his acquisition a real treasure to our state. Mr. Sotham is also taking out two improved Short Horned cows and a bull calf, besides quite a number of Cotswold and Leicester sheep. Venus is a very superior cow; but Cleopatra for pedigree and form, is one of the very best that has been taken out.

I find this has become so lengthy that I must postpone my remarks upon other stock until my next.

The weather up to this time has been very mild, though still wet. The fields are green, which looks to me strange and unnatural at this season of the year. A good old fashioned snow storm would be a real luxury. I pity people who never enjoy the pleasure of sleigh riding of a bright starlight winter's night. Wishing you the enjoyment of many such, I remain sincerely yours, T. C. PETERS.

OX GEARING.

MESSRS. GAYLORD & TUCKER—Having been a reader of your invaluable paper for the last year, I have been highly gratified by the numerous engravings, embracing almost all kinds of farming implements, machines, &c. I have not, however, seen any plan of an ox gearing, except the Dutch method; and as I believe that an ox will bear a heavier burthen next the shoulder than at the head, I submit the following plan, thinking it may be interesting to some of your numerous readers.

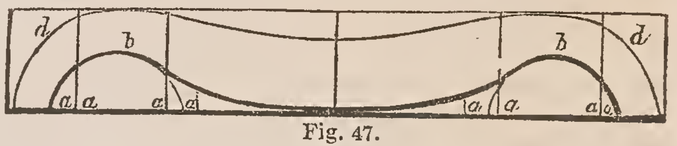


Fig. 47.

Fig. 47, is a side view of the stick $7\frac{1}{2}$ by 8 inches, marked out as follows: the bow holes being 9 inches from center to center, and the staple holes 12 inches from the in bow holes—measure 2 inches out from the center of the bow, from *a* to *a*; then set the compass so that the circle point will just touch at the points *a a* and *b*, 3 inches from the top of the stick, and mark the places for the neck; then set the compass 3 inches wide, which will mark the ends *d d*.

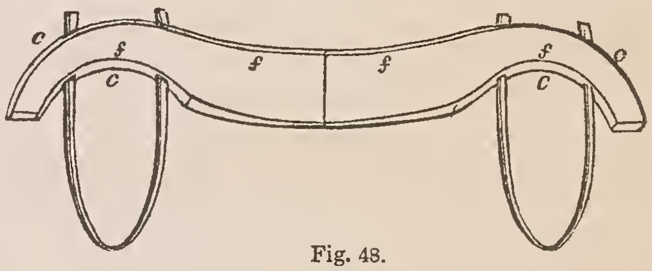


Fig. 48.

Fig. 48—After the yoke is worked down to line *c*, then it may be cornered down to line *f*; the neck places are to be cornered one inch convex, or an angular oval from side to side, worked smooth—the ends rounded off in the same manner. The middle of the yoke may then be worked off from *c* to *c*, leaving it 5 inches wide from the bottom as above. The sides may then be worked down in the middle within $1\frac{1}{2}$ or $1\frac{3}{4}$ inches of the center of the staple holes, which should be bored with a three-fourth inch auger, and the bow holes with a seven-fourth auger. The ends on the sides may be hewn down to $4\frac{1}{2}$ or 5 inches thick, and well cornered, so that it will not hurt the shoulder. As oxen's necks differ more on the lower part than top, it is difficult to have any exact rule for the bend of the bow. Care should be taken, however, that it is so bent that it will work between the neck and the front point of the shoulder bone; for if it is a little too wide or too narrow, it will cause much distress. The above yoke is calculated for cattle that will measure 7 feet. The length may be varied at will; but if it is varied on the bow holes, the two inches from *a* to *a* must be varied in proportion. O. H.

N. B. The bow boles should be bored square through. The staples deserve the attention of every teamster; the iron should be made round before bending, and bent on a half circle with a shoulder projecting about half an inch at the holes. *Rupert, Vt., Jan.* 31, 1842.

MILK HOUSE, &c.

EDITORS OF CULTIVATOR—Having seen an inquiry in your useful paper relative to the best method of constructing a milk room, the following hints are submitted for the consideration of the inquirer, and those wishing to investigate the subject, by a lover of good butter and cheese.

To insure perfect success in the above art, the following rules should be observed:

1st. Good milkers, well selected from the best breeds of cattle for that purpose, and to keep them on good sweet pastures, or succulent food.

2d. A good clean yard, and faithful, humane milkmen or maidens. For my part, I admire the latter, as more neat, kind hearted, and neither so harsh or boisterous to the animal, which, like the earth, will not produce well unless kindly treated.

3d. Clean and sweet vessels, which are much improved by cool, pure spring, or well water, and neat milkmaids.

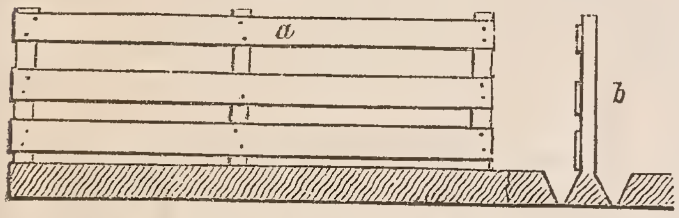
4th. The milk room, to set the milk to cool, should be so constructed that a circulation of cool, dry air should freely pass through it to carry off, as quick as possible, the volatile effluvia which rises as the milk is cooling, and would soon become impure if confined in the milk room, and thereby impart its impurities to the milk.

5th. The temperature should range, by Farenheit's thermometer, between 48 and 58 degrees, to prevent a putrid fermentation from taking place; to obtain which, the following description of a milk room is submitted:

1st. A good room of sufficient size to accommodate the size of the dairy, which should be so constructed as to exclude it from the influences of the surrounding atmosphere, or changes of the weather, by good walls, filled with some substance that is a non-conductor of heat.

2d. There should be a ventiduct at the bottom of the room to admit a free circulation of air, and a ventilator at the top to discharge the impure air, occasioned by the effluvia and fermentation of the milk. The ventiduct should pass through the dryest ground possible, and four feet below the surface, for the distance of four or five rods, of sufficient capacity to admit the air to pass through and cool before it enters the milk room; this can be done by a small bellows placed at the outer end; and (worked by the same machinery that is used to churn the butter,) this bellows will force the air through the earth, which is said to be, four feet below the surface, about 52 degrees. This ventiduct should open in the center of the milk room, over which should be placed a cover, say two inches above, to cause the air to scatter, or circulate to every part of the room, and out through the ventilator at the top, which should be of sufficient size to let the air pass off. It may pass off horizontally, or out through the top, according to the construction of the milk room. The above hints are submitted, with some diffidence; they may not be correct in every particular, but in the main they will, I presume, be found to be something like what is wanted to insure general success in the art of making good butter, which is so desirable, and not very often to be met with; but much depends on the working, salting, &c., to cause it to retain all its good qualities. The principle has been suggested by an extensive experience in obtaining an even temperature for another purpose; and if you think it would be of advantage to your inquirer, or the readers of the Cultivator, it is at your and their service, by a friend to agriculture, and especially to that of good

BUTTER AND CHEESE.



IMPROVED BOARD FENCE—(Fig. 49.)

MESSRS. GAYLORD & TUCKER—As the time far farmers to commence building their fences will soon be at hand, I here present you with a cheap and good post and board fence. I mark out the line of my fence, setting the usual number of posts to the pannel, and then plow two furrows on each side, throwing them towards each other until they form a true ridge; then nail three boards of about ten inches wide, placing the first board close on the ridge; the second within four inches of the first; the third within six inches of the second. This makes a fence that no horse or ox can get over. This is not all; it prevents the frost from heaving out the posts; and the wind will not lean it over as it would the usual board fence when the ground is soft and wet in the spring; and forms a good drain on each side of the fence. *a*, side view of fence—*b*, end of a pannel, and ridge and ditch on each side.

Waterford, N. Y., March 5, 1842. W. G. V. D. B.

STABLING HORSES.

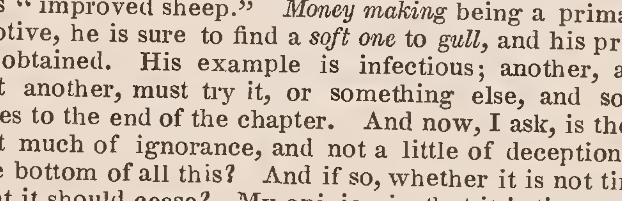
MESSRS. EDITORS—In looking over your paper, I find a few remarks on stabling horses, going to show that a plank or board floor is less injurious to horses' feet than that of ground. As doctors will differ, *we farmers* certainly should have the privilege. Our friend appears to think, that by having a ground floor or earth to stand on, it follows that the horse must be kept in a dirty or filthy way. To show his error in that particular, let him examine all training stables in which, so far as my experience (although limited) has led me to believe, he will find them perfectly clean, and not a plank to be seen or found; in place of which, earth or stone. If he will further examine the feet of horses thus kept, he will satisfy himself that boards or plank are not necessary to the preservation of a horse's hoof. On the contrary, if I am not much mistaken, he will change his opinion—in saying that a ground floor is absolutely necessary to keep a horse's feet free from many diseases. To further his views on this subject, I would inquire whether a stable having a ground floor properly made and kept in order by bedding—indispensably necessary to the horse's comfort—whether standing on ground, floor boards or plank —this bedding or litter kept under the horse, by shaking up and cleansed twice a day, adding thereto as becomes necessary by removing the parts not fit to remain—will not the horse stand in a stable thus arranged as well, in every particular, (*I flatter myself much better*,) as he would do on a plank or board floor? If so, there are many reasons to be given why a farmer would dispense with the boards or plank; one of which is, the cost, wear, danger of slipping, and falling through; another, show me a horse's fore foot, kept on plank or board floor, oiled or not, (the utility of which I much doubt,) and my word for it, his hoof is as hard as a brickbat. On a ground floor, his feet will be less hard, and will have a greater share of moisture and life; beside which, a ground floor is all important to the farmer, on account of the saving and making manure by its use. As with it, everything is saved; and without it, much is lost, arrange your plank floor as you can. In short, taking in consideration the cost of timber, stone, plank and carpenter work, add to which the wear and decay, slipping of your horses in winter, as also the risk of horses rising in the stalls, together with the loss of manure, I think should be considered as a sufficient reason to one of thirty years' experience, without a plank floor on his farm, to recommend his decision, having previously fully tested the evils attending the plank floor.

A SUBSCRIBER.

SALMAGUNDI—No. V.

> "There is a tide in the affairs of men, which, taken at the flood, leads on to fortune."
>
> There is *now* a tide in the affairs of sheep, which will lead—who knows where?

There is probably no subject connected with the pursuit of agriculture so little understood among the mass, as the rules or true principles of breeding domestic animals. In England, it has attained almost to a science; and investigation and the results of experiments made by thorough, observing men, with us, have served to add to its demonstrations. But the mass, as remarked, are lamentably ignorant, especially that part of it embracing the subject of crossing. This being so notorious a fact, it is a matter of no little wonder that editors of agricultural papers, who should know something about it, are so loth to enlighten their readers. It is possible though, that however much may have been written on the true theory of breeding, it would have been disregarded; because we are not only an enterprising, but an *experimenting* people; and it must be added, which is probably derived somewhat from our form of government, a *self-sufficient* people. We have a repugnance to being influenced by the example, or governed by the precepts of our best friends in matters appertaining to our occupation; much less, the results of the experience of *foreigners*, and the scribbling of book farmers. Hence, from some sudden impulse of ill digested enterprise, one is disposed to try what kind of a "*thing*" can be made from a cross of the Saxon and South Down; another with Saxon and Cotswold! another with Merino and South Down; and another with—who knows what? but it must be a *cross* with something—even with a Greenland bear; so that the produce is supposed will be hardy enough to live in *snow banks*, and *without care* and *attention!* It has often been remarked, that this is the age of experiment and humbug; and the future historian will certainly be false to his duty if he records it otherwise. We are truly a humbugging people. We love to humbug others, and in turn, like to be humbugged. Indeed, it is natural with half of mankind, and has been so since the fall of man. Humbug is the chief lever of the corrupt politician; and it is practiced through every grade and condition, and age, down to boys who swap knives —"unsight, unseen." But we Yankees do practice it, apparently, more than any other nation; and love it, too, better than Col. Murray, the English traveler, does "clam soup." Farmer B. obtains an English variety to cross with his flock of Saxons, and boasts that the produce is the *ne plus ultra* of sheep; that the quantity of wool and hardiness of constitution have been greatly increased, &c. &c., and demands a corresponding price for his "improved sheep." *Money making* being a primary motive, he is sure to find a *soft one* to *gull*, and his price is obtained. His example is infectious; another, and yet another, must try it, or something else, and so it goes to the end of the chapter. And now, I ask, is there not much of ignorance, and not a little of deception at the bottom of all this? And if so, whether it is not time that it should cease? My opinion is, that it is time; and why? Because I conscientiously believe that a cross of the Saxon and Merino with *any* of the English varieties of sheep, *is palpably wrong;* because it will result *eventually* in loss, rather than gain, with all who undertake it. Now let one and all understand, this is *opinion;* an opinion formed though after some reflection and personal observation. Am I wrong? Then let me be convinced, not by attempts at *guessing*, or mere *speculations*, but by sturdy, well authenticated knock-down *facts*, and deductions drawn from the true theory of breeding. But what I have advanced, I repeat, is opinion; and therefore, I deprecate any man, "mounting me rough shod," for assuming too much. My object is to get up a discussion with an eye single to the interest of the *many*, rather than the *few*. I further state, that the conclusion I have arrived at, takes not its hue from personal interest. On the contrary; the disposition among farmers to ruin their fine flocks by crossing with English sheep, is the very thing to promote my interest; and why? Because, being a grower of fine wool, with the fixed determination to continue so, it is plain, that in proportion as the quantity produced of it is diminished, the price will be enhanced accordingly. So I am on honest and fair ground. Then, "come one, come all," and let us fairly discuss the question of crossing the Saxon and Merino with *any* of the English varieties. Let us determine whether we believe and think as John Bull believes and *knows*, or whether he is an ass, and consequently his knowledge "concatenation accordingly."



Hay Box for feeding Sheep—(Fig. 50.)

With others, on former occasions, I have adverted to the slovenly mode of feeding hay to sheep by a large majority of farmers, and the waste that follows. The open winter we have passed, with those who have fed on the ground, must have caused a greater waste than usual; therefore, the subject cannot be presented at a better time than the present, and a remedy proposed. I herewith send you a drawing of one of my feeding boxes, which I have found from a trial of years superior to anything I have used, or that has come within the scope of my observation. In its use, there can be no waste of hay by being pulled out and trampled on, as is the case with ordinary racks. The butts and stems which sheep are loth to eat of coarse hay, can be taken out from time to time and fed to cattle, which they will readily eat in cold weather; and this is a large item of economy. But besides this, it demolishes everything like aristocracy, or the strong lording it over the weak and humble; every sheep standing up to its place, "on the broad principles of republican equality;" each undisturbed by its neighbor. The lower boards should be 15 inches in breadth for grown sheep, 12 inches for lambs; and the top boards, 12 inches for the former, and 9 inches for the latter. The opening through which the sheep feed, should be 8 inches for full sized sheep, and about 5 inches for lambs; and the width from 24 to 28 inches in the clear, which is sufficient to prevent disturbance when on opposite sides. Mine are without bottoms; therefore lighter, and easier of removal. I have seen them constructed with troughs inside; but I do not like the plan, as stems of hay lodge in them, which occasions the trouble of removing when grain or roots are fed; aside from this, they are clumsy, and more expensive than when the boxes and troughs are made separate. One man will construct a sufficient number of these boxes for 100 sheep in a day. The *modus operandi* is thus: lay the upper and lower boards down flat, as far apart as the opening is required; then take three slats, three inches wide, and one to one and a half inches thick—nailing, of course, crosswise the boards, one at each end, and the other in the middle. The nails should be tenpenny, and heated, so they will clinch. This completes one side. The end boards should come *inside* of the length boards, and nailed to the slats. After this, take a jack plane and smooth the upper edge of the lower boards, to prevent taring the wool from the breast and throat of the sheep. Six of these boxes are sufficient, if each 12 feet long, for 100 sheep, and one less for the same number of lambs. Let farmers take the opportunity when the weather is inclement, and make for themselves a set of boxes, and try them; and I am sure in saying, that ever after they will avoid feeding hay to their sheep on the ground. They should consider that in the month of March, when the weather is wet much of the time, sheep require the very best of attention; but if their food is loathed, which will be so if fed on the ground, they become enfeebled, and death soon brings up the rear. In conclusion, my brother farmers, if you wish to keep at least 10 per cent more of sheep, and have them come out in the spring in 10 per cent better condition, on the *same quantity* of hay, abandon your slovenly mode of feeding, and adopt the remedy proposed.

HAY PENS.—There is yet another thing of which farmers in general are destitute, and of vast consequence in promoting economy when foddering sheep; namely, a pen for the reception of the hay when thrown out of a building or from a stack. All know the waste, in a moist time, by sheep piling upon it if thrown on the ground, which is remedied most effectually by means of a pen. They are of trifling expense, which is reimbursed four fold in a single season. Mine are about 3 feet in height, and $4\frac{1}{2}$ to 5 feet square, constructed of pine or hemlock scantling, with board slats nailed to them; the slats being about $2\frac{1}{2}$ inches apart only, to prevent the sheep getting their heads between them. A pen, too, of this size, will prevent the hay seed and chaff from lodging in the wool; which, if otherwise, wool buyers will take advantage of, and with good reason. There is yet another advantage; if too much hay is thrown down for a foddering, it can remain in it, and save the trouble of pitching it back. All these things, however small they may appear on paper, are nevertheless of great importance in the long run, and constitute, whether neglected or attended to, a heavy item of profit or loss in sheep husbandry. Let these pens be made on rainy days, when farmers can do nothing else.

FEEDING OATS IN THE SHEAF.—In the March number, under the head of "Work for the Month," you say, Messrs. Editors—"It will also be an excellent plan to allow sheep, once a day, a few *oats in the sheaf*, instead of hay." Now, gentlemen, I am not a "captain," nor do I train in any captain's company; nevertheless, captain like, I am a great stickler for *consistency*, and have a profound regard for the *constitution* of sheep husbandry; consequently, I am constrained, painful as it is to my feelings, to "veto" your recommendation of feeding to sheep "oats in the sheaf." It is a wasteful practice; and such is my abhorrence of it, on this account, that I would justify any *boy in striking his daddy* when caught doing it. If fed in the way you recommend, when the ground is frozen, in the scramble that takes place, not only the strong sheep get the largest portion, but much of the grain will be shelled and left, and it is surely wrong to feed in this way when the ground is unfrozen, for the loss will be still greater, by being tainted by their feet, as well as shelled and trodden into the ground. Again; if fed in boxes, which is the only *decent* way, and I have charity to suppose you meant it should be so, there is an objection; for, before much is distributed, a rush is made, and a few sheep will seize, each, a large mouthful, more than they can manage, back out from their stands, and down much of it goes on the ground, to be trodden and wasted. All that I have remarked is the result of personal observation. The only correct and economical way of feeding, is to separate first the grain from the straw, and afterwards feed them separately;

the first, in triangular board troughs, and the last, in boxes, such as I have recommended. Do you give it up, gentlemen? If not, I'll try again. I'm an *"old 'un"* in feeding oats and oat straw, and will say something more about it at the proper season.

The last month as well as the present one, being the season when much manure is, or should be, disposed of on fields designed for hoed crops, it reminds me of—

"Hon. John Doe."—It was proposed, as heretofore stated in the last volume of the Cultivator, by Col. H. S. Randall, in his capital address before the Tompkins Agricultural Society—"that he who made only 50 loads of manure, should be called *plain* John Doe; if double that quantity, *Mr*. John Doe; that 200 loads should confer the title of *'Squire* Doe; and 400 loads, that of *Honorable* John Doe." Of course, I should not have adverted to this again, but for one of my neighbors who heard the address being dissatisfied with the proposition in its present shape. "For," said he, "you know, sir, that I am a farmer on comparatively a small scale, and when doing my very best, I cannot make over 200 loads, and some years not as much; therefore, I can never get higher than the title of ''squire,' as long as grass grows and water runs; that, as the matter now stood, it was calculated to secure the title 'honorable' only on large farmers, and seemed, therefore, too aristocratic." He suggested a modification, with a view to making it conform more strictly with republican principles, as follows: "that in each and every instance, where it could be proved by unimpeachable testimony, that any farmer who did make, save, and duly dispose of all his manure to the best advantage, without regard to any specified quantity, should have conferred on him the title of "honorable" by the president of the N. Y. State Agricultural Society." This is right. I second the motion, and move the previous question. Those in favor will please to say aye. Carried, without a count. You will please, gentlemen, "keep it before the people" in its amended form.

By the way, in the last volume of the Cultivator, an Ohio correspondent has recommended that sheep help themselves to hay from stacks in winter, instead of being foddered in the usual way, or in any other way. This has stuck fast in the crop of my nonest neighbor Ben Rogers; and he informs me that he shan't rest easy until the plan is duly tested by the "Agricultural Thermometer." He says—"he has a kind of a thinking, that when it is brought to the test, instead of any *bright* sparks, there will be an awful *stench* of *laziness*." Just refer it at once to "A. of the North;" for the old fellow will not be easy till he knows all about it. That's all. Your friend, L. A. Morrell.

Lansing, Tompkins Co., N. Y., March 8, 1842.

WINTERING STOCK ON PASTURE.

Editors of Cultivator—Amidst a pecuniary gloom which is nearly overwhelming the interests of the western agriculturist, it might at least to some seem heartless to say anything in his behalf, or anything that could encourage him. When pork is not worth more than a cent and a half, beef about the same, corn ten cents a bushel, and all things else rating at about the same prorortion, and cash scarcely to be had at these prices, and some debts to be paid, you will readily admit that we have some good cause to feel gloomy. Yet hope, that great sustainer of human nature, our only comforter in seasons like the present, whispers, better may come; and I will therefore proceed, and give you the result of my winter pasturing in this latitude, which lacks but a fraction of 40, north.

My horses consist of one, two and three years old colts, and a few brood mares. My horned cattle consist of one and two years old steers, and cows which had suckled calves during the summer, and were all in good condition except the cows, which were a little thin in consequence of their calves running with them during the summer. In the latter part of November I turned this stock on a blue grass pasture of about two hundred acres that had been kept up during the spring and summer, and they have run upon it until this time without any feed except what they procured from the pasture. The horses are in very fair condition for this season of the year—the older ones in better condition than the younger ones; and they are all in better condition than when they have been, as heretofore, wintered on hay. The horned cattle have done better than the horses. The cows are in better condition than when taken from their calves; and some of the two years old steers would make good beef; and the yearlings are thrifty and fine. Thus have I wintered my stock the past winter; but it is proper to state, we have had an unusually mild winter; we have had but little snow until the latter part of February, when we had a pretty smart fall, which lasted some eight or ten days. I am, however, induced to believe that horses and horned cattle may be wintered in this climate in a great majority of our winters on good blue grass pasture. In the fall of 1840, I removed my horses from the pasture on which they had been kept during the summer a few miles to a meadow, and turned them to hay, except two two years old colts, which, from accident, were left; and as I was from home during the winter, they remained here during the winter without salt or feed, and to my astonishment in the spring I found them doing about as well as those that run to hay; and that winter was a very fair sample of the winters usually here. This circumstance confirmed me in the belief, that good pasture was sufficient for stock in this latitude. Last season I reserved a pasture for winter, and have done well; and the hay that I have usually fed during winter I am now selling.

Blue grass that has been kept up during the spring and summer, (in this county at least,) forms a very thick and heavy coat; and although heavy snows fall upon it, horses will remove it very readily with their feet, and seem to find little difficulty in filling themselves; and the snow upon the grass rather preserves than injures; and cows, although they do not use this mode of removing the snow, very readily thrust their noses into it, and with their hard, tendinous lips, press it forward; and when they have once made an opening, they will feed round a common center for a considerable time. Colts and calves, I think, most likely in this manner, would not do well; of this, however, I cannot speak from any trial made. Their ages probably would render them too delicate to make a subsistence in this way.

Of the benefits of thus wintering, I need say nothing. It is thought a great saving in the way of cost and labor; two very important items in times like these. The price of the article makes it necessary to be raised with the least possible cost.

In relation to my kind of pasture, permit me to say that we have almost interminable forests all over the state, which are not yielding the owners a farthing, that will make such as I have by deadening the timber, rail timber excepted, and sowing in blue grass. Remove no logs; grub no spice; it costs too much. The bushes afford the finest amusement for fat cattle; they apply their horns to them and ride them down; and if you are scarce of bushes and wish to test what I say, turn a lot of them into a young orchard, and you will see what sport they will have with your young trees.

My sheep, a small flock, I have wintered upon a meadow which was mowed about the usual time, and is red clover and orchard grass. It was kept up after harvest until the latter part of November, when my sheep were turned in. My hay stood in the meadow unfenced; and until the middle of February, the sheep had not touched it. They have since that time eaten a little from one of the stacks, and but very little indeed. They have had no shelter, and are in exceeding fine health and condition; and there is not a wether in the flock but would make fine mutton now. They are common sheep, except one—a merino buck. A. C. Stevenson.

Green Castle, Ind., March 21, 1842.

ON REARING CALVES.

Messrs. Editors—As I have for the last several years frequently read the inquiries of gentlemen through the medium of the Cultivator and Farmer for the best modes and manner of rearing calves, and as often have I read answers to those inquiries, none of which have altogether coincided with my views upon that important subject.

I accordingly venture forth to offer my views relative to that subject; knowing also that there are many among your numerous correspondents possessing the ability and frankness to suggest their opinion when I am right and when wrong, if I should be so fortunate as to advance even one principle right; so that the more the exposition upon the subject the more capable shall we be of arriving at some safe and final conclusion upon a subject of some importance to the rearer of fine stock.

When the calf first comes, I do not allow it to suck more than one-third of the milk, if the cow is a good one, continually increasing until when three or four weeks old, at which time I allow him to take all the milk, and in all cases to suck it from the cow. After four weeks, if there is pasture sufficient for feed, I turn the calf out to run with the cow to suck when he chooses, until when about nine months old, at which time the cow will generally wean her calf off; which, if in winter or setting of winter, I give the calf a warm stable and plenty of sweet hay, with perhaps two quarts of roots of some kind sliced up, also always remembering to have a trough of salt for all my cattle to go to when they choose; and when spring arrives, turn my calf out to pasture, letting him fare thereafter with my other older stock.

My reasons for this management and course of treatment will be readily understood from the following *data:*

By giving good and nutritious food as first, such as nature directed, all parts of the system are kept growing according to nature's laws in exact proportion.

But on the contrary, should a calf be brought up upon skimmed milk "by hand," as the saying is, it is sometimes fed on milk at one certain degree of temperature, and at another time, at another certain degree of temperature, varying in degrees of heat as often as fed; and as often fed irregularly, and I might in some cases say rather sparingly for some three or four months, and then turned into the pasture to shirk for itself. In this way, at best, the food is poor, and requires a greater quantity to support the solid parts of the body, thereby distending the capacity of the stomach and intestines; as the poorer the food, the less the chyle to support the animal system—the remainder passing off in the excrements, at the same time contracting and stinting the lacteal vessels which convey the chyle from the mesentery to the thoracic *duct*.

The chyle is a white juice in the stomach, consisting of the finer and more nutritious parts of the food, which is received into the lacteal vessels, and serves to form the blood. The heart is the center of circulation in the animal system, and is called the seat of life. It is divided in the middle by a partition, if I may be allowed the expression, and on each side are two cavities called the ventricles; one on the right called the pulmonic, and the other on the left called the sytemic.

Attached to each is a cavity called the auricle, and from each proceeds a large tube called an artery—one the pulmonic, and the other the aorta; the first conveys blood to the lungs, and the other expels it through the system.

Hence my conclusion, that the poorer the calf is kept, the more the lacteal and arterial vessels will be contracted and stinted, and the more the stomach and intestines will be distended, which is plain as before; and should this course be persevered in, the finer points and just proportions never will nor can be fully and fairly developed, no matter how well they may be kept thereafter; although some may, by great care, be brought to a positive state. But as a general rule, it stints them forever.

Again. Where a calf is fed too bountifully, as is the case with many at the present day, all the vessels become extended to such a degree that the reverse cannot but be expected; that is, the vessels that carry nutrition to the solid parts of the body will be so much more extended than the intestines, &c., that when they come to be fed as all farmers should wish to feed their stock, after one year of age, on good hay only, the stomach and intestines become insufficient to furnish the necessary wants of the lacteals, &c. &c.; so that that sympathy of the parts will not be preserved, so essential and requisite for their future advancement and prosperity. And when kept in either of the two extremes for one year, and then placed side by side with those fed on the medium course, at three years of age, the difference of the three different courses will be satisfactory, even to the most sceptical. I am, sir, yours with regard,

Batavia, N. Y., March 13, 1843. Un Fermier.

A CORN-STALK CUTTER.

Editors of the Cultivator—I noticed in the last number of the Cultivator an instrument recommended by James M. Garnett, Esq., of Va., for cutting corn stalks. The article is no doubt good; but I think I can describe one much better adapted to the purpose. It is more *economical, efficient,* and much more *agreeable* to work with than his. No stooping is required at the work, and it is much more expeditiously performed; it *never* "jars off the ears of corn."

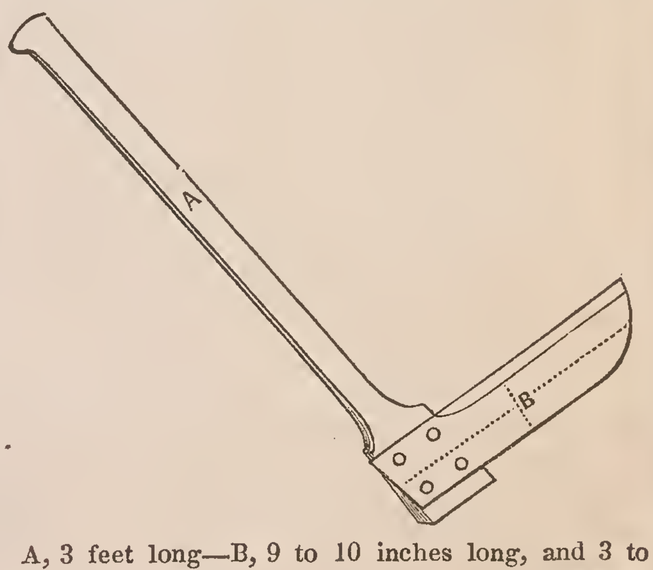
It is simply a handle, nearly similar in form and size to an axe helve, to which is attached by three or four rivets a thin plate of steel, about four inches broad and nine inches long. Nothing better can be had for the purpose than a piece of broken hand saw blade. No *blow* is given; but owing to the construction of the instrument, and slightly bending the stalks, the cutting is effected almost without effort. The bevil must be altogether on the upper side of the cutter; and the cutter should *not* stand at right angles with the handle. A *sliding* cut is the easiest with all edge tools.

When the cutter is riveted to the handle, the latter should be crooked; or which answers the same purpose, sink the cutting edge deeper into the handle; this inclines the edge *inwards*, which, together with having the bevel, and grinding, always on the *upper* side, effectually prevents the edge from slipping up the stalk.

I unqualifiedly venture the assertion, that no person who desires to work with expedition and ease to himself, will voluntarily return to the old fashioned cutter, after using the *improved* one half an hour.

I have often felt indebted to J. M. G. for his valuable communications in the Cultivator and other agricultural works; and with many others have profited by his long experience. Should he perchance realize any benefit from mine, my object is fully attained.

The annexed diagram fully explains the implement.

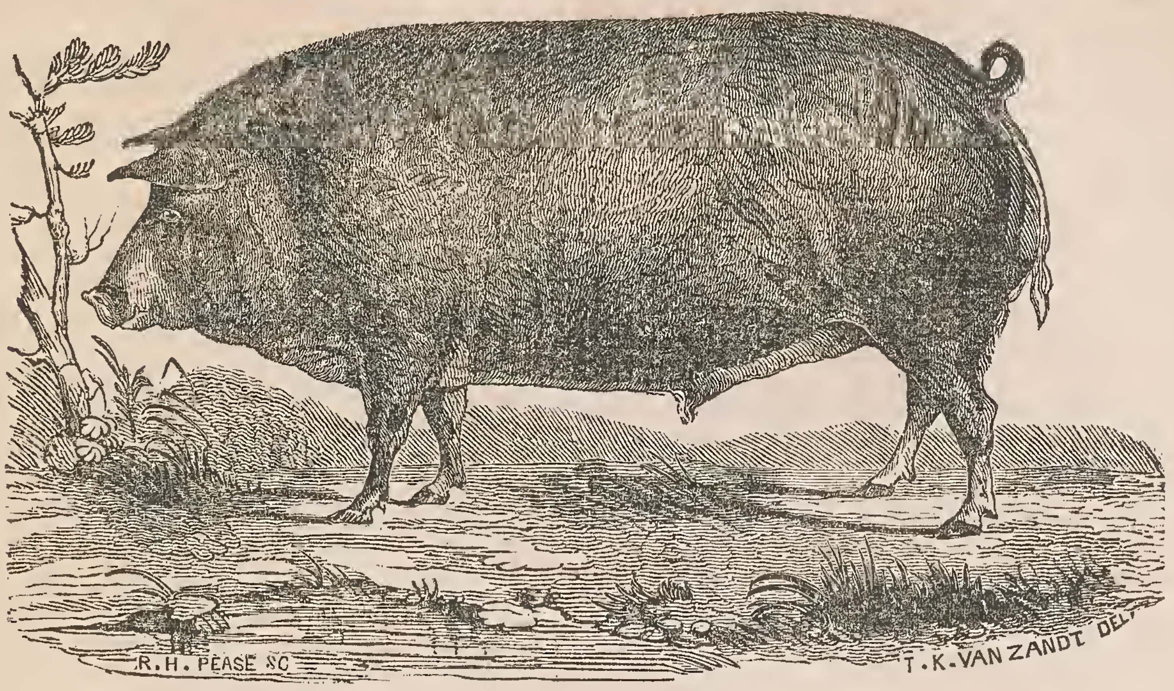


A, 3 feet long—B, 9 to 10 inches long, and 3 to 4 inches broad. A Farmer.

Montgomery Co., Md., January 14, 1842.

Distress in England.—The following is the classification of the incomes of a large portion of the poor in the large manufacturing town of Rochdale. It is the result of a personal investigation by a committee.

131	living upon	0s. 6*d*.	per head	per week.
291	do.	0s. 10 *d*.	do.	do.
508	do.	1s. 0*d*.	do.	do.
1855	do.	1*s*. 6*d*.	do.	do.
1500	do.	1s 9*d*.	do.	do.
812	do.	2*s*. 2*d*.	do.	do.



MR. BEMENT'S BOAR RIP VAN WINKLE.—(Fig. 52.)

Mr. Tucker—With this you will receive a portrait of my Berkshire boar, "Rip Van Winkle," to whom was awarded the first prize for the best boar exhibited at the fair of the N. Y. State Agricultural Society, held at Syracuse in September last. I do not offer it with a view of saying much in favor of the breed, for they are now so widely disseminated throughout the country, and so well known, that all I could say would be of very little consequence; but it is with a wish to exhibit a *correct* portrait of a Berkshire hog, which has not been given in any of the late volumes of the Cultivator.

The above portrait was taken by Van Zandt soon after he was exhibited at Syracuse, and I think you will recognize him at once, and say—"he is a Berkshire every inch of him; and that Van Zandt, as well as Mr. Pease the engraver, have done him justice." If there is any failure, it is in his legs, which I think he has made too small, and gives him rather a "leggy" appearance. He has bone enough to sustain 6 or 700 weight; and it is the opinion of many that he may be made to attain the latter weight. His head, neck, and ears, "are to the life," and his proportions are admirably good.

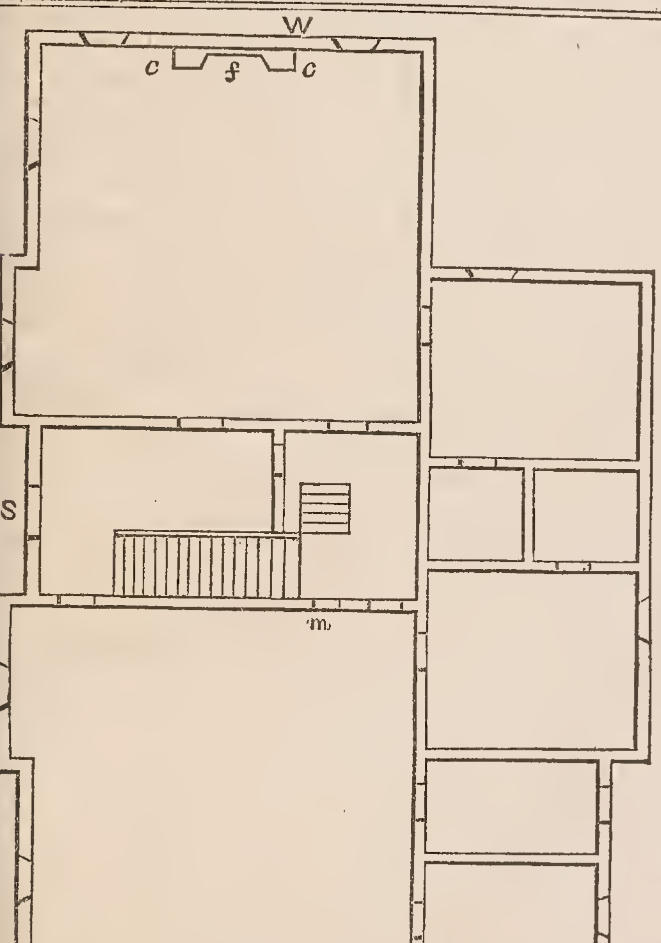
By-the-bye, I will take the present opportunity of giving an extract from a letter I received in December last, from Mr. John Bonner, of White Plains, Ga., to whom I sent several breeding sows last year; and no one, I assure you, has been more rigid or particular to procure the *pure* blood, and the best animals too. He is now rearing them for sale at $20 per pair—"first come, first served;" and applicants in that section may depend on procuring from him the real "*simon pures.*"

He says—"At the fair, held at Sparta on the 6th inst. (Dec.,) Mr. A. E. W. Brown, who resides near Sparta, in Hancock county, exhibited "Black John," a Berkshire boar pig, four months and twelve days old, that took the first prize of $5 for boars; and he weighed that day 166 pounds, and was the produce of 'Black Rose,' which you sent me, and which you said was got by the Shaker boar, Great Crosser," &c. &c.

The above mentioned pig, it will be observed, was bred by Mr. Bonner, and sold to Mr. Brown.

One of the Berkshire sows I sent Mr. Bonner was stinted to Rip Van Winkle; and in a late letter he says —"I have a remarkably fine boar pig, got by Rip Van Winkle out of the last sow you sent me, which promises to equal any hog I ever saw." His pigs have been much admired wherever I have sent them; and many of his pigs may now be found in Georgia, as the sows I sold Capt. Hardwick of Sparta were all in pig to him.

Three Hills Farm, April, 1842. C. N. Bement.



PLAN OF A CHEAP HOUSE—(Fig. 53.)

Messrs. Gaylord & Tucker—Having sketched the plan of a small and convenient cottage, on a different plan from any that I have seen published in your paper, I now offer it for publication. Main body, 20 feet by 26; posts, 14½ feet. Wings, 10 by 16 feet; posts, 8½ feet. Lower rooms, 8½ feet between joints. Wings to set back 1 foot, giving the carpenter a better chance to make a good finish, and giving a much better appearance to the building. 8 feet will be occupied for a hall and stairs in the center of the main body, leaving 6 feet each side of the hall, which, added to the room in the wings, will form two rooms 16 by 16 feet. The east room will be calculated for the kitchen, and the west for the parlor. On to the rear of the east wing will be added a linter of 7 feet, for pantry and passway out back; or if not wanted for a passway, will be found to make a very convenient clothes room to hang up such of the every day wearing apparel as is always wanted handy by.

The rear of the main body will be divided into two bed rooms 8 by 9 feet, leaving a space of 4 feet between them for two clothes cupboards 4 by 4½ feet, or it would make one large one 4 by 9 feet, best calculated to accommodate the bedroom opening from the kitchen.

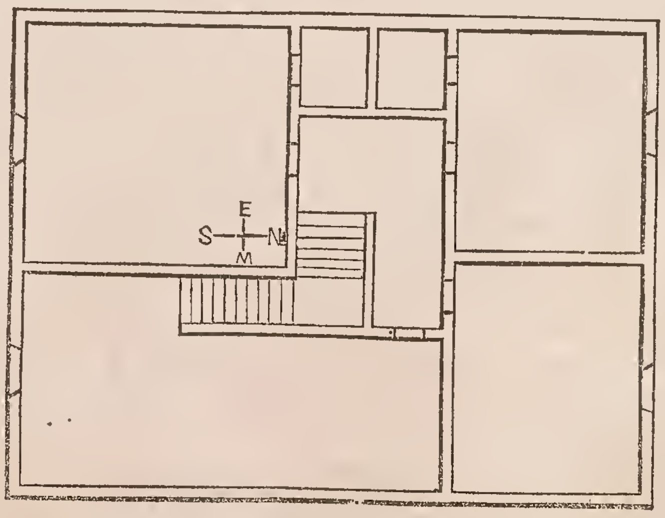
There will be a space under the stairs and in the rear of the hall for a cupboard, and considerable room to set pots of butter, sweetmeats, &c. &c., which will be kept from the light and heat. The main opening should be from the kitchen side, and two small half doors, if you please, from the parlor side to accommodate about setting the table in parlor, and prevent much passing round, and would be found very convenient in sickness, and through which the lady of the house might often speak with those in the kitchen.

The space of one foot depth by the side of the windows in the main body, which will be left when the walls are made straight, may be occupied in the parlor for setting canes, umbrellas, hats, &c. in; and those in the kitchen—one to set your clock in, which should be finished off to fit it, and the other to hang up a loose coat, set in your shoes and boots on some small shelves, or whatever your taste might direct. Each space should be closed by a small door.

The front door should be set back one foot or more, with side lights each side and over the top.

Further described as follows: *O*, represents the oven —*f J*, fireplaces—*K*, arch kettle—*S*, sink—*m*, cellar door—*c c c*, cupboards.

The front stairs should rise about three-fourths of the way, and then turn west, to land in the upper hall, and give more room under them. I will add a sketch of the chamber rooms—giving merely the form—as any one can, after having the plan, lay out the rooms.



I have not thought best to make any estimate of the cost; for in hardly any two places would a house be built for the same money, or any two persons would be found to build for the same price in a like place.

Stillwater, 3d mo. 1, 1842. B. Chase.

LETTER FROM SCOTLAND.

County of Roxburgh, Scotland, Feb. 28, 1842.

To the Editors of the Albany Cultivator:

Sirs—I have recently received several numbers of your periodical, forwarded to me by order of a friend in the United States. I have read those with great satisfaction, and have from the perusal derived much useful information on American husbandry practices, and on rural affairs generally. Without intending to flatter, I candidly and concisely give my opinion of the Cultivator. I think it ably conducted, and well supported by numerous intelligent contributors.

I hope you will not deem me impertinent in offering a few remarks on some of those communications. You have the editor's privilege in dealing with my essay as you may deem proper.

I beg to introduce myself to your notice as an old fashioned farmer of some experience, far advanced in years, and retired from active life, and retaining fixed opinions on husbandry, deduced from my former extensive practice. But I begin to think those opinions may have been formed in error and prejudice, as I now hear of such wonderful, nay marvellous discoveries in modern theory in this country, I am quite lost in amazement.

When I was in practice, I was led to believe the dung yard was the farmer's sheet anchor, and acted upon that principle; and firmly believed that straw was an essential article in forming farm yard manure. But now I am told that straw is of little or no use for that purpose. Our modern chemical farmers have got their heads so stuffed full of carbon, oxygen, nitrogen, hydrogen, phosphates, sulphates, nitrates, muriates, and other fancies, quite Greek to me, they ridicule and despise the old farmer's sheet anchor. On your side of the Atlantic, you also appear to have prodigies; such as

The Transmutation of Wheat into Cheat or Chess.—I do not know any plant by the name of cheat or chess. I will suppose it to be the plant here called darnel, *Lolium temulentum*, and treat of it accordingly; for even if a different plant, the remarks I am about to make on darnel will probably apply less or more to cheat or chess.

Darnel is a pernicious plant, frequently seen among the wheat crops of *slovenly farmers*. It is a hardy plant, and retains its hold in the ground when wheat is thrown out in severe winters. It is also much more prolific than wheat; so much so, that if only a small portion of its seed is sown among wheat in the first instance, and no attention paid to weeding its plants out of the wheat crop, it will, by a repetition of sowing the produce, entirely supplant the wheat in a few years. Hence may have arisen the idea of transmutation. But I should as soon have imagined a horse could be transformed into a cow, as that one vegetable could be transmuted into another *of a different genera*, as in the case of wheat and darnel. The seed of darnel has some resemblance to wheat, but easily detected on close inspection. It is longer and thinner than wheat, and has a blue gray cast of color. It is particularly objected to by millers and bakers, as it injures the flour and is considered deleterious.

Attentive farmers are careful in the selection of wheat for seed. They reject samples in which they see either darnel, or cockle, *Agrostemma Githago*, another prolific weed which infests wheat fields. The seed of it is round and black. It is not considered deleterious, and millers and bakers do not so much object to it as darnel. Judicious farmers are careful in weeding both plants out of their growing wheat crops; and when they winnow wheat, they do not throw the seeds of weeds into their dung yards.

When an attentive farmer succeeds a *sloven* in the occupation of a farm, he is careful in having the yard dung well turned and fermented, with a view to destroying the seeds of weeds, before he applies the dung to his land in preparation for a succeeding wheat crop.

Smut in Wheat.—Several contributors to the Cultivator give very proper instruction for pickling and liming seed wheat for the prevention of smut; but the dressing, however efficacious in itself, is not in many cases sufficient without further attention. It should be borne in mind that smut is a very infectious disease; and wheat seed, even after it is pickled, should not be spread out to dry upon a floor, upon which smutted wheat had previously been threshed. Neither should it be put into smut tainted sacks for the purpose of carrying to the field.

I have several times tried the experiment of inoculating seed wheat with smut, after the seed had been pickled, limed, and dried for sowing, by means of taking a sample of it in my hand and rubbing it with the powder of smut balls, then sowing it apart from the other. The result was, in every instance, I found smut in the produce of the inoculated samples, and none in the produce of the bulk from which they were taken. Smut is also sometimes taken to the field in unfermented dung, made from the straw of smutted wheat of the former year's growth.

Durham Short Horn Cattle.—Some of your correspondents affirm that cows of the improved Durham breed, here called "high bred, or well bred," are great milkers. They are not so esteemed in this country. There, no doubt, are exceptions to the general rule; and it is fortunate for your breeders they have got some such. We consider the superior excellence of high bred Durhams to rest upon their fine shape, great size, early maturity, and aptitude to fatten. In those points, collectively, there are no other known breed equal to them. It is too much to claim for them also the palm in milking. Their character stands justly high, independent of that desirable qualification. But I must say, I think the *quality* of beef of the Hereford breed is superior to the Durhams; and the beef of the polled Galloway Scots superior to either, as is proved by the London market, where Galloways sell from a halfpenny to a penny per pound higher than any other breed.

Cows of the old Yorkshire breed of Short Horns are generally good milkers. They, as well as high bred Durhams, require rich pasture in summer, and to be well fed in winter. Crosses between well bred Durham bulls and coarse Short Horn cows generally produce useful animals, and will go on for several generations without deteriorating. Crosses between cattle of distinctly different characters is not commendable. They soon degenerate.

Ayrshire Cattle.—The Ayrshires are a diminutive variety of Short Horns. They are in great repute as milkers, and are fast spreading over these islands. They are in every sense "the poor man's cow." They thrive and give a good portion of milk upon *very short commons*, where larger breeds would starve. There are also high breds or well breds among the Ayrshires, as in the Durhams, and with similar qualifications, with the exception of size.

Disease in Calves.—In the Cultivator of November last, Mr. Merrick states that in the preceding spring he reared eighteen calves, *part Durhams, and well fed*, and that in the latter part of summer five of the calves died in quick succession of a disease which he describes. He requests information on the cause and remedy, and whether the disease is infectious.

From the description given, I conclude it is the disease called in England by the several names of black leg, quarter evil, black quarter, and by other local terms. Young, high bred cattle, Durhams for instance, having a great disposition to fatten when forced with rich food, particularly in autumn, are subject to the disease. Young cattle *in bad condition* are seldom attacked by it. It is supposed to proceed from overflow of blood, accelerated by sudden change of atmosphere, and speedily terminates in mortification. Many remedies have been applied, but rarely with success, after the disease is firmly established. Preventives are the surest cure. When calves or yearlings of a *high breed* are forced with rich food, and full in condition, and exposed to atmospheric changes, particularly in autumn, they should be frequently blooded, and drenched with doses of nitre and sulphur. If that is strictly attended to, the preventive means will seldom fail of success. The disease is not considered infectious.

Young Leicester sheep, of a good breed, forced with rich food, are liable to overflow of blood, and consequent mortification. The same preventives are applicable to them as to young neat cattle. The disease is the effect proceeding from the cause here explained.

"If children are fed upon roast beef, they will require a good deal of physic."

And now, Messrs. Editors, I trust my eager desire for the prosperity of agriculture in whatever clime, will plead my apology for thus commenting upon some articles published in your admirable periodical, and subscribe myself, your humble servant, Tweedside.

"Tweedside" will please accept our thanks for his favor. We shall be glad to hear from him frequently; and if he will favor us with his address, we will send him the Cultivator regularly.—Eds.

ROTATION OF CROPS.

Editors of the Cultivator—The subject of agriculture is becoming one of absorbing interest to the great body of our farming population; and the most important question that can be raised on the subject is, how the two great articles of farming capital, land and labor, can be made the most productive. In countries that are new, labor may be most profitably employed in clearing, fencing and improving land, and preparing it for cultivation; but when the land is thus prepared, the inquiry is, how shall this land be cultivated so as to give the greatest nett proceeds for a number of years in succession? What amount of labor to the acre shall be expended, and what course shall be pursued, to preserve the productive powers of the soil? An acre of good tillage land, say a clover lay with 25 loads of good barn yard or hog pen manure, with proper cultivation, will produce at least 60 bushels of corn. The cultivation will cost $20. The corn at 50 cents per bushel, will be worth $30, and the stalks worth $10. After the corn, raise roots, potatoes, ruta baga, sugar beet, carrots, or some of each. This crop would be worth $30. This will violate no principle of good husbandry. An ameliorating crop will follow an exhausting one, and by having two hoed crops in succession, the land will be in the most perfect state of cultivation for a crop of spring grain. After roots, sow spring grain, wheat, barley or oats. The crop will be worth $15, and the cost of cultivation $5. With your spring crop, sow clover seed, fifteen pounds to the acre, with from one to two bushels of plaster, when your crop is well up. This acre of clover, cut and fed green to horses, cattle and swine, or cured for fodder, will be worth $12. This acre of land, after lying two years to clover, and giving back all the manure that is made from it, with careful attention, will be prepared for another 60 bushels of corn.

The value of products on five acres at the lowest computation cannot be less than $109. The cost of cultivation at one dollar per day would be $54.50, or half of the product, which deducted from the whole value of products would leave $54.50, or $10.90 per acre for the use of land. The annual products of 40 acres, upon this calculation, would be worth $872. The cost of cultivation at one dollar per day would be $436, which deducted from the whole amount of produce would leave $436, or $10.90 per annum for the use of land. This calculation, however visionary it may appear at first sight, is founded on facts and principles which every practical agriculturist will acknowledge to be correct.

The great benefits of this plan are, it proposes a system; and all must acknowledge that system in agriculture is as necessary as in any other business. It gives a proper variety to our agricultural productions. It recommends a more particular attention to the root crop, which is one essential item in a system of good husbandry. It gives a more equal division of labor through the season. It would save much labor in making and supporting division fences, which on this plan would be unnecessary. By this system, every species of noxious weeds, even the Canada thistle, would be eradicated, and the amount of labor would be greatly diminished, while the amount of agricultural products would be increased. *Homer, N. Y.* Jesse Ives.

POTATOES.

Messrs. Gaylord & Tucker—You no doubt recollect the experiment I submitted to you through the Cultivator and Farmer, volume 2d, number 4, with the Mercer, Yam and Rohan potatoes. My sole object then was to show that the Mercers and Yams were as productive as the Rohans. In planting the same kinds again, giving them all an equal chance, I find the Yams far superior to any I have ever raised, not excepting the Mercers, though I have always been very partial to the latter, and considered them the best for culinary purposes and for feed; but I find by an experiment last year, that the Yams are far superior on several accounts. 1st. They out yield all other kinds I have ever raised; they are very seldom hollow or pithy as, according to my experience, the Mercers are very apt to be. 2d. They are a much firmer potatoe, and will keep better through the summer than any I ever had.

I will now give you my experiment last summer, which I consider a pretty fair one, if we make allowance for the unfavorable season for the potatoe crop. The land was a clover sward, plowed in the fall, and manured the next spring at the rate of about twelve wagon loads to the acre. My seed potatoes were all cut, and calculated to have but one eye on a piece. I planted three pieces in a hill. The ground was all nearly alike, except about half an acre in one corner that was wet, which I made no account of. In the first place, I planted twelve rows of Mercers. One way they were about three feet apart, and the other way about fifteen inches apart, as near as I could get them. We plowed them through only one way. There were about two hundred and twelve hills in the rows one way. Next, I planted six rows of Yams, and next to them twelve rows of Black potatoes, and next to them six rows of Rohans, and next to them I planted a variety of kinds mixed together, such as Door Yards, English Whites, Kidneys and Pinkeyes. They were all tended alike, and I saw no reason why one kind should be better than another, unless the difference might be in the different kinds of seed. When I dug them, I found the result as follows: The Mercers gave, on an average, one bushel from eleven to thirteen hills; the Yams, a bushel from eight to ten hills; the Black potatoes, a bushel from thirteen to sixteen hills; the Rohans, a bushel from twelve to fourteen hills; the other mixed kinds, it took about sixteen or eighteen hills to make a bushel on an average. Thus you see a large balance in favor of the Yams. Some may ask why I did not plant as many rows of Rohans and Yams as I did of other kinds? In answer to that, I would say in the first place, I had not seed enough of the Yams. All the seed I had of them I raised from twelve potatoes the year before; and in relation to the Rohans, I planted no more of them, because I considered them inferior to some of the other kinds on several accounts.

The Yams are a new kind of potatoe to me. I have raised them only two years. I know nothing respecting their origin. A friend of mine gave me twelve of them in the spring of 1840. The result you have in the above named number. I believe he got the seed in the city of New-York, though I am not certain. He told me they yielded excellently with him, and he extolled them very much.

As the Cultivator opens away for the introduction of new articles in the agricultural line, I beg to avail myself of its agency for this object. An objection may be raised against the color, which is externally of a beautiful purple, with about two-thirds of the inside answering to the exterior, which is no less esculent than the whiter portion. When cooked, they are very dry and mealy; and when "mashed," nearly answer to white, though rather of a purple cast, and are not surpassed by any other kinds I have eaten. One thing I had like to have forgot to mention. They are almost worth cultivation for the beautiful flowers they produce; the tops and flowers being different from any I ever saw. I think they deserve the attention of agriculturists in every part of the union.

I shall have fifty bushels or upward unengaged, which I shall dispose of as they shall be called for, on the opening of the spring navigation. I shall be pleased to forward you, gentlemen, a box containing a sample of the Yams for your inspection.

Fallsburgh, N. Y., March 1842. Solon Smith.

ENGLISH BREEDERS.

Messrs. Editors—As guardians of the public interests, connected with agriculture and its kindred branches, I beg leave to call your attention to the fact, that through the columns of the Cultivator and otherwise, the idea has been industriously circulated, and to some extent has gained credence, that "by some kind of witchery or other," Mr. Bates, of Kirkleavington, England, has not only succeeded in obtaining the very "ne plus ultra" of Durham stock, but that, like patent medicine, none genuine are to be had of any one else, whatever their origin, character or appearance; and while I admit Mr. B. has some good cattle, particularly that his Dutchess family are so, I cannot admit that others have not as good, or that excellence can be found concentrated and confined to one man's yard, where so many gentlemen of fortune, taste, education and judgment have (father and son) for so long a period given their attention to the subject, and made the cattle of England what they are. It is true that reliable excellence is confined to such as have done so, and that they are comparatively few; yet no one or dozen individuals may arrogate to him or themselves the distinction, and to suppose the contrary necessarily involves a violation of all the laws of consanguinity; and neither Mr. Bates or his friends will claim notoriety on that ground. They do indeed claim that breeding in and in may be to some extent and under certain circumstances safely adopted; but to show that Mr. B. is not entitled to his celebrity by the adoption of such a system, it is only necessary to look at his practice. His cow "Oxford," (which brought him her full share of it,) so named in consequence of her having taken a first premium at Oxford, where very few Durhams were shown, and in the vicinity of which not more are raised, was the produce of Matchem, bred, not by Mr. Bates, but by Mr. Brown, of whom he purchased her in 1832. Her sire was the Duke of Cleveland, got by Mr. Whitaker's Bertram 1716, to which, in 1830, his dam, the Dutchess, was sent by Mr. Bates, with five or six others.

With "Matchem," Mr. Bates bought 16 other cows and heifers, for all which he paid £157—less than £10 each; and though for no inconsiderable part of his modern celebrity he is indebted to this stock, not bred by himself, nor the result of any peculiar system, yet the aggregate price paid, (and it may fairly be supposed to be some evidence of merit,) was less than that frequently paid by a spirited breeder for a single animal. At Mr. Dodd's sale in September, 1840, 38 of the descendants of Waterloo 2816, and Belvidere 1706, (from which were Mr. Bate's 1st and 2d Dukes of Northumberland,) sold for an average of less than £45 each, while at Mr. Collins' sale in September, 1839, 15 of the descendants of Mr. Whitaker's Frederick 1060, from 3 months to 9 years old, brought an average of £99, 12*s*. each; and at Castle Howard in the same month, 9 of his Fairfax 1023, brought an average of £95 each; 14 of his Belshazzar 1704, an average of £67; 12 of his Rockingham 2550, an average of £63; and 12 of his Marlboro 1189, an average of £106 each. And I have now by me catalogues of the sale by the Rev. John Higginson at Dishforth, in September, 1841, of that by Mr. Benj. Willson at Brawith, and of that by R. M. Jaques, Esq., near St. Trinians, both in the same month, and all showing about the same results as do the comparisons above made; and yet I have no doubt, were it in my power to institute others still, the relative complexion might be in some measure changed; for Mr. Bates is a very respectable breeder, and my object is not to disparage his stock, but only to show that it is not beyond comparison in England; and I ask if the representatives are so in this country?

I have stated that Mr. Bates' cow Oxford took the first prize at the show in Oxford; and will you allow me to compare with this Mr. Whitaker's Miss Fairfax, which also took the first premium at the great show in Leeds in 1839, and was declared the best cow ever seen in England; and that her son, Sir Thomas Fairfax, carried the first prize the next year at the great Northallerton show, beat the Clementi at a match of 5 guineas a side, and has never been beaten. May I also call your attention to the following notice of the Sir Thomas Fairfax in the 2d number, 16th volume London Farmers' Magazine, (where a fine likeness of him is given,) and where it is said that "he was sold by Mr. Whitaker to F. H. Fawkes, Esq., of Farnley Hall, and while in his possession obtained the following premiums, viz: as the best 1 year old bull at Otley in August, 1838, 3 guineas; as the best 2 year old bull at Leeds in September, 1839, 20 sovereigns, (at the same time he won a match of 5 guineas against Mr. Tempest's celebrated bull, Daniel O'Connell, which obtained the first prize as the best bull of any age at the above meeting;) and that at the Yorkshire agricultural society's meeting at Northallerton, (where he beat Clementi, as before spoken of,) in August, 1840, the first prize of thirty sovereigns, as the best bull of any age there, was awarded to him." The opinion is also confidently expressed, that if he had appeared as a competitor at the meeting of the Highland Society at Berwick he would have won the first prize; and yet for the bull that did take it, "Buchan Hero," Mr. Whitaker paid £200, and could have had £100 advance after the award was declared, and as much advance on the last price paid for Sir Thomas, has been offered his present owners and refused.

Albany, April, 1842. E. P. Prentice.

Fine Sheep.—Twenty one fat sheep were recently exhibited in Philadelphia, by Philip Reybold, Esq., of Delaware, whose weight averaged $214\frac{1}{2}$ lbs. each.

SUGGESTIONS FOR CULTIVATORS.

Editors of Cultivator—To Mr. Bridgman's work on gardening is appended a circular to the people of the United States, detailing in part an application to the national legislature for a sum of money to be appropriated for promoting "an improved system of terra-culture." What his[*] system is, I do not propose to inquire, neither do I wish to know; but the reading of that article has induced me thus to point out what I have noticed as an error in the culture of plants and trees, wherever I have been, and I know no better plan to illustrate it than in showing the effect of the error on corn. In the culture of corn, it is usual to work the crop till the tassel is about to make its appearance; this is an error. Whenever the lateral roots of a plant are injured, moved or disturbed, when the stalk that is to produce the seed is matured or about maturing, or whenever those roots are covered to a greater depth at this stage of growth than nature intended, it will produce early maturity and decay; and the yield will be just in the proportion to the extent of the error. If you will take the pains to destroy the lateral roots of a stalk of corn after its having made the last joint on the stock, you will find that it will produce no corn; and if you will displace their situation at this time by hilling, you will get a less quantity of seed than if left alone. If the lateral roots of a stalk of clover are cut off when the seed stock is forming, there will be no seed; and just so with other plants and trees; and the working of them at this stage cannot be attempted without injury. Yet, strange to say, it is almost invariably done. I have never suffered my corn to be worked after one-third of the height of the stalk was attained. I plant close enough to have the corn to shade the ground at this height, so as to prevent the growth of weeds after this last working. I plant two and a half feet square, and leave two stalks in the hill, and I have never missed having as much corn per acre and as large ears as my neighbors; and much more than some of them. I never planted a crop of corn that I had not some kind neighbor or friend to tell me that I would have neither corn nor fodder. Last spring a cropper upon my neighbor's farm planted thirty-five or forty acres in corn, and I about ten acres; our fields adjoining. He planted his corn four feet square, and left three or four stalks in the hill, and worked his crop till it was ready to shoot into tassels. I quit working mine when about 2½ feet high. His field was full of weeds and grass. Mine remained clear of both weeds and grass. When our corn was husked and housed, he told me that I had from my ten acres nearly fifty bushels of corn more than he had from his thirty-five or forty acres, notwithstanding he told me in its early growth, that I would have no corn. Part of his ground was quite as good as mine.

I have digressed somewhat from my subject, and to return, I would here notice that Mr. Bridgman's remarks on deep planting cannot be too closely attended to; and a similar and worse effect is produced in the hilling or working of plants in the latter stage of their growth, than takes place in plants and trees when deep planted. A disease is produced that hurries the plant on to early maturity by impeding the proper nourishment, by disturbing or placing the roots below where nature intended they should range for food, as well as depriving the vessels of the stalks thus covered from performing their functions. The stalks being established, it is folly for man to attempt to do that which God alone can do. Deep planting and plowing the peach orchard after the trees have attained sufficient maturity to produce fruit, is, if not wholly, the principal cause of the disease called the yellows. By plowing, the lateral roots are either cut, disturbed, or forced to seek food apart from where nature intended, and thus operates as a hill placed around plants, and brings the tree to early decay. To conclude this subject for the present, I will say, work your plants and trees while young, so as to form good stalks, and then trust to that all-wise disposer of events to perfect them.

I think I noticed a remark in your paper of the roots of the water melon being attacked by small animalculæ. Some salt added to the hills before planting will remedy that evil and give you better fruit; and salt and saltpetre sown in the peach orchard, (particularly where the orchard is worked with the plow,) will assist in preventing like depredations to the roots of the peach tree. If you think that this hasty notice will be of any service, you are at liberty to dispose of it as you think best, and be assured that I seek neither money nor thanks for performing duties we owe one to another.

Lyttleton Physick.

N. B. I should like to extend my remarks, to compare the above with the animal creation; but my present state of mind and body will not permit me to make more than this remark, that inferior animals from instinct are known to partake of certain kinds of plants and vegetables, and reject others. Now confine one of these animals to a single spot, and put before him the plants he rejects when running at large, and rather than die of starvation he will eat some of them, which in the end will be like the plant or tree that has been abused by its guardian, die with plenty before him. L. P.

Ararat Farm, Cecil Co., Md., March 31, 1842.

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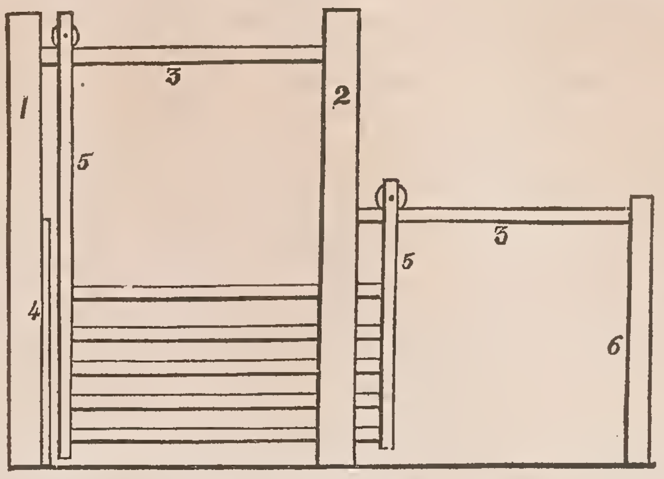
[*] Our correspondent seems to have misapprehended Mr. Bridgman's circular. It was not Mr. B. who petitioned congress for pay for a discovery in "terra-culture, worth more than all the discoveries of the age combined—the application of steam not excepted," but another individual, to whose pretensions Mr. B. is opposed.—Eds.



A FARM GATE—(Fig. 55.)

Messrs. Gaylord & Tucker—Accompanying this is a rough sketch of my plan for a gate. You will at once see that it is on the rail-road principle; and for that reason I think that it will go ahead. I think that this gate has many advantages over any that I have noticed. It makes a firm and lasting gate, with less expense than any that I have seen. It saves at least half an hour shoveling snow every morning after a snow storm; it plays easily, and is not liable to get out of order. However, the gate will show for itself, and I will occupy no more of your invaluable paper, save a description.

1, gate post 4 by 6—2, do., with a mortice, the same as the height of the gate—3, 3, rails for the gate to roll upon—4, two slats nailed on to post, four inches apart inside, to keep the gate from being pushed either in or out when shut—5, 5, upright posts to gate, 3 by 4, with a mortice in the upper end long enough to admit the rail and a cast iron or hard wood pulley 4 or 5 inches in diameter, upon which the gate hangs—6, is a post set beside the fence merely for the purpose of morticing the rail into. The dimensions I have not given you, as they may be built of any size required. M.

Onondaga Co., Dec. 9, 1841.

NOTES UPON ARTICLES IN THE FEB'Y NO.

Styptic.—One of the most efficacious that I ever tried is common gun powder, reduced to a very fine powder and applied to the wound. The ingredients composing that article appear to be in the proper combination to have a speedy and good effect. It is better than puff ball, and more easily procured at all times. I have known it applied so as to reach a deep wound, (the cavity where a tooth had been drawn for instance,) with the best effect, by putting a little of it in a quill and forcing it into the wound by blowing.

Making Pork.—Mr. Cornell, (page 33,) says he cannot make pork at $3.50 per cwt., with corn at 50 cents, potatoes 20 cents. But if all should cease making pork under these circumstances, pork would rise and corn would fall. What is the remedy? for we want to know out here in the West, being in just such "a fix." The price of pork at Chicago this winter has been from $1 to $2.25. A great portion of the hogs being of the landpike variety, being great consumers and small porkers, I do not think they have averaged more than $1.50 per cwt. Corn in the same market, 60 pounds to the bushel, 25 cents. Oats, 18. Potatoes, I cannot say what at Chicago; but here, 40 miles from there, plenty at 12½ cents; and corn, 16 cents; oats, 14 cents. Now at these prices, I am confident that every man who has put his grain inside of these long legged, lantern jawed swine, has lost money. But—and here I am "stalled." If it had not been for this immense "waste of grain," could it have been sold, even at these prices? It certainly does appear to me that it would be a beneficial remedy to have a better breed of hogs more generally diffused through the country.

And I too am certain that we never shall be wiser by reading of such experiments as Mr. Cornell alludes to; but we should be wiser if several gentlemen would take a lot of pigs and measure and count the cost of every article of food from weaning till butchering time, and give the result to the public, as to the breed, age, cost, weight, &c.

I suggest to agricultural societies to offer premiums for such detailed experiments. It would be far more beneficial than it would be to publish to the world that Mr. Prentice owned the best bull or the best boar at the fair, while at the same time everybody knew that Mr. Stay-at-home had a much better one that was not there, and consequently could not get the premium. Let the premiums be—not for the biggest bull, for if that was not a bull, it would be a boar; but let them be for those who produced the most beneficial and useful examples for their fellow citizens to follow. In this way we would soon learn how many bushels of corn it took to make a hundred of pork, instead of hearing how much more an old sow weighed after she had drunk a bucket of swill than she did before. We want more facts and less puffing.

"A Stone Scraper."—When I was a boy and lived in stony Connecticut, I used to have the back ache and sore fingers, "picking up stones." And as it was always considered an "endless job," I suppose they are not all picked up yet, particularly as there was when I left them a great many small ones; and since then, I have seen a great many small men grow into large ones, (in their own opinion.) I don't know but some of those small stones have grown large enough to be operated upon by that stone scraper described by Mr. Bowman, (page 34;) and for the benefit of some of those Yankee boys' backs and fingers, to say nothing about the sythes and consequent grindstone turning, I want some of them to try that scraper, and see if it will answer to pick up stones with; because if it does, I know my name will be blest by the rising Yankee generation for making the suggestion for their especial benefit. I would try it myself; but as a matter of geological information to those same Yankee boys, I will inform them that out here on the prairie, they could'nt find pebble stone enough on a thousand acres to make a "right smart chance of a sizeable sort of a stone heap."

"Cream Pot Cattle."—It is with feelings far from being allied to pleasure that I read the result of the sale of this stock of cattle in friend Bement's letter, (page 36.) Hundreds of far less valuable cattle have been imported at great expense. "Far fetched and dear bought," is all the recommendation required by some. Alas, for my worthy old friend, Colonel Jaques; his stock was "domestic manufacture;" and who would purchase that in these anti-tariff times? I knew the colonel was embarrassed, and I deeply regret to hear that he has been sacrificed too. His efforts to do good were worthy a better fate. I am at this time in good health, and as comfortable as could be expected, in one of the muddiest winters that you ever saw. If I do not get stuck fast, you will again hear from Solon Robinson.

SETTING GATE POSTS.

Messrs. Editors—As I was about sitting a gate post, the Cultivator came from the office; I sat down to peruse it, and cast my eye on an article giving directions how to set posts. The writer says: Dig your hole something larger than your post; then take water lime and sand, make it into mortar, pick up small stones, throw them into it, set down your post, take a shovel and throw in your mortar, fill up the hole and let it stand until it gets hard before using. It struck me that it was an improvement; but after a little reflection, I thought I could improve upon it. I therefore set down my post, which was 8 by 10 inches, gathered small stone, filled up the hole with them, made my mortar so that it would pour, filled the hole a little rounding with it, so that no water could stand near the post; smoothed it off, let it stand two or three days, and hung my gate, where it has been two years as firm as the tree before it was cut down, in a solid body of cemented stone two feet square. As water lime is an article that but few people keep by them, I would say that I have no doubt but mortar made of common lime and sand would be a great improvement in preserving the post as well as keeping it firm.

Galway, Saratoga Co., N. Y. P. Otis.

PRIVET FOR HEDGES.

Messrs. Editors of Cultivator—Seeing an inquiry in your March number, requesting information regarding the privet, (*Pyracantha,*) for live hedges, we would inform your correspondent, Mr. Long, that the late Jesse Buel tried the *common* privet on a small scale, more for ornament than utility, as a fence, and found it to succeed remarkably well; retaining their verdure almost entirely through the winter, and being susceptible of being trimmed in any shape, to suit the taste of the most fastidious. We presume they would not be sufficiently stout for preventing cattle or swine crossing them.

We would inform Mr. Long, that the plants of the common privet may be obtained of the undersigned, at the Albany Nursery and forwarded to any part of the country. The wholesale price is $3 per 100 plants.

Albany Nursery, March 14. Jesse Buel & Co.

KEEPING HORSES ON SALT HAY.

Messrs. Editors—I observe that you have of late devoted considerable space in your paper to the treatment of that invaluable animal, the horse, and I would mention that at the suggestion of several of my friends I have this winter fed mine with salt hay, and found that their wind and power of endurance was greater, and that they had less of what is called by farmers the hay-belly. They are also exempt from the cough which feeding on fresh hay, particularly clover, from the great amount of dust it produces, is very apt to produce. I am very well pleased with the result, and think those farmers who have such hay will find the benefit of keeping their horses upon it more exclusively. A. W. L.

Hempstead Harbor, Feb., 1842.

TO BEAUTIFY THE COUNTRY.

We have received from A. Bergen, Esq., a paper on this subject, in which he urges the propriety and utility of decorating our farms, grounds, &c., with trees, shrubbery and flowers, as contributing both to pleasure and health. We regret that a press of matter this month prevents our giving more than the closing paragraph.

"I say, then, that any man who is blessed with a comfortable dwelling and a few acres of land, can do much to embellish his home without intruding much on his daily business, and with very little expense. Trees he may get out of the forest, or raise fruit trees from the seed. Shrubbery and flowers he can multiply from a few sprouts and seeds; besides, if he has a family growing around him, how much more will they be attached to, and love their home. Let no man, therefore, say he cannot do this or that; but merely let him try, and he will soon find that he can accomplish wonders."

Answers to Inquiries, &c.

DYNAMOMETER.

"Editors of the Cultivator—I would be much obliged to you if you would furnish in an early number of your paper a description of the dynamometer, together with the cost of it, and where it can be obtained. The planters of this part of the country usually have their plows made on the plantation, and it would be very useful to us to ascertain the draft or power which is required in using such plows as we have, or in making alterations and improvements in them. H. O. F.

Montgomery Co., Ala., 1842."

We have some cuts of the dynamometer in the hands of the engraver, but are unable to answer the inquiries of our correspondent as to prices, and place of procuring them. Perhaps some of our makers of plows, or others, could give the information asked. If so, they would confer a favor by forwarding it to us.

INSECT IN WHEAT.

Editors of the Cultivator—As late as November 25th, I sowed two acres with four bushels of red bald Canada wheat, and before it came up we had several hard frosts. On the west end of the lot an insect has attacked it, which has caused the leaves to have yellow and red spots. The easterly end is entirely free. The fly is a small black fly. What is singular is, that a neighbor's wheat has been attacked in the same way; the eastern part is not touched. Is this the ichneumon fly?

Oatland cottage, South Hempstead. John Harold.

We are inclined to think the fly will prove to be the Hessian fly, but it may not. We shall look with great anxiety for Dr. DeKay's Entomological Report, in which we trust the depredating insects will be fully described. At present, there is too much conjecture, and too little certainty respecting most of them.

CORN WORM.

Messrs. Gaylord & Tucker—Can you, or any one of your correspondents give us Illinoisans any information respecting what may be called the corn worm. About the time our corn began to form on the cob, this worm, of a dark slate color, from one-fourth to seven-eighths of an inch in length made its appearance on the ear under the husk, having ground a hole in them to pass through, and continued to eat till the frost killed them. Sometimes six or eight were found in an ear. They were more injurious to late than early planted corn. Now whether this worm came out of the soil in its perfect state, or was deposited by a fly as soon as the corn began to ear, is a quere to me. Is there not something to prevent their depredations? And if so, you would oblige many by making known a remedy.

Brinkville, Ill., 1842. J. A. P.

We have never noticed or heard of the worm of which J. A. P. complains in this part of the country; and its history is to us entirely unknown. We had some complaints last year from the South and West respecting it, and if any of our correspondents can throw any light on this new depredator, we shall be happy to receive it. That it is the product of a moth, seems most likely; but of what kind, or what its parentage actually is, remains to be discovered.

CULTURE OF HEMP.

Our correspondent at De Kalb, Ill., will find his inquiries as to hemp, the proper soil, culture, &c., fully answered in the present number. We agree with him that it may be profitably made to take the place of part of the corn crop of the West, and that the interests of the nation demand more attention to this culture.

THE HORSE CHESTNUT.

Our friend A. Bergen, of New-Utrecht, L. I., informs us that in 1839 he planted a small piece of ground, previously plowed and mellow, with nuts from the black walnut and the horse chestnut in alternate rows. This was done in the fall; and in the spring they both came up finely, the chestnuts starting first. In the growth, the walnuts have far exceeded the chestnuts, although the latter have been manured; but it seems to little purpose, since while some of the walnuts are seven feet high, the chestnuts are not more than seven inches; and he requests us to account for this singular difference.

We know not that we can do this satisfactorily, having never attempted the cultivation of the horse chestnut; but we do not hesitate to ascribe it to the proximity of the black walnuts, and their sinister influence. Every one is aware of the fatal effect which the common butternut, *(Juglans cathartica,)* has on all trees, so decisive indeed, that in our forests not a tree or shrub is ever found within the spread of its branches; and the black walnut, *(Juglans nigra,)* possesses many of the same qualities. The soil too in which the nursery of Mr. B. was planted may not have been without its influence. The horse chestnut is well adapted to light lands, and thrives well on such, though they may be rather sterile, while in heavy clays it is always stunted and unhealthy. The black walnut on the contrary grows best in a strong, stiff soil, and rather moist than dry. The horse chestnut has large leaves, and requires more than the usual space to receive the necessary supply of air and light. All these causes may have had more or less influence; but it is to the presence of the walnuts that we attribute the mischief. In a young nursery of thrifty locusts, in order to occupy the whole ground, we three years since transplanted seedling butternuts between the locust rows. The result has been, that the butternuts have grown rapidly, while the locusts have scarcely the last year advanced at all. This spring we have removed a large part of the butternuts, and presume the locusts will again go ahead.

MANURE FROM AN ACRE.

"Messrs. Editors—In addition to the queries you were so kind as to answer in your last Cultivator, will you be so good as to inform us what quantity of manure one ton of hay will ordinarily make? J. A. S.

Reading, Vt., 1842."

We are unable to give a definite reply to the question of J. A. S.; but will furnish some data that may assist him in forming an opinion as to the quantity. In the General Agricultural Report of Scotland, volume 2d, Dr. Coventry has given an estimate of the manure an acre of land in good condition, or such as will yield 28 bushels of wheat, or 50 of oats, in the following crops, would give—

"By clover, grass, or herbage, hay, &c., first year, 6 tons.
By clover, if mowed, second year, ... 5½ do.
By white or corn crops, as wheat, barley, &c....... 4 do."

Mr. Youatt had a dragoon horse fed one week separately for the sake of experiment, exercising him one hour a day. The food converted into dung each day was as follows:

Oats,	each day,	10	pounds—one	week,	70	pounds
Hay,	do.	12	do.	do.	84	do.
Straw,	do.	8	do.	do.	56	do.

He drank within the week 27 gallons of water; and the loss of dung while on exercise was computed at 4 pounds per day, or 28 for the week. The total forage

consumed was .... 210 pounds.
Dung and litter produced,............... 327½ do.

yielding, if the lost dung be added, with the addition of the moisture imparted by the urine, an increase of two-thirds beyond the solid food.

Arthur Young states that the winter stock on his farm, consisting of six horses, four cows, and nine store hogs, consumed 16 loads of hay, with 29 loads of straw for litter, and the usual quantity of oats to the working horses, and produced 118 loads of 36 bushels each of manure. In another trial, 36 cows and four horses, when tied up, ate 50 tons of hay, and had twenty acres of straw for litter, with which they made, 200 loads of dung in rotten order for the land. In this case, the weight of the straw and manure is unknown.

INQUIRY—YIELD OF CORN.

"Messrs. Editors—Farmers frequently disagree as to the best kind of corn to plant, the twelve or the eight rowed; and which will yield the most per bushel of ears. If you have the means of giving us a little information on this subject, you will confer a favor on more than one Corn Grower."

A few years since we made several experiments on the comparative product of several varieties of corn on the cob, from which we arrived at the conclusion, that there was very little difference if any in this respect; that varieties with large cobs or a greater number of rows, gave more shelled corn per ear than varieties with smaller cobs; but that the average of corn in both would be about the same. There is a decided advantage, however, in the small cob varieties over the large ones in ripening quicker and more completely; an object of great consequence in places where it is necessary to give corn every facility for maturing. Mr. Colman has, in his 4th Report, recorded some experiments which in part at least confirm the opinions we have advanced. A condensed statement is all we can give of his remarks.

Half a bushel of eight rowed corn in the ear, very sound and well cured, weighed, ... 25 pounds.
Half a bushel of twelve rowed corn in the ear, not so well cured, weighed, ... 24¾ do.
Half a bushel of eight rowed, shelled and measured, 1 peck, 3 quarts.
Half a bushel of twelve rowed, shelled and measured, 1 peck, 3 quarts and a fraction.
Half a bushel of the cobs of the eight rowed weighed, ... 4¼ pounds
Half a bushel of the cobs of the twelve rowed weighed, ... 4¾ do.

Of two of the best ears of each sort carefully selected, the butts were shaved close to the kernel, and then the corn being shelled, both cob and grain were carefully weighed.

Of the two ears of the eight rowed, the grain weighed 8½ ounces—the cob 1½ ounce.

Of the two ears of the twelve rowed, the grain weighed 13¾ ounces—the cob 2½ ounces.

Thus in this case the proportional weight of the grain to the cob is the same; and this, we believe, with Mr. Colman, will be generally the fact.

A peck of the corn experimented upon was shelled, well shaken and struck, and the kinds weighed as follows: one peck eight rowed weighed 17 pounds, or 68 pounds to the bushel; one peck twelve rowed weighed 16¼ pounds, or 65 pounds to the bushel.

This difference Mr. C. attributes to the greater ripeness of the first variety.

☞ Answers to several other inquiries will be given in our next.

Veterinary Department.

DISEASES OF THE FEET IN ANIMALS.

Messrs. Editors—With your leave I wish to present my views of a question of much interest to the farmer—the origin or cause of those diseases of cattle or sheep known by the name of hoof-ail, foot-rot, &c.

The horse has on his leg what is called the *scab*, through which exudes a glairy matter, and this process seems necessary to his health. The hog has holes on the inside of his legs through which you know it is said the devil enters swine; but he will not be so confined, for we know, if the holes be stopped, the animal sickens and dies; at least, it is so with our poor stock here, the Landpikes and Alligators. May it not be he desires to leave them at pleasure to enter some of Mr. A. B. A.'s Aristocrats? Nor should we be much surprised if the aforesaid personage should enter some of his thin skinned poultry lately imported, through what the Tuckahoes call the oil bottle.

That long toes, or the friction of long or short grass between the toes of sheep should produce the foot-rot, or that this disease is at all contagious, I cannot deem founded in fact. Cattle have neither scab or oil bottle; but they have holes just below the false hoofs or hinder claws where they may be found; and they use their tongues to keep them open, when the muck or litter through which they go is not so offensive as to prevent them. It seems to me the stoppage of these might have produced the epidemic complained of near Troy, and the disease of Mr. Merrick's calves. If so, to have washed their feet in clean water, and driven them to dry, high and clean pastures, opening the holes of those complaining, and giving them a little spirits of turpentine, observing to pour some in the cleansed orifices, might have been a good prescription.

About the edge of the hair, and within the cleft of every sheep's foot, a duct or hole of this kind may be found. Now if this hole gets stopped, it suppurates, and a diseased foot is the result. Unstop it, and move your sheep on to hard land—not leaving the well ones; for the cause that effected the one will the others, if not removed. If there is much disease among them, make a compound of equal parts of finely pulverized rosin, salt, and flour of sulphur. Give them a little of this frequently, minding to keep the holes open, and I trust no one will find it necessary to cut away all the tough and hardened skin on which the animal needs to walk, and then trying to force these exudations from their natural channels through the sores made by means of balsams and plasters. J. Lawrence.

Jefferson Co., Tenn. 1842.

Note.—We were not aware that cattle possessed the excretory ducts spoken of by our correspondent; nor in any work on cattle do we find any mention made of such an apparatus for forcing matters from them which if retained would be injurious to the system. In the other animals named, they are obvious enough, and their uses are too plain to be disputed.

STAGGERS IN HORSES.

"Messrs. Editors—Permit me to give you the result of a remedy for the staggers in horses, used by Mr. Wesley Gray of this county. He makes a crucial incision thus + from two to two and a half inches in the forehead of the horse down to the bone, dissects up the angles, and introduces a tea spoon full of pulverized cantharides; the skin is brought over and confined by stitches. In a few hours the flies begin to inflame the part, a copious flow of mucus from the nose ensues, and the symptoms of the disease abate. A deep sore is formed, the after treatment of which consists in occasional cleansing by warm soap suds. Mr. Gray has succeeded in curing several horses by this method; and as the experiment is easily tried, and if opportunity offers, I trust some of your numerous readers will repeat it, and report the result in the Cultivator.

Brandon, Miss., 1842. Yeoman of the South.

The staggers is one of the most fatal diseases to which the horse is subject, and we thank our correspondent for a remedy which promises relief. Veterinarians divide staggers into two kinds; the stomach staggers, and the mad staggers. The first arises from over feeding, eating too great a quantity of food, or food of an improper nature. In removing this disease, the stomach pump has been within a few years used with much success; clearing the stomach and affording speedy relief. Before the adoption of the pump, stomach staggers was rarely cured. Unless removed, the disease effects the brain, that organ becomes inflamed, and blind or mad staggers ensues. In either of these diseases, or any stage of them, bleeding rapidly and in large quantities, with the exhibition of physic, has formed the most probable means of cure. When inflammation of the brain has ensued, or as a preventive to such a result, the remedy used by Mr. Gray appears to us very proper. The exhibition of physic at the same time would doubtless add to its efficacy.

CURE FOR THE BLACK TONGUE.

Burn alum, powder it fine, and apply it to the tongue of the animal two or three times, and he is cured.

Walnut Grove, N. Y., Feb. 14, 1842. D. Y. O.

☞ For remedy for Blackleg in Calves, see Letter from Scotland, p. 84.

The Garden and the Orchard.

THE SMALLER FRUITS.

AMONG the smaller fruits, may be classed the Strawberry, the Raspberry, the Currant, the Gooseberry, and the Grape. Independently of their delicious qualities, they possess one eminent advantage; they generally come into bearing within a year or two after being transplanted, which is a matter of some consequence to those who are commencing the culture of fruit by planting entirely new grounds. Most of them, also, are earlier in season than the larger fruits, and the crops are less liable to failure from frost or other accident.

The *Strawberry* stands inferior in importance to none. Its cultivation is as easy as anything which grows in the garden. Among some of the best varieties are,—the Austrian Scarlet, or Duke of Kent, which is the earliest, the Roseberry; and Keene's Seedling. The red and white Alpine possess the peculiar advantage of bearing the season through. I have partaken of a freshly picked dish of them on the first day of winter. Hovey's new seedling appears to be a variety of extraordinary excellence. The high price (two dollars a dozen) will prevent many from obtaining it this year.

Any good rich soil, whether heavy or light, is well adapted for strawberries. They may be transplanted in spring, or in the latter part of summer. A common practice, after the beds are planted, is to suffer them to run wild and cover the whole surface; and this affords tolerable crops with little or no care. But a much superior way is to plant them in drills, at such distance as will admit a narrow cultivator to pass between; and it will be found that the free space they thus have, and the cultivation, with the occasional dressing of manure which they may receive, will much increase their quality and productiveness.

The *Raspberry*, preferred by some even to the strawberry, is also of very easy cultivation; the chief reason of the want of success with some gardeners, being the want of pruning. When the stems are suffered to grow in dense bundles, none but imperfect crops can be expected. Early in spring every root should have all the stems cut off at the ground, except three or four of the most vigorous, and the tops should be pruned down to about three feet in height. Any rich garden soil is adapted to their cultivation; and it should be kept clear of weeds and grass by frequent hoeing.

The White or Yellow Antwerp is considered by most as the finest variety in cultivation. The Red Antwerp is also excellent, though it often bears very scantily, solely from the want of pruning. The American Red, and American Black are fine varieties, and doubtless might be much improved by cultivation.

The *Currant*, so well known to every one, is generally rated lower as a fruit than its pleasant flavor, great productiveness, and hardiness, entitle it to be. It is scarcely ever *cultivated* in this country, but merely permitted to grow by sufferance. Pruning and hoeing would be well repaid by the improved quality of the crop. When bushes are to be raised from cuttings, all the buds should be removed except a few at the upper extremity; this will prevent suckers. Every currant bush should have a single clear stem, at least six inches above ground.

The principal varieties are the *red* and *white*. These have been improved by careful cultivators, and deteriorated on the other hand by continued neglect. The small varieties should be rejected, and their place supplied with those which are larger and improved.

The culture of the *Gooseberry* has received abundant attention in England; but the course pursued, and the varieties raised there, have not succeeded so well in this country. The same general remarks apply to the cultivation of this fruit, as to the currant. Disappointment often results from the large English varieties, which are not only of inferior flavor in most cases, but scarcely ever escape mildew. There are some smaller fruited ones which are well adapted to this country; but by what names they are known, is uncertain.

The *Grape* is a valuable fruit, though ripening at a season when the peach, apple, plum, and nectarine, are in their full splendor. Much has has been said on its culture; but the chief requisites are, a deep, loose, fertile soil, frequent cultivation, and proper pruning. Among the best varieties are,—the Isabella, which for hardiness, great productiveness, and sweetness of flavor taken together, perhaps stands unrivaled; the York Madeira, earlier, hardier, and possessing less of the musky taste than the Isabella, to which it is preferred by some; and the Catawba, a large, beautiful, productive grape, but not equal to the other two in flavor. The Bland is a fine grape, but our seasons are usually too short for its thorough ripening. These are all hardy American. Among exotic grapes, the White Sweet Water is most admired, and is of most delicious flavor. The vines, however, require renewing every four or five years, to prevent mildew; and require laying down every autumn to avoid destruction from frost. But this renewing is no more labor than the yearly planting of corn and potatoes; nor the laying down than the autumnal harvesting of these crops. Yet many consider it so grievous that they are entirely deterred by this alone from the cultivation of this fine variety. The Malvoisé is a smaller grape, but even more exquisite in flavor. The Burgundy, (Black Cluster, or Black Orleans,) is a very good exotic grape, and has the singular advantage over most other exotics, of being quite hardy; at least,it is so in Western N. York.

Long and minute directions for the cultivation of the preceding fruits often afford many useful hints; but, on the other hand, they bewilder new beginners in the business, who perhaps have but comparatively little attention to spare from the crops of the farm. To such beginners it may be recommended, to use the same care, and apply the same principles to the culture of fruit that they do to the raising of corn, and success will follow. Corn will not bear its crop if suffered to grow too thick, if overrun with weeds, or on a sterile soil; so neither can the raspberry, the gooseberry, or the grape, be made to bear well without corresponding attention in pruning, in hoeing, and in procuring a fertile soil. But with this care, and a decent share of common sense superadded, none need despair of eminent success.

Macedon, N. Y. 4th *mo.*, 1842. J. J. THOMAS.

CULTURE OF MELONS.

"MESSRS. EDITORS—Will you be so good as to give in your next Cultivator some directions as to the raising of melons? It is a fruit of which I am very fond, but in the cultivation of which I am not always successful.

A SUBSCRIBER."

If there is one thing more essential than another in the culture of melons, it is a sandy soil; and if not such naturally, must be made so artificially. To think of growing melons on a compact clay soil, however rich it is made, is idle. We now rarely fail of a supply of melons; but we were obliged to correct the soil of our garden with many a load of sand before we could be sure of success. We sometimes succeeded, in favorable seasons, by covering a load of manure with inverted turf or garden mold; in this manure digging a hole some 12 or 18 inches deep, filled with light, rich earth, and on this planting the melon seeds. Some of the best melons we have ever seen were grown on a bed made of some two feet of stable manure in a box, on which was placed a foot of rich earth. The seeds were planted in this, and common sash frames placed over them until all danger to the young plants from frost had passed. The vines were then allowed to run over the sides of the box, and from a few vines a large crop of melons was produced. The difficulty with such beds of manure is the danger the plants run of suffering from drouth. It is better, therefore, to make the beds for the plants where this evil will not occur, that is in the soil itself. If your soil has the proper quantity of sand, make it rich with hog, sheep, or hen dung—the last is the best—and making the earth for the hills fine, plant your seeds some eight feet apart. Few plants suffer so much from being crowded as melons; and if the hills are too close, or too many stalks are allowed in a hill, large, fine melons will not be produced. The seed should not be planted deep; an inch is sufficient; and if after covering them a pane of glass is laid on the spot, the germination will be considerably hastened. We have used boxes made of six inch boards, over which small sashes of four lights were secured in such a way as to be movable. These we have found not only excellent for melons but for other plants, such as tomatoes, peppers, &c., which in our climate it is desirable to forward as fast as possible. We have been in the habit of sowing lettuce in the intervals between the hills, as this will occupy the space until the vines begin to spread. Mr. C. E. Clarke, of Jefferson county, recommends radishes and early beans in addition to lettuce. After the plants are well up, all the attention they will require is hoeing frequently, (get up early in the morning, before the sun rises, to do this;) thinning out, so that but two or three plants are left in a hill; and repelling the attacks of the striped bug and cutworm. The most effectual remedy we have ever found for the first, is a well directed pinch between the thumb and finger; but Mr. C. recommends that at the time of planting, an onion, garlic, or shalot, be placed in the hill. This mode we have never tried, but think favorable of it, and shall test it the coming summer. The best melons we have raised, at least the larger ones, were from Long-Island, or Jersey seed. Some of the most delicious and fine flavored ones, but small compared with the L. I. ones, were produced from seed lately introduced into the South, and termed the Ice melon, from the extreme thinness and brittleness of the rind. The melon will endure a great degree of heat and dryness without injury; but if it is necessary to water, it should be done with rain water, and a liberal supply be given. Watering in a hot sun is injurious rather than beneficial.

PRUNING ORCHARDS.

MESSRS. EDITORS—I have recently commenced reading the Cultivator, and know not what it has contained previous to the January number of the present year on the subject of pruning apple trees. I observe in the number for February, on 31st page, that in pointing out "Work for the Month," you say—"trees may be pruned this month." In the same paragraph you state that—"it is wrong to suffer years to elapse without pruning, since when it is then done, the cutting out of branches of many years' growth makes large wounds, and injures the tree." I have had some experience in raising an orchard; and my practice has been to prune apple trees *at any season of the year;* and sometimes I have found it necessary to cut off a limb of three or four inches in diameter, and without any injury to the tree. During many years, I have kept in my orchard in the spring, summer and autumn, a kettle of grafting wax, made by mixing three pints of tar with with one pound of bees' wax, one pound rosin, and six ounces of tallow, and placing the kettle over a fire until the rosin, bees' wax and tallow are all melted. The kettle is then placed where its contents become so cold as to begin to stiffen, and one pound of Spanish brown or yellow ochre is stirred in and thoroughly mixed with them. When cold, it will be of about the consistence of shoe-maker's wax, and is applied to the tree with a round or square pointed knife, kept in the kettle for that purpose. A thin coat is sufficient. I have pruned off large limbs in the summer, when the bark peeled easily; and by cutting through the bark round the limb with a knife before sawing off the limb; the bark was not started on the stock. I then smoothed the wound with a sharp knife, and applied the wax. Some of the wounds I have thus made and covered have been from 6 to 8 years in growing over; during all which time the wax has adhered, and was only pushed off by the encroachment of the new wood and bark, and not until completely healed over. I have removed the wax after it had been years thus in use, and have found the wood under it as sound and white as when the wax was applied. Were I to use no kind of composition to cover the wound made by pruning, I should prune within the last ten days before the blossoming of the trees. The wounds then made will grow over much quicker than those made in February.

In the same article of your February number, you say —"the latter part of this month is an excellent time to select and cut cions." My experience here, *"down-east,"* proves that the best time to cut cions is from the 10th to the 25th of April, according to the early or late commencement of vegetation. If cut so late, they will need no attention to preserve them in good order to the time for grafting, which is here during the first half of May. Cions cut so late will not need claying at the butts. You have only to lay them on the floor of a dry, cold cellar, until it is time to use them.

Bucksport, Me., March 16, 1842. SAM'L M. POND.

P. S. Should the heat of a summer's day melt the wax applied as above, so as to cause it to soften sufficiently to run off, you have only to melt it, and stir in more ochre.

GARDEN HINTS.

There are many plants that should be transplanted from the hot bed the last of this month. Of these, the cabbage and tomato are perhaps the most common. In transplanting, the ground should not be *wet;* but just moist enough to pulverize easily, and press close upon the roots without baking, or becoming hard when dry. A cloudy, but not a rainy day is best for transplanting. Melons and cucumbers, when first transplanted, should be shaded from the hot sun, or it would be fatal to them. Lettuces started in a hot bed may be transplanted into beds, and will produce fine heads. It is a good plan in removing plants to dip the roots in a thick paste, or mud made of rich soil and water; this adheres to the roots, and prevents their drying up, or the exposure to air of the delicate rootlets. Plants from a hot bed will be more tender, and require more attention, than if started in the open air; but the trouble is well repaid by their being so much sooner ready for the table.

Silk Culture in the United States.

HATCHING, FEEDING, CLEANING, HURDLES, &c.

As soon as the warm weather has become settled, from the 1st to the 15th of May, the eggs intended to be hatched may be spread out upon a table, either in the cocoonery or an ordinary room. A small ordinary room is best, because in case of a cold spell of weather a fire may be made, and the temperature thus kept equable. In small, domestic establishments, nothing more need be done than to spread out the papers containing the eggs, and thus let them remain till the young worms make their appearance. If the eggs are loose, not on paper or cloth, spread them out thinly on paper, just as if the worms had laid them so. If the eggs are in good condition, they will hatch in from 5 to 10 days from the time they were brought out. The worms generally hatch in the morning. On the first day of the hatching but few will come out, and these need not be attended to. In the morning of the second day a considerable quantity will appear, and they must be secured. The simplest way of doing this, is to lay some whole leaves of the mulberry flat upon the worms, covering the whole. About one hour afterwards, the young worms having attached themselves to the leaves, take each leaf by the stem and lay it gently upon another table, and thus continue till the whole are secured. The next day proceed in the same way, and on the next again. Generally, it is not advisable to save any that do not hatch on the second, third and fourth days, as those that appear afterwards are apt to be weakly and indolent, giving more trouble than they are worth. Observe that each day's hatching must be carried to a separate table. When all the worms are thus secured, feed them with fresh leaves as often as you find them without food; and at all events, give them fresh leaves three times a day—simply lay the leaves flat upon the worms. The better plan is to feed them in small quantities at each time, taking care that they are never without fresh food. While young, and if you have not plenty of leaves, it is well enough to tear or cut the leaves into small fragments and scatter them over the worms; but if you have plenty, this is not necessary. In from five to seven days the worms will begin to change their skin, which you will observe by their being asleep. In 24 hours many of them will revive; and as soon as this is observed, lay on some leaves and remove the worms, as was done from the hatching table, to another table or shelf, and thus continue each day till all are revived, taking care to place those that revive each day on separate tables, as before. The worms are then to be fed as before, as much as they will eat of fresh leaves. It is needless to go over in detail the proceedings of each *age*, as the periods between the moultings are called, the same things are to be done precisely in all, except that, as the worms grow larger they require more food. The quantity of food must always be regulated by the appetite of the worms; if they eat more you must give them more; if they eat little you must give them little. Bear in mind that it is important that at each moulting or change of skin, each day's revival must be kept separate. The object of this is, that when the worms come to spin their cocoons, all on each shelf or table may commence as nearly as possible at the same time. This saves much labor and difficulty.

Cleaning Hurdles.—After the 2d moulting, when the worms have been removed from shelf to shelf by means of the leaves, the Paper nets, described in a previous paper, come into use. When the worms begin to revive in the morning, spread a paper net over the shelf, and lay some fresh leaves on it. An hour afterwards pass the rods into the loops at the ends, and then bear the net to a clean hurdle, laying it down gently. Thus continue to lay the nets on the hurdles every day till all the worms are revived and removed; then clean the hurdle thus vacated of its rubbish, and prepare it for the reception of worms from other tables. It is generally unnecessary to clean the hurdles at any other time than at the several moultings; occasionally, however, this is necessary, and particularly after the third and fourth moultings and during damp weather. It may at these times, of course, be performed in the same way as at the moultings. The paper net that has been carried to a clean shelf with worms on it, will of course remain under the worms and rubbish till the shelf is again cleared, when it will be relieved, must be carefully cleared of the rubbish and hung up to dry for use again.

If very damp weather happens at any time, it will be well to make a brisk fire of shavings or some light fuel to dry the room and purify the air. Air slaked lime may also be sifted over the worms at all times, every morning before feeding, just enough to whiten the surface of the worms and leaves. If the worms be sickly, or appear dull and torpid, sift over them more lime. The lime should be *air slaked*, and should be as fine as possible. If the worms on a hurdle appear very sickly with the yellows or other disease, the best way is to take the hurdle immediately out of the room into the open air, where all of the dead worms may be taken from among them; sift lime over the others, lay on fresh leaves, and leave them to themselves. Most of them will soon recover, and when well may be returned again to the cocoonery. Whenever one hurdle has been found sickly, others may soon be expected in the same condition; and therefore all should be carefully watched. Every window and door should be opened, and every means used to ventilate the room. Slaked lime should be freely spread over the hurdles and floor of the cocoonery. During the whole process of feeding, from the hatching to the spinning of cocoons, the utmost care should be observed to keep the air in the rooms sweet and pure. In damp weather all the windows and doors should be closed, and fire made to dry the air. In hot, sultry weather, all the windows and doors should be thrown open, taking care not to allow the sun to shine on the worms, but rather to shade the windows next to the sun with blinds or by some other means. When it can be done, always keep the room rather dark. Strong light is very offensive to the worms.

Those who prefer feeding with branches can do so by laying them on the hurdles instead of picked leaves. After the third moulting, lay the branches with all the leaves on them first across the hurdle five or six inches apart, so that the edges and ends of the leaves will touch. The next time you feed lay them lengthwise, and so on, crossing at each feeding. When the pile gets too high, lay a paper net over the worms as in the other mode; and when the worms have risen through the meshes, carry the net with the worms to a clean hurdle, and go on again as before. The same process is to be gone through in cleaning the hurdles, moulting, &c. Some people feed in this way from beginning—never clean nor separate the worms. This practice may succeed sometimes, but I should not dare to advise it.

Above all things, take care not to hatch more worms than you can properly attend to. Don't run the risk, by feeding too many, of losing the whole. This has caused more failures than all other causes combined. Ten thousand worms, well fed and well attended to, are worth more than fifty thousand sparingly fed and badly managed. Don't be deceived by the appearance of the little worms when first hatched. Unless you are a pretty good judge, a parcel of young worms will appear to you to number not more than 20,000, when they really amount to 100,000; and you will probably not find out your mistake till your hurdles become piled up, and your floor covered with them; or till just as you begin to expect to see them spinning, you find your leaves exhausted and your worms perishing. Beware of this great mistake. Many a hundred bushels of cocoons have been *missed* in this way, just as the proprietor was beginning to count the dollars he was to receive for them. Let no argument induce you to attempt too many, and be sure you are right in the estimate you make of the quantity of food you will be able to supply.

My next paper will take up the subject of the spinning of the cocoons and the preparation for it, &c.

Baltimore, March, 1842. G. B. Smith.

PRODUCTION OF SILK IN THE U. STATES, &c.

An important error having been discovered in the tables of Agricultural Statistics, recently laid before congress by the commissioner of the patent office, the undersigned addressed a letter to the commissioner, suggesting its occurrence, and has received from him the following explanation. The error consists in the amount of *silk cocoons* estimated to have been produced in Massachusetts. The amount is set down in the tables at 198,432 pounds; whereas, it undoubtedly should have been 19,843 pounds. The effect of the error is apparent. It makes it appear that we have produced in the United States 379,272 pounds of silk cocoons, and consequently the equivalent quantity of raw silk (37,927 pounds.) Deducting the amount erroneously attributed to Massachusetts, and the total estimated production of silk cocoons in the United States during the year 1841 is 200,683 pounds; of which the equivalent in raw silk is 20,068 pounds. I have seen so much injury (to the silk interest especially) from exaggerated statements and estimates of results, that I am particularly sensitive on this point, and have therefore obtained the explanation of Mr. Ellsworth, with his permission to publish it. No one need be told of the extreme difficulty of obtaining accurate results from so wide a field, and from so numerous a class of operatives as are presented by the experiments in silk culture. The wonder is, that greater errors have not been committed, not only in this item of the tables, but in others. So far as I have been able to arrive at conclusions, the estimates are as nearly correct in all other respects as the means afforded could possibly admit. The other portions of Mr. Ellsworth's letter are deemed sufficiently interesting for general dissemination. The importance of green *corn stalk fodder*, which Mr. Ellsworth has brought to the notice of American farmers lately, and to which he now alludes, will not escape the attention of those interested. I may be permitted to state here in corroboration of his views, that a milk-man in the vicinity of Baltimore, who keeps a large number of cows, is every year in the habit of sowing corn broadcast, and mowing the fodder for daily feeding to his cows; and though he keeps no record of his results, he undoubtedly feeds as many cows from five acres in this way, as he would be able to do from twenty acres in any other fodder. Gideon B. Smith.

Sir—Your very kind letter of the —— ult. is received. From my qualified remarks that there had been "quite" an increase in the culture of silk, the error in the statistics as published, on reflection is obvious. The estimates were transmitted to me, sometimes in cocoons and sometimes as silk, rendering it necessary to bring the two together, by increasing the latter at least ten times. Although I cannot at the moment ascertain from the person who assisted me precisely how the error occurred, I am satisfied that it exists, and that it was doubtless occasioned by reducing the two classes of products reported to me; thus giving one figure, (the last,) too much. I am glad you have pointed out the mistake, which I should doubtless have discovered had I not been confined to the precise time on which my report had to be transmitted to congress.

The work of improvement is onward; and while credulity will be daily taxed in crediting the improvements of the age, I hope that scepticism will not too obstinately resist the light of science or the tests of experiment; above all, that if there is tenacity in the former, it will be assailed by argument rather than ridicule. I make this remark from noticing the sceptical surprise manifested by some of our agricultural friends in their periodicals, especially the New Genesee Farmer. *The statistics I have submitted are based upon the census of congress.* With the exception of the article of silk, where you notice the error, no very great difference appears, farther than the season or increase of population, &c., will justify.

To be informed that the juice of corn stalk on Beaumé's Saccharometer is about the same with that of cane in this country, or that it is five times greater than that of maple, and three times that of beet, may appear wonderful. Still, the experiments of Mr. Webb justify fully the belief. Indeed, he has kindly deposited in the patent office samples of sugar and molasses obtained from the corn stalk, the simple machine used in the manufacture, together with many accurate details of the process.

The New Genesee Farmer admits that 40,837 pounds of Herd's grass, when green, has been raised to an acre, and yet thinks it incredible that five times as much weight of corn stalks, (so much greater in size and height,) can ever be obtained. But facts are stubborn things. I have carefully weighed the stalks of corn on four square feet of land; the produce was 20 pounds; the stalks were thick and stout, the corn having been sown broadcast; this you will perceive is 5 pounds per square foot, and on an acre 43,560 feet, equal to 217,800 pounds. Although an experiment at the North, where the season is short, might not equal this aggregate, I doubt not that other trials on a rich soil, well prepared, in this latitude will prove the truth of the statement.

You will be pleased to notice the great simplicity of turning lard or pork into oil and stearine, as described in the pamphlet enclosed. I will only add that the oil burns well. Accept the assurance of yours, respectfully,

Patent Office, April 6, 1842. H. L. Ellsworth.

Potatoes on a Rock.—In corroboration of the truth of the "New Discovery in Agriculture," or the production of crops without earth or tillage, Mr. Greely of the N. Y. Tribune gives the following as related to him by a respectable farmer: "A portion of his farm was bare rock, which, in view of the small amount of labor he bestowed upon it, he made the most productive. In the spring of the year he laid down or planted his potatoes on this rock, and covering them over with straw, paid no more attention to them until fall, when he merely raked off the dry straw, and exposed a most abundant crop of the finest quality. The advantages of this method of raising potatoes are: 1. No plowing. 2. No hoeing. 3. No digging; the rake only being required. 4. They are perfectly dry; and 5. They are perfectly clean."

"Sowing Grass Seeds.—If you intend to sow clover seed alone on your grain fields, you should not think of seeding less than from 12 to 16 pounds to the acre. Timothy, if sown alone, should be in the proportion of 1 to 2½ gallons of seed to the acre."

ACKNOWLEDGMENTS.

For articles received the last month, our thanks are due,

To Geo. Sherman, Charles Robinson and Levi Durand, Esqs., for copies of "The Transactions of the New-Haven Horticultural, and the New-Haven County Agricultural Societies for 1841."

To J. Parker, Esq., Perth Amboy, N. J., for a copy of "A Letter to the Farmers and Graziers of Great Britain, to explain the advantages of using Salt in the various branches of Agriculture, and in feeding all kinds of farm stock, by Samuel Parkes, F. L. S." &c. republished in Philadelphia in 1819.

To Hon. D. D. Barnard, M. C., for the "Annual Report from the Commissioner of Patents."

To Rev. T. S. Hinde, Mount-Carmel, Ill., for a copy of "The Western Shepherd, by Geo. Flower, of Albion, Ill."

To L. Smith, Esq., Fallsburgh, N. Y., for a small box of the "Yam Potatoe," described by him in a communication in another part of this paper. Mr. S. informs us that he will deliver these potatoes at Newburgh, from which they can be shipped north or south, at $6 per barrel.

To Hon. H. L. Ellsworth, Com. Patent Office, for a pamphlet, published by the National Agricultural Society, on the "Mode of Manufacturing Sugar from the Corn Stalk, and of Oil and Stearine from Lard," &c.

To T. B. Wakeman, Esq., New-York, for Rev. Mr. Choules' Oration before the American Institute at its last Fair.

To —— ——, for a very highly finished "Livingston County Plow," manufactured by Howard Delano, Mottville, Onondaga county, N. Y., to which was awarded the first premium of the State Ag. Society, at its fair at Syracuse. A cut of this plow was given in our last number. As no letter accompanied it, we do not know to whom we are indebted for it.

To Parsons & Co., Flushing, for a Catalogue of their Commercial Garden and Nurseries at Flushing.

NOTICES TO CORRESPONDENTS, &c.

In addition to those published in this paper, we have to acknowledge the receipt, during the last month, of communications from Justin Morgan, Tart, T. Foster, N. Titus, Economist, Camdonian, B. A. Hall, P. Otis, L. Physick, Dutchess Co. Farmer, E. H. Northrop. Tyler Fountain, Wm. Partridge, D. S. Howard, Lewis C. Beck, Anon. Friend, H. Clark, A. B. Allen, H. C. Godfrey, S. E. T., Lawrence Smith, John Moxon, Wilson Newman.

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MULBERRY TREES ON SHARES.

As there is every prospect that the demand for the finest kinds of Mulberries for silk will be greater next spring than the supply, I now offer to furnish 200,000 superior Trees of the Alpine, Elata, and Multicaulis Mulberries, two years old, to be cultivated on equal shares; one-half the trees produced therefrom to be delivered to my order in the spring of 1843. The expense of packing and transportation to be paid by the person desiring them. The cost of matting and delivery to a vessel or transportation line will be $2 per thousand; and any person desiring to contract as above, will, on remitting sufficient to cover this expense, receive forthwith the number he may desire. WM. R. PRINCE.

Linnæan Botanic Garden and Nurseries,
Flushing, April 18, 1842.

PLEASURE GROUND DECORATIONS, FOUNTAINS, URNS, FIGURES, &c.

The subscriber is ready to supply Fountains, Urns, and Figures, for Geen Houses, Grass Plats, and Fish Ponds. The above decorative articles are made of metal, (in imitation of marble,) and are calculated to stand a northern winter. Figures and Jets, appropriate for any particular situation, supplied. A plan for raising water may be seen by referring to the Cultivator, number 11, 1840. D. L. FARNAM,
New-York, April, 1, 1842. 247 Water-street.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

N. Y. STATE AGRICULTURAL SOCIETY.

A full attendance of the officers of the Society is particularly requested at the next meeting of the Executive Committee, to be held at the office of "The Cultivator," on the 8th of June, at 10 o'clock, A. M.

Luther Tucker, Sec'y.

THE SEASON AND PROSPECTS.

It seems to be generally conceded that the past spring has been a remarkable one for its forwardness, and the impulse vegetation in consequence received. As a matter of interest to some of our readers, we give the average temperature of these months for a few years past.

Year.	January.	Feb'y.	March.	April.
1838	32°	14°	40°	39°
1839	25	32	35	54
1840	19	35	37	49
1841	28	24	36	44
1842	30	31	41	53

It will be seen that the aggregate temperature of the first four months of the present year exceeds that of any of those given by 9°, or 2° per month, while it exceeds that of 1838, by 30°. An examination of the records of former years, will show that so small a difference as an average of 2° increased temperature, has a decided effect on the crops, particularly that of Indian corn. One of the best corn seasons we have had was that of 1839, the temperature of the spring months of which, most nearly approached the present. Notwithstanding this average increase, this season has been marked by some of the most extreme transitions of temperature we have ever recorded. Thus on the 22d of April, at two o'clock, the mercury was at 86°. The next morning at sunrise, some 16 hours later, it stood at 35°, making a range of 51° in that time: and there have been others not much less sudden or extreme. The past spring has throughout the country been remarkable for the little hindrance to the labors of the field, occasioned by unfavorable weather. The consequence has been, the spring grains have been got in earlier, and the soil in better condition, than we have known for years; and the complaints of imperfect vegetation, so common in wet cold seasons, have scarcely been heard this.

We have not for years known a season in which winter wheat has suffered so little from spring or winter frosts, as during the present; and from every section of the country, the same gratifying account reaches us. Every thing indicates that there will be a very great advance in the quantity of the wheat crop the coming harvest. In the wheat growing states, more land than usual was seeded, and as a whole, it has never promised fairer. Michigan promises to raise her crop from 2,200,000 bushels, to 3,000,000; and the states of Ohio, Indiana and Illinois, will not fall much behind this increase, should present indications be verified. There is to us farmers, much pleasure in reflecting that while banks are breaking, states repudiating, governments bankrupt, and financiers at their wit's end, the earth promises to be liberal in its rewards to labor, and thus eventually bring back things to that sound and healthy condition, from which dreams of the sudden acquisition of wealth, the facilities of an unlimited credit, and the madness of speculation, have caused so wide and dishonorable a departure.

NEW WORK BY A. J. DOWNING, ESQ.

We have the satisfaction of being able to state that this gentleman, so favorably and extensively known by his unrivaled work on Landscape Gardening, is engaged in the preparation of a volume to be entitled "Cottage Residences," and which will be looked for with much interest as supplying a desideratum in American books.—There is not an individual in this country, to whom the preparation of such a work could be so properly confided with the assurance that every reasonable expectation would be fulfilled. His thorough acquaintance with the different styles of building, his correct taste, and his knowledge of the wants of the country, are a guarantee that his Cottage Residences will be adapted to the wants and wishes of the public. We trust it will be the harbinger of a more correct taste, and an improved style in our country residences.

NATIONAL AGRICULTURAL SOCIETY.

A press of matter the present month, will prevent our giving as full an account of our "impressions" during our recent visit to Washington, and of the proceedings of the National Agricultural Society, the meeting of which we had the pleasure of attending, as we had contemplated. Railroad traveling, our readers are aware, is not the kind of traveling where a country is to be surveyed or the condition of its agriculture noted; but the glimpses caught, were sufficient to show that the prospects for the farmer were flattering; and that many fine farms, and beautiful examples of improved husbandry were passed, which would doubtless have well repaid delay (could it have been permitted,) for their examination.

The meeting of the Society was opened on Wednesday, the 4th ult., at the Patent Office. Committees were appointed to report on various subjects—to nominate officers—and to report on the propriety of establishing an agricultural journal at Washington; and then the meeting adjourned until the next day at 10 o'clock. On Thursday, at the hour named, the Society again convened. There were present eight delegates from the New-York State Ag. Society; two from the American Institute of New-York city; two from New Haven, Ct.; one from New Jersey; one from Maryland; two from Virginia, including the President of the Society; and quite a number of gentlemen of Washington, among whom were the Hon. Mr. Woodbury, Amos Kendall, J. S. Skinner, Hon. H. L. Ellsworth, O. B. Brown, Elisha Whittlesey, &c.

Mr. Garnett, who was re-elected President, delivered an able and interesting Address, for which, and the official account of the proceedings of the Society. The reader is referred to pages 94 and 102 of this paper.

The proceedings of the Society were conducted very harmoniously; but to us, the enthusiasm, the *esprit du corps*, which seems so necessary to the accomplishment of all great undertakings dependant on voluntary action, seemed to be wanting. It must be remembered, however, that this is but the beginning; and that the interest which the success of the Society should certainly create, will be more deep, in proportion as its existence and acts are more extensively known.

Correction.—At the request of J. M. Garnett, Esq. we notice the following errors in his article on the "Agriculture of Virginia," published in the volume of Transactions of the N. Y. S. Ag. Society. Page 174, line 5 from bottom, for "soubriquet," read *sobriquet*. Last line of same page, for "wisely," read *really*. Page 176, line 22 from top of page, for "vogets, animal," &c. read *vegeto*-animal. As an excuse for the many errors which may be found in the "Transactions," it is proper to say, that owing to the late period at which the copy was given to the state printer, he was under the necessity of hurrying it through the press, without giving proper time for a careful and thorough reading of the proof-sheets.

In the May No. of the Cultivator, page 80, in the description of Fig. 47, instead of seven and a half by eight inches, read seven and a half by six inches; and instead of three inches wide, it should read wider, and strike the the ends from the same center.

ORCHARDIST'S COMPANION.

This work, which should be in the possession of every lover of fine fruit, or who is engaged in the cultivation of fruit trees, has completed its first year, and the quarterly numbers with their beautiful colored engravings are now before us. "The Orchardist's Companion," is published by A. Hoffy, editor and proprietor, Philadelphia, and is "devoted to the history, character, properties, modes of cultivation, and all other matters appertaining to the fruit of the United States." It is embellished with engravings of the various kinds of fruit, drawn and colored in the best manner, with a portion of the leaves and branch, so as to enable the orchardist to determine accurately his fruits. The "Companion" is published quarterly, in the quarto form, each number containing 12 engraved fruits, with ample descriptions and directions. The price is two dollars a number, or seven dollars per year in advance. An edition with only three colored engravings in each number, but the same in every other respect with the other, is afforded at $1,00 a number, or three dollars per year in advance. Such works as the 'Orchardist's Companion,' are not only extensively useful, but are honorable specimens of the progress of the arts in this country. There is not a 'centre table' in the United States, that would not find the 'Orchardist's Companion' a more tasteful and appropriate ornament, than the flimsy annuals which have so long usurped them. It is a publication that deserves a liberal patronage; and its list of subscribers shows the names of great numbers of our most influential and respectable citizens. Let the 'Companion' go ahead. We will with pleasure forward the names and money, for any of our friends who may wish it sent to them.

RUTA BAGA FOR COWS.

One of the most serious objections to the culture of the turnep, especially in dairy districts, is the unpleasant flavor which this root communicates to milk and butter; and various means have been proposed to prevent these disagreeable results. One of the most successful that we have tried, has been feeding the roots immediately after milking, so as to have as long a time as possible intervene between the feeding and the milking. In a late number of the Cabinet, we find a letter from Samuel West of Chester, Pa., describing his mode of feeding, which, while it is somewhat similar to ours, is said to totally obviate all taste of the turnep. He states also that the same method is applicable to garlic, so common and disagreeable in some parts of the United States:

"After a sufficiency of first rate upland hay, I allow to each cow about half a bushel of ruta baga turneps finely cut up—always remembering to strip the cows clear of milk *before feeding with the turnep*, and *in the morning*, feeding with a different kind of food, viz: cut hay, with a little Indian meal, or other mill feed. By this process there will be no taste of the turnep, either in the milk or butter, so objectionable to many; and by it you will have a full flow of milk from your cows, and butter of a fine, rich, spring like quality, seldom obtained in the winter season."

SUGAR FROM THE MAPLE.

The quantity of sugar that may be made from the maple, when the trees are good, and the process well managed, is generally much underrated. Trees growing in open fields will produce more sugar than those in the forest; and the sap from trees tapped many years, is much richer, than from those tapped but few times. We find in the papers some notices of this tree, and its products, worthy of record, as proving that the north has within its limits, the means, if desirable, of producing its own sugar.

Mr. Harriman of Warner, N. H. tapped a sugar maple 2½ feet in diameter, which in eighteen hours gave eighty quarts of sap, from which was made seven and a half lbs. of sugar. A pail full of sap was sufficient for one pound of dry sugar.

A red maple, (*Acer rubra*,) has long been an object of interest at Ossipee, N. H., on account of its size, and the quantity of sugar it produced. Its circumference near the surface was 28 feet, and it continued nearly the same size for 17 feet, when it parted into two branches, one of which was four feet in diameter, and the other of nearly the same size. This magnificent tree was lately blown down in a storm, taken to a saw mill, and the product in inch boards is 3300 feet, besides nine cords of wood from the branches, &c. The owner has made forty lbs. of sugar in a year, from this single tree.

Notices of New Publications.

DR. DANA'S MUCK MANUAL.

In our brief notice of this work last month, we intimated our intention of again recurring to it, for the purpose of giving our readers a more full account of the principles advanced, and the manner in which they were supported, than could be done at that time. We do this the more willingly, both from the intrinsic value and importance of the Manual itself, and because it is the first contribution, which can properly be named as such, made by American philosophers to the cause of agricultural science. Circumstances have demanded that in many respects the processes of cultivation should be different in this country from those pursued in Europe. The climate, the crops, the seasons, have contributed to give a distinctive character to American agriculture, and this difference is destined to become still more marked; but the principles which govern the germination of the seed, which regulate the nutrition and growth of the plant, which control the maturity and perfection, are and must be the same every where; and hence the various questions which come under the name of scientific agriculture, have not received the attention here, they have in the old world. Admitting that the principles and laws of vegetable nutrition and growth were as well established and defined, as they are uncertain and obscure, the application of these principles would be a legitimate object of investigation; but while all inquirers can as yet be considered only on the threshold of the temple of nature, the field open to the competent observer both here and there, must be considered abundantly ample. We trust the success of this attempt, will induce Dr. D. to continue his explorations.

The method pursued by Dr. Dana in the Manual, is very direct and perspicuous. His leading object appears to be, to convince farmers that in "Muck," that is in decayed vegetable matter, they have all the elements of fertility, and that there is no soil which with proper care and cultivation cannot be made productive. The work is divided into sections, which contributes greatly to facility of reference, and prevention of repetition in the facts or arguments.

Dr. Dana first establishes some general principles in regard to the action of soils and salts in producing vegetation. This has led him to consider their structure geologically as well as chemically; and in our remarks we propose to follow him in his investigations, allowing him to speak for himself as far as possible. Dr. Dana remarks—"Referring rocks to their origin, they are divisible into two great classes. 1st, those formed by fire. 2d, those formed by water. This division relates both to their origin and their distribution. In their origin, all rocks are truly *igneous* or by fire. In their distribution they are *aqueous* or by water. This is the only division necessary to the farmer. It is the division taught and demanded by Agricultural Geology."

From this view of the origin of rock, and the consequent general sameness in the chemical composition, he derives his first principle in Agricultural Chemistry, "ONE ROCK AND CONSEQUENTLY ONE SOIL." As a necessary consequence of this principle, in his further inquiry how rocks and soil affect vegetation, he lays down his second principle—"THAT ROCKS DO NOT AFFECT THE VEGETATION WHICH COVERS THEM."

We apprehend that this principle; understood in its broadest sense, and without restriction, would be erroneous. Rocks do certainly exert a powerful influence on the soil that covers them in many cases, but this is owing to their physical condition, and not to their chemical constitution, in which sense Dr. Dana would intend to be understood. Temperature is the great agent which affects the vegetation of any strata or region, according to Dr. Dana, and this is depending on the physical composition, rather than the chemical constitution of the rock. In this view of the subject, there will be little room for dissent to this principle. Take, for instance, a north and south section of western New-York. This would pass over strata of sandstone, lime rocks, gypseous shales, clay shales, &c. in repeated alternations, and the soils and the crops grown on them, are as well marked as the strata themselves. Those on the limestone strata are the most productive as a general rule, and these are also the warmest and driest; two qualities owing to the rock below, which, allowing water to pass off freely, give as a necessary consequence a higher temperature to the soil than belongs to that on the more retentive portions of the district. If soils were always formed of the rocks immediately below them, there would be more room for disputing the disposition; but this every farmer knows is never the case, and consequently the chance for the chemical constitution of rocks affecting vegetation above them is much lessened.

To show that it is temperature that governs the distribution of plants, and not the soil, Dr. Dana gives some interesting tables respecting the northern limits of some of the cultivated grains, such as barley and wheat, thus proving that it is not the average temperature of the year, or of the winter, but the temperature of the time employed in the growth of the plant, or of the summer, that determines its "habitat." North latitude 70° is the highest northern limit of barley; and latitude 64° the highest northern limit of wheat. Barley grows the highest of the cereal grains, and a little beyond the line of this grain, is the northern boundary of the potatoe.—"This belt," says Dr. D. "is the zone between agriculture, and fishing and hunting; between races of men subsisting on animal and on vegetable diet, and those whose chief food is animal." It is somewhat remarkable that in ascending mountains, the grains cease to grow at heights which correspond to the latitude marking the isotheral line, or their northern limit. Thus on the Swiss Alps the grains cease at the following heights:

"Wheat	at 3,400	feet corresponding to lat.	64°
Oats	at 3,500	" " "	65°
Rye	at 4,600	" " "	67°
Barley	at 4,800	" " "	70°"

From these facts, and the singular uniformity or identity in the chemical composition of the soil, Dr. Dana adduces his third principle, viz: "ROCKS HAVE NOT FORMED THE SOIL WHICH COVERS THEM." The evidence of this is so ample, and so open to every observer, that we shall pass it without further remark.

Dr. Dana's second chapter treats of the chemical constitution of rocks, and is one of the best expositions of this subject we have yet seen. "Seven simple minerals compose all rocks, viz: quartz, mica, feldspar, hornblende, talc, serpentine, carbonate of lime. Other minerals are found in, but these seven compose all rocks termed geological formations, and which form the crust of the globe." Of the 55 elements which chemistry has detected, 14 are found in rocks. This includes the elements of water, oygen and hydrogen. Without these only 12 remain. Of the earthy and metallic, eight; of the volatile and combustible, four. These elements of all rocks may be divided into four pairs—the alkalies, potash, soda; the alkaline earths, lime, magnesia; the earths, silex, alumnia; the metals, iron and manganese. We have not room to follow our author through the instructive details of this chapter; but the man who wishes to become acquainted with the combinations which these elements assume, will do well to consult it carefully.—The following table will show the constitution of the simple minerals:

	Silex.	*Alumnia.*	*Lime.*	*Potash.*	*Manganese.*	*Oxide of Iron and Manganese.*
"Feldspar,	66·75	17·50	1·25	12·00		0·75
Mica,	50·82	21·33		9·86		9·08
Hornblende,	45·69	12·18	13·83		18·79	7·32
Talc,	58·02			water.	33·02	4·06
Serpentine,	43·07	0·25	0·50	12·75	40·37	1·11"

Thus it appears that silex is the most abundant ingredient in rocks, and alumina is next. "The average of these elements in the most important rocks, is silica 62.79, alumina is 25.15." In the best constituted soils, the proportion will not be found to vary widely from what is here stated, a proof that soils have originated from the decomposition and mingling of the elements of rocks.

The third chapter is devoted to a consideration of the properties and chemical action of the elements of the soil. Here the important part performed by silica in vegetation is clearly developed, and its various combinations with other substances pointed out. The manner in which soils are supplied with lime and potash by the decomposition of rocks is here shown. The composition of granite, composed of two-fifths quartz, two-fifths feldspar, and one-fifth mica, according to Dr. D., is as follows:

Silex,	74·84
Alumina,	12·80
Potash,	7·48
Magnesia,	0·99
Lime,	0·37
Oxide of Iron,	1·93
Oxide of Manganese,	0·12

To show that soils are not exhausted of their lime or alkali, Dr. Dana shows the quantity of each an acre of soil, made from the decomposition of such rock as the above would produce, taking the soil only six inches deep. "The cubic foot of such soils weighs about 90 lbs., or at six inches deep, 45 lbs. The acre at this depth, contains 21,780 cubic feet, which will afford 3,626 lbs. of lime, and 73,311 lbs. of potash, or nearly a ton and a half of lime and 36 tons of potash." The probability of the exhaustion of these substances may be inferred from the following estimate. The straw of a crop of wheat of 30 bushels per acre, will weigh about 5,000 lbs.—Burned, this will yield 220 lbs. of ashes, of which one-fifth is soluble in water, and consists of one-half of that dissolved, of potash. The part not soluble, contains 5.80 per cent of lime. Thus an acre of wheat straw contains 22 lbs. of potash, and 10 lbs. of lime. From these facts Dr. D. deduces his fourth principle, viz: THAT ALL SOILS CONTAIN ENOUGH OF LIME, ALKALI, AND OTHER INORGANIC ELEMENTS, FOR ANY CROP GROWN ON THEM.

When it was stated in Prof. Hitchcock's Geological Report, on the authority of Dr. D., that all soils contained phosphates and sulphate of lime, a principle of great importance to the farmer, it was received with doubt and distrust by many, principally from the fact that many crops, wheat in particular, for the production of which lime is deemed essential, could not be grown on much of the soils of New England. The proofs, however, are abundant. The bones of animals, a great variety of vegetables, contain phosphates and sulphates. All our cereal grains contain them both in the grain and in the straw, and half the weight of bone is a phosphate. On these facts is based Dr. Dana's fifth principle, THAT ALL SOIL CONTAINS SULPHATE AND PHOSPATE OF LIME.

Dr. Dana's fourth chapter is on the "Organic constituents of soil." "Whenever plants die, their elements are again subject to the laws of affinity, and during the decay of vegetables, they return to the earth not only those substances which the plants had taken from the soil, but also those which have been elaborated by their living structure. The former are silicates and salts, or the inorganic elements; the latter are the organic parts of the soil." The organic elements of plants "are the product of substances once endowed with life;" and "the great difference between the two divisions, is this, that while the inorganic are simple combinations of two elementary substances, the organic are combinations of three or four elements, but never less than three." From the fact that plants are always composed of several elements, Dr. D. draws his sixth principle, THAT SOIL, CONSISTING CHIEFLY OF ONE SILICATE, OR SALT, IS ALWAYS BARREN.

Dr. Dana's seventh principle in agricultural chemistry, is based on the fact, "THAT ONE BASE MAY BE SUBSTITUTED FOR ANOTHER, IN AN ISOMORPHOUS PROPORTION," or the law by which one element may be substituted for another, which produces a like form. For example the alumina in alum may be replaced by iron; the form will not be changed, but its chemical properties and relations will be totally destroyed. This fact of substitution is of the highest practical value, since where one element happens to be exhausted in a soil, the organic acid of the plant, will appropriate another, and thus be enabled to perfect all its functions.

The great mass of organic matter in soils, is a well defined chemical compound, called by Dr. Dana *geine*, by Liebig and Berzelius *humus*, and by Braconnet, Boulay and others *ulmin* or *ulmic acid;* and consists of carbon, hydrogen and oxygen. The product of decayed organic matter; the name is of very little consequence to the farmer, so long as he remembers that without the presence of this substance in the soil, plants cannot grow and perfect their seed; that without *geine* or *humus*, crops are never raised. Dr. Dana well remarks, "that geine is as essential to plants as food to animals; and so far as nourishment is derived from the soil, geine is the food of plants." On this is based his eighth principle, "THAT GEINE IN SOME FORM, IS ESSENTIAL TO AGRICULTURE."

So far as the value of geine is concerned, it matters nothing at all to the farmer, whether he believes with Liebig that plants derive their nourishment almost entirely from the air, or with Dana, Johnson, and others, that some portion of it is taken up by the root; since in the first case, the carbonic gas absorbed from the air is generated by the geine, and in the last, is furnished directly to the roots of the plants from the decomposing geine of the soil. It is the changes which this substance undergoes, the various combinations it forms with the several alkalies and acids with which it comes in contact, which gives it its great importance in the estimation of the agricultural chemist and farmer. Vegetable mold is a mixture or compound of soluble geine, with earths and metals, mixed with soluble and insoluble geine. In rich mold there is usually a large portion of free organic matter. With lime, alumina, iron, &c. geine, or geic acid, forms compounds called salts or geates. These salts are soluble in water, and are of the utmost consequence to the farmer. Into the chemical history of geine or humus, we cannot here enter. Those who take an interest in the matter, will find a good account of it in the appendix to chapter IV. It is sufficient to state that Dr. Dana prefers the term *geine*, to any of the others that have been given this substance.

"The elements of soil, are silicates, salts, and geine. The silicates as such have no tendency to re-act on each other. They are gradually decomposed by the action of the air. The great agent in this action is carbonic acid, which gradually combines with the alkaline base of the silicates, and the potash and soda are converted into soluble salts, whilst the silex and alumina remain." Dr. Dana's exposition of the action of the class of salts is admirable, and shows how the effect of the carbonates upon soil is produced. From their action as explained, is drawn the ninth principle; CARBONIC ACID, AND THE CARBONATES, DECOMPOSE THE EARTHY, ALKALINE AND METALLIC SILICATES OF THE SOIL.

Dr. Dana gives an interesting account of what the French call action of presence, or catalysis. It is well known by chemists, that the mere presence of a body, influences the nature of a second body, so as wholly to change its properties. For example, starch is converted into sugar by oil of vitriol. The acid suffers no change. It acts by mere presence, and converts the starch into sugar. A distinguished German chemist maintains that all decomposition takes place in obedience to a third substance acting by its presence. So the vital principle of plants, let it be called life, electricity, galvanism, acts by its presence and gives power to enter into new combinations. A living, growing plant, in soil, will in one year effect a greater amount of decomposition, than all atmospheric influences can in many years.

To determine how salts or mineral manures act, is one of the most important inquiries of the chemist or the farmer. It is not enough to say they are stimulants; that "they are to plants what condiments are to the food of man." "Some general principle is demanded which will enable the farmer to say what the action of a salt will be; and whether he may apply one or less than one per cent of it, without risking his crop." This general principle, according to Dr. Dana, is found in the following, which is his tenth principle of agricultural chemistry. THE BASE OF ALL SALTS, ACTS EVER THE SAME IN AGRICULTURE. PECULIARITY OF ACTION, DEPENDS ON THE ACID OF THE SALT. On this principle, the Dr. lays great stress, and we think deservedly. Lime for instance, which forms the base of a vast variety of salts, can never act otherways than as lime; but when united with phosphoric acid, as in bones, or with sulphuric acid, as in plaster of Paris, very different results ensue from its application to plants. Our readers are aware of the theory of Liebig in regard to the action of gypsum, which he supposes to arise *solely* from its absorption of the ammonia of the air and water, by which soluble sulphate of ammonia is formed and appropriated by the plant. The theory is a beautiful one, but does not appear to us perfectly satisfactory, as not accounting for all the facts connected with its action. Were this absorption of ammonia the sole cause of the efficacy of plaster, it would be equally efficacious on all soils, and in all places, but farmers are well aware that such is not the fact. That this action on ammonia takes place, cannot be questioned; that this is the *only cause* of the efficacy of gypsum, is what is doubted. Dr. Dana's account of the action of plaster, we shall here give in full, not only as showing his views of the matter, but also of the changes which a salt of lime can produce in soil:

"Suppose plaster or gypsum has been applied; the effects of a bushel of plaster per acre, or even the four-hundredth part of one per cent, produces effects on alluvial land which shows its good results, as far as the eye can reach. It seems almost incredible that so minute a portion of a mineral can act at all, yet how beautifully is this result explained by the principle, that plants decompose, first, this salt; the lime, for plaster is sulphate of lime, then acts on geine, which is thus rendered soluble; while the acid, the oil of vitriol or sulphuric acid, immediately acts on the silicates. If silicates of alkali exist in the soil, we have now changed sulphate of lime for an alkaline sulphate; and if silicate of lime is also present, the potash or alkali having been exhausted, plaster of Paris is formed anew. So long as there is in the soil organic matter, this action continues and will continue, till the plant has gradually withdrawn for its own use the acid of the salt which was introduced. Fertility depends wholly on salts and geine. Without the last, there is no fruit formed; without the salts, the geine is locked up or insoluble. The base of the salts acts always in one uniform way; its action is wholly upon geine; the acid of the salts acts upon the silicates."

Dr. Dana goes on to show at length, and with much ability, the manner in which lime, ashes, &c. perform their part in the growth of plants, and we think that any one who will study this part of the volume, will agree with us, that one of the worst things a farmer can do, is to sell his ashes from the farm. To convince those who allow their leached ashes to be lost, of the waste of valuable matter they sustain, we quote the following:

"A bushel of good ashes contains about 5½ lbs. of real potash. In leaching ashes, generally about one peck of lime is added to each bushel of ashes, and as it loses no bulk during the operation, a cord of leached ashes contains about the following proportions, allowing the usual proportion to be leached out, or 4½ lbs.

Phosphoric acid,	117 lbs.
Silex,	146 "
Oxide of iron,	17 "
" of manganese,	51 "
Magnesia,	119
Carb. of lime, including that added in leaching,	3,072 "
Potash combined with silica,	50 "

In chapter VI. Dr. Dana commences the discussion of the subject of manures properly so called, and very properly says that the first requisite to successful farming is manure. Manures are composed of geine and salts; and by their elements are divided into three classes: "1st, those consisting chiefly of geine. 2d, those consisting chiefly of salts. 3d, mixed, or consisting of salts and geine. * * * By far the greater part of manures belongs to the third class. Such are all composts, all stable manure, and all the usual products of the cow yard and hog pen. In discussing this subject, therefore, there ought to be some starting point, some standard common measure of value, to which can be referred all manures, and by which their worth can be determined."

For this standard of value, Dr. Dana selects "pure fresh fallen cow dung," as one of the most common manures, and of which the chemical constituents have been well ascertained. Dr. Dana's analysis of this manure gives the following proportions of water, organic matter, and salts, in 100 lbs. of cow dung:

Water,		83·60
Organic matter.	Hay,	14·60
	Bile, and resinous and biliary matter,	1·275
	Albumen,	·175
Salts.	Silica,	·14
	Sulphate of Potash,	·05
	Geate of Potash,	·07
	Muriate of Soda,	·08
	Phosphate of Lime,	·23
	Sulphate of Lime,	·12
	Carbonate of Lime,	·12
		99·86
	Loss,	·14

This agrees very well with analyses made by European chemists, some giving more water and others less, while the other substances do not vary essentially, or more than was to be expected from the difference in food, &c. The composition of cow dung may be stated as follows:

Geine,	15·45
Salts,	·95
Water,	83·60

Or in 100 lbs. of cow dung, only one-sixth is of any value in agriculture. 100 lbs. of fresh cow dung affords five-eighths of a lb. of pure ammonia, or 2 lb. 2 oz. of carbonate of ammonia of the shops. A bushel of fresh cow dung weighs about 86 lbs. and this contains in round numbers 2½ lbs. of salts of ammonia, potash, soda, and lime. Dr. Dana found by actual experiment, that a single cow, an average producer of the article in question, her food and water being accurately weighed, consumed and produced in seven days as follows:

Water,	612 lbs.
Potatoes,	87 "
Hay,	167 "

Total of food and drink 866 lbs.; and voided, free from her liquid evacuations, 599 lbs. of dung. This cow produced from 24 lbs. of hay and 12 lbs. of potatoes, daily, about one bushel or 85.57 lbs. of dung. One cow therefore forms

Daily,	*Or per year,*
12 lbs. geine,	4,400 lbs. of geine,
3 oz. phosphate of lime,	71 " bone dust,
1½ oz. plaster of Paris,	37 " plaster,
1½ oz. of chalk,	37 " lime, marble or chalk,
	24 " common salt,
	15 " sulphate of potash.

Estimating the nitrogen of dung as ammonia, a cow in a year produces 188 lbs. of pure ammonia, or 550 lbs. of carbonate of ammonia of the shops. The great value of dung for agriculture it is clear from this statement, depends on the ammonia and the geine; and from the statements of Dr. Dana, as well as those of Liebig, it is evident that the salts of lime, which are the annual product of one cow, are sufficient to supply the grain and straw of a crop of wheat of 20 bushels per acre, on three acres. Dr. Dana's inquiry into the use and origin of the nitrogen of dung, "that organic element to which must be attributed its chief enriching quality," will well repay perusal. It was found by experiment, that the formation of nitrogen depended in a great degree on the kind of food given the animal, and that the dung of a cow fed on meal and water, gave of nitrogen 2½ per cent, or five times as much as common cow dung. This accounts satisfactorily for the fact of the dung of fattening animals being richer for agriculture than that of store animals.

Having thus determined the agricultural value of cow dung as a standard, Dr. Dana proceeds to compare with with this the dung of some other animals. Of these, the first is the horse. As compared with cow dung, horse manure gives in 100 parts,

Geine,	27·
Salts,	0·96
Water,	71·20

The quantity of geine then in horse dung is nearly double that in cow dung; the salts, which are mostly phosphates of lime, magnesia, and soda, are about the same. As in the fermentation of manures, the heat is usually in the proportion to the formation of ammonia and nitrates, the greater product of these substances in horse dung, may in part account for its value as a heating material in hot-beds, &c. Horse dung contains in 100 parts, 3.24 of carbonate of ammonia.

Dr. Dana ranks in his analysis, hog manure and night soil together. He states the composition of the latter in its purest state as follows:

Water,	75·3
Geine,	23·5
Salts,	1·2

"Night soil, including that of the hog, contains in 100 parts,

Geine,	23·
Salts,	1·2
Carbonate of Ammonia,	15·32"

Here we have the three most common substances used as manures; cow, horse and hog dung, including night soil, reduced to geine, salts, and ammonia, or its equivalent nitrogen; and we believe experience fully proves that their value is in direct proportion to their power of producing ammonia. Experiments made by authority, in Prussia, proved that on soils which, manured with cow dung gave a product of seven for one sown, if manured with horse dung the yield was 10, and if with night soil, 14, which is about the proportion the nitrogen in these manures bears to each other. We think therefore, that Dr. Dana is fully justified in saying "that the nitrogen present in a manure expresses its true value."

"Among the mixed manures, poudrette and guano, rank next to night soil. Poudrette is night soil, partly dried in pans, and mixed up with variable quantities of ground peat and plaster. Its value will depend on the circumstance whether its ammonia is saved or lost in the manufacture. If sulphate or muriate of lime is added before drying, then the volatile carbonate of ammonia, will be changed into sulphate of ammonia, and sal-ammoniac." Besides these soluble salts of ammonia, the peat retains a portion of the gaseous ammonia, and its geine is rendered more soluble. Plaster should always be mixed with night soils, to prevent the escape of ammonia. Guano, which is coming into use in England as a manure, is the excrement of sea birds. It is found in vast beds from 60 to 80 feet thick, on some islands in the South Pacific, near the coast of Peru. Of the various salts of ammonia it contains some 33 per cent; and of the phosphates about 15 per cent; and of soluble organic matter 12 per cent; facts which sufficiently indicate its origin and its richness.

We have not room to follow Dr. Dana through his analysis of other animal matters used as manures, such as hair, horn, wool, &c. &c. but must not omit to state that the Dr. furnishes incidentally, a solution of a fact which has caused some bad blood, and some hard swearing, viz: the greater hardness of the beard when compared with other hair, when he states that hair contains from one-half to two per cent of bone earth, the beard far exceeding in quantity any other variety.

It will not do to pass over Dr. Dana's account of soot so easily, for this most valuable manure is entirely overlooked by the greater part of our farmers. There are few substances so rich in geine and salts as this, as the analysis of Dr. D. will show:

Geine,	30·70
Nitrogen,	20·
Salts of lime, chalk, &c.	25·31
Bone dust,	1·50
Salts of potash, soda and ammonia,	6·14
Carbon,	3·85
Water,	12·50

The salts contained in 100 lbs. of soot, are equal to those in one ton of cow dung; and its nitrogen in a similar comparison, is as 40 to 1. "Mixed with water in the proportion of six quarts of soot to a hogshead of water, it has been found a most efficacious liquid in the culture of green house plants," and we can add ourtestimony to its value, when applied in proper quantities to any ordinary crop. We have, however, known it used on tender garden plants to excess, destroying many of them.

The sections devoted to bone dust, slaughter house offals, urine, spent ley, &c. will be read with advantage by every farmer; certainly all those who wish to have a reason for the action of such substances as promoters of vegetation.

But to the practical farmer, one of the most interesting sections of the book, will be that in which it treats of artificial manures. There is scarcely a farm in the country in which there are not deposits of vegetable matter in the shape of peat, swamp muck, or pond mud. Such substances are composed mostly of geine or humus, soluble and insoluble, and have been hitherto almost entirely neglected, when in fact they are the very elements of fertility. These deposits, dug out and thrown upon soil, produce little beneficial effect, unless subjected to previous preparation; hence the little value placed upon them. Agricultural chemistry has led the way to their use, and now peat bogs, or swamp muck, is justly regarded as a source of wealth. An analysis by Dr. Dana, of 10 specimens of peat from different localities, shows the average composition of this substance. Soluble geine, 29.46; insoluble geine, 55.03; total geine, 85.39; salts and silicates, 15.59. Pond mud is less rich in geine, containing more salts and silicates; but still when prepared is an excellent manure.

It is a singular fact that fresh dug peat of average quality, scarcely differs in its elements from cow dung, 100 parts containing,

Water,	85·
Salts of lime,	0·50
Silicates,	0·50
Geine,	14·

A cord of 103 bushels of cow dung and of peat, will compare in composition as follows:

	Weight per cord.	*Soluble geine.*	*Insoluble geine.*	*Total geine.*	*Salts of lime*
Dung,	9,289 lbs.	128	1,288	1,416	92
Peat,	9,216 "	376	673	1,049	91

"The salts and geine of a cord of peat, are equal to the manure of one cow for three months. * * And the power of producing alkaline action on the insoluble geine of peat, is alone wanted to make it good cow dung." The great point in rendering peat useful to the agriculturist, is to supply that lacking element, ammonia; since without this, cow dung would not be as valuable as peat in its natural condition. Abundant experiments prove that the addition of an alkali to peat, is all that is required to effect this change; and the calculations into which Dr. D. enters to ascertain the quantity of alkali necessary, are extensive and minute. Fortunately the question is only one of economy in the use of alkali; as a larger quantity than is demanded to render the giene soluble is no injury to the land. Dr. Dana states, that

59	parts of ammonia, are equal to
58	" soda or white ash, or to
72	" 1st quality pot or pearlash, or
86	" 2d " pot or pearlash.

100 lbs. of fresh peat require 2 lbs. of soda ash, or 3 lbs. of pot or pearl ashes, to render it equal to cow dung. Peat in drying, loses three-fourths of its weight; hence the quantity or per cent of alkali for dried peat must be proportionably increased. Every cord of fresh dug peat requires 92 lbs. of pot ash, or 61 lbs. of soda, or 16 to 20 bushels of common house ashes will effect the change which the peat demands. Mr. Phinney of Lexington, a high authority in agricultural matters, has found by experience, "that a cord of green dung converts twice its bulk of peat into a manure equal in value to itself; that is, a cord of clear stable dung, composted with two of peat, forms a manure of equal value to three cords of green dung." The dung furnishes the requisite alkali, and ammonia in increased quantities is the result.

The value of peat when combined with ashes, either new or spent, does not however depend on theoretical speculation alone; and it is in combination with ashes that this substance quickly proves its importance as a fertilizer. Mr. G. Robbins of Watertown, Mass., an extensive manufacturer of soap, has one of the finest and most productive farms in that vicinity; and although he keeps eleven horses, four cows, and one hundred hogs, he has not for four years used a shovel full of their manure, or that made by any animal, upon his farm. His animal manure is carefully saved and sold, while his spent barilla ashes, mixed in the proportion of one part of ashes to three of peat dug up in the fall, and mixed in the spring, forms a manure that keeps his land in the best possible condition. The following extract will show how easily this manure may be prepared:

"The best plan for preparing the artificial manure would be to dig the peat or swamp muck in the fall; in the spring of the year let this be mixed in the proportion of 30 lbs. of potash, 20 lbs. of soda ash, or 8 bushels of common house ashes, to every cord of fresh dug peat, estimating this by the pit dug out, and allowing nothing for shrinking. If ashes are used, they may be mixed in at once with the muck, but if potash or soda is used, they must be dissolved in water, and the pile evenly wet with the solution. The pile is then to be well shoveled over, and used as other manure. But it has been found by experience that the peat may be dug in the spring, immediately mixed with the alkali and used forthwith. If spent ashes are used to prepare this muck, add one cord of spent ashes to three cords of peat or swamp muck."

Animal matters convert peat or muck into manures with great rapidity. "It has been proved by actual experiment, that a dead horse can convert 20 tons of peat into a valuable manure, richer and more lasting than stable dung; 'a barrel of alewives is equal to a wagon load of peat.'" Urine is a most prolific source of ammonia, and Dr. Dana says: "that the urine of one cow for a winter, mixed up as it is daily collected, with peat, is sufficient to manure half an acre of land with 20 loads of manure of the best quality." Can a stronger argument be offered to farmers, why they should fill their barn-yards and hog-pens with muck, to detain and become saturated with the ammonia of the urine?

Dr. Dana seems inclined to question the correctness of that part of Prof. Liebig's work which affirms the existence of volatile carbonate of ammonia in rain water. That ammoniacal salts exist in both rain and snow water is not questioned, the existence of the free carbonate only is doubted. Dr. Dana's explanation of the presence of these salts is ingenious, and as the subject is one which, since the publication of Liebig's volume, has excited much attention both in Europe and in this country, it will undoubtedly ere long receive a full elucidation. In treating of the advantages of irrigation, Dr. Dana dwells at length on the composition of water and its use in promoting vegetation. From a series of careful experiments, he estimates the quantity of salts and geine which were carried past Lowell, in the river Merrimack in 1838, at 839,181 tons. In river water "the dissolved salts are sulphate and geate of lime, and the fine deposit occurring after the water has settled, is composed of one-half of geine, and the remainder of salts of lime and silicates."

Dr. Dana's concluding chapter is on the "Physical properties of Soil," in which he has embodied much useful information in regard to their character and treatment, but for which we must refer the reader to the work itself, having already much exceeded the limits we usually allow to such subjects. The importance of the matters treated will be a sufficient apology. There can be no question agitated of more vital interest to the farmer than that of manures, and the best means of preparing and using them, will always command his attention. The volume treats plain subjects in a plain manner, and our notice we have endeavored to conform to the evident design of the author, that of writing so as to be understood.

TRANSACTIONS OF THE NEW HAVEN HORT. AND AG. SOCIETIES.

THIS is a neat pamphlet of some 80 pages, the examination of which has afforded us no little gratification. It is filled with proof that the farmers of the flourishing county of New Haven are determined not to be outdone in their agricultural and horticultural improvements, by any section of our country. Open as the great market of New-York is to their productions, the farmer, and particularly the gardener, has every inducement to make the cultivation of roots and vegetables, a prominent part of his business, and we are glad to say this has been done with much success. The influence of these societies has been extensively felt in originating and spreading a taste for rural embellishment; a love of fruit and flowers; a knowledge of improved stock and superior implements; and in this way communicated an impulse to the agriculture and horticulture of that county, which cannot fail to be permanent. The publication of these Transactions, will materially aid the same laudable purposes.

"THE WESTERN SHEPHERD."

THIS is the title of a pamphlet of 40 pages, received from G. Thorburn, Esq. from the pen of George Flower, of Albion, Edwards co. Ill. The object of the pamphlet is thus fully set forth in the title page. "The object of this little work is to call public attention to the necessity of adding wool to the staple articles of produce in the states of Illinois, Missouri, and Iowa. Containing instructions for the breeding and the proper management of sheep, and their pastures. Showing, also, the peculiar adaptation of the western prairies for such purposes; and giving particular directions for preparing and packing wool for market." On the topics here indicated, although necessarily brief, we find many valuable hints indicating a familiar acquaintance with the matter, and which can hardly fail of being useful among the farmers of the west. The facts stated in the following remark should not be lost sight of by the sheep grower. "In England, mutton is the article of first importance, and wool the secondary. In America, wool is first, and mutton is second. The flock which produces the best wool, is the flock that pays the western farmer the best. To choose aright that flock, to keep it well, and propagate it rapidly, is our decided interest." We regret to learn that the wolves, (there are two kinds, the Black wolf and the Prairie wolf,) are the most serious drawbacks on the sheep grower of the west; but this is a difficulty which an increasing population, or if necessary, a legislative bounty, will gradually do away.

MR. COLMAN'S FOURTH REPORT.

Several inquiries having been made for Mr. Colman's Fourth and final Report on the Agriculture of Massachusetts, we have succeeded in obtaining a few copies which are for sale at this office, at $2.00 each. It is a large octavo volume of over 500 pages, and should be in every farmer's library.

GREEN MANURES.

WHERE plants in a state of growth are plowed in on land for the purpose of enriching the soil, they are properly termed green manures, and this method of manuring has in many instances been successfully practiced. But one kind of green manure has been extensively used in this country, and that is clover; and the benefits of this are so great and certain, that it is believed the practice might be advantageously extended to other plants. Plants contain, already elaborated, all the elements necessary for the formation of others; not perhaps in precisely the same proportions, but always more or less of the essential parts. Reason then would teach the farmer that growing plants might be readily converted to effective manures, and experience in this case fully supports the theory.

The constituent elements of plants are woody fibre, starch, sugar, and gum, and these are compounds of carbon, hydrogen, and oxygen. The fixed and the volatile oils, wax and resin, are formed of carbon, with the elements of water and an excess of hydrogen. Vegetable gluten and albumen contain nitrogen, and it is never wholly absent in plants. It follows that for the growth of plants, the presence of carbon and nitrogen, or substances capable of yielding these elements, as well as water, iron, lime, and other inorganic matters, must be furnished. Green manures do this more readily than almost any thing that can be provided, as the use of clover for wheat clearly proves. It appears from the writings of Xenophon, that the value of green manures was early understood, for he recommends that crops be sown for this purpose, and declares they "enrich the soil as much as dung."

The value of sea weed as a manure is well known, and arises from the organic elements it contributes to the soil. Dr. Browne of Suffolk, in a letter quoted by Prof. Johnston, in his essay on the use of salt, gives a striking instance of this. "In October, 1819, a violent gale of wind drove to this part of the coast, an unprecedented quantity of sea weeds; these were eagerly scrambled for, and from my greater vicinity to the beach, I collected twenty-seven cart loads, each as much as four horses could draw; and although other persons deposited their collections in their farm yards, to rot among their other manure, yet I spread mine, fresh and wet, upon little more than an acre of bean stubble, instantly plowed it in, and dibbled wheat upon it, on the 6th of October. I then salted the adjoining land with three bushels per acre, manured it with fifteen loads of farm yard manure per acre, and dibbled it with wheat on the 15th of November. The result was, that the sea-weeded portion gave three times the produce of any equal part of the field." The effects of sea-weed as a green manure, it appears from the reports of Prof. Jackson and Mr. Colman, have been in Rhode Island and Massachusetts, equally decided.

Next to clover, buckwheat has been more used in this country as a green manure, than any thing else. It is evident that to produce the best effect as an enricher of the soil, the plant used as manure should have a rapid growth, as in that way more of its bulk is drawn from the atmosphere than the earth. The farmer finds that the best wheat follows a luxuriant growth of clover, that the best corn is grown where the thickest richest turf has been turned, and that the crop is generally in proportion to the vegetable matter present in the soil. It has appeared to us, however, that where large quantities of green manure were used, the presence of some alkali was necessary to correct any acidity which might ensue, and hence ashes when used in such a connection have proved of essential service.

Mr. Knight was a strenuous advocate of the use of green manures, and some of his experiments to prove their value, were most ingenious and decisive. As the result of his investigations, in one of his communications to the Hort. Society, he says, that what he has stated is is sufficient to show "that any given quantity of vegetable matter, can generally be employed in its recent and organised state with much more advantage than when it has been decomposed, and no inconsiderable part of its component parts have been dissipated and lost during the progress of the putrefactive fermentation." This remark is unquestionably correct, although it will depend much on the manner of decomposition, whether any considerable part of the elements of the plant are dissipated. Green plants decomposing in the open air, must lose a large portion of valuable matters, but if covered with earth, such loss cannot take place. Combinations take place, and the escaping gases are retained for the future plants.

It is evident that green manuring can only be used profitably in a warm climate, or during the warmest part of our seasons. In Italy, the lupine is most generally used for plowing in; but in colder latitudes buckwheat has proved the best plant for green manure. It gives a large amount of vegetation, grows rapidly, and comes to maturity, or the state in which it is most valuable for manure, at a time when the heat is greatest, and the perfect decomposition insured. Plants used for green manure, should be plowed down when they have come into flower, as the experiments of Sir H. Davy, prove that at that time they have least exhausted the soil, and contain the most soluble matter.

In common with many farmers, we think the practice of turning under a large growth of clover for the purpose of manure, is injudicious. Our experience would prove that it is better to feed it off on the land. The large quantities of animal salts deposited on the soil with the manure dropped, which are, as is well known, the most efficient agents in vegetation, will more than compensate for what may be carried off in the flesh of the animals fed. Sheep are the stock we should prefer, and sheep, clover, and wheat, are associated in the minds of most grain growers at the present time.

SUGAR FROM CORN—OIL FROM LARD, &c.

WE are indebted to our friend, H. L. ELLSWORTH, of Washington, for a pamphlet containing the address of Mr. Webb, of Delaware, before the Nat. Ag. Society, on the important subject of making sugar from corn; and also the methods described by Mr. Morfit of Philadelphia, and Mr. Smith of New-York, of making Stearine from tallow, oil, lard, &c.

The subject of making sugar from corn is truly a national one, and we are gratified to find the public taking so much interest in the matter. As described by Mr. Webb, in his address, there would appear to be nothing difficult or tedious in the manufacture; and it seems to be very satisfactorily ascertained that any quantity of sugar, equal to that of the cane, may be made at a not greater expense than that. Mr. Webb states that the ears may be removed from the plants intended for sugar, but he thinks the better way will be to so increase the quantity grown on an acre, as to prevent the formation of ears, a result which every farmer is aware will ensue from too close planting. But in any event, the formation and perfection of the ear must be prevented, or very little sugar will form in the stalk. There appears little doubt that the principle laid down by Mr. Webb, will be found the true one; viz: "that every pound of starch found in the seed of a plant, has required for its production, at least one pound of sugar in the form of sap."

The richness of the juice of maize in sugar, is truly surprising, and it is strange that public attention has not before been directed to it, in preference to the beet. Mr. Webb says—"the raw juice of maize, when cultivated for sugar, marks 10° on the saccharometer, while the average of cane juice, (as I am informed,) is not higher than 8°, and beet juice not over 3°. From $9\frac{3}{4}$ quarts (dry measure,) of the former, I have obtained 4 lb. 6 oz. of syrup concentrated to the point of crystalization. The proportion of crystalizable sugar appears to be larger than is obtained from cane juice in Louisiana."

The process of grinding is very simple. Three upright cylinders from 20 to 40 inches long, are secured in a strong frame; the centre one is moved by a sweep, and cogs on this, working in cogs on the others, move the other rollers. In grinding, the stalks pass through on the right side of the middle roller, and coming in contact with what is called the dumb returner, are directed back so that they again pass the rollers on the other side of the middle one. A cut is given of the front view of such a sugar mill. Corn juice like that of the cane, must not stand after it is prepared, as the incipient fermentation soon commences. One hour is the extent it can stand, and even this is attended with danger, although less in the case of corn than in that of cane. The process of manufacture, is as simple as that of grinding.

The juice after coming from the mill stood for a short time to deposit some of its coarse impurities; it was then passed through a flannel strainer, in order to get rid of such matters as could be separated in this way. Lime water, called milk of lime, was then added in the proportion of one or two table spoonfulls to a gallon. The juice was then placed over a fire, brought nearly to a boiling point, when it was carefully skimmed before ebullition commenced. It was then boiled down, rapidly removing the scum as it rose. It was sometimes necessary, when not sufficiently clear, to pass it a second time through the strainer. To determine when it was sufficiently done, some of the syrup was taken between the thumb and finger, and if, when moderately cool, a thread half an inch long could be drawn, it was at once poured into broad shallow vessels to crystalize.

The experiment of making corn sugar will doubtless be tried by many the coming season, and the address of Mr. Webb will furnish the necessary information for a successful issue to the enterprise.

The preparation of stearine, although of much importance to the country, is depending on so many chemical combinations and manipulations, that it is not probable it will become an object to families, and that part of the pamphlet we shall pass over, remarking that those who feel an interest in the matter, will be glad to find the several processes as well described as is done in the account before us.

LARGE YIELD OF CORN.

In a late number of the Louisville Journal, we find an account of a corn crop raised by Mr. Young, of Jessamine co., a crop exceeding we believe any on record in the country. The editor says: "Mr. Young exhibited to us a certificate of several respectable gentlemen, certifying that in a lot of five acres, he had produced *one hundred and ninety-five bushels of corn to the acre.* The corn was measured, and there is no doubt of the correctness of the estimate. This was on a piece of bottom land, and the committee were of opinion that Mr. Young's crop on the upland was better than that which was measured." Mr. Young pens his stock on the land intended for corn, and manures it in no other way. This land is broken up in the fall, in the spring struck out in squares three feet each way, from eight to twelve corns dropped in each, which at the hoeing is reduced to four stalks to each hill. As soon as the corn is up, a large harrow is run over the whole ground, regardless of harrowing the corn up, which seldom happens. Nothing but the plow is used in the cultivation; after the harrow, no hoe or cultivator is brought to the field.

Answers to Inquiries, &c.

THE YELLOW LOCUST.

Messrs. Editors—Will you please inform me through the Cultivator, whether the yellow locust which grows about Syracuse, and other parts of western New-York, is the kind best for timber, where strength and durability are wanting; and if not, which is the best kind, and where the seeds can be procured, and at what price?

Van Buren, Onondaga co. N. Y., 1842. J. B.

The yellow locust cultivated at Syracuse, and in other parts of western New-York, is the kind most valued for timber, and for which such high prices are paid at the ship yards of our country. There are one or two other kinds cultivated, the honey locust, *(Robinia viscosa,)* and the rose locust, *(R. hispida,)* but these are of little value as timber: the first being grown for hedges, and the latter as a flowering or ornamental tree. The wood of the yellow locust when very young, is not remarkable for its durability, but it soon assumes a firmness which renders it invaluable where durability and strength are required. It can scarcely be propagated too extensively.

SUN FLOWER OIL.

We have had some inquiries as to the method of making sun flower oil; and the quantity a bushel of seed will make; and the uses to which it can be applied.

1. Method of making. The same as that of linseed, except that the seed must first be hulled, or its hard envelop taken off. This is done by machinery with great ease. If ground with the hull, not half the quantity of oil can be obtained as when it is hulled. Any press that will extract the oil of linseed, will do for sun flower seed.

2. Quantity per bushel. Mr. Mann made some experiments which are recorded in the N. E. Farmer, in which only half a gallon per bushel was obtained, and the project was abandoned. He did not hull the seed, hence the failure. C. A. Barnitz, near Baltimore, on the contrary, obtained a gallon of fine oil from a bushel, but his seed was hulled, and none was lost by the saturation of the dry covering. When well managed, a gallon may be counted upon with certainty.

3. Uses. It makes a very good oil for lamps, burning clearly and without offensive smell. It is found to be well adapted for painting, spreading smooth and drying with facility. For the table, most prefer it to olive oil, being cheaper, and having a more agreeable flavor.

We may add here, that the quantity of seed produced on an acre will vary much, having ranged from 20 to 75 bushels. The editor of the Baltimore Farmer thinks that the average on good corn land may be stated at 50 bushels.

We have no data from which to answer the inquiries of our correspondent at Canton, in regard to the quantity of oil produced by hemp seed. Hemp seed oil possesses many of the qualities of linseed oil, and doubtless might be extracted with equal facility.

SUBSOIL PLOWING—TRENCHING.

Editors of the Cultivator—Will you please explain the term subsoil plowing, so much used of late in papers on tillage. How is it done? I understand it to mean the plowing up the soil deeper than usual; but how much deeper, and how is it accomplished?

Trenching, also needs explanation. I understand it to be digging up the soil first on one side of a field, in the form of a ditch as deep as required, say two feet; then filling up that with the soil taken from another ditch dug in like manner, by the side of the first, and so on through the field; mixing manures or compost with the soil as it is thrown into the ditches. Is this right?

Why does not some Albany dealer keep a carefully selected and improved stock of agricultural implements for sale? Some are to be found it is true; but there is no one whose assortment is general, or who furnishes only the best. Prouty and Mears, Barnaby and Mooers side hill, Ruggles, Nourse and Mason's, and Howard's plows, the best kind of drill barrows, cultivators, churns, cheese presses, models of hay presses, bee hives, &c. &c. in short, all truly valuable implements, and the latest improvements should be found at such an establishment.

Thomas.

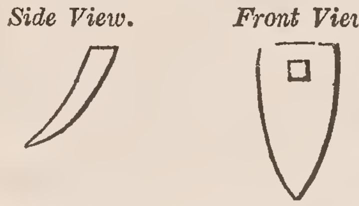
Subsoil plowing is intended to move the earth to a much greater depth than can be done with the ordinary plow, and to effect this without bringing the lower earth moved to the surface. It renders the surface more dry, gives a greater range for the roots of plants, admits a free passage to water and air, and gradually converts the sterile subsoil into fertile mold. The implement is a strong iron plow, with a stout share, but no moldboard. It is generally used by first turning a furrow with the common plow, and the subsoil plow follows in the furrow so made, moving the earth to the depth of from ten to twelve inches, breaking up the dense soil or hard pan, but not throwing it upon the surface; and the earth so moved is covered by the next furrow slice of the common plow. The subsoil plow requires a strong team. The depth will of course depend on the two plows; if the common plow cuts six inches in depth, and the subsoil ten, then the earth is moved to the depth of sixteen inches.

Trenching has for its object the inversion of the soil to the depth trenched; placing the original surface soil at the bottom, and then by manuring, or the slower effect of the atmosphere, converting the whole earth moved into the best of soil. "Thomas" is right as to the manner of doing this. It is very little practiced in this country, except in the preparation of gardens, or for the cultivation of particular plants.

The suggestions of "Thomas," as to the necessity and propriety of an agricultural warehouse in this city, are deserving attentive consideration. Situated as Albany is, with such facilities for communication with all parts of the country, it is scarcely possible that an establishment meeting the requisitions pointed out by our correspondent, should not succeed. The benefits conferred on the agricultural public by the agricultural warehouses in Boston, are immense; and there is no point where one could be more generally useful and effective than in this city. We hope the hint of "Thomas" will not be lost.

PLOWING IN GEORGIA.

Gentlemen—On very rocky soils, such as we in this section of the country have to plow, the bar share plows, such as your magazine exhibits, seem to be wholly inapplicable. All your premium plows are bar shares in various grades of improvement. Here they use the coulter plow, the bull tongue, or any sort of wrought iron or steel plow shaped thus:



Plows of this kind, I am informed, (for I am a recent emigrant hither,) are the only ones that can be used on tenacious clay and rocky soils, and hilly withal. Our soil here is filled with broken rocks that strew or penetrate the surface, generally weighing from five to twenty pounds, and sometimes fifty. The premium plows exhibited in the Cultivator, may doubtless be applicable to every surface of ground, as well plain and sandy, or clayey, free from rocks; but experience seems to teach the agriculturist here, that the single pointed plow above depicted, is the only one that will penetrate the ground here, and impose less additional work on the horse. These plows are drawn each by a single horse. The harrow and roller are here unknown, it being supposed they could not be used or moved among the rocks.

Farmers here may be suffering under the ignorance of the age, and the bar share plow and the harrow may be adapted to the culture of this part of the country. The question is but one, and can be simplified: On tenacious, but fertile rocky clay fields, what plows are the best to break ground, and cultivate the Indian corn? And can the harrow and roller be used with profit on such soils?

J. J. Flournoy.

Wellington Farm, Jackson co. Ga., April, 1842.

We have abundance of soil at the north very similar to that described by our correspondent, and we find no difficulty in cultivating it with our plows, and in fact it cannot be well done with any other. What Mr. F. calls rocks, would in New England be called pebbles or stones, and a soil so constituted would be treated somewhat as follows: The largest stones or rocks would be at once removed and made into walls, and then the plow and harrow would be used as though there were no stones in the field. It is true, our plow would require more team, but the whole surface would be moved, the plowing more effectual, and the crop proportionably better; at least experience in our stony districts would justify such expectations. The roller cannot be used with much profit where the surface is covered with stones, but unless very large, the harrow is here never dispensed with. We have seen many a field, the surface covered with stones both loose and fast, of the sizes mentioned by Mr. F., plowed effectually and easily with a single pair of horses; and we think our correspondent, after removing the largest stones or rocks, would find no difficulty in treating his soils in the same manner.

POUDRETTE—SOILING.

"Moyallero" makes some inquiries as to the process of making proudrette at the city manufactories of that article, and says, "My inquiries, therefore, are not merely as to the process, materials, &c. employed in the New-York factories, but it extends also to the best method which *farmers* have, or can employ in the maufacture of poudrette."

We have before said in answer to inquiries, that we are unacquainted with the details of the processes adopted in the city manufactories; but it is certain those methods are not adapted to the means of the common farmer. The great object in the conversion of night soil into poudrette, is to prevent the loss of the ammonia, a substance to which the nitrogen of plants appears to be owing, and which is of so much consequence, that it is confidently stated the value of any manure may be estimated by its nitrogen. To prevent the escape of ammonia from the night soil, plaster is mixed with it before, and while drying, and ground peat thoroughly dried is also used to a considerable extent. The farmer, to manufacture poudrette, has only to mix plaster with the night soil in sufficient quantities to prevent the formation or escape of ammonia, and the addition of the peat not only renders this powerful manure more capable of equal distribution, but in itself furnishes a valuable manure, and an excellent absorbent of any gas that may escape in the preparation. By adding the plaster, the volatile carbonate of ammonia is changed to sulphate of ammonia, and is thus secured for the use of the plant. The value of city prepared poudrette must depend on the skill and honesty of the maker, but the presence of peat is no proof that the article is not of the best kind.

There is another kind of animal offal which in Paris, is converted into one of the most effective manures; we allude to that of the slaughter-house, and which is mostly lost in this country. These offals are boiled into a thick soup, then made into a stiff paste by stirring in powdered or sifted coal ashes, and drying the mass. All signs of putrefaction pass away with the mixture of the coal dust, and this poudrette is as free from all offensive smell as pure garden mold. This preparation is the "animalized coal" of French agriculture, and is a capital manure.

"Moyallero" adds—"Sometime since I heard that a few New England farmers were trying the experiment of keeping their cattle up in the yard, the whole year round,—of in fact, not pasturing at all, but mowing the grass for them daily, when large enough. Can you inform us as to the result? Or whether such a course is any where pursued, and with what success?"

Quite a number of such experiments have been made in this country, and in most cases have been successful; at least so far as to show that a given quantity of land would keep a much greater number of animals the year round under a system of soiling, than it would in pasture or meadow in the ordinary way. Some of the experimenters estimated that the additional manure made and saved, would pay the expense of attendance. The high price of labor, and the abundance of land, however, in this country, or perhaps still more, the force of old habits, has prevented the adoption of the soiling system to any extent in the United States; but there can be no question that where circumstances render it desirable, soiling may be practiced with profit and success. In England and Germany it is common, and the system is on the increase.

TOAD FLAX.

"Messrs. Gaylord & Tucker—Growing in our lands there is a noxious weed; and we wish to know what will kill it. We allude to that plant called *toad flax* or *snap dragon*. [*Antirrhinum linaria.*] If you can let us know in what manner it may be destroyed, you will have additional claims on the gratitude of the

Dutchess Co. Farmers."

At the west, we have had no acquaintance with this pest of the farmer, and are entirely unacquainted with any particular mode of destroying it. Wherever it prevails, it is very destructive in wheat fields; and where it has long been known, as in some parts of Massachusetts, it is pronounced one of the most obstinate and difficult weeds to destroy. There is, perhaps, no plant, however, that thorough tillage, and a careful prevention of seeding, will not eventually destroy; and on this course we should rely for the destruction of the toad flax. If any of our readers are advised of a better and more expeditious way, they will confer a favor on the public by letting it be known.

LIVINGSTON CO. PLOW.

F. H. Hill, Esq., P. M. Madison C. H., Va., says, "Several planters in this county wish to get the Livingston co. plow, of which you have given a description in your paper. We wish to know the particulars; whether the moldboard, share, and all is cast, or whether the share is wrought, &c., and what will be the expense of getting one to Fredericksburg, Va?"

We are unable to answer all these inquiries, but the makers of the Livingston plow we presume will do it satisfactorily. Mr. Hill may be addressed by letter.

CULTIVATION OF THE CRANBERRY.

We have had several inquiries in relation to the cultivation of this fruit, the demand for which is rapidly increasing in our markets. Few things are more easily grown than the cranberry, and the cultivation is very simple. Nothing more seems necessary to success than bog or peat earth; if the bogs are sandy, so much the better, but too much wet is fatal to the hopes of an abundant crop. On the sandy coasts of Massachusetts, where wet bogs or meadows abound, the cultivation of the cranberry is increasing, and pieces of ground hitherto of no value, now yield handsome incomes. It is found they grow well on these sandy bogs after draining, and the following is stated to be the method pursued by Mr. Hall, of Barnstable, who has for some time produced them in great quantities:—"If the bogs are covered with brush it is removed, but it is not necessary to remove the rushes, as the strong roots of the cranberry soon overpower them. It would be well, if previous to planting, the ground could be plowed, but Capt. Hall usually spreads on beach sand, and digs holes four feet asunder each way, the same as for corn; the holes are however deeper. Into these holes sods of cranberry roots are planted, and in the space of three years the whole ground is covered." Mr. Kenrick remarks, that "although a moist soil is best suited to the plant, yet, with a suitable mixture of bog earth, it will flourish, producing abundant crops, even in any dry soil." Loudon asserts that Sir J. Banks, who obtained this plant from America, raised in 1831, on a square of 18 feet each way, three and a half bushels, equal to 460 bushels per acre. Any man who has a bog swamp may raise cranberries, by draining it so that the surface at least shall be dry, either inverting the surface, if hard enough, with a plow, or covering it with sand, and planting as above directed. When well set, the yield of an acre will not be much, if any, short of 200 bushels.

INQUIRIES.

"MESSRS. EDITORS—I wish to solicit advice from you or some of your worthy contributors, on the following points: What course is to be observed the first and second years, in commencing a farm, in order to gain? Is it commendable to purchase the stock designed for the subsequent year, the first year, and feed that stock on your pocket, until your own corn or other food matures? If not, or if so, why? How many acres of good ground can a good hand cultivate properly, in a year, without injury? *Lecsburg, N. C.*, 1842. CAMDONIAN."

Will some of our southern friends be kind enough to reply to the queries of our correspondent?

We cannot furnish "A Patron and Friend," of Bloomfield, Ky., the information he solicits. It would be improper for our columns. By application to a competent veterinarian, his wishes can doubtless be gratified. This notice would have appeared sooner had not the application been accidentally mislaid.

PLASTER.

THE following is an extract from a letter received from WILLIAM EDWARDS, Esq. the founder of the extensive tanneries in Greene County, which have added so much to the wealth and prosperity of that part of the state.

"From personal observation, and a limited experience, I am led to believe that *plaster of Paris* is the best substitute for manure that can be applied in all this region of our country. A knowledge of the best mode of using it—the quantity per acre—the period of applying it—the kinds of crops most benefited by it—and in short, every thing relating to its use, published in your most interesting paper, would be highly beneficial and acceptable to the farming community, whether derived from your own experience, or from the pens of experienced contributors."

We have for more than thirty years, lived in a district where plaster has been extensively used, and where its value is so well understood, that the farmer who declines its use, would be deemed little better than insane. Plaster produces the most effect when sown upon land, and this is generally done by hand. Plowing it in is not generally approved, and our experience would be against the practice. The quantity per acre may be from one to three bushels, but we have received as much benefit from one and a half bushels per acre as from a larger quantity. More, however, will do no injury. The best time for applying plaster is when the grass or other crops have thrown out their leaves in the spring, say in May. Nearly all crops are benefited by plaster; it is applied advantageously on wheat, corn, potatoes, peas, &c., but its greatest effect is produced on the clovers, and its action here is principally relied upon for renovating and enriching the soil. Plaster may be made one of the most powerful of manures by converting it into a carbonate of ammonia, accomplished by the addition of urine until saturation is effected.

NEW-YORK COUNTY AG. SOCIETIES.

CHAUTAUQUE.—The next Fair of this Society is to be held at Westfield, on the 28th and 29th days of September next, for which a handsome list of premiums has been published. T. B. Campbell, Esq. Pres't.

DUTCHESS.—The Society in this county are to hold a Fair in the town of Washington, on the 5th of October next. Henry Staats, Pres't: Geo. Kneeland, Sec'y.

SARATOGA.—Fair to be held at Ballston Spa, on the 4th of October next.

LIVINGSTON.—We have received the premium list of this Society, of which James S. Wadsworth, Esq. is President, and C. H. Bryan, Esq. Secretary, for their next Fair, which is to be held at Geneseo, on the 4th and 5th days of October next.

NIAGARA.—The Society in this county has published a liberal list of premiums, which are to be awarded at their next Fair, but at what time it is to be held the notice does not state.

The ONEIDA Society hold their next Fair at Rome, on the 12th and 13th days of October next.

ST. LAWRENCE.—At the annual meeting on the 9th Feb., Jonah Sanford, Esq. was chosen Pres't—26 V. Pres'ts were appointed—N. S. Prentice, Canton, Treas., and Ch. Lyon, Oswegatchie, Rec. and J. L. Russell, Canton, Cor. Sec'y. Their next fair is to be held at Canton, Sept. 14.

ESSEX.—An Ag. Society has been organized in this county and the following officers appointed:—Reuben Whallon, Pres't—Reuben Sanford, Samuel Murdock, Gideon Hammond, and Almerin Smith, V. Pres'ts—D. Judd, Treas.—E. F. Williams, Rec., and A. B. Mack, Cor. Sec'ys.

SUGAR FROM CORN STALKS.

JOHN GREIG, Esq. of Canandaigua, President of the Ontario Agricultural Society, to induce experiments in the manufacture of sugar from the stalks of Indian corn, has offered the liberal premiums of $30 and $20, for the greatest and next greatest quantity of sugar and molasses made from an acre of land, to be awarded at the annual Fair of that Society, to be held at Canandaigua, in October next.

ANNUAL MEETING OF THE U. S. AG. SOCIETY.

Washington, May 4, 1842.

The Society met to-day at the Patent Office, when a number of delegates from the several states, appeared with their credentials, and the Hon. J. M. GARNETT, of Va., at 11 A. M. took the chair, and J. F. CALLAN, Secretary.

On motion of the Hon. H. L. Ellsworth, a committee of three was appointed by the Chair, to inquire into the expediency of establishing in this city, a periodical, to be devoted to the cause of agriculture, and to be the official organ of this society, viz: Hon. H. L. Ellsworth, D. C., Dr. Eli Ives, Conn., and Rev. J. O. Choules, N. Y.

Rob't E. Horner, N. J., T. B. Wakeman, N. Y., Rev. O. B. Brown, D. C., Dr. G. B. Simth, Md., and Hon. H. L. Ellsworth, D. C., were appointed a committe to report the order of business for the future action of this meeting, and the Society adjourned until to-morrow morning.

Thursday, May 5, 1842.

At 9 o'clock, A. M. the Society met at the Patent Office, and proceeded to the election of officers, and upon counting the ballots the following named gentlemen were declared duly elected, viz:

Hon. JAMES M. GARNETT, Virginia, *President.*
J. F. CALLAN, D. C. *Rec. Seretary.*
OLIVER WHITTLESEY, Ohio, *Cor. Secretary.*
EWARD DYER, *Treasurer.*

Board of Control.

Hon. H. L. Ellsworth, D. C.
Hon. Elisha Whittlesey, Ohio.
John A. Smith, D. C.
John S. Skinner, D. C.
William J. Stone, D. C.

Vice Presidents.

Maine,	Hon. George Evans.
New Hampshire,	Hon. Isaac Hill.
Massachusetts,	B. V. French.
Connecticut,	Dr. Eli Ives.
Rhode Island,	Governor Fenner.
Vermont,	William Jarvis.
New-York,	J. B. Nott.
New Jersey,	E. S. Green,
Pennsylvania,	Hon. G. M. Keim.
Delaware,	Dr. J. W. Thompson.
Maryland,	Thomas Emory.
Virginia,	Ed. Ruffin.
North Carolina,	Hon. E. Deberry.
South Carolina,	Wade Hampton,
Georgia,	Hon. Wilson Lumpkin.
Alabama,	Hon. Dixon H. Lewis.
Louisiana,	Hon. Alexander Mouton.
Arkansas,	Hon. A. Yell.
Tennessee,	F. H. Gordon.
Mississippi,	Hon. R. J. Walker.
Kentucky,	Chilton Allen.
Missouri,	Hon. L. F. Linn.
Illinois,	Thomas L. Hinde.
Indiana,	Solon Robinson.
Michigan,	Hon. J. C. Crary.
Ohio,	Hon. John Hastings.
Dist. of Columbia,	Amos Kendall.
Florida,	Hon. C. F. Mercer.
Iowa,	Timothy Davis.
Wisconsin,	Henry Dodge.

The Vice Presidents of Virginia, District of Columbia, Maryland, Pennsylvania, and Delaware, are, *ex officio*, members of the Board of Control.

The President addressed the Society in his usual felicitous manner, at the conclusion of which, on motion of Dr. G. B. Smith of Md., the thanks of the Society were voted to Mr. Garnett, and a copy of his address was solicited for publication.

The committee to inquire into the expediency of establishing an agricultural periodical, reported favorably to that measure, and their report was, after some debate, adopted.

The committee on business, reported the order in which the business of the Society should be taken up and acted upon, and advised the amendment to the Constitution as follows, in Art. 19: "and the Board shall have power to prescribe the mode in which it shall be withdrawn," and that a "draft from the President, countersigned by the Recording Secretary," as now required, shall no longer be necessary.

The Board of Control, through its chairman, the Hon. Levi Woodbury, made a written report, in which they state in consequence of the severe pressure of the times, and the Society's limited means, they had declined holding a Fair in the present month, as required by the Constitution; but in the hope that they would find their pecuniary condition much improved during the coming summer and fall, they recommend the holding an exhibition in this city, early in the month of December next.

T. B. Wakeman, Esq. of New-York, from the committee on business, made a report, concluding with the following resolution, which was adopted:

Resolved, That with a view to holding an exhibition under the auspices of the Agricultural Society of the United States, in December next, in the city of Washington, a committee of two be appointed from each State and Territory, and the District of Columbia, whose duty it shall be to ascertain how far the agricultural and scientific societies of the country will unite in the proposed fair; and that this committee meet in Philadelphia, at the U. S. Hotel, on the 6th day of July next, at 5 o'clock, P. M., to decide upon the expediency of holding the contemplated exhibition. It shall also be the duty of this committee in co-operation with the Board of Control, to make all the necessary arrangements for this first annual fair, and to associate with them such other persons as they may think necessary in furtherance of this object, all of whom together, shall constitute the Board of Managers to conduct the exhibition to its final conclusion.

The Chair appointed the following gentlemen to select the general committee above, viz: Dr. Eli Ives, Conn.; Thaddeus B. Wakeman, N. Y.; Rob't E. Horner, N. J.; Dr. Gideon B. Smith, Md.; J. F. Callan, D. C.; Thomas Crux, Va., and Hon. R. J. Walker, Miss.; who reported the following committee:

Maine—Hon. F. O. J. Smith, Hon. E. H. Allen.
New Hampshire—Hon. Isaac Hill, Hon. L. Woodbury.
Massachusetts—B. V. French, Hon. G. N. Briggs.
Vermont—Wm. Jarvis, Hon. Hiland Hall.
Rhode Island—Christopher Rhodes, Sol'n Townsend.
Connecticut—Dr. Eli Ives, Hon. J. H. Brockway.
New-York—Thaddeus B. Wakeman, E. P. Prentice.
New Jersey—R. E. Horner, C. S. Olden.
Delaware—Dr. Jas. W. Thompson, John Jones.
Pennsylvania—D. Landreith, Geo. M. Coates.
Maryland—Hon. J. D. Jones, Gov. Geo. Howard.
Virginia—Rev. Jesse H. Turner, Thos. S. Pleasants.
North Carolina—Rev. S. Weller, Hon. E. Deberry.
S. Carolina—Hon. J. C. Calhoun, Hon. W. C. Preston.
Georgia—Hon. Lot Warren, J. A. Merriweather.
Ohio—Hon. John Hastings, Thos. Affleck.
Tennessee—F. H. Gordon, Hon. W. B. Campbell.
Alabama—Hon. W. R. King, Hon. D. H. Lewis.
Louisiana—Hon. E. D. White, Hon. Alex. Mouton.
Mississippi—M. W. Phillips, Hon. R. J. Walker.
Kentucky—Chilton Allen, Hon. P. Triplett.
Missouri—Hon. L. F. Linn, W. H. Saunders.
Illinois—Thomas L. Hinde, Hon. Z. Casey.
Arkansas—Hon. W. S. Fulton, Hon. A. Yell.
Michigan—Hon. J. E. Crary, Hon. J. M. Howard.
Florida—R. W. Williams, Hon. C. F. Mercer.
Wisconsin—Hon. Henry Dodge.
Iowa—Timothy Davis, A. C. Dodge.
Dist. of Columbia—Hon. H. L. Ellsworth, J. Pierce.

Mr. Adam Lindsly, of the District of Columbia, exhibited a piece of black Satinet, containg 23 yards, manufactured in his family in this city.

Mr. T. B. Wakeman, offered the following resolution, which was unanimously adopted:

Resolved, That the thanks of this Society are due to the Hon. Henry L. Ellsworth, Commissioner of Patents, for the agricultural statistics contained in his annual report to Congress, and that the continuance of such statistics is worthy the patronage of the national government.

SILK IN MASSACHUSETTS.

One of the most satisfactorily conducted experiments in the silk culture which we have seen, was made in the family of Mr. Barton, Gill, Mass., and reported by Mr. Colman, in his 4th report. The management was under the direction of Miss Barton, who not only fed the worms but reeled the silk. Mr. Deane, the narrator, says:—"Partly at my suggestion, the details of this experiment were accurately noted. The weight of the eggs hatched was 2½ oz. The worms spun in 28 or 29 days. The amount of leaves consumed was 2,500 lbs. The weight of cocoons was 248 lbs. The weight of reeled silk was 20 lbs.; and the amount of labor was one month; that is, the first half was greatly less than that, and the last days something more. The building used was the vacant corn house, which of course should not enter into the list of expenditures, and the fixtures were merely temporary shelves of rough boards, and a few hurdles to contain the worms, during their three first ages. Neither should there be any charge for eggs, as a great quantity were produced for future use. The expenses therefore stand as follows:

Labor, one month, $12,00, board do. $6,00,	$18 00
2,500 lbs. of mulberry leaves, 50 cts. per 100 lbs.	12 50
Gathering cocoons, camphor for curing do.	2 50
Reeling 20 lbs. silk at 75 cts. per lb.	15 00
Interest on reel and fixtures,	1 00
	$49 00
Income.	
20 lbs. silk, for which Mr. B. has refused $5 per lb.	$100 00
The state bounty of 15 cts. on 248 lbs. of cocoons,	37 20
" " 50 cts. on 20 lbs. reeled silk,	10 00
	$147 20
Deduct	49 00
Profit, including bounty,	$98 20
Without it,	51 20

In this case, the cost of cultivation was less than $2,50 per lb.; from which the state bounty was to be deducted. Miss Barton was able to reel without difficulty, one and a half lbs. of silk. During the three first ages, the worms were fed with chopped leaves; during the two last, on branches. The worms passed each entire age without the removal of their litter, which service was only performed immediately after moulting. In what other way, we may ask, could a young lady make as profitable a use of her time, as was done by Miss B. in feeding these industrious laborers? And we may hope that such examples will be followed, until such instances of successful industry shall not be as rare as they now unfortunately are.

INDIAN CORN.

We make the following extract from the New Encyclopedia of Agriculture, by C. W. Johnston, Esq. article Maize. The only apology for the singular error into which the writer has fallen, is to be found in the fact, that

Indian corn cannot be grown to any extent in Great Britain; and this should have induced him to examine more authentic sources, when speaking of one of the most important bread plants on the globe. If there is one plant more than another that requires a rich warm dry soil, it is corn, and it will flourish in no other. There is another error or misprint as to the great number of ears. Few plants give a greater number of grains, but many produce more ears:

"This valuable plant produces a much larger number of ears, which abound with a greater proportion of wholesome mealy matter, than any European grain; and as Indian corn prospers in low, swampy situations, where it tends to dry up the superfluous moisture, and to render the ground firm, it might perhaps be advantageously cultivated in some of the southern counties of Britain."

FARMER'S CLUB AT BUTTERNUTS.

We have received the following note from our correspondent, F. Rotch, Esq. of Butternuts, Otsego co. "You will be gratified to learn that our *young* men have formed themselves into a 'Farmer's Club,' for the purpose of debating the principles and practices in Agriculture; and I am surprised how much latent thought and talent is brought out in this way, and with what readiness its members are willing to join in the debate. It is our young men who are to carry on the work of improvement, and give to agriculture her proper rank. I now want to hear of the establishment of a public lecturer. It cannot be but that such an one would be profitably employed in the service of any well established periodical. I only want the advantages of reading, of education, and of science, clearly exhibited to the farmer, as all-important to the advancement of himself and his farming operations: and then give me an agricultural school, and I should be content that with such an impetus the ball must roll on."

We are indeed gratified to hear of the formation of such an association as the Butternuts "Farming Club," and trust that it will be exemplar and parent of many others. Experience has proved that familiar conversation and debate, has been one of the most effectual means of extending agricultural knowledge, and some of those clubs that commenced a few years since in England with beginnings less auspicious than the one under notice, have now become most influential associations, diffusing intelligence and the proper agricultural spirit among the farmers of large sections of country. Such, we cannot doubt, will be the result of similar spirited and well conducted Clubs here. We wish our young friends every success in their undertaking.

ASHES ON COTTON—CUTTING OFF SPAVIN.

We make the following extract from a letter received from S. W. Cole, Esq. of Wadesboro, North Carolina.

"This Co. (Anson,) is a fine farming section, and is the only county in the state well adapted to the raising of cotton. Here we raise a large quantity for this section of the union, and our planters are devoting more care to the improvement of their plantations. The best manure we have for cotton is ashes. My mode of putting it on is this: I run a scutter furrow, then from a basket or box scatter about 35 bushels per acre in the furrow thus opened, and then with a dagon make the cotton ridge. I tried ashes and cotton seed as a manure last year, in the same field, and used the same quantity of each. The ashes made far the best cotton; it took an early start, looked green and fresh, whilst that planted on the ground manured with cotton seed, looked yellow a long time, and never recovered the check it received at first coming up.

Did you ever know the spavin cut off from a horse? If not, I can inform you that a few years since one of my carriage horses was badly spavined, so much so as to be almost useless. I had him thrown, then cut the skin immediately over the spavined bone in the shape of a ∧ then peeled it down until the bone was exposed. I then took a chisel and with a blow or two from a mallet I soon cut off the bone. The horse soon recovered; it has now been four years since, and not the least return of the disease."

The inquiries of our correspondent, have been answered in a private letter as requested.

AGRICULTURE IN GEORGIA.

We make the following extracts from a letter of our correspondent T. Forster, of Walker co. Georgia.

"We have here a fine country, rich land, good water, excellent climate, convenient markets, and handsome profits in farming. I have been in your state, the yankee states, the middle, western and southern states, and have found no section of the country presenting more advantages than this. We are getting a dense population. Until recently the spirit of agriculture had scarcely reached us. I proposed to several of my neighbors to take agricultural papers, and five copies of the Cultivator, with some other papers, were taken. The change produced is very perceptible, and the spirit of inquiry and improvement is awakened. To me, I have no doubt the Cultivator has been worth one hundred dollars the past year. I left the practice of medicine a few years since, and turned farmer. I confess I knew but little about the business and made but slow progress, when I commenced taking the Cultivator, and am now succeeding to my satisfaction. * * * Last year I took two copies; one for myself, and one I kept on a recruiting tour; the plan proved an excellent one; has been of service to many who could not take a paper, and has added several to your list of subscribers. * * * We are in great want of all sorts of farming tools, and threshers, straw cutters, and corn crackers, &c. Are those of which figures are given in the Cultivator, patented? [Yes, most generally.] If not, such descriptions of the best of them as would enable a mechanic to make them, would be of great benefit to us. If some good mechanic would come to this country and make all such things, and keep a tool warehouse, I think he might make a fortune."

CANADA THISTLE.

Mr. Mills of Elbridge, Onondaga co., sends us the following directions for the destruction of that pest of the farmer, the thistle. Although too late for adoption this year, we hope it will not be forgotten another, but receive a full and fair trial.

"Take any piece of stubble land, pea or oats stubble is preferable, as it has less sward. I then if needful manure it well, and plow it carefully on the 20th of April. About the 15th of May, I drag it thoroughly. On the 25th of May, I cross plow, and in the middle of June I again drag it, being careful to harrow crosswise of the furrow. On the 28th or thereabouts, I plow and sow one bushel of buckwheat to the acre. At this season, buckwheat will vegetate very rapidly, and in two weeks will completely cover the ground. The thistle, by former plowings being checked, the buckwheat will in ordinary seasons thoroughly subdue them. I have tried various methods of destroying the thistle, and I find this the best."

SUMMER FALLOWS AND PLOWS.

Summer fallowing is a most important part of the farmer's work, and it is one which should never be attempted, unless it can be fully done. Where the soil is deep, permeable, rich, and in particular free from all weeds, summer fallowing may be dispensed with, as a single deep plowing with a careful inversion of the surface, followed by the harrow, roller, &c. will fit the earth for the reception of the seed. But such farms are few, and on all others, summer fallowing can alone be relied on for the proper tillage of the soil. If the soil is properly constituted, there is not the least danger of over tillage; and in summer fallowing the true rule seems to be to plow till there is not a root, plant, or seed left in the ground to vegetate or interfere with the crop. Treated in this way the soil is thoroughly cleaned, its particles are divided and exposed to atmospheric influences, and the decomposition of the animal matters is facilitated. In this country, we as yet know little of what would be called summer fallowing in England or Belgium; although it is probable an improved agriculture, will render such examples less uncommon among us. June is not too early for breaking up lands, and from this first operation, the plow should be used so as to prevent vegetation of any kind on the fallow.

Let our farmers this year in breaking up their fallows, try some of the new plows, constructed on scientific principles and offered for their use. The difference in ease of labor and neatness of execution, between Ruggles, Nourse & Mason's Worcester, or Mooer's side hill plow, and those in general use, cannot be appreciated by the farmer until they are tried. We have one of the first kind, received from the makers last fall, and this spring have not only given it a fair trial ourselves, but given our neighbors the privilege; and it is pronounced one of the very best implements in ease of draft, and perfection of work,ever used on our farms; and we think those who want a first rate plow, will hardly do better than to purchase one of the Ruggles, Nourse & Mason implements. The difference in draft between these or the Mooer's plow, and the common ones, is equal to one-third, a relief to a team which will be sensibly felt.

BOARD FENCES.

Our correspondent, Myron Adams, informs us that the improved board fence noticed by Mr. Horsfield in our April number, may be found described in the 4th volume of the Genesee Farmer; that some ten or twelve years since, his brother conceived the plan of this improved fence, and "having a saw mill and plenty of lumber, the improved board fence went up rapidly." "Its general appearance was pleasing, not to say handsome." But Mr. Adams adds—"Alas for all human inventions! There came a wind one day, such as doth oft blow over the land, sweeping away the fairy castles of many fanciful builders. Then if Mr. Horsfield had been present, and seen what a wreck of *upturned matter* lay before him, he would not have hazarded the expression 'that it stood a good chance to outlive the builder.' But my brother is a man of energy, and not to be baffled by one overthrow. A general turn out was called—*every man to his post*, and the fence stood erect again. Then a strip of oak scantling was driven into the ground, and nailed to the outer edge of each post; but all would not do; fix it any way you would, the wind had the longest end of the lever, and go over it must. But its being easily overthrown was not its only fault. It had also the power of locomotion, and was constantly changing places; and as a live fence, its constant tendency was to create broils by its encroachments. It at length became a vexation beyond endurance, and not a vestige of it now remains. My advice to your correspondent, or any reader who may be disposed to try an experiment with this *improved fence*, is: that they select a valley so deep that old Boreas with his blasts can never enter, where no ill bred porker shall ever be permitted to rub his lazy sides, and then if built as your correspondent recommends, and well painted, and the builder thereof is dying with ennui, it may indeed outlive the builder."

DESTRUCTION OF WEEDS.

There are few things more essential to the farmer than having a good wheat crop. He gets a better price for his grain, and what is quite as much, he has no fears from injury in using such pure wheat for seed. Weeding wheat therefore is not to be neglected. In a wheat field, every thing that is not wheat is a weed, and should be pulled out at once. Remember that a rank, thrifty weed, chess, cockle, steinkrout, &c. draws sufficient nutriment from the crop to sustain a handful of good ears of wheat, and which belong to them. Thorough summer fallowing is the best eradicator of weeds, but if any escape and spring up, they should be carefully gathered and destroyed, before the seed ripens.

Let no weed ripen its seed on your farm, if it can be prevented. The thistle, johnswort, and similar pests, are left so long in many cases before they are cut, that they mature their seeds, and these do as much mischief as if allowed to stand and ripen, while the labor of cutting them is nearly lost. The best way to treat them, is to rake and burn them as soon as dry. This destroys their power of mischief effectually. It is very bad policy to put weeds, whether cut with your hay or grain, into your barn, as the manure of the yard will be filled with seeds, ready to spring up whenever and wherever it is applied to the soil. There are thousands of farms in this country, the productive value of which, both in grain and grass, is lessened full twenty-five per cent in consequence of the vile weeds with which they are infested. Sowing spring grains, such as spring wheat, barley, or oats, has had a bad effect in extending the growth of weeds, and in many places the system must give way to summer fallowing, or cropping will be impossible.

PRESERVATION OF GRAIN.

A correspondent of the Farmer's Cabinet, says, that "in a late visit to a branch of the Cooper family in New Jersey, he observed that the grain of different descriptions was stowed away in large strong iron bound casks, and in these the wheat, &c. was preserved for any period, no matter how long, without fear of weevil, grain worm, vermin, damp or moldiness. The grain is introduced by a funnel through the bung hole, and when full, the cask is carefully closed, and made air tight, and kept in that state by occasionally driving the hoops. The casks are laid on sleepers so high that a bushel measure can be placed under them, when it is necessary to draw the grain."

It is evident this plan would only answer where the grain was thoroughly dried, as if damp when deposited, entire moldiness, or even decomposition would ensue. In those parts of France, where grain is kept in vaults prepared in the earth, or in the limestone rocks, the grain is fully dried, then the vaults are filled, and afterwards hermetically closed. The suggestion that this method of packing in good casks, where grain is to be transported by sea, and afterwards used for seed, would be preferable to packing in bags, we think just, provided the grain was in a fit state at the time of deposit in the casks, and was aired as soon as possible after its arrival at its destination. Every farmer is aware that but a slight degree of heating is fatal to the germinating qualities of grain, and must be sedulously guarded against, when grain for seed is to be transported to any distance, in a confined or damp situation. Many of the specimens of wheat imported into this country from Europe, have either wholly or partially failed from want of attention to this matter.

COCOONS WANTED.

The following may interest some of our subscribers, particularly those who have cocoons to dispose of, or who are interested in improved silk machinery:

"Gentlemen—You would confer a favor on a subscriber, by informing me where could be got a supply of good peanut cocoons, at reasonable prices. Those would be preferred in which the worm has been destroyed by the fumes of charcoal or steam, as baking is an injury to the silk. I have a brother well acquainted with the management of silk, and preparing it for all kinds of manufacturing purposes. He is getting up the best kind of machinery, and is ready to purchase a quantity of cocoons, and would like to make arrangements with one or more silk growers for a supply. You shall soon hear from me in relation to the machinery about to be adopted; I have no hesitation in saying it is the best that has been manufactured in the States. William Naylor."

New-York, 554 Broadway, April, 1842.

LARGE PIGS.

Messrs. Editors—I would beg the liberty of sending you the weight of four pigs reared, fatted and killed by M. Vanderlin, Esq. of this town. They were a cross of the Berkshire with the common hog. The four were all of one litter, and 9 months and 8 days old, when killed. They were fed with slop from a tavern house, until Sept. 1st, then they received boiled potatoes, with one bushel of meal made of equal parts of corn, oats and peas, to six bushels of potatoes, until the 20th of December, when killed. No. 1, 483 lbs. | No. 2, 404 lbs.
" 3, 368 " | " 4, 328 "

Gross weight, 1,583—Average weight, 395¾.

Manchester, Vt., April 28, 1842. John Cooke.

Original Papers from Contributors.

HILL-SIDE DITCHES.

MESSRS. EDITORS—I see in the April No. of the Cultivator, an article from Mr. Easley, recommending the ditching of hill-sides. This is a subject which I conceive to be of great importance to those farmers (and they are many,) who cultivate broken farms. It is a matter of some surprise that the agricultural journals of the country should have so long preserved silence upon it, when it is remembered that few farms are so level as not to be seriously injured by every heavy fall of rain. It is high time that we, of the South especially, were casting about us for some effectual plan to remedy this evil. From my own reflections and knowledge of the course or system of farming, pursued by our cotton-making, pork-buying people, I must say that I know of no plan so well adapted to that system, as the one advised by Mr. Easley. Though some eminent agriculturists have objected to the practice on account of the waste of land which it causes and the ugly appearance which it presents to the eye, yet as I find that it has been recommended on one occasion, by the late Judge Buel, whose authority with me, ranks high, I shall not be deterred from practicing it yet a while longer; preferring rather to lose a small portion of land, than to have my eyes pained at the sight of gullies and soilless hill-sides—a sight by no means calculated to please the fancy, or to make home "more enticing." I do not commend the taste of those who object to it, as being in bad taste. Let the work be well done—neatly, if you please—and they will have little reason to complain of its unseemly appearance. That which is useful, can never be objectionable to men of sense, where a proper regard has been had to style in its construction or execution.

But to my purpose when I first set out. The grade or fall in the ditch, advised by your correspondent, will not answer. A fall of a half inch to ten feet is not sufficient. It is objectionable on account of the difficulty most farmers would experience in making an instrument sufficiently accurate to indicate that fall; on account of the slow and sluggish motion of the water in passing off when collected, thereby causing the ditches to fill up every heavy rain; on account of the unevenness of our lands generally, as it would require a surface as smooth as a planed plank to operate upon, and lastly, would require too many ditches to pass off the water which is not absorbed by the land. But let ditches of 2½ or 3 inches fall to 10 feet, be judiciously located and properly excavated, and they will preserve land, will not wash into gullies on clay soils, and require but little time or labor to keep them in order. Less grade will do on land, the sub-soil of which is sandy. I prefer to have my ditches wide but not deep—sloping on each side and the bottom concave—of size sufficient to hold all the water, which the heaviest rains would throw into them under any circumstances, for it must be remembered that some lands absorb more freely than others, and that the same land is more or less absorbent according to its condition or the manner and depth of the plowing. If there is science in any one thing in farming, (and that there is I have no doubt,) it is in ditching. That it has many advocates, is a fact so well established, that none can deny it. That it is the *best* plan yet discovered, for preserving hill-sides, I do not assert, but until I receive "more light" I shall continue to practice it, notwithstanding the objections urged against it. Those who know a better plan, would do the world a favor to publish it, and confer a favor for which unborn generations would thank them.

The most judicious plan of cultivating land, in connexion with the ditches, is to lay off the rows on a level, or as nearly as possible. In doing this, the drilling system must of course be pursued. It is done with the aid of the instrument used to lay out the ditches, with an additional mark upon it, to point out the level at every stride. It is our practice to lay off with the instrument, any number of what we call guide rows, on every hill-side, that the judgment may dictate, and then with the aid of a small measuring stick of the length that we wish to have the rows in width, proceed to fill up the intermediate spaces in such manner as to keep the rows as much on a level as the nature of things will allow. Some planters think it better to give each row an inclination to the ditch, so slight however, as to avoid the washing of the land, by the passage of the water in the rows. This may be the better plan, but I cannot think so. I cannot bring myself to believe it, for it is hardly probable that water can be made to go down hill without taking with it more or less soil, according to the rapidity with which it moves or the force which it acquires in its descent. I have now given you my opinions upon the subject of preserving hill-sides. I shall be delighted, should any more effectual and practical method of effecting their preservation, be communicated through the columns of the Cultivator. The South especially, is deeply interested in ascertaining the best mode of doing it, as from our course of cropping, such lands are in constant cultivation, and of consequence almost literally exhausted, before the timber left upon them, decays.

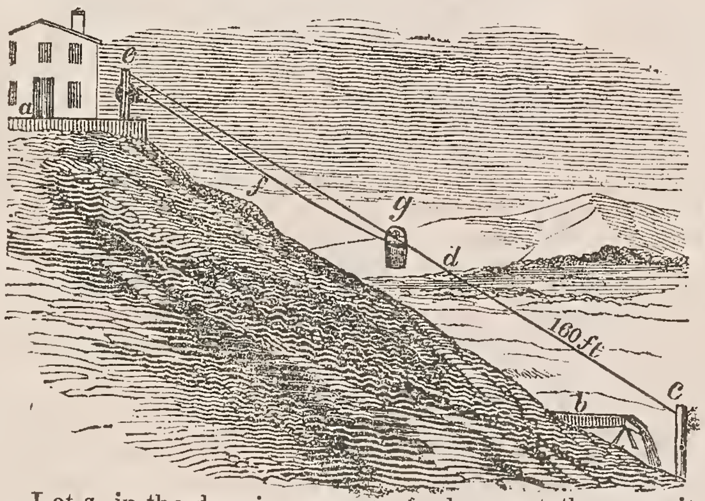
The people of the South are many years behind the people of the North, in the improvement of their farms, and lamentable to tell, are too much wedded to the old system to depart from it. But a new era has dawned upon us. Agricultural journals are eagerly sought and read, and agriculture is made the theme (as it should ever be,) of conversation among farmers. We have a "Planter's Club" in our county, composed of many of the most enterprising farmers among us; fine stock of several kinds, particularly of swine, and if I am not much mistaken in the signs of the times, we shall have in a few years more, "improved farms." I find that the Cultivator has done much good here, though it is objected to by some, on account of its emanation from a northern latitude, and supposed inadaptation to our climate. Northern or Southern, its pages contain matter, in my estimation, of the deepest interest to the farmer every where, and principles which are valuable, and which are as much principles in the South as in the North. I have but little doubt that the Cultivator would be more universally esteemed here, if it had more southern contributors. I do not look upon it myself, as a local paper, and I am persuaded that none who read it regularly, can regard it in any other light than national, in its tone, object and intention. A GEORGIAN.

Hancock Co., Ga. April, 1842.

☞"A GEORGIAN" is "acceptable," and we shall expect him to fulfil the promise given in his private note, on the part of himself and friends.

WATER ELEVATOR—(Fig. 56.)

MESSRS. GAYLORD & TUCKER—As a partial recompense to the Editors of the Cultivator, I cheerfully remit to you your annual compensation, and I feel also in duty bound to your numerous correspondents to repay, if possible, in part for the instruction, profit and pleasure, they and you have furnished me through the columns of the paper that monthly cheers the fireside, informs the minds, and lightens the toil of some 20,000 of our American yeomanry. I therefore send you a plan of the manner in which I obtain the "ale" which I use. Many like me, I presume, have with great expenditure of breath, flesh, and patience, tugged for years to their kitchen and table, a portion of the crystal spring that gurgled below them, and they probably would be thankful for a cheap, easy, and expeditious mode of raising it, otherwise than by the primitive slip-and-spill method of bringing it by hand. The annexed drawing of a wire railway for elevating water, or indeed any weight up an inclined plane, shows one I have had in operation more than two years, and is found to work most admirably.



Let *a*, in the drawing represent a house at the summit of the hill—*b*, the spring—*c*, a post just below the spring, or two of them, with a roller between, by which the wire can be easily tightened or loosened—*d*, a common good sized wire—*e*, a platform with a post to fasten the wire and windlass, and to raise the wire clear of the inequalities of the surface—*f*, a cord fastened to the pail g, which, when water is drawn, is suspended on two hooks attached to a pulley, slide, or even the half of a common cast door hinge through the junction holes of which the railway wire passes. This, when the pail is hung upon it, will quickly slide to the spring, where it will immediately fill from the spout, to the end of which a cross spout is fitted which turns the stream at right angles, thus permitting the pail to slide directly to the proper place without touching the spout at all. It is then drawn rapidly up by the crank and cylinder at the top of the hill. My wire is 160 feet, or nearly 10 rods, in length, and I can draw a pail of water with less labor, and in less time than is usually taken to draw a bucket from a well 25 feet deep. The expense for cord and wire was less than two dollars; the "fixens" cost me two or three days' work. It has been in operation two years without repairing, and is better to me than a first rate well of moderate depth.

When large quantities of water are to be raised, two wires may be drawn, so that one bucket shall ascend while the other is descending. Wells are more expensive, and less useful than this apparatus, to those who are situated like myself. Besides well water, to those accustomed to pure spring water, smacks too much of antiquity, while this corresponds with the railroad, steamgoing improvements of modern times. This alone would recommend it to the favor of some, but perhaps to the prejudice and disfavor of more. Therefore test it by experiment, and judge of it by its merits.

WILLSON NEWMAN.

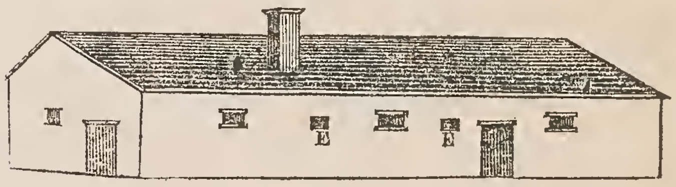
NOTE BY THE EDITORS—Mr. Newman's farm is situated on the rich diluvial deposit of South Onondaga, on the margin of a narrow valley or depression in this deposit, through which flows the west branch of the Onondaga creek. This deposit, made of limestone, gravel, sand, &c. forms one of the finest soils for cultivation, and varies in thickness from 40 feet to more than 100. Generally it is very difficult to obtain water in this deposit, by digging wells, as its porous nature allows water to flow off very readily. Where, however, the streams have cut down to the clay which underlies the deposit, copious springs of fine water appear, as is the case on the farm of Mr. Newman. To elevate this water to the level of the buildings and the plain, the water elevator of Mr. Newman appears to be well adapted, as in digging, no water could be reached, until the retentive strata was struck, some 55 feet in depth.

But we would take the liberty of suggesting to our friend Mr. N. whether an apparatus similar to those figured and described at pages 47 and 174 of the 7th vol. of the Cultivator, in which, by means of a wheel and forcing pumps, a constant supply of water is raised to a greater height than Mr. Newman's buildings above his spring, would not be preferable to his. If, as he informs us, his stock rely on the water of this spring for their drink, we think they would thank him to adopt a plan which should save them as well as himself the trouble of descending and climbing such a hill. The only difficulty would be in the water required to work the wheel; if the spring is sufficient for this, he can water his yard as well as his house easily.

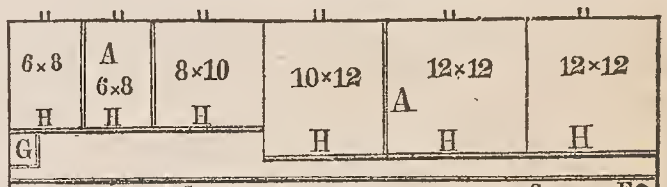
It appears to us that this simple machine of Mr. Newman's might be made useful for other purposes than drawing water. For instance, why might it not supersede the long and expensive inclined planes sometimes used by builders? Why might it not supersede the labor of the mortar and brick carriers? A wire railway of this kind might pass over streets without danger, and by increasing the length, any requisite elevation be gained.

MR. HALL'S PIGGERY.

EDITORS OF THE CULTIVATOR—Acting on the principle that every farmer may impart some information, whereby his brother farmers may be benefited, and observing the readiness with which you give place to nearly every communication on the subject of agriculture which you receive, I have taken the liberty to forward you a drawing and plan of my hog sty, or in more modern phrase, my piggery, which I erected on a plan partly original, and partly gathered from the pages of the Cultivator. From observations I have made on the course pursued by some other farmers, I have formed the opinion that a course of mixed husbandry, on farms adapted to it, is the most advantageous, not only to the farmer, but also to the farm. I have been gradually striving for the last two years to pursue such a course, and as the erection of a piggery was essential to the business of making pork, which is now an established business on the farm, I determined to erect one; from which I have slaughtered the last fall and winter, 30 hogs, weighing 7,200 lbs., worth at prices for which I have been able to sell, $360, which forms no inconsiderable item in a farmer's productions. Still further to enhance those productions, I have taken from the yards appertaining to the building, (what every *good* farmer knows how to prize,) about seventy heavy loads of manure.



[*Front and End View—Fig.* 57.]



[*Ground Plan—Fig.* 58.]

The enclosed drawing, (fig. 57,) gives you a view of the front and west end of the building, which is 56 feet long and 20 feet wide, divided into six apartments for the hogs, as you will observe in the ground plan, (fig. 58,) each of which communicates with a yard in the rear of the piggery, and are designated by the letters A. A; each apartment communicates with the others by doors sliding up and down in a groove. The feeding troughs H, H, extend the whole length of the building adjoining the alley, and are covered by doors hung to a girth above them. The doors are fastened, when open and when shut, by a wooden bar sliding in, and entering staples of iron. They can be opened for the purpose of feeding, and shut again in an instant. The apparatus for cooking, and conveying food to each apartment, consists of a steamer, B, constructed of planks, with the exception of the bottom, which is heavy sheet iron, placed upon a brick arch, the sides of the steamer extending so far over the walls of the arch as to prevent burning. It will contain 15 bushels of roots, and will cook them in one hour. When sufficiently cooked, they are immediately transferred to a car placed upon a railway, C, C, which runs the entire length of the building in the alley, which is eight feet wide, and as close to the troughs as is convenient, and also close to the steamer, which is placed on the opposite side of the railway. D, D, are bins for roots, in each of which a window opens for the purpose of shoveling them in, represented at E, E. At F, is placed a suction pump which brings water from a spring outside the building—G, bin for ground feed—I, I, doors.

I shall make the process of cooking food, feeding, profits, &c., the subject of another communication.

Very respectfully yours, B. A. HALL.

New Lebanon, March 25, 1842.

REPLY TO MR. BICKETT AND OTHERS, ABOUT AYRSHIRES.

Messrs. Gaylord & Tucker—You are well aware that the letter about English stock that appeared over my signature in your paper of November last, was dashed off at your request, just before leaving Albany, and if I remember rightly, was not, from the brief time I had, reperused, but was handed you with a request to correct any little errors that might be contained in it. It is not to be supposed therefore, I weighed my expressions with that accuracy that their extensive circulation would seem to have demanded. It is preposterous to infer in my observations on Ayrshires, that I could mean anything else than you were obliging enough to attribute to me in your December No., page 188, in reply to "A Novice," in which you say: "Perhaps, however, Mr. A. did not intend to assert that the cross proposed by him would give positive Ayrshires, but only a breed possessing all their essential and most valuable qualities."

Certainly this was what I intended, and as a proof of it, need only to refer gentlemen to a communication of mine on the same subject more at length, made to the president of the Kentucky State Agricultural Society, during a visit to that warm hearted, hospitable country in January last, which was written previous to my seeing the December No. of the Cultivator. I quote from this: "To those who wish for *something like* an Ayrshire already acclimated to our country, I recommend to purchase snug short horned bulls of a medium size, bred from milking families, and cross them on the best milkers at their hand, and from these make the most approved selections, and then continue," &c. The reasons I offered for this course, were that our country has paid large sums for the importations of short horns, for this object, viz: the improvement of our native cattle; and I had been informed by several gentlemen, both in England and Massachusetts, that had imported Ayrshires, that they had rather disappointed expectation. These are persons of the first respectability, and one of them a president of an agricultural society; and if the advocates of the "*unrivaled*" excellence of Ayrshires, can rebut this testimony by *facts*, no one will more readily acquiesce in them than myself. I further added in the communication alluded to: "That the Ayrshire is an excellent cow, both for the dairyman and butcher, in the particular districts of Scotland, where they are bred and fed as they are, I do not doubt." What further would Mr. B. or others, desire me to concede, unless, to assert with him their "*unrivaled*" excellence for their milking qualities? This is a stronger expression than I am prepared to admit; but if they are entitled to it, it can easily be shown, by stating their yield in milk, with all the particulars of feed, &c. *in this country*. In the trial made in the London dairies between the Short Horns and Ayrshires, the latter were found inferior in the quantity of milk, produced from the former, and I can give the name and date of a cow in this country, from a Short Horn bull, "*something like an Ayrshire*," that averaged 41 quarts of milk per day for three weeks in succession, fed on grass and clover alone. Other cows of the *same cross*, have produced from 26 to 28 quarts per day each, for weeks in succession, during the winter.

As to "staking my reputation as a breeder and judgment as a man, that the Ayrshires are a cross at all," inasmuch as I did not moot that question, I must decline from want of time, entering here on that subject. Some other matters in these comments, not being relevant to the subject, I shall be excused omitting to notice. I shall only add, that as I am a friend to the improvement of stock in any way, I shall learn and give currency to, any well attested experiments on this subject, at all times whenever possessed of them, with the sincerest pleasure.

Respectfully Yours, A. B. Allen.
Cincinnati, O. March 29, 1842.

☞We have also from Mr. Allen, a reply to Dr. Martin's last article; but, believing the public feel little interest in the subject, we cannot make room, in the present crowded state of our pages, for a continuance of the controversy.—Eds.

CULTURE OF POTATOES, &c.

Messrs. Gaylord & Tucker—Your correspondent "Columbia" thinks it is not right to plow in manure, nor to plow land in the fall of the year. Fall plowing has been condemned by our ancestors, but practice has convinced me that plowing in the fall does not injure the land. If a stiff soil is plowed in the spring of the year, when the ground is wet, the furrow slice will be as smooth as a mason can make mortar with his trowel, and when dried will be almost as hard as dried mortar, and it would be useless to undertake to raise potatoes on such a soil, plowed in the spring of the year. A light loam, in a wet season, may be tilled advantageously as Columbia recommends, but a clayey soil cannot. One of my fields, a sandy loam, was tilled last year as directed by Columbia, except in applying the manure, which was spread on the sod before plowing, and the product was fifty bushels to the acre short of the product of the field tilled in the way he so much disapproves of. One of my neighbors last year planted on the sod, as directed by Columbia, and his crop of potatoes would not pay the expense of digging, so he turned his hogs into the field, and they rooted up what few potatoes had grown. I have never attempted to raise potatoes by manuring the hills. I have known my neighbors undertake it, and if a drouth succeeded, the crop was lost. I take the manure, if possible, before it has lost any of its weight by fermentation, evaporation, or any other cause, and when I commence manuring a field I commence plowing it; I do not plow the manure in deep; four inches is sufficient for the first plowing, six for the second, and eight for the third and last plowing; this done, my field is in good condition for four years' rotation of crops, viz: potatoes, oats, clover and timothy.

I have learned by experience, that a small farm pays a better interest than a large one. I formerly owned 170 acres of land. I had the misfortune a few years ago, to lose my only son, a youth of eighteen; so I sold half of my farm, and now I find the income of my farm more than when I owned the whole, and I think I can double my present income by increasing the fertility of the soil. A few years past I have tried by way of experiment, 60 bushels of mild lime to the acre, on my oats. I think they were materially benefited, and the land made more productive by it. My oats, these two years past, averaged 56 and 58 bushels to the acre. I surveyed one acre of my last crop, had them thrashed out, and I had 71 bushels. We do not in these parts of "creation," ever expect to get such large crops as some published in the Cultivator. Yours, &c.

Tyler Fountain.
Peekskill, N. Y. April, 1842.

PROFITS OF FARMNIG IN THE WEST.

Messrs. Gaylord & Tucker—Having opened your columns for the publication of some very valuable farms "down east," I claim for the "far west," the insertion of the following exhibit of the productions of a farm on the banks of the Fox.

In the reports of the farms alluded to above, an important item, materially affecting the balance sheet, is omitted. The profit or loss of any operation, can only be correctly ascertained by taking into the account the cost or value of the capital employed.

1841. Farm,	Dr.
To cash, for its purchase, 640 acres at $5,..	$3,200
“ Stock invoice,........................	2,500
“ Labor, 2 men, $150 per year,..........	300
“ “ 1 man 4 months,...............	60
“ “ extra, in harvest,..............	35
“ Interest on capital,.....................	399
	$6,494

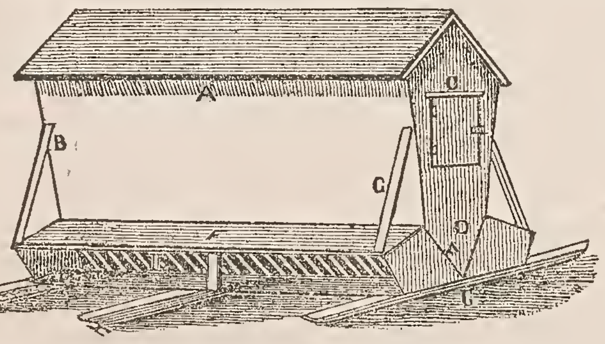
1841. Farm,		Cr.
By 40 acres wheat, 20 bus. 800 bus. at 70 c.		$560
“ 40 “ corn, 50 “ 2000 “ at 18 c.		360
“ 40 “ barley, 40 “ 1600 “ at 25 c.		400
“ 40 “ oats, 50 “ 2000 “ at 15 c.		300
“ 3200 lbs. wool, at 28 c..................		896
“ Invoice of farm,..................	3,200	
“ Stock to new account,...............	2,700	
		5,900
		$8,416
		6,494
Profit,..........................		$1,922

For the sake of brevity, fractions, and unimportant items on both sides of the account are here omitted, the object being to enable the young man with small means to contrast the produce of acres valued at $5, with those which are said to be worth $200.

Respectfully yours,
Edw'd W. Brewster.
Elgin, Kane co. Ill. March 1, 1842.

SHEEP BARN.

Messrs. Editors—Having seen an article in your paper, "On feeding sheep at stacks," I thought the subject worthy of particular attention, and after having reflected upon it for some time, have concluded to send you the following imperfect sketch of a method which must be far superior; which we will denominate a



Self-foddering Sheep Barn.—(Fig. 59.)

A, Length, 30 feet—B, Height from top of shelter, 10 feet—C, Width at the top of the posts, 10 feet—D, Width at top of shelter, 8 feet—E, Length of rack sticks, extending from the ground to top of shelter, 5 feet—F, Roof of shelter—G, Props, extending from posts of shelter to posts of barn—H, Runners by which to draw it—I, Rack, whole width of the bottom of the barn, converging to a point—J, End of shelter boarded up.

Here we have sufficient length for sixty sheep to eat at once, which they would not be very likely to do, as they would have access to hay at all times. My object in having the width greater at the top than at the bottom, is, first, that the building may hold more hay. This may be an objection in regard to the hay settling as fast as the sheep eat it from beneath the mow, but the question arises, were the sides perpendicular would not the hay settle so fast as to cause a waste? I think it would; then, second, that it may not settle so fast as to cause a waste of fodder. We consider that a building of this size ought to hold from three to five tons of hay, properly mowed away. We would recommend keeping the middle fullest at all times, that it may not wedge too much. It will be perceived by an end view of the barn, that the rack comes to a point near the ground, from each side of the mow; now if the sheep eat on, or from the base of the mow to the extent of eight feet, how can the hay wedge so much in a slope of two feet in ten, as to be prevented from descending. The shelter, being five feet high and five feet wide, protects the sheep while eating, and at all other times. The width of barn and shelter at the base, being eighteen feet, and props from outside of shelter to posts in barn, render it less liable to be blown over by the violent gales which at times sweep across our country. We think three pair of cattle sufficient to move it on level ground.

Where farmers, who are in the habit of keeping large flocks of sheep on large farms, are obliged to travel one mile or more in a day, to fodder, it is found to be an unpleasant task, especially in bad weather. In the summer season we do not think of yarding our sheep and carrying their food to them. If we were to do so, who could imagine that they would look as plump and healthy as when they have their liberty, and use such quantities as nature requires for their support? The advantages then of this "Self-foddering barn," over the stack feeding system, are these—first, the hay is protected from the weather; second, it does not get wet by fog, nor do the sheep wear the wool off their necks by reaching after the hay, as they do by feeding in board racks; third, there can be no danger of the falling of the mow as in stacks, when eat out below; and fourth, the hay seed will not be as likely to enter the wool as when they reach directly over head. George.

Amenia, Dutchess co. March 5, 1842.

CHEMICAL MANURES.

Messrs. Gaylord & Tucker—Your correspondent Mr. Geo. Woodfin, in an article on chemical manures, page 61, vol. 9, criticises my article inserted page 181, vol 8, as follows: "The well intended efforts of your correspondent Wm. Partridge, in the November No. of the Cultivator; upon a more careful examination, I am sure he will correct some errors into which he has fallen, especially when he recommends the use of caustic lime in the manufacture of sulphate of ammonia. Lime has no affinity for ammonia, and when the sulphate of ammonia has been actually formed, the moment it is brought into contact with lime, will be liberated and driven off."

I would inform Mr. Woodfin, that I am always open to conviction, whenever it can be proven that any opinion I have given is erroneous. There is no bigotry in practical science. All branches of the practical sciences are dependent on series of facts to sustain them; but when new theorists suggest changes in long established operations, whose actions have been proven by numerous actual experiments, it behooves them to point out the series of new facts which displaces the older ones. I would request Mr. G. W. to review his criticism, and see if it does not destroy his own theory. I will quote the article I wrote you, and I think any person capable of judging, will see at once, the error our friend G. W. has fallen into:

"The question has been asked, does the lime used in making alkaline vegetable powder from urine, prevent the escape of the ammonia?

"I presume caustic lime, or fresh burnt is used; in which case, instead of preventing the escape of the ammonia, it facilitates its escape. Ammonia as found in urine, is in the state of a sub-carbonate, and when mixed with caustic lime, the lime combines with its carbonic gas, and the ammonia immediately becomes volatile and will readily escape.

"If caustic lime be a necessary ingredient in making vegetative powder, its use can only be necessary to liberate pure volatile ammonia from the salts with which it is combined when in the state of urine. Plaster of Paris is a sulphate of lime, having little affinity for carbonates or sub-carbonates of ammonia; but when caustic ammonia is presented to it, a portion of the sulphuric acid of the sulphate of lime will combine with the ammonia, and leave the lime, forming a sulphate of ammonia and a sub-carbonate of lime. Hence the use of lime in the composition of vegetative powder."

It appears then that my friend Mr. G. W. agrees with me that caustic lime has no affinity for ammonia; yet if I read his criticism understandingly, he presumes I had asserted that a mutual affinity existed between them.—My knowledge of chemistry must have been very crude indeed, if I could have supposed that any two alkalies had an affinity for each other. Mr. G. W. speaks of obtaining sulphate of ammonia by mixing urine with plaster of paris, or sulphate of lime. In this our opinions differ in toto. Plaster of paris is a chemical compound, composed of sulphuric acid saturated with lime; now according to all the known laws of chemical action and chemical affinities, the sulphuric acid cannot leave the lime and combine with the ammonia of the urine, until the urine is deprived of its carbonic acid gas. In the article I sent you, I merely gave the rationale of the process by which alone a combination could be effected.

Let us re-examine what my friend Mr. G. W. says on this operation. "Lime has no affinity for ammonia, and when the sulphate of ammonia has been actually formed, the moment it is brought into contact with lime will be liberated and driven off." Now as plaster of paris is already saturated with lime, how, according to my friend's theory, can any sulphate of ammonia be formed at all by mixing ammoniacal liquids with plaster. I am really afraid my friend will have to adopt my process, before he can form his sulphate of ammonia, unless he has discovered some new principles of chemical action.

New-York, April 9, 1842. WM. PARTRIDGE.

I think, Messrs. Editors, that you should obtain the French process for making urate, for the benefit of our farmers.

Where can it be obtained?—EDS.

COMMENTS ON THE MARCH NUMBER OF THE CULTIVATOR.

UNDER the head of "Work for the month," although you have many observations well worth the attention of your readers, I must say that you treat with unmerited lenity, those seedsmen who sell seed mixed with "Canada Thistles, Charlock, Steinkrout, Johnswort," etc. for they inflict on their confiding customers an injury, from the effects of which, it often takes years to recover their lands. Merely to remind such men that they ought "*to do as they would be done by,*" would probably have no more influence on their conduct, than to sing psalm tunes to them. A severe fine would probably prove a much more effectual remedy. Indeed, something of the kind seems to be absolutely necessary, for I have found to my cost, that the practice of selling bad, adulterated seeds is becoming more and more common every day—at least, such is the fact, if I may judge by my own experience. It might perhaps, be checked—if not entirely corrected, provided the sufferers in every case would unite—when near neighbors, in publishing the circumstance, and the name of the seedsman who had imposed on them.

Under the same head, you speak of sowing clover and grass seeds on winter sown grain, in March. To this I would add as the result of long experience, that unless the seeds—especially of clover, be harrowed immediately after sowing, they will almost certainly be killed, should there be a drouth in the spring; and this has occurred oftener within the last ten or fifteen years, than good, seasonable weather. Harrowing, therefore, should never be neglected, particularly as it secures the seed from being killed by drouth, and at the same time actually benefits the grain.

The method which you mention of preventing certain insects from injuring peach trees, by planting a red cedar in the same hole with the tree, has been tried I believe, by only one person, and not long enough to inspire full confidence in its efficacy. It is, at best, little more than a conjecture, which *may* or may *not* be well founded, and of no use in those very extensive portions of our country where the red cedar is not a natural growth; to say nothing of its very soon checking the growth of the tree it was designed to protect, and thus injuring it as much as the insect themselves, although in a different way.

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I CONCUR entirely with you in your remarks on Mr. G. Cook's "Observations on farming," so far as they concern plaster of paris. I have been a close observer of its use by others, for forty years at least, and have used much of it myself. In no instance have I ever seen it do harm—although in many it has done no apparent good—whilst it has proved highly beneficial in a great majority of cases. Indeed, the idea of its injuring land has always appeared to me of a piece with the notion of the old Dutchman mentioned by Judge Peters in his little work on the use of plaster, who objected to it because (as they said,) "it attracted thunder."

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YOUR correspondent W. K. has recommended a very simple, cheap, and effectual mode of preserving ruta baga during winter, as I can testify from my own experience. But this root which is more hardy than the rough leaf varieties of turnep, (all which may be preserved in the same way,) may be preserved by a still easier method. This is—to cut or twist off the tops as they stand, and to cover them completely, by running a deep wide furrow on each side the rows, and covering with the hoe all that have not been well covered with the plow. Having tried it myself, I can speak, as our Congressmen say,—"understandingly" on the subject.

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UNDER the head "Live Fences," there is a botanical mistake which I hope you will pardon me for correcting, at the same time that I assure you I am no botanist. But seeing that you spoke of Privet and Pyracantha as the same shrub, and knowing them to be very different, at least in appearance, I was induced to consult Loudon, and some of the botanical writers of our own country, to ascertain what they said of them. All describe the Privet as a species of Ligustrum, and the Pyracantha as a species of Cratægus. I once saw a small hedge of Pyracantha. It was beautiful to the eye, with its numerous clusters of scarlet berries, thickly interspersed among its dark, glossy, evergreen leaves; but it was quite insufficient to keep out mischievous stock. How a Privet hedge would succeed in our country, I know not, having never seen one. But this shrub spreads much from the roots wherever I have met with it, and of course, if planted for a hedge, would require frequent grubbing at the sides. Loudon speaks of it thus: "Few shrubs exceed it as a garden hedge-plant: it will thrive in the middle of coal-burning cities, in the shade, and under the drip of trees; though to flower well it requires an open, airy situation. Cows, sheep and goats eat it, but horses refuse it."

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THE remarks of your correspondent, Mr. Gaius Butler, appear to me very judicious in regard to some of the topics which he has noticed; although I beg leave to differ from him as to some others. For instance, he seems to approve of manuring corn in the hill, in preference to broadcast. The whole of my own experience, and of my observations on the practice of others is opposed to it; and for reasons which I have stated in a former communication. Again, I should infer from what he says of fall-plowing, that he disapproves of it as a general practice, although he admits that "*it is best in many instances.*" This does not appear to me sufficiently explicit, considering the great importance of the subject. If I might be permitted to enlarge upon it, I would say,—that in *all* cases where lands have either sod, or much cover of any other kind on them, winter-plowing is best, particularly for stiff soils. But that spring-plowing is best where there is little or no cover of any kind, especially for light lands.

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SCOTUS seems to me to be certainly right in what he says about the seed-end of potatoes. Why, in the name of common sense, should any one incur the additional trouble and expense of "stringing them up" after cutting them off; or why should it be done in winter so as to expose them to shrivel and rot, as Scotus found they did? That a part of every potatoe may be saved for table use, and feeding stock, by cutting off the seed-end only, to plant, is a fact which was probably well known before the inventor of the stringing-up process was born. But I presume he will have to adduce very many proofs that such an operation in addition to the cutting off, and in winter too, is better than the mere cutting off in spring, and burying or preserving in some common way the parts saved for eating, before he will prevail on many to try his projects.

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THE remarks of our friend, Mr. Solon Robinson, on the Morus multicaulis, and "*the lamentable waste of land,*" that had been planted therein around Philadelphia, where he says "*many patches of the trees,*" and "*little that looked like the owners ever intended to convert them into their only proper use—the feeding of silk worms*"—induce me to assure these sufferers, with whom I have some strong reasons to sympathise, that I have found out at least four other purposes to which those trees are admirably well adapted. No tree nor shrub makes better riding switches, rods such as the whipping class of pedagogues use; nothing answers better for pea-sticks and wattle fences, whilst the leaves are actually preferred by many cattle, as I myself have often seen, to clover and orchard grass. Long life, then, say I, to Morus multicaulis, for other purposes besides feeding silk worms; although, I dare say that there are hundreds—perhaps thousands of our countrymen—who, for at least half a century to come, will sicken at the very name. For their consolation therefore, I would respectfully suggest, that whenever hereafter, we have occasion to mention this exotic, we should always call it, Morus multidoloris.

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ALTHOUGH I have most studiously avoided, and shall continue to avoid, taking a hand in the Woburn and Berkshire war, I will venture to express a hope that it may soon be ended by mutual consent; or that the parties thereto will call in umpires who are neither breeders nor venders of either Berkshires or Woburns, to settle the matter finally, and place it "on the best and surest foundations." So long as this war is waged by such equi-potent belligerents as have been battling it in your paper for a year or two past, the misfortune is, that we luckless fellows who are utterly ignorant of the comparative merits of these two famous breeds of hogs—although very desirous to buy the best—have been kept pretty much in the same tantalizing situation of the poor ass between the two apparently equal bundles of hay; and have been drawn by such equality of temptation towards both, that we have not been able to choose either. This, I think, you will admit to be a sad predicament; and one from which I hope you will exert your influence to relieve all the sufferers—not excepting your friend,

COMMENTATOR.

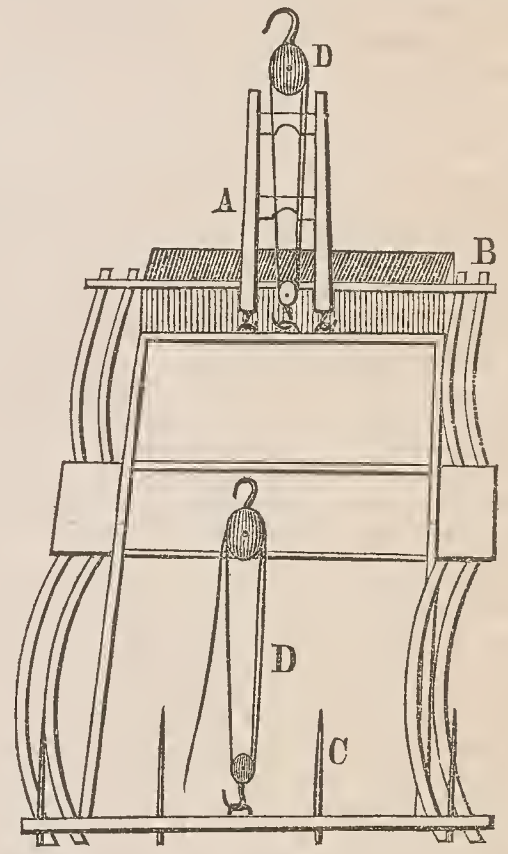
THE POTATOE OAT

EDITORS OF CULTIVATOR—In your paper of this month, is a letter of Mr. G. B. Smith, cautioning the public against the use of the Potatoe Oat, as having had an injurious effect on many horses. My experience being directly the reverse, I feel called upon to entreat those who have used this variety of oats, and those who might be about to try them, to revise their judgment, and to ascertain whether some other cause than the oats may not have contributed to the ill condition of the horses fed on them. I do not raise many oats, but have had the potatoe oat in preference whenever I could get them. In 1839, I had about four hundred bushels, all of which I fed to my horse teams, with chaff, cut straw and roots, and very little hay; and the remark of a friend, who returned from Canada in the following spring, was, that he never saw my teams in quite so fine condition. That there is more nutriment in a bushel of the potatoe oat than in a bushel of the common kinds, the weight, 42 and 45 pounds per bushel, would show. I have no doubt that Mr. Smith has stated correctly what was communicated to him. It is the fear that the influence of his well known name may deter some of my brother farmers from availing themselves of what I consider a valuable addition to our means of feeding, that induces me to state publicly my experience. JOHN MOXON.

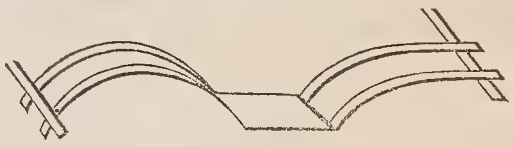
Charlotte, Monroe co., N. Y. April 18, 1842.

HAY RIGGING OR PATENT SHELVES.

MESSRS. GAYLORD & TUCKER—In several numbers of the Cultivator, inquiries have been made respecting Hay Riggings. Your correspondent from Knox co. Tenn., in the December No., has given the plan of one used in his part of the country; but as I think they are inferior to those used here, I am induced to send our pattern.—New-York affording a ready market, hay is carted a distance of forty to fifty miles on riggings of this description, called here, "Patent Shelves." The enclosed drawing, (fig. 60,) is from one I use; some of my neighbors have three slats over the wheels, one inch thick and three inches wide. The slats are morticed through the end rails and pinned; the other parts are fastened by bolts and screws.



Hay Rigging or Patent Shelves.—(Fig. 60.)



Side view of Shelves.—(Fig. 61.)

A, the ladder, at the bottom of which are hooks, which are hooked into eyes on the front rail. The slats of the ladder are hollowed out for the pole or boom to rest in, over the load, the boom being cut with a notch. This ladder prevents the load shifting forwards, and rests against the feed or driving box B, at an angle of about 85; this box is large enough to hold feed or to sit on to ride, and when the load arrives at market the traces are unhitched, the horses are turned round and fed. C, four hickory or white oak pins, 18 inches long, which hold the hay from shifting backwards. D, two double purchase pulleys, fixed at the top to a beam or pole over the wagon house; when the wagon returns from hay or straw carting, it is run under the wagon house, the lower pully is hooked into a screw eye placed in front and back rail. One man can easily hoist it from the carriage out of harms way without taking it to pieces. The common sides can be placed on for usual carting, till it is wanted again for hay or grain, and is easily lowered on the bolsters. A cleet is screwed on each side rail, to prevent its shifting on the bolster. JOHN HAROLD.

Oatland Cottage, South Hempsted, 1842.

"DUTY ON WHEAT FROM CANADA."

OUR thanks are due to our friend J. K. of Canboro, U. C., for his well written paper on this subject. On most points we have the pleasure of agreeing with him perfectly. Farmers do not need, nor should they desire much legislation on matters relating to labor, further than to defend them from the oppressive or injurious enactments of others. Reciprocity of exchange, equality in trade, is all that they can claim or reasonably desire; this granted, industry and skill must do the rest; and the present fearful condition of England proves that all beyond this, is an attempt to thwart or obstruct the irreversible laws of nature. If there is one article more than another, which all should be free to obtain at the lowest rates possible, it is bread; and the great fault in all governments, has been, that they do not make the necessary distinctions between the *necessaries* and the *luxuries* of life. We would cheerfully give our correspondent's paper a place; but it would probably lead to a discussion which, if not foreign to the objects of the Cultivator, would in the crowded state of our columns, be inadmissible.

SALMAGUNDI—No. VI.

Sheep—Items of Summer Management.

Messrs. Editors—It is unfortunately the fact that too many farmers suppose sheep require but little attention during the season of pasturage, and can secure an adequate supply of flesh to carry them through the winter, if left to "shirk" for themselves. This is a very great error; and the baneful consequences of such a course are very obvious, in thousands of instances, in the months of March and April, in the numerous premature deaths that follow. It is an axiom "that stock well summered are half wintered," which every thrifty farmer will hold in recollection and practice upon; and it is especially applicable to all who have large flocks to manage, yet not much less so, to others. Sheep, with the exception of the English varieties, which are great devourers, do not require what is usually understood as a *luxuriant* pasture, but short, yet at the same time an abundance, growing on dry, elevated lands, rather than bottoms; the latter, where sheep range upon them wholly, originating, very often, foot rot, as well as other diseases. This is generally well understood, and therefore requiring no particular authorities to prove its truth.

But having an abundance to eat, is not the only point necessary to secure health and flesh; *it is changing the flock often from one field to another.* To every intelligent, observing farmer, the fact is well known that no domestic animal is possessed of olfactory organs more keen and sensitive than the sheep; and consequently, if a flock is kept too long upon a field—and it matters not how good the pasture may be, it becomes tainted, is rejected, and the sheep fails rather than thrives. Whenever the flock is seen in a restless state, nosing here and there, without eating, then, rest assured, it is high time they were removed, even if the pasture where changed to should be shorter or less abundant. I can assure all, that I practice most rigidly what is here preached. Early in the spring, after ceasing wholly to fodder, I rarely suffer a flock to remain on a field beyond two or three days, and the balance of the season, change as often as once in five or seven days, depending, of course, upon the supply of grass which each field may afford; but never deferring it longer than a week under any circumstances.

It must be obvious, in order to carry out this policy, that the fields of a sheep grazing farm should be small; and the flocks likewise. My fields vary in size from 8 to 15 acres; and I never permit over 100 sheep to herd together, at any season, at least, not after one year old. From long experience and close observation, I am so well satisfied that small fields and frequent change of pasture, is the true policy, I am willing to make a pledge, that 125 sheep can be kept in *better health and condition* by its adoption, than 100 can in disregard of it, *on the same number of acres;* and I doubt not very many of your readers will concur in this statement.

I have not, until of late, been of the opinion that the cultivated grasses were best relished by sheep; but last season I was resolved to test the matter, and the result induced me to think differently from what I had previously supposed. One of the fields upon which a flock was placed had never been plowed; being hill-sides bordering a brook, on which grew June grass, natural to our soil; the other adjoining field was seeded two years before wholly with timothy, being rather too low for clover. The bars communicating between these fields were left out for the sheep to change themselves; but I soon found it was "no go;" they were determined to stick to the timothy as long as there was stock or root left; and in the meantime, the natural grass in the other field grew unmolested. After this, I tested it with another flock, on another part of the farm, and a like result followed. Having established so important a fact, I mixed this season, an equal quantity of timothy and clover for seeding; heretofore using a proportion of one-third timothy—unless in occasional instances when it was wholly used, from the soil being too wet for clover, where it is soon thrown out by frost, especially if it is tenacious or clayey.

It is perhaps not generally known that no domestic animals seek for so great a variety of food, as sheep. They will occasionally eat of every plant and noxious weed that grows upon the soil where they range, and especially aromatics. This fondness for variety, the practical sheep master has often seen manifested, in the avidity with which his flock will devour the leaves of the milk weed, and even burdock, indeed of almost every thing, if cured with the hay. There is true philosophy in this, for the acrid and bitter properties of these and other plants of like nature, aid wonderfully the digestion of other food. "Instinct is a great matter," said old Jack Falstaff. True as the needle to the poles, it points unerringly the way for the individual welfare of the whole brute creation. How important, then, is it, with a view to perfect management, that the shepherd should ascertain the likes and dislikes of the interesting animal for which he has to provide !

The philosophy of *salting sheep* frequently, during the season of pasturage, is no longer questioned; yet it is shamefully neglected. The change from dry food to grass should not be sudden; but notwithstanding this care, more or less will scour, if salted too much, immediately after dry fodder is wholly disused. For several weeks thereafter, less than two quarts to the hundred is better than a larger quantity; after which, about four quarts is the amount I give, and that, on the average of the season, once in about five days. The above caution of salting in small quantities should be rigidly observed with yearlings, until after shearing. Salt is a material aid to the digestive organs, and it is a pretty well ascertained fact, also, one of the preventions of disease with nearly all domestic animals; and if given in judicious quantities, will induce greater thrift and condition. Hear what Youatt, the distinguished sheep historian, says: "Passing by the beautiful country of Montpelier, (France,) and the mouths of the Rhone, the traveler can study the fine sheep and the sheep husbandry of Arles. The district of the Cran, in length nearly eighteen miles, and about half as much in breadth, extends from the mountains towards the sea coast. It is one uniform gentle declivity; in no part of it is there the slightest portion of stagnant water, and not a tree or bush is to be seen. The soil is consequently dry, and apparently barren enough; but the herbage which it affords, is that which peculiarly suits the sheep, and the cocks-foot grass, and the clover, (*Trifolium pratense,*) and the common thyme, and the wild thyme, and the lavender, (*Lavandula spica,*) grow amid the flints, affording a pasture nutritive, without one dangerous aqueous property, and of a luxuriance that would scarcely be deemed possible. No less than 130,000 sheep grazed on this declivity. A writer in the Memoirs of the Royal Academy of Sciences at Paris, attributes the thriving of the sheep on such a spot, *to the free use of salt*, thereby enabling the *digestive organs to extract every particle of nutriment which the food contains.*" He says, "on this spot, so seemingly sterile, by the free use of salt, more numerous flocks are bred and reared than upon any other common of equal extent throughout the whole kingdom; and what is not less remarkable, the sheep are *healthier, hardier,* and *endure the severity of the winter with less loss,* though they have fewer sheep-cots for covering, than those fed and bred on more copious pastures, and that have, besides, the advantage of more convenient shelter." Other authority on this subject could be cited, but the above is deemed quite conclusive.

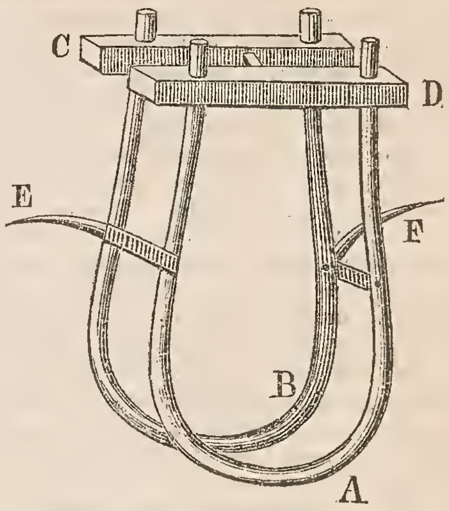
I had almost forgotten to notice a practice with thousands of farmers—and a lazy one it is too—when removing a flock of sheep, of letting down only the *ends* of the bars, instead of taking two or three of the lowest *entirely out.* All know who have witnessed it, the rush that is made at such times, and consequently, feeble sheep are often thrown down, run over, and if heavy with lamb, injury must follow. But this is not all; the great danger is of getting their feet fast between the bars, and thereby legs are liable to be broken or severely injured. If you are in a hurry, you will save time by adopting what is recommended.

Mammoth Hog !—I am quite as much opposed as any of your readers, to accounts of big calves, hogs, and what not, unaccompanied with statements, *how* they were made such. His distinguished swineship whose dimensions, weight, &c. I am about to render, was slaughtered some five weeks since, distant about two miles from my residence. The scene was witnessed by an hundred or more of my neighbors, and I would have been present myself, had I not forgotten the day fixed for the termination of his lordship's existence. Like some of the counterfeit aristocracy of our country, his pedigree is remarkably short, viz: sire, full-blood Yorkshire; dam, full-blood Land-pike. His proportions were as follows: live weight, 1,108 lbs.; dressed do. 1,040 lbs.; length, 7 feet 8 inches; height, 3 feet 9 inches; girth, 7 feet 5 inches; age, 2 years, 11 months and 4 days. Nothing was done behind the curtain; but weight and measurement were witnessed by all present, and the above statement was rendered by the "marshal of the day." The little difference between the live and dressed weight, will, I think, surprise all. He was kept as a boar until two years of age, and put up for fattening in September last. The average consumption of food was 14 lbs. of corn meal, with occasionally a few cooked potatoes, per day. The owner and fattener's name is Mr. Wilson Merritt, of the adjoining town of Genoa, and county of Cayuga. Can Mr. Bement, or Doct. Martin, beat the above? *Nous Verrons.*

Agricultural Census.—I had prepared a table embracing the statistics of wheat, sheep, and wool, copied from the late agricultural census report; but I perceive from the Cultivator, (just received,) that I have been anticipated, by yourselves, in publishing the whole. I am right glad you have done so, for it is a document of the highest value to the statesman as well as agriculturist. Your comments appended, are of the genuine "American stamp," and will, we think, be responded to most cordially, by every true lover of his country. For my own part, I love to dwell on agricultural statistics. They constitute a sure index of a nation's prosperity, or otherwise, its glory or shame. Who can calculate, now, the vast aggregate product of labor of our beloved country, fifty or an hundred years hence? None. All, though, can respond, mighty and wonderful will be the amount! A word more. It will be seen, on reference to the table, with surprise to many, that sisters Ohio and Pennsylvania—(and "Old Virginny" *ain't slow*)—are ahead of the Empire state in the amount of wheat; but if either the crops of '40 or '41, had been taken, we would, beyond question, have taken the prize, as all recollect the universal failure of our crop in '39, as reported in the statistical table. There are unaccountable errors in the *wool statistics*, averaging, it will be observed, less than one pound and three-quarters to each sheep; whereas, the true average, all will concede, cannot possibly be less than 2½ lbs., and is not unfrequently estimated as high as 3 lbs. The errors must have originated, in many cases, from official misduty, and again, rendering to the officers, often perhaps, only the amount *sold*, neglecting to include the quantity reserved for family use.

Wool, and Better Times.—The following appeared in my N. York paper, received to-day. "Altogether, there is much cheerfulness and hope among moneyed men, and *better times* are looked for as *immediately at hand.*" "Boys, do you hear that ?" Better times, eh? Well, we want them amazingly in these "diggings;" therefore let 'em slide, the sooner the better. A word about wool. The prices the article has borne for the last six months, or more, will be no criterion for the present clip. The weight which has depressed it is about to be lifted at Washington; therefore let every wool grower *think twice before he sells once.* All may hope to get cost, at least, which few of the fine wool growers have received for several years past.

L. A. Morrell.



COW COLLAR—(Fig. 62.)

Messrs. Editors—It often happens that valuable cows acquire the habit of sucking themselves. They thus rob their owners of their milk, thereby lessening materially their value. The question then presents itself, "What can be done to prevent them ?" The farmers in and about *this* neighborhood, construct a collar, (I use the term for want of a better one,) that has proved most effectual. I send an illustration (fig. 62,) with an explanation, because I think it will be better understood than I could otherwise make it.

A and B, in the cut, represent two ox-bows, of a size suitable for the animal for which it is intended. The bow marked B, should be a little the largest, corresponding with the size of the neck at the shoulders. C and D, represent the yoke or neck piece. It is formed of two pieces of wood of a size say 1½ by 2½ inches, and framed together by means of a cross piece, which gives it the appearance of the letter H. In this yoke are bored four holes of the size of the bows, and at such distance apart as would best receive them. Across the bows, midway from the bottom to the neck piece, are riveted two pieces of iron marked E and F. These pieces have a spiral termination. They should be bent out somewhat, lest they unnecessarily pierce the sides of the animal.

Query—How can a queen bee be distinguished, and by what process can she be taken from her colony ?

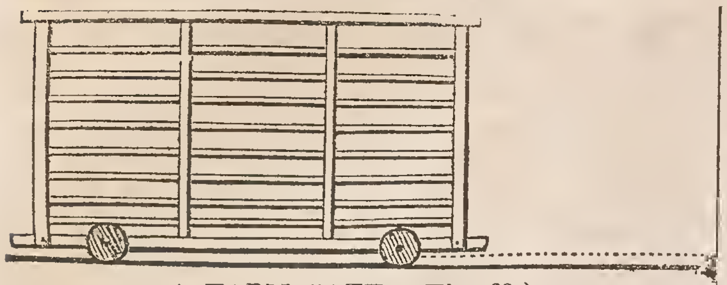
Berlin, Conn., March 18, 1842. R. North, Jun.

ORIGIN OF THE MORGAN HORSE.

Messrs. Gaylord & Tucker—Mr. Edward Terry, of Rochester, Vt., recently sent me two numbers of your Cultivator, containing some account of the origin of the Morgan breed of horses, and also an affidavit of John Stearns, of St. Johnsbury, Vt., relative to the same subject. I have read the affidavit of said Stearns attentively, and know that he is entirely mistaken in all his statements relative to the time said horse was brought into Vermont, the place from which he was brought, and the manner in which he says his uncle John Goss, obtained said horse of my father. I know very well that Mr. John Goss never obtained said horse of my father in any way whatever. My father owned said horse to the day of his death, and in the settlement of my father's estate, said horse passed into the hands of William Rice, then living in Woodstock, Vt., since deceased.

I will now relate the facts relative to said Morgan horse, as I recollect them. My father, Justin Morgan, brought said horse, or rather said colt, into Randolph, Vt., in the summer or autumn of 1795. Said colt was only two years old when my father brought him to Randolph, and had never been handled in any way, not even to be led by a halter. My father went to Springfield, Mass., the place of his nativity, and the place from which he removed to Randolph, in the spring or summer of 1795, after money that was due to him at that place, as he said; and instead of getting money as he expected, he got two colts, one a three years old gelding colt, which he led, the other, a two years old stud colt, which followed all the way from Springfield to Randolph; having been, as my father said, always kept with, and much attached to the colt he led. Said two years old colt was the same that has since been known all over New England, by the name of the Morgan horse. My father broke said colt himself; and as I have before-remarked, owned and kept him to the time of his decease, which took place in March, 1798, and said horse was five years old the spring my father died; and as before stated, soon after my father's decease, he passed from my father's estate into the possession of Wm. Rice, of Woodstock, Vt. I cannot state positively that my father purchased said colt in Springfield, Mass., but I am very confident that he purchased him in that town or in the immediate vicinity on Connecticut river, and I know that my father always, while he lived, called him a Dutch horse.

Stockbridge, Vt., March 1, 1842. Justin Morgan.



A FARM GATE—(Fig. 63.)

Editors of the Cultivator—I herewith send you a rough sketch of a gate I have had in operation for some time, and find it answers an excellent purpose. It can be built by any farmer and costs but a mere trifle, as the materials can be procured on any farm, and are not valuable for any other purpose—recommendations which will render it the more acceptable to a great portion of my brother farmers, as it requires no outlay of money, and is yet exactly the thing they want. In traveling through the country, I have discovered generally the most wretched defects in gates and bars, of anything that relates to fencing; not unfrequently finding a farm tolerably well fenced in all other respects, and the bars miserably defective, to say nothing about the time spent in taking them out and putting them up, and gates, if any, in a miserable sagging, tattered condition, rendering their crops insecure for the want of a little labor and attention. I will give you the plan I built mine upon, and the kind of materials used, which can be varied according to circumstances, with the chance of improvement which all new things are apt to undergo. For the top and bottom piece of the frame, I split a chestnut sapling so that each piece, when dressed out, would work about two inches by four; the end pieces about 1½ by 3, and the middle slats still smaller, all of the same kind of materials. I then put one board at the bottom, morticed through the end pieces with two small tenons at each end; the remainder I fill up with small soft maple poles, let through the end pieces by a 1¼ inch auger, and fastened with half inch pins, just cutting the side of the tenons, which prevents weakening them too much, and secures them equally well, and nail the poles and board to the middle slats. I then take a chestnut pole about six inches through at the butt, and 22 feet long, and hew the butt end so that the flat part that goes across the gateway will be from 4 to 6 inches wide, to receive the forward roller, which is plain; the small end that extends back of the gateway, need only be straightened to receive the rail upon which the back roller traverses; the rail may be sawed out of three-fourths or an inch oak board and 1½ inches wide, and rounded on the top to receive the back roller, which is concave, and may be made of wood or cast iron; then put the rollers which should be six inches in diameter, with a mortice into the bottom piece at suitable distances; then to keep the gate in its place and properly secure it, set into the ground two pair of large stakes, straight on the inside at each end of the gateway, just far enough apart to let the bottom and top pieces pass easily through, and put a pin at the top to secure them properly. Objections may be raised as to the durability of the soft maple poles, but those who have not used them are not aware what length of time they will last when the bark is taken off. It may also be said that both rollers should be concave and a bar of iron run across the gateway. With those who are willing to incur the expense, there can be no objection, but for all ordinary purposes the plan I have proposed will answer; there is no difficulty in opening and shutting them by a child eight or ten years old with ease, and I think less liability to get out of repair than swinging gates, not so liable to be operated upon by the wind, being built of small poles, and not so troublesome in winter on account of snow.

Claverack, Dec. 14, 1841. John Martin.

LETTERS FROM MR. PETERS—No. IV.

Messrs. Gaylord & Tucker—Your able correspondent Commentator, in the May number, seems to doubt an assertion of mine, that we are not 30 years behind England in our agriculture. I may be mistaken: but notwithstanding his doubts, I think I shall not give up the point yet.

We may not have the capital, but we have what is almost as good, enterprise and industry, and these in time will accumulate the capital.

England, 30 years ago, in every thing save her improved stock, was not one step more advanced among the great mass of farmers than this country is now. I doubt very much whether there was any thing like the general knowledge among the English farmers, that there is now among the American farmers. I go still farther, and assert that even now, there is as much knowledge among the great mass of our farmers as there is among English farmers. We fail in practice, and that is mainly owing to the want of capital. I would ask Commentator, as he is a much older man than I am, if he is not aware that nearly all the improvements in agricultural implements and machinery, in the last 20 years, have been made in this country? And, excepting the improvements in stock, I would further ask him what great improvement has been made by England within the same time; and has she not borrowed as much from us as we have from her? True, she has celebrated agricultural writers, but excepting perhaps Davy, none who have done as much as either Chaptal of France, or Liebig of Germany, for the real improvement of agriculture.

We have not as much good stock as they have, but we have as good, because we are constantly importing from them, and selecting the best. For instance, Mr. Prentice has as good Short Horn Durhams, and Messrs. Corning & Sotham as good Herefords, as can be found in England, and there are any number of breeders of as good swine as can be found there or any where.

If we only had a judicious and well digested system, we should be but little if any behind our mother country, taking our agriculture as a whole. We have not yet the taste that is everywhere displayed around the cottage and home of the farmer. One reason has been that we have had no wealthy nabobs scattered about the country to lavish money upon their estates, and thus make us sensible by contrast of the difference between refined taste and no taste at all. We are however improving from each others example. The farmer begins to find time to set out trees, to fence in his front yard, and to help his women to cultivate a few rose bushes and flowers, and feels all the better when he contrasts the pleasant appearance of his home thus improved, with the naked prospect around the house of his more careless and indolent neighbor.

In the trim appearance of the country, we are indeed, a great deal more than 30 years behind England; but in all the essentials of good farming, we are but a few years behind her; and I shall see, if I live to my three score years and ten, our agriculture fully equal if not superior to hers. When more at leisure, I may recur to this subject again, but in the meantime hope Commentator will look more into the subject, and see if I am not nearer right than he at first supposed. T. C. Peters.

SUGGESTIONS TO FARMERS—No. II.

Messrs. Editors—An agriculturist should never overlook these two laws of Nature—1st. That which keeps the earth covered with vegetable production, and which is necessary for the continuance of vegetable growth. 2d. That for the continuance of its kind. All organic productions, being possessed of a set of generant organs for re-producing their kind, cannot be disturbed, when these functions are developed for procreation, without injurious results.

We cannot look upon our fields and forests, without being forcibly reminded of this wise and unalterable plan, and the manner in which nature provides to keep up their continuous succession. Upon this depends the result of the product of our soil, and whenever we step aside from the examples set before us by nature, overreaching her to grasp at human ambition, our science falls, and we either have to retrace our steps, or sink invidiously to our own desires. Wherever the earth is without vegetable growth, it is barren, and the wisdom displayed in keeping up its fertility, is clearly set forth in the decomposition of her own productions, and these laws are the same in all climates and upon all soils. Then to produce the best and most happy results, what should be the practice of the farmer? The first thing to be attended to on all exhausted soils, is to restore it to fertility. 2d. To prevent as much as possible, the escape of gaseous matter from the soil. 3d. To plant our crops in such manner as to afford the greatest yield.

The improvement of the soil has been and is a subject of deep consideration and interest to almost every farmer, and has elicited from men of great genius and science, years of indefatigable labor, each in his course arriving at something new for the alleviation of our toil, or to increase more abundantly the munificent productions of our farms. In following them into the intricate depths of science, let us not forget what nature is achieving in her laboratory; if she can enrich our fence corners and our woodlands, by keeping them covered, while we impoverish the field, let us not overlook the lesson.

To enrich our lands, they should never be left without a covering to protect them from the sun of summer, and as far as our abilities extend, from the severe frosts of winter. To insure a good crop of wheat, and at the same time, improve the soil, two green crops should be turned under during summer, with the use of salt. In the slow decomposition of vegetable matter, I have found an animalcul production, that has been supposed to be harmless; but I have had reason to believe otherwise, and find that common salt is a good corrective. Under the supposition that the land does not want lime, two green crops plowed under during summer, will, in a great degree, protect the earth from the influence of the direct rays of the sun, and the crop receive the exhalations from the soil to be returned to it, and with the use of salt, will produce a better crop of wheat than manure from twice their quantity, after undergoing a decomposition in the stomach of cattle, and be a more permanent improvement of the land.

To retain the gaseous matter in the soil, nature keeps it closely covered, and by this covering, each plant receives a continuous and equi-necessary quantity; while if the putrifying vegetable substance was exposed to the direct influence of the sun's rays, it would be thrown off into the atmosphere in vapor, as I presume all excess of gaseous effluvium is for the common benefit of nature's grand design, and with the use of lime and plaster, those gases which appear necessary can be retained.

To plant our crops so as to afford the greatest yield with the least labor, is the great desire of every farmer; and as we are not to be informed by that person, whoever he may be; and you say it is not Mr. Bridgeman that is invested with this inestimable secret, then allow me to ask his name,* his residence and his occupation. Mr. Bridgeman might at least have given his name, and not left his readers in ambiguity of construction.

The greatest error appears to be committed in our corn crops and peach orchards, and this is for want of the proper application of the two laws of nature, that head this article; and I believe that thousands of days labor are expended in violation of these two laws, that are worse than useless. I know from the result of my own farm, that from the ground—under common culture by a good and attentive farmer—that produced about 400 bushels of corn, planted four feet square, I have taken nearly nine hundred bushels, with less labor (except the husking,) when planted and worked consistently with the above laws: and this is not the only instance, but in every crop that I have ever planted of this kind. Plant this, and all other hoed crops, close enough to prevent spontaneous growths at the time when the vessels for forming seed are maturing, so as not to be under the necessity of working them at this time, and I will venture to predict that we shall not need the aid of that person, whose name I have not learned, nor the million of dollars to confirm the belief, that a protecting covering for the surface of the earth, by close planting or otherwise, following nature in the course she points out, is the cheapest, best and only safe system for the farmer to adopt.

Lyttleton Physick.

Ararat Farm, Cecil co. Md., May 12, 1842.

PHILO COMMENTATOR.

Gentlemen—I am an admirer of the strictures of *Commentator;* he is evidently a writer of a sound discriminating mind and a clear head. Well written criticisms designed in all kindness, and specific answers to inquiries from your many readers seeking information, are among the most valuable articles with which you treat your readers.

I should be highly gratified if he would pursue his labors *con amore.* In the meantime, will you permit one who has been a "looker on here in Vienna," some three score years in this breathing world, one who has no other pretensions to worldly wisdom than what he has picked up in the bye-ways and highways and corners of the fences of the Republic of Letters, to follow a humble gleaner of the *tares* from the golden grain that your *Cultivator* so successfully disseminates.

Covered Wells.—In your January number your answer is not full enough on the subject of *covered wells.* In all wells the least disposed to produce sulphuretted waters, as nearly all do that are in the region of the transition or secondary rock, covering is fatal to them, as it presupposes the use of the pump. Sulphuretted hydrogen gas is heavier than common air, and as it is given off by the water, forms an atmosphere above it, which has a tendency to keep the whole mass surcharged and consequently impure and noxious. In all such wells there is no security but in the use of the bucket; in the drawing of the water and from the drippings of the bucket, a constant circulation and change of air is kept up, the water procured is from the *surface* which has given up its gasses, as it has a tendency to do as soon as it is free from the pressure of the superincumbent earth; while the pump always takes the water from the *bottom* just as it is produced, charged with all its noxious gaseous contents.

These are the *whys* that all well waters are purest and best, that are drawn with the bucket.

The complaint as to worms, insects and reptiles, is owing to the imperfection of the walls at the surface. Let about three feet of the upper portion of the walls be laid in mortar or clay, with a well fitting platform and a tight curb, and the defect is cured.

One word on the subject of *bad water.* Great fears have been indulged in—whole countries have been anathematized as uninhabitable and fatal to life, from the whims of early settlers. Now sir, my belief is, on that point, that you may *eat the devil and drink the vil, head, horns and all,* but you must not *breathe* him. There is no water in nature, so bad that you may not use it for all the common uses of life; there is none so bad not even the "green mantle of the standing pool," but I have used while hunting and traveling with a pack horse the trackless prairies of the west; the water used on ship board by sailors, frequently is so putrid that they have to hold the breath and strain the living mass with the teeth while drinking it, and yet it does not affect their health.

Hard well waters, whether from carbonic or sulphuric acid's holding the earths in solution, are pure in comparison with the Saratoga chalybeates, or sulphur springs of this country or the south, and yet they are the very hygean fountains that poets dream of. The gastric juice is the purifying menstruum that corrects the contents of the stomach, and you may drink of the standing pool with safety, while the breathing of its noxious malaric exhalations is fatal to existence.

Gates.—A man once asserted that honesty was the best policy; another asked "how he knew it?" He replied, "by the Lord Harry I have tried it." So with Mr. Garrett's gate, of which an engraving is given in this number, for I have tried them for several years. There is no *sagg* to them—boys may enjoy the perfection of human happiness—to swing on a gate and eat candy, and not disturb them. When well made, they will sink a half an inch in dry weather and regain it again in wet weather. I should prefer the brace to be *toed* in at the foot, and dropped in at the top at the point where the middle post joins the top rail, and with a crotch hinge at the bottom, so that it will open either way, and shut of its own accord.

Slug.—Mr. Hodges' communication on the slug that infests the cherry and pear, is quite correct; he is unable to determine whether the *nidus* is laid on the tree or on the leaf; on that point I am clear; it is laid on the upper side of the leaf, about ten days previous to their appearance in the larvæ form, in the shape of a little blister or bladder that covers the egg. I have never been able with the most untiring and closest scrutiny, to discover the parent insect. I have several times, in a close vessel filled with earth and covered with glass, attempted to perfect the creature, but from some fatality never succeeded; a case I never failed in when applied to the curculio, cut worm and various other insects.

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* The name of the person who applied to Congress for a reward for an important discovery in terra-culture, is Russel Comstock, a resident, and we believe a farmer, of Washington, Dutchess county, N. Y.

They first appeared about Albany in 1820; at Canandaigua and Rochester about 1830, and at Buffalo in 1840; they are progressive and quite a pest; the only preventive is, after they have hatched out, to use tobacco juice or dry ashes and slaked lime thrown freely into the tree.

ROHANS.—Very many persons are denouncing as useless the Rohan potatoe, and in many cases not without some cause, mostly as I conceive from the want of information as to the proper management. The great failing is, that they do not plant them early enough to give them time to ripen and perfect themselves. They should be planted as early in May as possible, at any rate before or by the time of planting corn. Unless they are planted early, and have time to perfect their tubers, they do not yield better than many of our standard kinds, and are an unripe, watery insipid article, unfit for the food of man or beast. There is but two or three principles of nutriment in the whole vegetable economy. Starch or flour, saccharine or sugar,and mucilage or gum constitute nearly the sum total.

The nutritious principles of bagas, beets, carrots, apples, &c. exist in the saccharine, and in all the grains and potatoes, it resides in the starch, principally, and that potatoe that contains the greatest quantity of starch with the same ability of production, is the most desirable article to cultivate; and that is a point that requires examination, the settling of which beyond cavil, by competent authority, would be worthy the patronage of the state society, and I admire that the subject has not attracted the attention of the committee for offering awards, eliciting valuable truths by experiments.

The Rohan requires a longer period to perfect itself than any potatoe we grow in this state that I am acquainted with, and a potatoe that will not ripen planted from the 10th to the 15th of June, is objectionable.

From the 20th to 30th of May, corn planting is usually finished, and then commences a period of 10 or 15 days usually devoted to the potatoe crop, and therefore a species that will not ripen after that time for a stock crop, is not as desirable as an earlier and equally prolific variety.

FALL PLOWING.—Your correspondent "Columbia," has the best of the argument in my view of the subject of fall plowing, for which practice there is no other possible benefit to be derived, than a saving of time and the killing of the *larvæ* and *chrysalis* of destructive insects, which in most cases is of doubtful efficacy. If plowed early in the fall, the foul grasses during the wet weather, will shoot up through the furrow,like young wheat coming up; if plowed late it does not rot and decompose, is beat down close and solid by the winter, and will require cross plowing while the sods are fresh and alive; such a field for any spring crop will be hard to subdue. The spring plowing if well done, thoroughly harrowed with the manure on the surface, has decidedly the advantage, especially for potatoes, that is, if you want to realize the virtues of the manure for the present crop; if not, why plow it under 6 or 8 inches deep and lose nine-tenths of its value? L. B. L.

SUN DIALS.

MESSRS. EDITORS—In the Cultivator for November last, is an article on Sun Dials, from the pen of Wm. P. Kinzer of Pennsylvania, that may seem to require some notice from me. As a manufacturer of dials, I feel thankful to Mr. Kinzer for bringing the subject again before the public, and I am pleased with his enlarged views on the subject. I see no reason however, from Mr. Kinzer's communication, to change my views, heretofore expressed in the Cultivator.

As to the kind of dials, I have adopted the horizontal, on account of its being the simplest for use when made, and the easiest to manufacture from the materials I employ. I have, on my premises, made by myself, all the kinds of which Mr. K. speaks.

With regard to the best and most convenient mode of setting the dial, I am aware that there are different opinions, and that some writers on the subject recommend the mode adopted by Mr. K., although I should think more are favorable to the one I have recommended; yet, as experience is a better teacher in such matters than theory, let Mr. K. try the two modes, and (so easy has it become of late to ascertain the time accurately,) I feel confident he will be satisfied that the mode I have recommended is preferable. Indeed, if there were no more convenient way of ascertaining the apparent time, than that recommended by Mr. K., (of drawing a meridian line by equal altitudes of the sun, and thus obtaining, as he says, a 12 o'clock dial,) it would still, according to my experience, be the easiest and best mode to draw the meridian line on some other place than the pedestal, and when the shadow of the wire arrived at the meridian or 12 o'clock mark, to set the dial to 12 o'clock precisely. But in almost all situations, the time may be obtained (from a place not far distant,) as accurately as by drawing a meridian line, and a watch set to the true apparent time the forepart of the day, and at or near 12 the dial set true to the time piece.

My mode is, (and this is the best where there is a suitable instrument,) to take the sun's altitude the forepart of the day, by a theodolite, graduated to minutes by means of a vernier, and then by spherical trigonometry calculate the true apparent time, and set a clock or watch, and at or near 12, to set the dial. The reason for setting the dial near 12 o'clock, is, that should there be any inaccuracy in the dial, it will be equally balanced in different parts of the day. S. MOORE.

Kensington, Ct. March 5, 1842.

SOUND WHEAT GROWN IN A SMUT BED.

WE make the following extract from a letter received from H. Ransford, Goderich, U. C. The fact stated is a curious one:

"Last autumn I was in the habit of bathing behind a grist mill just below my house, which I had to pass to go to the river. One day observing several stalks of ripe wheat growing round the heap of dirt and smut that had accumulated below the opening from the smut machine, *on the roof that covered the wheel, full twenty feet from the ground,* I said to the miller, who was standing outside, 'I fear your crop will be but a small one.' He replied, 'not worse perhaps than some of my neighbors. What will you say if I go and get you a handful from the wheel, and you are not able to find a smutty grain among it?' 'I suppose I must believe it if I see it, but I should be afraid to tell it to another person,' I replied, and walked on to the river. On my return, he met me with a handful of the identical wheat gathered from the roof, roots, chaff, smut balls, and dirt, and strange to say, although the berry was not plump, yet it was clean and bright as any wheat I ever saw, nor could we discover the slightest trace of smut in some twenty ears that we carefully rubbed out for the purpose of finding some. Here, thought I, is the doctrine of homœpathy with a vengeance; treat a disease with what will produce the disease in a healthy subject, and health will be restored; in other words, take smutty wheat, sow it in a smut bed, and it will produce clean grain; I will send this to the Cultivator for the learned to explain, and believers in transmutation to fight over."

Mr. R. enters his protest against the Rohan, pronouncing them an "overgrown, yellow, watery kind, fit only for pigs, and not containing as much starch or nutriment as some other sorts that do not weigh one-third as much."

PROFITS ON FARMS.

WE have received from a correspondent in Chester co. Pa., a communication in reference to this subject, elicited by our notice of the farms that received the premiums from the Hartford Co. Ag. Society, in the January No. Our correspondent dissents from the manner in which the estimate of profit in those reports is made up, contending that the interest on the capital invested, (that of the land, and that of the floating capital required,) the wages and board of all the persons employed, expenses to mechanics, &c., should all be included and subtracted from the aggregate of products, before determining what the nett profit is. The remarks in general appear to us very just, and the subject deserving the consideration of Ag. Committees in making up their reports. The closing part of the communication we give entire:

"I will proceed to show the manner we in Chester co. Pa., keep debt and credit, on a farm of 115 acres of land worth 100 dollars per acre. Capital in land $11,500. Interest $690. A property of 115 acres will require a capital of from $2,000 to $2,500 in personal property, such as stock, farming utensils, and household and kitchen furniture.

Interest on capital vested in farm,..........	$690
" on floating capital,................	120
Wear and tear of personal property,........	50
For lime annually, to keep land up,........	100
Plaster annually,.........................	20
The owner of the farm, wages $11 per month,	132
Wife and girl's wages, $2 per week,.......	104
2 men hired at $10 per month, each,........	240
Mechanic's bills, annually,................	60
Store bill, consumed in boarding,..........	30
Expense of such a farm,..................	$1,546

On this farm we divide our business, feeding cattle, raising corn, oats, and barley, or wheat. We plow from 10 to 12 acres annually. 600 bushels of lime are put on previous to planting corn; when it is put into wheat with dung manure, and seeded to grass for mowing or grazing. The remaining part is mowed or grazed. We do not count the amount raised; for we board all the people employed on the farm, and that should have been another item in the expenses, worth $188. The hay is all fed to stock. This stock is changed annually, therefore we take the profits of our cattle and all the surplus produce of the farm to pay expenses, and what money is left, if any, we call profit. It is the profit on our cattle, and surplus produce sold, that makes up our profit or loss, and not the amount raised.

I have said more on this subject than many may think requisite, but it is a subject that concerns us nationally, as well as states and individuals; and we ought not to deceive ourselves or the public these trying times. Every thing should go by its right name, for every rise or fall seems now-a-days to depend on the soil, and it behooves us to make correct calculations. I have seen estimates made out by writers on the great resources of our country, taking the whole amount of production, and holding it forth to the people, as being ample to meet our great indebtedness, avoiding to show that the great bulk of the production is absorbed in supporting ourselves, and that in some years there has been a large deficit. *Chester Co., Pa.* T. T. W."

ADVANTAGES OF AGRICULTURAL PAPERS.

WE should be pleased to insert the communication of G. H. Esq. of Middleborough, Mass., as a specimen of many we are constantly receiving, were it not for the apprehension that by doing it we might be deemed lacking in modesty. If there is any thing which can cheer the conductors of an agricultural paper, it is such assurances from their friends and the public, that their exertions are appreciated, and that real substantial benefits are flowing from their labors. The following extract will show *one* of the many instances named by "G. H." in which he has derived important aid from the Cultivator:

"There is running through my farm a brook of pure spring water; and as our well water is hard for washing, we were obliged to draw it from the brook in barrels, a mode inconvenient and expensive. I was looking about for some way to force this water a distance of 300 feet and a height of 30 feet, but could find no one who could inform me how it could be done, until I saw in the Cultivator Mr. Bement's and Mr. Phelps' experiments, which were exactly what I wanted. I went to work and made the proper fixtures, got the required machinery of Mr. Farnam, and I now have plenty of water for *all* purposes; for the house, barn yards, hog pen, and surplus water enough flowing over my meadow to increase the crop more than a ton annually, which will pay all expenses. There is also extra power enough, to work a churn, carry a grindstone, &c. Now had it not been for your Cultivator, I might have continued to draw water from the brook as long as I had lived."

We cannot doubt that our correspondent's new arrangements with regard to his barns, cellars, and manure yards, will be as successful as his experiment in bringing water to his house; and there are multitudes of farmers who if they would follow the example of "G. H." in reading, and profiting by what they read, would not only benefit themselves, but do honor to the farming community, and to the country.

PLASTER—BEES.

G. COOK, Esq. of Tivoli, N. Y., has forwarded us two communications, one on plaster, the other on bees. The first is devoted to the consideration of some remarks made by us on a paper of his on the same subject, in the March Cultivator; but as he has advanced no new position on the question; as we are agreed as to the main points, which are the folly of relying on plaster *alone* to maintain the fertility of the soil, and neglecting the preparation and use of other manures; and as he proposes to give us hereafter, his views of the nature and action of plaster, we shall omit this part, and give the one on bees, which appears to us to contain some valuable suggestions.

"In all the systems proposed for the management of the bee, it appears to me they are all deficient in one great point, the best preservation of this industrious little insect. Although, with very few exceptions, the systems proposed, contemplate their preservation, yet experience seems to establish the fact, that they will not do well in comb that is allowed to become old; therefore it appears to me, that any contrivance for a hive that will give them frequently a change of comb, must be for their interest; as breeding in, and running over it so much for several years, seems to render it unfit for the deposit of honey, or even the egg of the bee. Now the course I would recommend, would be to make two boxes, or half hives, say about 15 inches square, and about 13 inches high, (but in that respect to be governed by the average size of the swarms,) each covered at the top, with the exception of a hole 3 inches square as a passage for the bees out, and when the first or uppermost box is filled, to allow them to pass into the lower one to fill that also. In most cases, probably in the first year they will have filled the first box, (unless the swarm is very weak,) while the next year will suffice to fill the second, when the first or upper box is to be taken for use. It is not claimed that by this method the comb that contains the honey, will be as white as that taken in boxes in the other methods, yet it will not yield to the other in richness and flavor.* Nor is it claimed that this is a non-swarmer; indeed I have tried almost every thing to prevent their swarming, but have found them all inefficient: it seems to be the way that nature designed them to multiply, and at the same time be provided with sufficient food. One other fact I have found out to my cost, and that is, that under all circumstances they must be ventilated and kept dry. And now while on the subject of bees, permit me to give a valuable receipt for their sting; it is to bruise the leaves of the *white ash*, put water upon them, and drink the decoction. G. COOK."

Tivoli, March, 1842.

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* Our correspondent might have added, that honey of the second year is far more healthy than when new; rarely producing those colics and derangements of the stomach, which frequently result from eating new honey. The famous honey of Colchis in Asia Minor, long celebrated for producing delirium and madness, a quality derived from the bees feeding on the blossoms of a species of laurel, loses this power with age; and every apiarian knows that new honey partakes sensibly of the qualities of the blossoms from which it is derived.—EDS.

Agricultural Society of the U. States.

MR. GARNETT'S ADDRESS.

At the first annual meeting of the Agricultural Society of the U. States, held at Washington on the 4th ult., Mr. Garnett, on being re-elected President, delivered the following address:

Brother members of the Ag. Society of the U. States:

I beg you to accept my very sincere thanks for the honor just conferred on me, and to assure you that no efforts shall be wanting on my part, to discharge the duties of my office in a manner which shall be satisfactory to you, and at the same time promotive of the great objects of our Association.

If the great increase of State and County Societies of Agriculture, be any true indication of the increase of that spirit from which they originate, and by which they must be cherished to render any essential and permanent good to the cause of American husbandry,—*then*, surely, the friends of this cause were not too sanguine in encouraging the hope that an Agrigultural Society might be formed, which would accomplish for the United States, *as a whole*, what the local societies of the same character were accomplishing *for the separate parts*. If a numerous attendance of its members from every state, at every regular meeting, were essential to its success, and that those meetings should always be held in the District of Columbia, then I admit our scheme would be impracticable. But neither of these conditions are necessary. On the contrary—it is easy, I think, to prove that the chief objects of our society may be effected without any such numerous attendance from every state; and that to meet alternately at some of our principal towns and cities, as the Royal Society of England and the Highland Society of Scotland do at theirs, would be a far better plan than always to hold our meetings at the same place. On each occasion, we should thereby afford an opportunity for a different set of members to attend, which would have the effect of diffusing and keeping up the interest that such spectacles never fail to excite—especially if the funds of our society would enable us to hold an annual show and fair, accompanied by public trials of agricultural machines and implements. But the great object of every such association *is*, or *ought to be*, to collect and make public all facts within the sphere of their operations, which can in any degree contribute to the improvement of American Husbandry. Our society might do this I think, very effectually, if they would only adopt and execute the following scheme, which I now beg leave to propose. Let it be made the duty of our Vice Presidents,annually,to make a full report as far as practicable, of the agricultural condition of their respective states; to enumerate all the improvements (if any,) which may have been made in their agricultural machines and implements; to describe the most approved modes of culture—of manuring their lands—of managing their various crops—of rearing and treating their stocks—in short, to make these reports so comprehensive as to form, when condensed and arranged by some competent person, as complete a body of husbandry for the United States, as Sir John Sinclair's justly celebrated "Code of Agriculture," has formed for Great Britain. I have not the pleasure of a personal acquaintance with many of our Vice Presidents, but if I may judge of the others by those whom I do know, there cannot be a doubt of their entire willingness to perform such a task; nor will I doubt their readiness to undertake it, if called upon to do so. It would surely be a truly honorable, patriotic, and praiseworthy occupation, although no food for vanity and ambition—that mental diet with which,by the way,far too many of our brethren are so marvellously fond of regaling themselves, that they can find no time for studying and praticing their profession; by which neglect they deeply injure themselves and families, without being able to do the slightest good to their country. Moreover, the occupation which I have taken the liberty to suggest for our Vice Presidents, would be one to which, I should think, any farmer might be proud to devote as much of his time as would suffice for the purpose; particularly when he might feel perfectly assured, all the while, that he was not laboring in vain, nor doing worse—as the politician often does even without being conscious of it—but actually rendering no inconsiderable service to his fellow citizens, and thereby indirectly benefiting his country. The agricultural societies of his own state could probably, and willingly would furnish each Vice President with all the information which he himself did not possess, so that the work would prove in the end, far easier to accomplish, than might at first be supposed. All they would need to secure success, would be earnestly to strive for it, and confidently believe it attainable; for the old maxim—"*possunt quia posse videntur*," will be found to hold good in regard to every thing which can be accomplished by human effort. Faith must always precede works, or they will either not be attempted at all, or commenced in such a way as certainly to fail. I know not how others may estimate those works which I propose to require of our Vice Presidents, but to me, they seem of great importance; although I confess they will be entirely destitute of all that ostentation and eclat which so fascinates the minds of ambitious men, that they will very rarely ever attempt to do any thing—especially, of a public nature—unless it will place them in some situation of dazzling show and notoriety. Simple, unobtrusive, silently working acts of patriotism, however beneficent in reality, have no charms for *them*, but pall upon their vitiated minds, as simple food does upon the appetite of the gourmand. The public good!—the public good!!—although constantly in the mouths of such pseudo-patriots, is never in their hearts; and most unfortunate indeed, would it be for every community, if the mass of its citizens consisted of such fasle, pretended friends. Especially unfortunate will it be for *our* class, and hardly less so for our country, if the inordinate passion for public life, which of late years has been spreading so alarmingly fast among our brethren, should not speedily be checked; for it is seducing very many of them from their farms and families, where they can do some good, into situations for which they are totally unprepared, either by early education or subsequent study. I may be thought presumptuous in making this declaration; but it is the literal, undisguised truth, which it behooves some of us to tell our brethren, and I am willing to take the responsibility, as I cannot expect to live many years longer among them. It is a deeply seated, rapidly increasing moral disease, which, like deadly blight upon our crops, destroys for a time all disinterested efforts to improve our husbandry—as there are no pompous, gorgeous honors in store for such laborers—nothing to feed insatiate vanity—nothing to gratify inordinate ambition. The workers in *our* sphere, must be content to toil without public appplause; to struggle with all the difficulties of their situation without public sympathy; to be even looked down upon by some, with feelings not far short of contempt; to labor for their country, whilst their country labors not for them; and to seek their reward in the thorough consciousness that as their profession is first and above all in general utility, it has a just,—an inextinguishable claim to be ranked as fully equal, if not superior, to any other, in honor, in dignity, and in the hearts of their countrymen. To this cause, I fear, we must ascribe the fact of our finding so few in our profession who are willing to exert themselves in its behalf, with sufficient zeal and perseverance to promote it as a source, not only of their own, but of our national prosperity. Too few of us are accustomed to take this comprehensive view of the subject; too few to notice the important fact that our individual gains constitute an elementary and essential part of our nation's wealth. To induce such a sentiment, (for it is something more than simple belief,) at least in a majority of our brotherhood, is one of the advantages—may I not call it a blessing—which I have always expected our country would derive from the general establishment of agricultural societies properly contstiuted and judiciously managed; and from ours more than any other, simply because it was more comprehensive. This has been my chief reason for attaching such importance, as I have ever done, to these associations: for nothing seems to me more perfectly demonstrable than the necessity of thoroughly convincing the agriculturists of our country, that it is their imperative duty always to consider the improvement of our husbandry, as well in reference to the national interests as to their own, if we would qualify them to discharge as they ought to do, the various and all-important duties, both private and public, which they are destined in every community to fulfil. Shall we therefore be proud of our profession? Surely not, unless we render ourselves worthy of it; otherwise we should take shame to ourselves, and not acknowledge to what family we belong, lest we should disgrace it. But only let us contemplate it as it deserves to be contemplated; let us view it in all its bearings upon the great, the vital interests of society; and sure I am, that there would be few, very few of us indeed, who would not thereby be irresistibly urged to the diligent study and practice of our profession, by the twofold motive of *self-interest* and *patriotism;* the joint influence of which could hardly fail to produce all the happy effects that might reasonably be anticipated from them. And if there ever was a time, when more than any other, it deeply concerned the Farmers and Planters of the United States, especially to cherish both these powerful stimuli to human action, *that time* is now present. Enormous debts oppress and nearly paralyze the energies of our whole country, as well as of every honest trade, profession, and calling in it; dangers of no ordinary character and magnitude threaten us both at home and abroad; whilst vice and crime are stalking over the land with most alarming increase, and almost entire impunity. For most of these apalling evils, I am not presumptuous enough to suggest any remedy whatever; but for the *first*—I mean our great indebtedness chiefly to foreign nations, of which every sentiment of honor and honesty, binds us to acquit ourselves—I have no hesitation in saying, that the only cure must be sought in augmenting the skill,industry, and economy of the productive classes of our society, and especially of the agriculturists, who produce by far the greater portion of the materials from which our debts can be paid. The only question then, *is* by what means this augmentation can be effected, at least among our own brethren? The answer, I think, readily suggests itself. Make us more conscious of our own deficiencies, both in the science and practice of our profession; make us better acquainted with the nature and magnitude of our resources, with the best methods of developing and applying them—with the imperious necessity of speedily ascertaining those methods—with the great advantage of frequent mutual consultation and cordial co-operation, for the purpose of making this discovery—to all which, agricultural societies in general, and ours in particular, may most powerfully contribute, and more than half the all-important work would be accomplished.

Many of my auditors probably, and not a few of my own brethren, may be unaware of the extent of our ignorance as a class, in regard to nearly all the matters just stated; and particularly of the great disproportion which still exists between the vast arable surface of our country, and the number of persons employed in cultivating it: although I believe the common opinion is, that we have quite enough for the purpose. If such were not the general belief, we should surely see more, at least of the intelligent, reflecting portion of our fraternity, educating their sons for their own profession. But this belief of a full supply of agricultural labor, even if it were universal, is most assuredly wrong, as can easily be shown. Indeed, I think I can demonstrate, so far as facts and figures can do it, that however large our present agricultural population may appear to be, it still falls short—even in the old States—very far short, of what it ought to be, if our beloved country is ever to be cultivated in the manner and to the extent which its immeasurable capabilities of production evidently require of us. With a view to place this matter beyond a possibility of doubt, I have been at some pains to prepare from our late census and other public documents, the following tables.* In the first, the states and territories are arranged according to the number of square miles in each; then follows the number of persons reported to be engaged in agriculture; next, the proportion of such persons to the square mile; then, the quantities of all kinds of grain produced by them; and lastly, the quantities of sugar and potatoes, together with the values of the orchard and dairy products, and the number of tons of hay. The other table exhibits the states and territories arranged according to the total amount and average values in 1840, of those agricultural productions, and comprehends all the other articles included under the head "Agricultural statistics;" although to place "furniture" in this category, (as I see has been done,) seems to me as queer a conceit as was that of an old congressional acquaintance of by-gone days, who, on a certain occasion, called to one of the little pages of the house to hand him a glass of grog, and charge it to the article "*fuel.*" But there is another objection to this classification. It probably includes the furniture of all the other classes of the United States; and ours is already sufficiently extravagant in such investments, not to be made responsible for more than their own share of the innumerable sacrifices daily made to this highly culpable, and often most preposterous—most ruinous love of show. It is bad enough in any of the productive classes, but far worse in ours, because *we* furnish the means of subsistence to all; and must furnish less and less, just in proportion as we spend more in useless decorations for ourselves and houses, than we do in the substantial improvements of our farms.

I will not tax your patience by reading the subjoined tables, but must solicit your attention to some of the results, which to me, at least seem worthy of the deepest consideration.

The first of these tables proves most clearly, that notwithstanding the immense agricutural resources of our country, and our great inducements to develop them, greater in fact, than at any former period of our national existence—if we would maintain the national credit both at home and abroad, as every honest man must most anxiously desire to do—we are still deplorably deficient in agricultural labor. For even in Massachusetts, which possesses, in proportion to its whole population, the largest number of persons engaged in agriculture, the ratio to the square mile is only 12.11, whilst in Arkansas it is no more than .45, the average for the whole United States being only a very small portion over 5.10. But this estimate is made on the supposition that the whole number of persons reported by the census to be engaged in agriculture, are really capable of labor; whereas, we may assume as it a thing certain, that at least one-fourth consists of persons either too young or too old for such occupation, and consequently, that the above statement makes the average proportion to the square mile, of actual laborers, one-third larger than it should be. It is true that some deduction ought to be made in each state and territory, from its estimated surface, on account of inarable lands and water; but I have no means of ascertaining what such deduction should be, and therefore have been compelled to argue as if our whole territory was arable, and as if all our population called *agricultural*, were actual cultivators thereof. We should also bear in mind that the census itself is known to be very inaccurate in many respects; owing in part, to the carelessness of the persons engaged in taking it, but chiefly to the highly culpable conduct of certain editors of newspapers who exerted all their influence to prevent the execution of the new and extended plan. Still it affords a sufficient approximation to the truth for my present purposes, and therefore I have availed myself of it.

This first table proves another highly important fact, which ought to excite the deepest shame in our brother agriculturists in some of the states. It is, that with nearly double the number of square miles, and about the same proportion of agricultural laborers to each, they produce but little more than half the quantity of food for man and beast. It would be invidious to name these states; but the table will show them to any who have the curiosity to examine for themselves; and such examination may render them much service, if it be made with a sincere desire to contribute towards the removal of this shame by the only attainable means, and that is—*better husbandry*. This course however is the very last, I fear, which will be taken by the authors of the disgrace: who probably, will greatly prefer seeking to find an excuse for it in differences of climate, and natural fertility of soil. Something certainly may be truly ascribed to these causes, although not in the cases which particularly attracted my attention. But after making for them, where they really exist, all the allowances which can justly be made, I am very confident that in nearly every instance where one state is found to produce more than another, in proportion to its cultivated surface, it will be discovered by those who will take the trouble to ascertain the true causes of such difference, to be attributable to the superior scientific knowledge, practical skill, industry, and economy of the owners and cultivators of the soil, who have either never abused the bounty of Providence in giving them good lands, or have corrected the abuses committed by their predecessors. In some of those states, it is notorious that agriculture is still in a very lamentable condition, and little or no attention is paid to it as a science. The inevitable consequence of this is, in all those states, that the practice thereof as an art, must necessarily fall very far short of what it ought to be; for there are certain fundamental principles upon which *all arts* depend, without a knowledge of which in their practitioners, it is just as impossible that they should ever reach perfection, as it is for mere chance to make a world. If the opinion be general, that neither mechanics, geology, mineralogy, chemistry, nor botany, has any thing to do with our profession, it is very certain that neither will ever be studied by those who entertain this opinion: and it is equally certain, that unless they acquire some knowledge of the intimate connection which exists between agriculture and all those sciences, they never can gain a just title to the character of good farmers. They may indeed, often make good crops, and even make money, if they are economical. But this they can do only by following implicitly the example of others, without understanding any thing of the principles upon which they act, or knowing how to make the slightest change in their modes of proceeding, should a change of circumstances make it necessary. Another great evil arising from this state of things, is, that our profession does not rank near as high in public estimation as it should do; for the majority of its followers being comparatively ignorant and illiterate, the members of other trades, professions, and callings, especially of what are called, par excellence, the learned professions, will certainly be very apt to infer that *their* vocation itself, is one which requires neither talents nor learning to render it successful, since so large a proportion of those who follow it are found very deficient in both. None indeed, will more frequently entertain this most pernicious opinion, than that very numerous body of our own brethren who are so destitute of education as scarcely to be able to read or write. This is an evil of great extent, and interposes, wherever it exists, an effectual barrier to any great improvement in American husbandry; for it is always accompanied and fortified by a combination of self-conceit and obstinacy, which is nearly as impregnable to all force of argument, as the rock of Gibraltar has heretofore proved to all the power of artillery. Illustrative of this fact, I have somewhere seen an amusing anecdote of King Alfred the Great, and an old priest, who, in one of the latin prayers then always used in the church, had ignorantly substituted the word "*mumpsimus*," for "*sumpsimus*." The king, (as the story goes,) labored hard to convince him that he was wrong, but could get no other answer for his pains than this, "*your majesty may be right, but I can't give up my old mumpsimus for your new sumpsimus*." And if similar traits of character be any proof of consanguinity, the old priest has not a few near relations, even in these our days of much vaunted enlightenment. Still, as their liberation from such mental degradation is a most desirable thing, and not altogether hopeless, every true friend to his country should labor incessantly to accomplish it; for next to the victory obtained over our own ignorance and prejudices, there is none whatever so truly glorious, so full of soul-cheering thoughts, as that which we gain over the ignorance and prejudices of others: it ennobles both the conquerors and the conquered. But unfortunately for mankind, it seems not to be the common opinion. Such victories procure no applause, no man-worship, from the multitude; and this being the thing which most men covet above all others, it is no wonder that the mental and moral improvement of our race should be a pursuit in which we find so very few voluntary laborers in proportion to the magnitude and vital importance of the work to be done. That portion of it which the professional and intellectual wants of our own brethren require to be performed, constitutes but a small part of the vast whole; but it is *that part* especially, in regard to which it most behooves us who are members of the Agricultural Society of the United States, to exert all the means in our power to accomplish. This, I presume, was one of the chief purposes for which we associated ourselves together; and most earnestly do I hope, that at least a majority of our members are of the same opinion. If they are not, if they contemplate no such end, if they believe that our meetings are to be held without effecting any good to our agricultural community at all, commensurate to the large scale upon which our society has been organized,—*then indeed*, I have no hesitation in saying, that when we adjourn on the present occasion, it should be to meet no more as an agricultural society; for we should justly deserve the derision, instead of the praise and approval of our brethren throughout the Union. Already we have been sneered at, and that too, in an agricultural paper, as something that would prove at least "*harmless*;" and harmless, I trust, will be the prediction. But attempts have been made to excite against us something more than ridicule; attempts, which, if successful, will do us material injury. It has been said that we shall kill all the local societies; and although not a shadow of reason has been offered in support of this preposterous assertion, yet, like every other which concerns the interests of many, it appears to have made proselytes enough to require that it should be noticed. So far am I from being able to discern the most remote probability of other societies being injured by ours, that it seems to me certain they must reciprocally benefit each other: since the various information which they *can*, and I hope *will* impart to us, relative to all the different branches of husbandry, *we* can diffuse more generally and rapidly than they can, over our whole country. Moreover, it is such information as *they* can always best obtain, in consequence of their greater intimacy, and nearer connection with our agricultural brethren in the different states and territories. Instead of seeking over the whole country for the facts we may want, which we should be obliged to do if there were no local societies, we should always be able to find the greater part of these facts in their possession; and hence we should have every inducement to co-operate most cordially together. Although distinct in organization, and independent in action, they may always be to each other, what the states and the general government *may* and *should be*, that is, cordial co-laborers in the one grand, all-glorious cause—National Happiness.

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* Most of the facts given in these tables, being embraced in the tables of Agricultural Statistics, published in our last number, we have not deemed it necessary to insert them.—Eds.

I have heard of a few other objections to our society, although they are really so frivolous, so manifestly the offspring of a total misconception of our objects, that it would be an utter waste of time to notice them. I shall not therefore make the slightest attempt to disturb the self-complacency of those who entertain them.

To insure complete success to our association, there seems to me but one thing necessary in addition to an Agricultural paper, and *that* by no means difficult to accomplish. If the men who occupy the high places of our country would constantly and zealously aid it, not only by their purses, but by giving their countenance to all its proceedings—by contributing their good words to all its objects—and by communicating to it, for publication, the useful results of all their own agricultural experience: then indeed, might we reasonably hope soon to render to the cause of American husbandry all the good which such a society, properly conducted, is certainly capable of imparting. Funds would soon accumulate sufficient to have an annual Show and Fair, on a scale coextensive with the magnitude and importance of the ends to be attained. At these exhibitions, we might bring into highly useful competition, the inventors of all the most approved agricultural machines and implements, so as to make it far more generally known than it can be by any other mode, which are best. Another great advantage of these Shows would be, that being on a much larger scale than any State Show, they would afford better opportunities for putting an end to the apparently endless controversies in regard to the comparative merits of the numerous varieties of foreign cattle, hogs, and sheep, which for several years past, have been imported into our country. The praises of all these far-famed animals have been so incessantly sounded forth, and by trumpeters of such equal wind and speed, that our simple, untraveled brethren have found it utterly impossible to do more than to choose by guess, if they purchased at all. They have been thus placed in the sad predicament of the luckless Ass, between two equal bundles of hay. But should they ever make a purchase under such circumstances, there are twenty chances to one, that they are forthwith converted into the bigoted partizans of the particular breed of stock of which they have become the owners; for their pride and vanity will both be excited to maintain the judiciousness of their choice; and when these besetting sins once get possession of our minds, our judgment can very rarely exercise its proper influence. Our own property, whatever it may be, assumes a merit and value in our own eyes, far greater than the reality, merely because it is our own; or, to borrow an old adage expressive of the same thing, "*our geese all become swans*."

I fear, my friends, that in the preceding effort to advocate our cause, I have tresspassed on your time longer than I should have done. But if I have committed this fault, I trust you will pardon me in consideration of the very deep interest I take in the subject, and of my thorough conviction that unless our husbandry is honored and otherwise encouraged far more than it ever yet has been, our country never can reach that high state of agricultural, commercial, and manufacturing prosperity which it is so pre-eminently susceptible of attaining.

Domestic Economy.

BUTTER—POUND CAKE.

Messrs. Gaylord & Tucker—Butter is so extensively made in the state of New-York, that it may be considered one of its staples.

It is a surprising fact that this most important article of northern production is *made* poor from negligence in attending to the common and obvious qualities of the milk. The pure milk itself possesses all the qualities requisite for making good butter, and if properly manufactured, there would be no variation in the quality of the butter, except that arising from the different qualities of cows or their pasturage.

Mark the above expression—*made* poor. This is the great difficulty. The milk in all its stages of progress to butter is subject to the influence of foreign matter, and thence becomes tainted at its commencement, verifying the old adage, "as the twig is bent," &c., thus it is easy to see that impure milk must inevitably make impure butter.

A cellar of about ten feet is most fitting for a milk room; be careful to have no sink or hen roost near the room, nor any plants of strong odor, such as catnip, onions, tomatoes, growing near the windows, to taint the air of the room, which ought to be kept at a temperature of from 50 to 66 degrees, and to accomplish this desirable object a thermometer is recommended.

Flat stone or clay make the most suitable bottom for a milk cellar.

Let there be a total abstinence *from water* in the making of butter, as it washes away much of its volatile sweetness, which gives it the rich peculiar flavor; this is fairly illustrated by the fact, that ice placed on a plate of good butter renders it flat and tasteless.

Cream will rise sufficient in thirty-six hours; it must be sweet when taken off and sweet when churned. The butter in coming from the churn must be well worked with a wooden ladle; after a short time strew on the salt and continue working until the buttermilk disappears; then put the butter in a cool place for twenty hours; at the end of this time the salt being dissolved, the ladle may be again used to advantage. If the same care and patience were bestowed in working the milk from the butter, that is usually bestowed in mixing *pound cake*, there would be but few complaints of poor butter. The ingredients of the pound cake in general, must be admirably proportioned, but how deplorable do we often find the proportion of salt and butter! An ounce and a half of the former is generally applied to a pound of the latter, and from the manner in which butter is usually worked, the article would be intolerably rancid with a less quantity of salt; but if thoroughly worked, three quarters of an ounce of washed and well pulverized rock or Turk's island salt is sufficient to preserve a pound of butter two years.

Butter firkins should be of heart ash or white oak, to be soaked twenty hours before using. In putting down the butter, use no salt between the layers. In packing, great care is required to exclude the external air, exposure to which is highly injurious; firkins, therefore, are preferable to open tubs or pots, as they can be securely headed. Tubs with tight slip on covers, to hold 12 to 15 lbs. of butter, are much in use, and are neat and convenient for a small quantity of butter for immediate use. Butter cloths are sometimes necessary, and these cloths should be used for butter only.

Butter is frequently conveyed to market and to exhibition for premium, in very improper vessels and unsightly cloths, which prevent a quick sale and good price, and frequently the loss of a premium when otherwise entitled to reward. Magnolia.

MANAGEMENT OF POULTRY.

Messrs. Gaylord & Tucker—I have been requested to give you and your readers, some account of my success in the management of domestic fowls. My experiments, having been continued for many years, have wrought in me the full conviction, that there is as great a difference and as much ground of preference among the breeds or varieties, as there is among cattle. Having tried a great number of different kinds, I have adopted as my favorite, the Poland breed, or the black top-knots, as they are familiarly called. These, when pure or thorough-bred, are of a glossy coal black, with a large tuft of long white feathers on the top of the head, and are the most beautiful domestic fowl probably, that can be found in this country. Their excellence consists mainly in their disinclination to set till they are three or four years old, and when well fed, continuing to lay eggs the whole year, except during moulting time. This generally commences in the month of October or November, and occupies about six weeks, during which they never lay eggs.

Last year I kept of the black top-knots, two cocks and fourteen hens. Early in December, 1840, they began to lay and continued laying, with occasional intervals of from three to six days, all winter and summer, till about the middle of October, 1841. The whole number of eggs produced, I did not ascertain; but of the eggs of three hens, that laid by themselves the year round, I kept an account, and found that they averaged 260 eggs each. Only two of the fourteen hens showed the least disposition to set during the year. The food they consumed during one year, consisted, first of twelve bushels of damaged wheat which I purchased at twenty-five cents per bushel, and afterwards twelve bushels of oats, also at twenty-five cents per bushel, amounting to six dollars. This, with a supply of fresh water every day, kept them in good condition, and caused them to produce large eggs; for all fowls lay larger and heavier eggs when well fed, than when they are poor. My fowls have also laid the whole of this last winter. I have never succeeded so well with any other breed.

Buffon says, a common hen, well fed and attended, will produce upwards of 150 eggs in a year, besides two broods of chickens. But the common hens I formerly kept, always fell much short of this number.

Were I to describe as the result of my experience, what I think the *best food* for fowls, I should say a plenty of grain, not much matter what kind, either boiled or soaked in water, and in winter mixed with boiled potatoes, fed warm, twice a day. It is also of great importance that they have a warm sunny place to stay in during winter, for if left without care to find their roost here and there in an open barn or shed, they will produce no eggs. If they could, in winter, be roosted in a tight room ten feet square, where by their contiguity they could mutually impart warmth, their improvement would be manifest to the most incredulous.

The only *disease* of consequence that I have observed among my fowls, has been the *pip*, which is a kind of horny scale growing on the tip of the tongue, and by which they are liable to be attacked late in autumn and early in the winter. When attacked with this, they appear stupid, stand by themselves with no inclination to move about, refuse all food, and if not attended to in two or three days they die. On discovering these symptoms, they should be immediately caught, and with a knife or the thumb nail, this scale may be caught on the lower side of the tongue and peeled off, when they will immediately recover.

Keeping Eggs.—Having tried many ways of preserving eggs, I have found the following to be the easiest, cheapest, surest and best. Take your crock, keg or barrel, according to the quantity you have, cover the bottom with half an inch of fine salt, and set your eggs in it close together on the *small end;* be very particular to put the *small end down,* for if put in any other position they will not keep as well and the yolk will adhere to the shell; sprinkle them over with salt so as to fill the interstices, and then put in another layer of eggs and cover with salt, and so on till your vessel is filled. Cover it over tight and put it where it will not freeze, and the eggs will keep perfectly fresh and good any desirable length of time. My family have kept them in this manner three years, and found them all as good as when laid down. I believe we have never had a bad egg since we commenced preserving them in this manner. The trouble is comparatively nothing, for when we have a dozen or so more than we wish to use, we put them in the cask and sprinkle them over with salt; and when at any future time we wish to take them out, they are accessible and the salt is uninjured. But mark! the eggs should be put down before they become stale, say within a week or ten days after they are laid.

Every man by this process may have eggs as plenty in winter as in summer; and farmers who make a business of selling their eggs, may easily calculate the profits of preserving them in summer and selling them in winter. Eggs where I live, sell frequently in summer at eight cents, and in winter as high as thirty-seven and a half cents per dozen. In view of these various considerations, it must be evident that no investment that a farmer can make, will yield so great a profit as a few dollars in domestic fowls. They will cost, probably in no case, more than fifty cents each per year for their food; the trouble of taking care of them is fully counterbalanced by the pleasure they give; and they will, or may be made to, produce each on an average from 200 to 250 eggs, besides an occasional brood of chickens.

The theory of your correspondent B., in your March No., respecting *animal* food being necessary to the production of eggs, does not correspond with my observation of facts. I have for years been obliged to shut up my fowls during most of the summer, where they could neither get insects nor any kind of animal food, and yet they continued to lay as much as any I have ever known that run at large.

The banishment of cocks too, which he recommends, I have tried, and abandoned it as unnatural and worse than useless; for with a good attendance of the male, say one to six in summer and one to four or five in winter, I have always found the hens to be the most profitable. H. A. P.

Buffalo, March, 1842.

STEAMING BREAD.

Messrs. Gaylord & Tucker—I see that you devote a part of your valuable paper to Domestic Economy.—This is as it should be. Our lady readers, we think take an interest in our agricultural papers, and of course they should have a part of the paper set apart for them. There is no more important part of the provision of a family than the article of bread. If we are out of bread, we hardly know how to make a meal. We believe that every housewife almost, can or does pride herself, on making good bread. But, says the good housewife, as she looks through her specs into the Cultivator, I wonder what they wont carry steam to next? We have steam to drive people through the world on railroads, and steam for hatching chickens, and last of all, steam for making bread. Not steam for making bread, good lady, but steam for making old bread into new. It is well known by every housewife, who has a family, that in baking a large batch of bread, some of the loaves will get dry and hard, before it is all used. The general practice is, we believe, to make puddings out of the dry bread. This, however, is some trouble, and we will come to the point at once; in the first place, fill your porridge pot about half full of water, and as quick as it boils, have some short sticks or rods to lay in across the pot, close to the water; then put in your loaf, shut down the cover, and then you can let on the steam for about fifteen or twenty minutes. However, you can try it with a fork, and when it is done put it on the table; and if you don't say it is as good as new bread, if not better, then you may set me down as a false prophet. We don't think this to be entirely new, yet it may be new to some. It is worth a trial. It has justly been said, that "bread is the staff of life," and a certain gentleman said, that if bread was the staff of life, bread and butter was a staff with a gold head. Yours truly,

Derby, Conn., March 21, 1842. L. Durand.

AN EXCELLENT PASTE.

Take half an ounce of Gum Tragacanth, dissolve it in water, put it into a wide-mouth bottle, and keep closely corked; when thus prepared, put a small quantity of kreosote or cologne water on the top to prevent moulding. Paste made in this manner, will last for years. A.

The Garden and the Orchard.

THE PEACH TREE.

Editors of Cultivator—I think the lovers of peaches, and especially those who are desirous of raising the peach tree, and who are deterred from doing so by the difficulty of preventing its destruction by the peach worm, will be gratified to learn that the very best way of effecting that object, (the prevention of the peach worm,) is to make a pile of stones around each tree, and in close contact with it, to the height of about 12 or 15 inches. This, if done and continued, before the trees have become diseased by the attack of the worm, will effectually prevent their decay from *that* cause ever afterwards. Let the sceptic try it. Anon.

The Plains, Va., Feb. 1842.

BLACK RUST ON PLUM TREES.

My plum trees are all destroyed by the black rust.—What will cure the disease which appears to be caused by insects? I came into possession of the Oakland farm on Staten Island, late in the spring of 1839, having a number of plum trees upon it affected with the rust. The fruit that season was nevertheless tolerable, though many rotted and fell off before they came to maturity.

In the spring of 1840, the trees were trimmed and cleared of all the rusty knots, the bodies of the trees whitewashed, and holes bored into them and filled with sulphur. Very little good fruit that year, though plenty on the trees, most of it dropping off, or rotting on the limbs. In the fall of the year, the trees were as full as ever of a new crop of rust.

In the spring of 1841, they were again trimmed and cleared of all the knots, and the trees manured with ashes. They were full of blossoms, but there was no good fruit, and in the autumn the rust was thicker than ever; and as the disease was spreading to the green-gage trees near them, I deemed it advisable to cut them down and burn the limbs, which was done in the beginning of 1842. A number of young plum trees were transplanted by me, but the disease has attacked them also. Thus it appears that there is no hope of raising plum trees to advantage, where this disease becomes so prevalent and spreads so rapidly as above described. Our latitude is between 41° and 42° north. Richmond.

REMEDY FOR INSECTS ON PLANTS.

Mr. D. Haggerston, of Watertown, Mass. has claimed the premium offered by the Mass. Hort. Soc. for the most cheap and effectual mode of destroying the *Rose slug* or bug. The remedy is "*Whale oil soap dissolved at the rate of two lbs. in fifteen gallons of water.*" Mr. H. states that as there is much difference in the strength of this soap, it will be better to begin with this quantity, and if it does not kill the insects to increase the strength, which may be done without injury to the plants. Dissolve the soap in a small quantity of boiling water, and strain it through a fine sieve, then add the proper quantity of cold water, and apply it with a watering engine or syringe. The cost is about four mills per gallon. Mr. H. also states that this preparation is also an effectual remedy for other troublesome insects, such as the *Thrips* or vine fretter, the *Aphis* or plant louse, the *Black fly* that infests the young shoots of the cherry, &c., the *Acarus* or red spider, and some insects that infest evergreens, such as the balsam of fir, and others. "The *disease Mildew,* on the gooseberry, peach, grape vine, &c., is checked and entirely destroyed by a weak dressing of this solution." If this solution of whale soap is as efficacious as is represented, Mr. H. deserves the thanks of the public as well the offered premium, for bringing it to the notice of the public. There can be but little doubt it will be found useful in many cases not specified by him, and it will also be be beneficial in promoting the growth of plants.

Veterinary Department.

DISEASE OF SHEEP.

A note from J. Harland, Esq. Guelph, U. C. says, "A subscriber states that his sheep were attacked in the early part of last summer, by a cough and running at the nose, which has continued up to the present time. He would be glad to learn a remedy."

There are several causes which may produce the symptoms described, such as the presence of the larvæ of the *Œstrus ovis* in the frontal sinuses; the presence of the round hair worm, *Strongylus filaria,* in the trachea and bronchial tubes; and what is called Coryza. The larvæ of the œstrus are best removed by blowing tobacco smoke up the nostrils; no remedy has as yet been discovered for the hair worm; but its presence is fortunately rare. Coryza is brought on by the exposure of the animal to storms or severe cold, after having been heated, and we have known severe cases arise from improper exposure to cold storms after shearing. Generally, the cough and running of the nostrils disappear without trouble; sometimes fever accompanies the attack, and then shelter and a purgative medicine are necessary; but sometimes the cough continues, the irritation of the bronchial tubes becomes chronic, and the rot or consumption of the lungs follows. If the disease in its early stages appears obstinate, Blacklock recommends in addition to the purgative, "a powder made of powdered digitalis, (foxglove,) half a dram; tartarized antimony, fifteen grains; nitre, two drams. Rub well together, and divide into fifteen parts or powders. Half an hour after the powder is swallowed, give the sheep a basin of warm gruel, and repeat the powder at the end of six hours, if the symptoms are not much abated." Sheep so diseased, should have a dry, sheltered pasture, good nutritious food, and be sheltered from sudden or unfavorable changes of weather. In this country, allowing sheep to lick salt from tarred troughs, or giving a little tar to swallow occasionally, has been strongly recommended as producing a good effect in such disorders of this valuable animal.

CURE FOR BLOODY MURRAIN

Messrs. Gaylord & Tucker—Having cured several cattle of Bloody Murrain by the following recipe, I send it to you for publication in the Cultivator. Take one pint of fat, melt it—add one gill spirits of turpentine—then put in half a pound of sulphur, stir it till it is thin—put in a junk bottle, and pour it down the animal.

Rockville, Ill. 1842. A. Huyck.

ACKNOWLEDGMENTS.

Our thanks are due to J. Boyle, Esq. England, for a copy of a volume recently issued at Edinburgh, entitled "Agricultural Tour in the United States and Upper Canada, in 1841, with miscellaneous notices, by Capt. Barclay, of Ury,"—to B. V. French, Esq. Boston, for "Constitution and By-Laws of the Mass. Hort. Society, together with a report of its Transactions for 1839, 1840 and 1841,"—to Hon. D. D. Barnard, M. C, for Mr. Salstonstall's Report on the Tariff,—to the Editor o the *New Farmer's Journal,* London, for the continued files of that valuable publication.

NOTICES TO CORRESPONDENTS, &c.

Our correspondents must not think that their favors are rejected, because some of them are kept on hand for months. We should be glad to give most of the communications we receive, an early insertion, were it possible to make room for them; but notwithstanding we condense and crowd into our pages all that is possible, we still find it necessary every month to omit many articles which it was our wish and intention to have inserted.

Besides those inserted in this paper, we have received since our last, communications from J. Horsfield S. McCay, Subscriber, Commentator, Good Intent, Eli Westfall, Henry Palmer, J. C. Stone, J. B. Cook, John Cooke, Stockport, D. G. Weems, Joseph Cope, Agricola, J W. McCall, C. N. Bement, Wm. Partridge, H. Clark, L. Durand.

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CLARKE'S SILK REEL.

THE subscriber now offers for sale his patent Silk Reel, which he believes for simplicity, for saving labor, and for making superior silk, exceeds any other now in use in this or any other country. The reel is turned by the foot of the reeler with perfect ease, thereby saving the expense of a boy to turn; and is so constructed that the pipe from the furnace dries the silk as fast as it is woven on the reel, which makes the silk more glossy and soft, and less liable to tangle when wound from the skeins. Reels may be obtained of the subscriber in Greenwich, Ct., and sent by him to any part of the United States; and also of Darius Mead, No. 81 Maiden Lane, New-York. Also, patent rights for states or counties. Orders from any part of the country, postage paid, will be immediately attended to. Price of the reel, $10. AARON CLARKE.

Greenwich, Ct. May, 1842.

PORTABLE MILLS FOR GRINDING.

A PATENT has lately been taken out for Mills, that will grind with one or two horse power, 3 or 4 bushels of grain per hour, with a stone of two feet in diameter. They are now in successful operation. The cost is about $100. Your Subscriber in Illinois, and any one else, wishing to purchase, can be supplied by addressing a letter to J. SHERMAN, Jr. Bridgeport, Connecticut. *May,* 1842.

PORTABLE MILLS, &c.

IN answer to an inquiry from a subscriber in the April number, respecting Portable Mills for grinding corn in the ear for fodder, I would inform him that they can be had in Auburn, N. Y. The price of the machine will be $30; will grind from 4 to 6 bushels per hour. With an additional expense of $20, there can be a fixture to the same machine, for grinding corn sufficiently fine for bread.

Also, HUSSEY'S REAPING MACHINE is manufactured at the same establishment. Orders for either of the machines, directed t the subscriber, will be duly noticed.

Auburn, N. Y. May, 1842. T. R. HUSSEY.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CUTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

CATTLE SHOW AND FAIR AT ALBANY.

The next Cattle Show and Fair of the New-York State Agricultural Society is to be held in Albany, on the last week of September next. The List of Premiums, amounting to about $2,000, has heretofore been published. It embraces almost every variety of farm stock and implements, farm and garden products, butter, cheese, maple sugar, silk, and other domestic manufactures, &c., &c., being a much more extensive list than ever before offered in this state. At the meeting of the Executive Committee in June, the judges to award the prizes were appointed, a list of which is given in another part of this paper; and we think the public will see in their names, abundant assurance that justice will be done to all competitors. From present indications, we are inclined to believe, notwithstanding the state of the times, that this Fair will far exceed, in the number and quality of the stock, implements, &c. exhibited, as well as in the attendance of the public, any thing of the kind ever got up in this country. The facilities for traveling to and from Albany, from all quarters, are such as will undoubtedly, with the attractions offered, induce a very general attendance from our own and the neighboring states. The Fair is to be held on the beautiful grounds adjoining the new Bull's Head Tavern, Troy Road, on the northern boundary of the city; and such arrangements have already been made, as to enable us to assure those who intend to bring stock, either for competition for the prizes or for sale, that all necessary accommodations will be provided for their convenience. The Show Yard is to be made large enough for the entire exhibition, and is to be enclosed with a good board fence sufficiently high to prevent ingress or egress except at the gates. The exhibition will commence

On Tuesday, Sept. 27, on which day the trial of Agricultural Implements will take place.

On Wednesday and Thursday, the 28th and 29th, the general exhibition will be held.

On Friday, the 30th, there will be a public sale of such stock as shall be sent in for that purpose. It is expected that there will be a large number of high bred animals of all kinds offered, catalogues of which will be circulated a day or two previous to the sale.

CULTIVATION OF WHEAT.

A farmer of Stirling, in a communication in the Mark Lane Express, says that he has in a great measure succeeded in obviating the evil of having wheat freeze out, or as we term it, winter kill, by plowing in his seed. He first prepares his fields by summer fallowing, liming, &c. and then puts in his wheat in the following manner: "I sow my wheat by a plow drawn by two horses, five or six inches deep, and cover it with the next furrow at ten or eleven inches breadth. I never harrow it after sowing, and there is no treading upon the land." The wheat thus covered grows in drills, being in the deepest part of the furrow, and the writer finds that it comes up better than when sown broad cast, while the roots are longer and stronger, and consequently the plant escapes freezing out in the spring.

New-York State Agricultural Society.

The regular monthly meeting of the Executive Committee of the N. Y. S. Ag. Society for June, was held at the office of the Cultivator, on the 8th, at 10 o'clock, A. M. Present—the President, James S. Wadsworth, Esq. of Geneseo; Hon. Anthony Van Bergen of Coxsackie, Vice President of the 3d district; Messrs. Geo. Vail of Troy, Alex. Walsh of Lansingburgh, Henry D. Grove of Hoosick, and James L'Amoureaux of Albany, members of the Committee; and Messrs. E. P. Prentice, Treasurer, and L. Tucker, Secretary.

Letters were read from several gentlemen—among them one from the Hon. Daniel Webster; and one from L. B. Langworthy, Esq. Vice President of the 8th district.

The Board then proceeded to the appointment of County Corresponding Committees, agreeably to the provisions of the 4th section of the Constitution,—when the following appointments were made:

County Corresponding Committees.

Albany—C. N. Bement, Albany; W. N. Sill, jr. Cedar Hill; Thomas Hillhouse, Watervliet.

Allegany—Hon. Laurens Hull, Angelica; Jas. McCall, Rushford.

Broome—Hon. John A. Collier, Binghamton.

Cattaraugus—Sam'l Barrows, Olean; H. W. McClure, Franklinville.

Cayuga—D. Wright, Auburn; Ellery Howland, Venice; Abner Hollister, Cato.

Chautauque—Geo. W. Patterson, Mayville; Hon. T. B. Campbell, Westfield; Jabez Burrows, Mayville.

Chemung—Eli C. Frost, Catharine.

Chenango—Wm. S. Randall, Norwich; Wm. Doolittle, p. m., Susquehannah; R. B. Monell, Greene.

Clinton—Levi Platt, p. m., Plattsburgh.

Columbia—Dr. J. P. Beekman, Kinderhook; J. S. Gould, Stockport; W. B. Ludlow, Hudson.

Cortland—Dan Hibbard, Cortland Village; P. Barber. Homer.

Delaware—Sam'l Law, p. m., Meredith; Wm. Frisbee, Delhi.

Dutchess—Henry Staats, Red Hook, J. W. Kneevels, Fishkill; D. H. Holden, Poughkeepsie; Theodore Allen, Hyde Park.

Erie—L. F. Allen, Black Rock; T. C. Love, Newstead; Benj. Hodge, Buffalo.

Essex—William B. Ross, Essex.

Franklin—Hon. Luther Bradish, Moira.

Fulton—James McIntyre. Johnstown.

Genesee—T. C. Peters, Darien; Lee Comstock, Le Roy.

Greene—George Griffing, jr. Cattskill; A. Marks, Durham.

Herkimer—A. Loomis, Little Falls; W. W. Mann, Frankfort.

Jefferson—Micah Sterling, Watertown, Edm'd Kirby, Brownville; Abner Baker, jr. Watertown.

Kings—John G. Bergen, Brooklyn; A. Bergen, Flatbush.

Lewis—Isaac Bostwick, Lowville.

Livingston—A. Ayrault, Geneseo; C. Metcalf, p. m. Geneseo.

Madison—Alex. Krumbhaar, Cazenovia; B. Enos, De Ruyter; S. B. Burchard, Hamilton.

Monroe—Rev. H. Colman, Rochester; Gen. R. Harmon, jr. Wheatland; Dr. Abel Baldwin, Clarkson.

Montgomery—T. J. Van Deveer, Amsterdam; G. Goertner, jr. Canajoharie.

New-York—C. H. Hall, Harlem; Sam'l Fleet, Jordan L. Mott, Isaac Adriance, Dr. R. T. Underhill, William Partridge, Rev. Jno. O. Choules, T. Dunlap, Gideon Freeborn, Abraham Bell, R. L. Allen, D. K. Minor, William A. Seely, New-York City.

Niagara—P. B. Porter, jr. Niagara Falls; William Parsons, Lockport.

Oneida—Benj. P. Johnson, Rome; Dr. T. Goodsell, Utica; Ira S. Hitchcock, Oneida Castle; H. Rhodes, South Trenton.

Onondaga—Willis Gaylord, Otisco; H. Baldwin, Syracuse; G. Geddes, Geddes; William Fuller, Skaneateles.

Ontario—John Greig, Canandaigua; R. C. Nicholas, Geneva; Myron Adams, Bloomfield.

Orange—A. J. Downing, Newburgh; Chas. Morrell, Goshen; Amos Brentnall, Canterbury.

Orleans—Cornelius Plocker, Kendall.

Oswego—Arvin Rice, Hannibal; E. W. Clarke, Oswego.

Otsego—Francis Rotch, Butternuts; S. Doubleday, Cooperstown; J. E. Cary, Cherry Valley.

Putnam—L. D. Clift, Somers.

Queens—Effingham Lawrence, Flushing.

Rensselaer—J. J. Viele, Lansingburgh; L. C. Ball, Hoosick Falls; J. C. Mather, Scaghticoke.

Richmond—Dr. Samuel Ackerly, Richmond.

Rockland—Edward De Noyelles, Haverstraw.

Saratoga—J. H. Beach, Saratoga Spa; H. Rogers, Fort Edward.

Schenectady—D. D. Campbell, Schenectady.

Schoharie—Wm. C. Bouck, Fultonham; Hon. J. Westover, Richmondville.

Seneca—A. B. Dunlap, Ovid.

Steuben—Z. A. Leland, Bath; O. F. Marshall, Wheeler; Stephen Arnold, Tyrone.

St. Lawrence—Henry Van Rensselaer, Ogdensburgh; Zenas Clark, Potsdam; Josiah Sandford, Stockholm.

Suffolk—B. Hunting Foster, Southampton; W. J. Wood, p. m., Huntington.

Sullivan—Charles Broom, Fallsburgh.

Tioga—Charles F. Johnson, Owego.

Tompkins—L. A. Morrell, Lake Ridge; Ezra Cornell, Ithaca.

Ulster—J. E. Hornbeck, Accord; Jas. Sherman, Milton.

Warren—Lewis Numan, Glenns Falls.

Washington—John Crary, Salem; E. Long, Cambridge.

Wayne—Dr. C. S. Button, Newark; E. Price, p. m. Lyons.

Westchester—W. H. Morris, West Farms; Governeur Morris, Harlem.

Wyoming—J. Horsfield, Perry; Sam'l Howard, Perry Centre.

Yates—Jared Patchen, Benton Centre.

VIEWING COMMITTEES.

The Board next proceeded to the selection of Judges to award the Prizes at the Exhibition and Fair to be held in September, and made the following appointments:

On Bulls, Classes 1, 2, 3 and 4—Felix Renick, Chilicothe, O.; J. Barney, Port Penn, Del.; Adam Ferguson, Watertown, U. C.; Thos. Husten, Circleville, O.; C. M. Giddings, Cleveland, O.

On Cows, &c. Classes 5, 6, 7 and 8—Henry Clay, jr. Lexington, Ky.; William Neff, Cincinnati, O.; Sam'l D. Martin, Colbyville, Ky.; William Fitzhugh, Hagerstown, Md.; D. K. Townsend, New Haven, Ct.

On Grade Cattle, Classes 9, 10 and 11— —— Neilson, New Brunswick, N. J.; G. V. Sackett, Seneca Falls; William Garbutt, Wheatland; Thomas Hollis, Gilbertsville; Charles Godfrey, Geneva.

On Cattle, Native Breeds, Classes 12, 13, 14 and 15—Sam'l Jacques, Charlestown, Mass.; Geo. Griffing, jr. Catskill; Governeur Morris, Harlem; Tyler Fountain, Peekskill; Henry Burrell, Salisbury.

On Working Oxen and Steers—Robert Colt, Pittsfield, Mass.; Allen Ayrault, Geneseo; William Fuller, Skaneateles; Joseph Haswell, Hoosick 4 Corners; George McKie, Cambridge.

On Fat Cattle and Fat Sheep—P. Reybold, St. Georges, Del.; Edward Tonkin, Clarksville, N. J.; —— Wheeler, New-York; T. Kirkpatrick, Albany; B. D. Noxon, Syracuse.

On Horses—John C. Stevens, New-York; J. M. Sherwood, Auburn; W. T. Porter, New-York; Edward Harris, Moorestown, N. J.; L. C. Ball, Hoosick Falls.

On Swine—William Lincoln, Worcester, Mass.; William B. Ludlow, Hudson; William Parsons, Lockport; John E. Brown, Brownsville; Ezra Cornell, Ithaca.

On Sheep, Class 1—Francis Rotch, Butternutts; E. C. Delevan, Ballston; D. D. Campbell, Schenectady; Effingham Lawrence, Flushing; Bailey Montross, Fishkill.

On Sheep, Class 2—A. B. Allen, Buffalo; Z. A. Leland, Bath; Enoch Marks, Navarino; R. S. Musson, Gilbertsville; D. S. Curtis, Canaan Centre.

On Sheep, Class 3—J. P. Beekman, Kinderhook; Edward A. LeRoy, Avon; L. A. Morrell, Lake Ridge; Thomas L. Davis, Poughkeepsie; Edward Long, Buskirk's Bridge.

On Plows—Henry Colman, Rochester; Henry Burden, Troy; Anthony Van Bergen, Coxsackie; J. B. Nott, Guilderland; J. S. Gould, Stockport.

On Threshing Machines, Fanning Mills, Straw Cutters, and Horse Rakes—C. N. Bement, Albany; L. B. Langworthy, Rochester; W. A. S. North, Duanesburgh; Orville Hungerford, Watertown; George Geddes, Geddes.

On Harrows, Cultivators, Drill Barrows; and any other Agricultural Implements, not enumerated—George W. Patterson, Mayville; Thomas Hillhouse, Albany; Rawson Harmon, jr. Wheatland; John B. Dill, Auburn; J. Horsfield, Perry.

On Silk, Silk Reels, &c.—H. S. Randall, Cortland Village; R. C. Nicholas, Geneva; Samuel Ackerly, Richmond; A. Gridley, Auburn; G. V. Sackett, Seneca Falls.

On Butter—Benj. P. Johnson, Rome; Micah Sterling, Watertown; Robert Deniston, Salisbury Mills; —— Delmonico, New-York; William Van Wyck, Fishkill.

On Cheese—H. Baldwin, Syracuse; Edward Perry, New-York; Henry Holmes, Greenwich; Wilber Sherman, Lansingburgh; T. C. Peters, Darien.

On Vegetables—T. Bridgeman, New-York; James Wilson, Albany; —— Colman, New-York; M. B. Bateham, Rochester; Dennis Belden, Troy.

On Fruits—A. J. Downing, Newburgh; James Powers, Catskill; J. J. Thomas, Macedon; R. S. Underhill, New-York; Alden Spooner, Brooklyn.

On Flowers—Alexander Walsh, Lansingburgh; Rev. J. O. Choules, New-York; Prof. J. W. Jackson, Schenectady; A. P. Heartt, Troy; T. Dunlap, New-York.

On Domestic Manufactures—L. F. Allen, Buffalo; A. L. Linn, Schenectady; Oliver Wiswall, Hudson; T. Dunn, Albany; Amos Briggs, Scaghticoke.

On Maple Sugar—L. Bronk, Coxsackie; J. C. Mather, Scaghticoke; Myron Adams, East Bloomfield; P. N. Rust, Syracuse; Arvin Rice, Hannibal.

On Horticultural Implements and Garden Ornaments—E. P. Prentice, Albany; S. S. Fowler, Greenbush; John Townsend, Albany; E. Holbrook, Hyde Park; Oliver Phelps, Canandaigua.

On Discretionary Premiums on Articles not enumerated—J. J. Viele, Lansingburgh; J. B. Duane, Schenectady; William Partridge, New-York; Samuel Williams, Waterloo; W. A. McCulloch, Greenbush.

On motion, it was *Resolved,* That the Mechanics and Manufacturers of this state be invited to send specimens of their manufactures to the Fair of the State Agricultural Society, and that suitable arrangements be made for their exhibition, under the direction of a committee to be appointed by themselves.

Resolved, That Farmers and Gardeners generally, be particularly requested to send in for exhibition, such samples of the products of their farms, gardens, and orchards as they may deem worthy of special notice.

☞ The next meeting of the Executive Committee is to be held at the office of "The Cultivator," on the 2d Wednesday of July, (the 13th,) at 10 o'clock, A. M.

SWEEPSTAKES—TWO YEARS OLD BULLS.

A gentlemen of Connecticutt, requests us to say that he will show a two years old bull, at the Fair of the N. Y. State Ag. Society, to be held in this city in Sept. next, for a sweepstakes of $25 entrance, provided three others shall be entered, so as to make a purse of $100. On mentioning this proposition to a friend, he directed us to enter his name as one of the subscribers. Any other gentlemen disposed to become subscribers to this, or to propose sweepstakes for any other animals, will please give notice to the Editors of the Cultivator, that their propositions may be timely noticed.

WOOL, AND ITS MANUFACTURE.

ONE of the best papers we have seen on this important subject, is given in a late number of the Western Farmer, from the pen of Mr. Snow of Detroit. He has condensed from McCulloch's Commercial Dictionary, and other sources, much valuable information, the more necessary at this time, as the subject is undergoing investigation in our national legislature, and should be understood by the people. We have abridged Mr. Snow's paper, and added a few facts.

From the earliest settlement of this country, the settled policy of Great Britain was to prevent all manufactures. In 1699, Parliament declared, "*that the erecting manufactories in the colonies of America, tended to lessen their dependence on Great Britain.*" In 1719, the increase of the domestic manufacture of woolens excited the attention of the parent country, and a law was passed, "*that no wool, yarn, or woolen manufactures of their American plantations, should be shipped there, or even laden, in order to be transported from thence to any place whatever.*" In 1732, a report was made by a committee in Parliament, stating that in New England, New-York, Connecticut, Rhode Island, Pennsylvania, and Maryland, they were taking to the manufacture of woolens, and recommending that "*an early stop be put to their progress.*" In 1734, complaints were made in England, that the colonists made their own woolen hats; the Governor of Massachusetts was written to, and he stated that the citizens were exporting large quantities of their hats to Spain, Portugal, and the West Indies. A law was immediately enacted in which the exportation of hats was forbidden under severe penalties; no person was allowed to make hats unless he had served an apprenticeship of seven years, and no man was allowed to have more than two apprentices at a time.

Up to the year 1790, there was no woolen factory in this country. In that year, one was put in operation at Hartford, Ct., "and President Washington delivered his Inaugural address to Congress, in a suit of broadcloth from this factory." Mr. Snow traces the course of British legislation on this subject, from the war of the revolution, to that of 1812, which found us destitute of the means of clothing our armies, of providing them with blankets, and at once forced wool up to from two to three dollars per lb., and broadcloths from $10 to $18 per yard. In the first eighteen months after the peace, woolen goods to the amount of $17,000,000, were thrown into the United States, and Lord Brougham said in Parliament, "that it was worth while to incur a loss upon the first exportations, in order, by the glut, to *stifle in the cradle*, those young manufactories in the United States, which the war had *forced into existence.*"

From the period of the last war, the woolen manufacture and wool business of this country has been continually, but gradually increasing in magnitude. In 1830, the number of sheep in the country was 14,000,000. The present number exceeds 20,000,000, and the clip fifty millions of lbs. The following table will show the capital at present engaged in growing wool in the U. States:

20 millions of sheep, at $2,	$40,000,000
7 million of acres of land for pasture and hay,	70,000,000
Care of sheep, clipping of wool and transp'tn,	10,000,000
Total invested in wool growing,	$120,000,000

In 1840, there was imported into the U. States, principally from the Mediterranean and Germany, eight and a half millions lbs. of wool.

In 1830, both McCulloch and Marshall, estimate the number of sheep in Great Britain at 32,000,000. Average yield per head 5 lbs., making 160 millions of lbs. The same year about 30 millions of lbs. were imported, making the consumption for that year, about 190 millions of lbs. In Great Britain the number of sheep is about two to each person; in France and Prussia, the number is about equal to the inhabitants; in the United States, about one and one-sixth to each inhabitant. It appears that the consumption of wool in the countries named, is as follows:

In England in 1830,	190,000,000
In France in 1834,	116,000,000
In the U. States, in 1840,	59,000,000

According to the census, the number of persons engaged in the woolen manufactories is 21,341; those employed in domestic woolen manufactures, 30,000. As these cannot on an average have less than three persons depending on each one for support, the number supported by the woolen manufactures equals 200,000: and at least one million in the agricultural class are interested in the growing of wool.

"Here then the farmer has a home market of two hundred thousand, to supply with his surplus products. Each will consume weekly of beef, pork, flour, butter, cheese, milk, eggs, wood, &c., at least 50 cents, which gives $100,000 a week, or *five millions two hundred thousand dollars a year;* a larger sum than one half the agricultural exports of the U. States to all foreign countries, have averaged for the last five years, (excepting cotton,) as the treasury reports fully prove." This question of home consumption is of vast importance to the farmer; and as a matter of fact, is worth all the abstractions and theories ever engendered.

British economists estimate the consumption of woolen and cotton goods annually in Great Britain, at $10 per head, for the population. There can be no doubt that the people of this country are as well clothed and fed as those of Great Britain; and this would give $170,000,000 for this country, at $10 per head, and at least one half of this is woolens, or 85 millions. Such statistics and facts prove that the woolen interest is one that cannot be lightly sacrificed; interwoven as it is with the prosperity of both farmer and manufacturer.

HARVESTING GRAIN.

MILLERS have long been aware, and farmers have generally admitted that wheat or other grain cut a few days before it is perfectly ripened, will make more and better flour than if suffered to stand too long before harvesting. There seems to be enough of the developed juices in the stem and ear to perfect the filling of the kernel, while the envelope or bran does not become as thick, dark, and hard, as when the cutting is too long delayed. Grain that is lodged or struck by the rust or mildew, should always be cut with the least possible delay, as in the first case the straw becomes worthless while the kernel will not improve; and in the last instance, the longer it stands the more rapid and extensive will be the deterioration of both the straw and the grain. Cutting prevents the accumulation of more of the juices in the straw, where the already ruptured vessels and cuticle prove they are not wanted, and the appropriation of those that remain will be carried on by the kernel, until the stem is dried. Grain cut before it is fully ripe, threshes with more difficulty than that which stands till fully matured, but since the general introduction of machines, this objection has not the weight that formerly belonged to it. There are various ways of putting up the sheaves of wheat in the field to cure, before they go to the stack or barn. Some put six together, pressing their heads into as small a space as can be, and then capping them with a seventh; some put a dozen sheaves together by twos, and cover the tops with two sheaves placed butts together in the centre; but unless it is necessary the grain should stand a long time before carting, as good a way as any, perhaps, is to set up the sheaves by twos, merely leaning them gently against each other, and without any capping at all. This system is practiced by our most extensive wheat growers, and while it requires less labor than any other mode of setting up, is found to occasion as little loss, and give full as much security to the grain, as any that can be used. When, however, it is necessary that grain should stand several weeks in the field, it should as soon as dry be put up in small stacks of six or eight shocks each, and well capped and secured against rain.

"CHARCOAL AS A MANURE."

WE wish to call attention to a paper under this title in the Transactions of the N. Y. State Agricultural Society, furnished by J. H. Hepburn, Esq. of Lycoming, Pa. The facts there stated, agreeing as they do with what every one must have witnessed to a greater or less degree, should secure for charcoal as a manure, a greater degree of consideration than it has yet received. As it is probable some of our readers may not meet with the "Transactions," we shall condense some of his statements for the benefit of such.

"During the last autumn, business called me into Harford Co. Maryland. While there, I was surprised at the exceedingly luxuriant growth of a crop of grain, but lately seeded into a field on Deer creek, and also at the peculiar appearance of the soil. The soil upon which the grain was growing, had a remarkably dark appearance, and appeared to be so mellow and friable as nearly to bury the foot at every step. * * I inquired if the field had not been covered with charcoal, and was told that it had been. I inquired when it was done, and was told that it had been spread upon it more than *twenty years ago !* I then asked what was the general quality of the crops raised upon it, and was told they were invariably fine, both as to quantity and quality." Mr. Hepburn gives, among other experiments, one made by a gentleman in the iron business. "He had a large quantity of coal that had become too fine to be used in his furnace, and not knowing what to do with it, concluded as the easiest way to dispose of it, to haul it out, and spread it on his grass land. He spread it late in the fall, and for many years, he informed me he observed the most astonishing effect produced upon his yield of grass. The quantity was nearly doubled, and the good effect continued as long as he owned the property, which was at least ten years." Mr. Hepburn also states the important fact, that "wherever charcoal has been applied, *rust never affects the growing crop of wheat.*"

Every coal burner is aware that a vigorous and healthy vegetation always surrounds the old hearths, or coal beds, as the place where the coal has been burned is called. We have known a blacksmith who made his own coal, that always used the hearth for an onion bed, and his uniform success justified the use to which he appropriated those places. In another instance a farmer who was remarkable for his gardening operations, told us that his practice was to make his garden beds for his onions, carrots, &c., and then spread over them a layer of straw some ten or twelve inches in thickness, which was burnt on the ground. The charcoal and ashes made by this dressing was slightly raked in, and then the seeds sown. In this way, his crop never failed.

Mr. Hepburn remarks that he shall not attempt to explain the chemical action or affinities which impart such value to charcoal. We think the following quotation from Liebig, will exhibit one great cause of its efficiency. In speaking of the power of various substances to absorb ammonia from the atmosphere, he says:—"Powdered charcoal surpasses all other substances in the power which it possesses of condensing ammonia within its pores, particularly when it has been previously heated to redness. Charcoal absorbs 90 times its volume of ammoniacal gas, which may again be separated by simply moistening it with water." The experiments of Lucas given in the appendix to Liebeg, are also most striking proofs of the value of charcoal to vegetation, and the manner in which it operates. They show that plants thrive in powdered charcoal, and may be brought to blossom and bear fruit, if exposed to the influence of the rain and the atmosphere; a result almost impossible to obtain in any other simple substance, and which can only be owing to the facility with which powdered charcoal absorbs and gives out the gases, whether carbonic or ammoniacal. It is to this facility of absorption that charcoal owes its *sweetening* properties, as its effect on partially spoiled meat is termed.

As charcoal is almost indestructible, and its effects as a manure remain as long as it exists in the soil, it is possible that charcoal may be found one of the cheapest as well as most efficient manures for some crops, and on some soils. It appears evident from the manner of its action, that plants requiring the greatest supply of nitrogen would be the most benefited by its application, and hence its efficacy when given to wheat. It could produce little effect on extremely wet soils, as alternations of dryness, to allow the contact and condensation of the gases, and of moisture to render such absorption available, are necessary to give effect to charcoal. Charcoal has a physical, as well as a chemical effect on soils, decidedly useful. It renders them as far as it is present, light and friable; and gives additional warmth to them by its color, which absorbs and retains readily the rays of the sun during the day. It is not surprising that those preparations of night soil, in which powdered charcoal constitutes a large portion, should be found more effective and durable, than those in which its place is occupied by peat or even common mold.

THE TRUE DOCTRINE.

MEN may preach, or write, or talk about the respectability of this or that profession, but it will avail little or nothing, unless that profession is taught to respect itself, to understand its true position and its claims, and true means of enforcing them. No man of sense can deny that the profession of agriculture is one of the most honorable, useful, and indispensable: that it is the eldest of the arts, and should—other things being equal—entitle those who practice it to the front rank in society. To what then is it to be attributed that the farmer has been kept in the back ground, and what by courtesy have been called the learned professions, allowed to take the precedence in all public matters, even to the legislation on topics which interest the farmer almost exclusively, and which he does, and should understand better than any one else? This question we have never seen more satisfactorily answered than in an address delivered at Grenada, Miss., by A. C. Baine, Esq., before a meeting convened to devise the ways and means of building and endowing a college at that place, and for a copy of which we are indebted to the author. From this address we shall make a few extracts, confident the truths they contain will commend them to the readers of the Cultivator:

"I confess it is one of the most lamentable marks of the present and preceding ages, that it is deemed unnecessary to educate a man's son for a farmer. If one of a family is to be educated, he is not designed to till the soil; but is to be placed in a learned profession. Why is not tilling the earth a profession *as learned*, and as useful, and as honorable, as any on the globe? Because you degrade it. Every boy whom you educate, you instil into him the belief that he is above the calling of his father. You teach him that the cultivation of the earth is servile. But educate him for this great employment; talk to them of its usefulness and nobility while they are boys; and my word for it, the next generation will not have passed away until the profession of a planter will be a *learned profession*. And you will see the young, the generous, the talented, age and amibition, pressing into it with the same eagerness that they crowd what is at this day called the liberal professions. * * * It is one of the most astonishing, but tolerated errors, in the history of mankind, that it should be unnecessary to educate a farmer. Why the cultivation of the soil was the first employment of man ! It is a condition of his existence, and requires a high order of mind to manage it successfully. And it is a fatal mistake that has degraded the mass of intellect for centuries, to suppose that a farmer need not be educated. It is essential; no man can fill that high station and dignity—that first office within the gift of his Maker—with honor to himself, benefit to his race, and glory to his God, without an education;—without some proficiency in the science of human happiness. He ought to be instructed in the physical sciences, and he ought to be able to analyze his soil, and tell you its composition; and the effect upon a given production, of the excess or absence of given constituents. He should be a good political economist. He should understand the law of production, consumption, of distribution, of supply and demand. Every man should deem his son *actually disqualified* for this noble employment, until he has at least learned this much."

Let such sentiments as are inculcated in this address, become prevalent at the south, and they will offer a sure guarantee against opinions which are most ruinous and destructive; against the idea that all labor is of necessity servile and degrading. Teach mankind that there is such a thing as honest industry, honorable and useful; that success in any pursuit, involves knowledge, research, thought, education, and you do much to abate prejudices, and smooth the way for further conquests and acquisitions from the domains of error. Let it never be forgotten, however, that learning is not education, and that they are not always associated in the same individual. Learning only furnishes the means of education; it is not education itself. Gifted minds, close observers of men and things, are frequently among the best educated men, while their pretensions to learning are small. It is enough to name as examples of such, Benjamin Franklin, Roger Sherman, and Jesse Buel.

WORK FOR THE MONTH.

Much hard work must be done by the farmer in July, and his physical system must be attended to accordingly. The man of retirement, the student, and the man who has no active employment, does not require that substantial food which he who swings the axe, or the scythe, must have, or sink under protracted labor. To the farmer we say then, live well; if there is a man who is entitled to such living, you are the one; but make no attempts to "live high." Abundance of plain, substantial, nutritive food, is the food for the farmer; the high seasoned appetite-and-fever-provoking viands, are not for him. Good food is the natural stimulus of the physical powers, and the man who regards his own happiness, or the welfare of society, will think twice before he desires any other. The farmer who carries rum into his fields, is little better than a suicide, for he is needlessly laying in himself, and perhaps in those he employs, the foundation of a habit that may carry him to the drunkard's grave. Men who sweat profusely, must have drink; but that drink should not be alcohol. Water, pure water, is the best drink extant; but if there are any with whom it does not agree, then let them use milk, or molasses and ginger, or the Scotch drink of oat meal and water, which has been so highly approved by those who have tried it in this country, or the home brewed beer of the "gude wife;" in short, any thing that will not foster the accursed spirit of intemperance, which has so long threatened the destruction of every thing that makes life valuable. But be not intemperate in the use of even cold water. Don't go to the pump, or the "old oaken bucket," while hot from exertion, and drink enough to founder a horse, at the outset. Wash your hands and your face, before drinking; then take a drink, and then time to breathe freely, before you drink again. Half a gallon of water at 50°, thrown at once into the stomach of a man heated to 110°, will produce a revulsion fatal to life, and the prudent man will carefully avoid all such dangerous excesses.

Haymaking is one of the most important farming operations for July. This is rendered indispensable by the severity of our winters; as on the quantity and quality of the hay made, the health and safety of our flocks and herds is depending. Too many farmers begin haying before they are ready. They have not examined and put in order their implements. Their scythes, forks, rakes, hay racks, are some in one place and some in another; and when wanted, some will come up requiring a thorough repair, or perhaps be found missing in toto. Don't begin then to make hay till you are ready, even if the sun shines. If your hay is to be made of timothy or herds grass, let it stand until the seeds in the earliest heads are sufficiently matured to grow: if it is principally clover, as is the case on most farms where wheat is the main crop attended to, it should be cut when the heads of perhaps one-half are turning brown. If clover is allowed to stand too long, the heads and the leaves fall off in curing, and the value of the hay is much lessened. All grass should be cut in the morning, and it will cut easier if the operation is performed while the dew is on. When the dew is dried off, and the swaths wilted on the surface, the grass should be shaken out evenly, and lie until the afternoon; when it should be raked into winrows, or if the weather appears unfavorable, it should be put up in cocks for the night. The raking and putting up should be done before the dew falls. If the grass is clover, the best method of treating it we have ever tried, is to let it wilt during the day, and towards night put it up with *forks* into cocks made high in proportion to their base, and in these let it remain until nearly cured. If put up as it should be, the air will circulate through these heaps of clover, and they will require no opening, until the final opening and drying for the barn. If bad weather occurs, the clover may require opening and drying, and putting up again; but if put up in the way recommended, we have rarely found it to suffer in any weather. Clover hay made in this way is best, as it is handled but little, and is not subjected to a loss of leaves and heads in consequence. We have found it to be an excellent plan, when mowing or stacking hay, especially if there is the slightest apprehension about the curing, to sprinkle on salt occasionally, as the hay is laid on. Cattle will eat hay so salted with avidity, and they will be certain of a little salt at a time when they need it the most, and when too, they are in this respect, most frequently overlooked. In stacking hay, farmers in general err much in not paying sufficient attention to its being properly put up. It is frequently so slovenly done, that no inconsiderable part of a stack is moldy, and lost for every purpose except manure. Hay or grain may be put up in stacks, when there is not barn room, and be as well saved, as if under cover; but it cannot be done without some skill, and some pains, and many of our American farmers would do well to take lessons from their English brethren in this respect.

Indian Corn demands much of the farmer's care and attention during this month, as on its growth now, the future crop is depending. Keep the corn free from weeds, stir the surface often, thin the corn in the hills, and with a good soil, you can scarcely fail of a crop. Some farmers hill up their corn so extravagantly, that it looks as if planted on the summit of ridges. This is a bad practice in any season, and in dry ones is most injurious. Attention to the structure of the corn plant, and the manner in which its roots, particularly the upper or brace roots are thrown off, would convince any one that the practice of hilling is not demanded by any thing in the nature of the plant, and that unless the condition of the soil is such as to require it, hilling should never be attempted. It sometimes happens that after the usual dressings have been given to corn, and it is laid by for the season, a rank growth of weeds will spring up, owing perhaps to the corn not fully occupying and shading the ground, and these are allowed, most injudiciously, to stand and perfect their seeds. The farmer who goes over his corn for the sole purpose of cutting down these weeds, instead of allowing them to encroach on his corn and ripen their seeds to plague him hereafter, will find the labor has been well applied, and the increased crop will amply reward him.

Every farmer should make calculations to raise some of the common or English Turnep. For the table they are unequaled, are cultivated with great ease, and while they remain in good condition, are excellent food for sheep, cattle, &c. The soil best adapted to the turnep, is one abounding in vegetable mold, and hence newly cleared lands are found to produce the best roots. Such soils too, are exempt from worms which are apt to infest long tilled or highly manured lands. When we have not had such a piece of land at command, we have generally succeeded in getting good turneps, by turning over in July, a piece of clean rich turf, rolling it smooth, and then harrowing until sufficient loose earth for a seed bed was provided. There is so much danger of over-seeding in sowing turneps, that an old saw recommends to the farmer when going to sow turneps, to leave his seed at home. If too thick there can be no crop, and thinning, a work of considerable labor, must be adopted. Where such a small quantity of seed only can be used, it can rarely be distributed equally; and hence it has been found a good practice to mix the seed with sand or ashes for sowing, as that permits a more equal deposit of the seed. A very fine light harrow should be used for covering the seeds; and where such a one cannot be had, brushing them in may be practiced. One thing must not be forgotten, and that is, unless your lands are *clean*, it is idle to expect a crop of turneps. Much benefit has been derived to the young turnep plant, particularly if attacked by the fly, by spreading, or rather sowing ashes, pretty liberally over the field.

Some have strongly recommended the cutting of the Canada thistle in the last of the July moon, as an effectual cure for this weed. Now though we have no faith whatever, in the influence of the moon in the matter, yet as the plant must have reached that period of its growth approaching to maturity, it is evident the roots must be more exhausted than at any other period of their growth, and hence when cut at this time will be less likely to recover from the injury cutting produces. In any event, cutting can do no harm; and the farmer who at any time allows the thistle to ripen its seed on his farm, is doing not only himself, but others, a serious injury. We have known many farmers allow their thistles to stand as long as they could without danger of their shedding their seeds, and then cut them. In this way, little or no benefit, so far as the seed is concerned, is derived from the cutting, as the juices of the plant will mature the seed, and they will be scattered by the down almost as widely as ever. When allowed to stand so long, they should, when cut, and dried, be raked into piles and burned; and we may add, that another kindred pest of the farmer, Johnswort, should be cut and treated in the same way.

We wish that some of our farmers would try the experiment of sowing some corn broadcast for fodder. Some experiments that have been made, seem to show that this would be one of the easiest methods of making winter fodder known; and it would certainly be a kind of food highly relished, and very nutritious to all animals. The trials made, indicated that from eight to ten tons of food could be grown on an acre. From two and a half to three bushels of corn may be sown per acre; but there can be little hope of success, unless the soil is clean and rich.

HESSIAN FLY.

An able contributor to the S. C. Temperance Advocate and Ag. Register, in a paper on the advantages, of preparing wheat for seed, says that soaking it in a strong solution of blue stone, 10 or 15 hours, and then drying it with lime, is the surest preventive of the Hessian fly, he has tried or known. As a proof that the egg is deposited in the grain, he says: "It is enough for me to know that I have extracted from the wheat in four weeks after it had been sown, from one to four semi-transparent destructors, (I should call them,) within the sixteenth of an inch of the grain, when there was but one leaf to the wheat, and when the grain had not even lost its shape or its envelope. The blades thus affected were yellow, and ultimately died. In fact, that year, I hardly made a grain of wheat from the original stalk; what matured, came from the suckers. I have seen the fly, or *Destructor*, at various stages, and my whole experience goes to confirm what I learned from the old Pennsylvania farmers forty years ago, that the egg was deposited in the grain. And since an experiment on the grain prevents the fly, I consider that sufficient evidence for me."

BRITISH CORN LAWS.

So long as the commercial and agricultural relations of the United States and Great Britain remain as they now are; so long as the prices of our most important agricultural products are in a great measure depending on England; so long as British legislation for her farming interest makes itself felt in this country to the remotest hamlet beyond the Mississippi, so long will the regulations of that country possess an interest for every American cultivator of the soil. Perhaps there never has been a system devised which so effectually and clearly defines the line between plenty on the one hand, and starvation on the other, as the British corn laws; and if the journals of that empire are entitled to the least credit, it unfortunately happens that for no inconsiderable part of the time a large portion of the population are on the starvation side of the line. To understand the excuse for this state of things, it must be remembered that the immense taxes of England, including the government, church, and poor rates, are mostly paid by the land, and consequently come from the farmers; not those who own the land, but those who hire and work it; and these could not meet the enormous demands made upon them, were not the sale of all their produce secured to them at rates which inevitably bring distress, and in times when trade is unfavorable, starvation to those who depend for bread on their daily or weekly earnings. It is evident that any modification or repeal of the corn laws, which should admit the grain of the United States, or Germany, into England, except at heavy rates, would disable the farmers from paying their rents to their aristocratic landlords, their taxes to the church and the state, and compel the noble land owners and the government to measures of retrenchment, or see their lands go uncultivated. Under these circumstances, it cannot be considered probable, that any radical or indeed important changes in the corn laws will take place, certainly not under the present ministry. The deep public feeling on the subject, however, the half suppressed howl of despair that comes up from starving millions, has forced on the government the necessity of doing something to divert and palliate, if not to relieve the public distress. In this light only, can the measure lately proposed by Sir Robert Peel, as a substitute for the former law, be considered. To show this, we here give the proposed rate of duties, as well as the present; and we do this the more readily, as the matter does not appear to be understood by many of those in this country who are the most interested, that is, the grain growers. The table will also show the encouragement offered to colonial products; a subject of some interest to us, situated as our whole northern frontier is with regard to the Canadas.

Whenever the average price of wheat, made up weekly from the reports according to law, and published as required, shall be for every quarter of eight bushels, as marked in the two first columns, then the duty will be as shown in the proposed and present scales.

Average.	Colonial Wheat.	Peel's Proposed scale.	Present Scale.
Under 51s.	....	20s. 6d.	36s. 8d.
51 and under 52	....	19	35 8
52 " 53	....	18	34 8
53 " 54	....		33 8
54 " 55	5s.		32 8
55 " 56	4	17	31 8
56 " 57	3	16	30 8
57 " 58	2	15	29 8
58 " 59	1	14	28 8
59 " 60	....	13	27 8
60 " 61	....	12	26 8
61 " 62	....	11	25 8
62 " 63	....	10	24 8
63 " 64	....	9	23 8
64 " 65	....	8	22 8
65 " 66	....	7	21 8
66 " 67	....	6	20 8
67 " 68	....		18 8
68 " 69	....		16 8
69 " 70	....	5	13 8
70 " 71	....	4	10 8
71 " 72	....	3	6 8
72 " 73	....	2	2 8
73 and upwards,	....	1	1

The new scale, should it be eventually adopted, would doubtless slightly effect the prices of American wheat, but not materially, since it is clear that when wheat is under 51s. at Liverpool, we could not afford to export to any extent, as prices here, which would render such rates profitable to the exporter, would be ruinous to the grower or the farmer. The principal effect of the proposed scale, will be to cause American wheat to pass into Canada, from whence it will be exported as colonial, at duties merely nominal, as will be seen by the table. This is to a very great extent the case under the existing scale; and letters from all the ports on the lakes, speak of the extensive purchases of wheat already made for the Canada or St. Lawrence market, either with specie or eastern funds. So alarmed have the farmers of Canada become with regard to this increasing influx of American wheat, and so urgent have been their representations to Parliament, that Mr. Gladstone has introduced a bill laying a duty of some nine or ten cents per bushel, on all grain introduced into Canada from the U. States.

The English press, or that part of it controled by the landed interest, and particularly the agricultural journals, are bitter against the proposed modification. The New Farmer's Journal, and the Mark Lane Express, denounce the proposed change in no very measured terms; and it is every day becoming more and more apparent that no change affording relief and bread to the multitude, can take effect, until the masses, in tones that cannot be mistaken, demand it. Things cannot remain long as they are. John Bull is proverbially patient and forbearing, when old habits and ancient abuses are concerned, but there is a point beyond which even an Englishman cannot submit; in starvation, old prejudices and preferences find a powerful opponent; and the truth which should be every where recognized, that the man who labors should have the *first* benefit of his labor, will gradually make itself felt all over the world. This is the point to which all things in the old world are tending, peaceably if they can, forcibly if they must.

IMPORTATION OF WOOL.

WE make the following extracts from a late number of the Boston Cultivator, and invite for them the attention of our readers. Every one is aware that wool, costing less than 8 cents per pound, is admitted free of duty; as it was supposed that none but the coarse Smyrna or Buenos Ayres wools, which would come in competition with none grown in this country, could be procured at those rates. Such, however, it seems is not the fact; but that grades of wool, which directly compete with a large proportion of our wool, ranging from middling to fine, are imported to a great extent, and at prices which exempt it from duty. Of this duty-free wool, the importation annually is from ten to fifteen millions of pounds, and is constantly increasing. The number of sheep in the United States may be estimated at 20 millions, and the clip of wool at 50 millions, about equal to the wants of the country. There is a vast capital engaged in this production of wool by the farmer, and the prices seem to have reached the lowest point compatible with the business, and further reduction would be destruction. We think farmers have a right to ask that in the mutual adjustment of the claims of the various interests of the country, one so vitally important to its interests, and their prosperity, shall not be overlooked. The editor of the paper named, says:

"We have now before us on our table, six kinds of wool imported duty free from South America, furnished us as samples by one of the largest importers in the United States, which actually cost in South America, from 3½ to less than 8 cents per lb., and therefore all admitted duty free.

"The first kind is a long coarse wool about 7 inches in length, about as fine as wool of our coarse long wool sheep, such as is manufactured into coarse blankets, carpets, worsted, and coarse cloths. This sample is very white and clean, and may be afforded for 12½ to 16 cents per pound.

"The second is a coarse wool of a finer grade, fully equal to the wool of our best old fashioned common sheep, and is adapted for middle satinetts, coarse woollens and common blankets. 1,200 bales of this wool were imported into Boston in one week, duty free. If sold at one shilling per pound, it would afford the importer over 100 per cent profit. This wool, by comparison, is equal to some taken from a half blood Dishley ewe, and cleanses white and fine.

"The third is full as good as our half blood merino wool, and may be cleaned, as the importer said, at an expense of from 1½ to 2 cents per lb. This wool is fit for the second grade of broadcloths, cassimeres, flannels, and the first class of satinetts, and may be imported so that it shall not cost the manufacturer, when perfectly cleaned, twenty cents per lb.

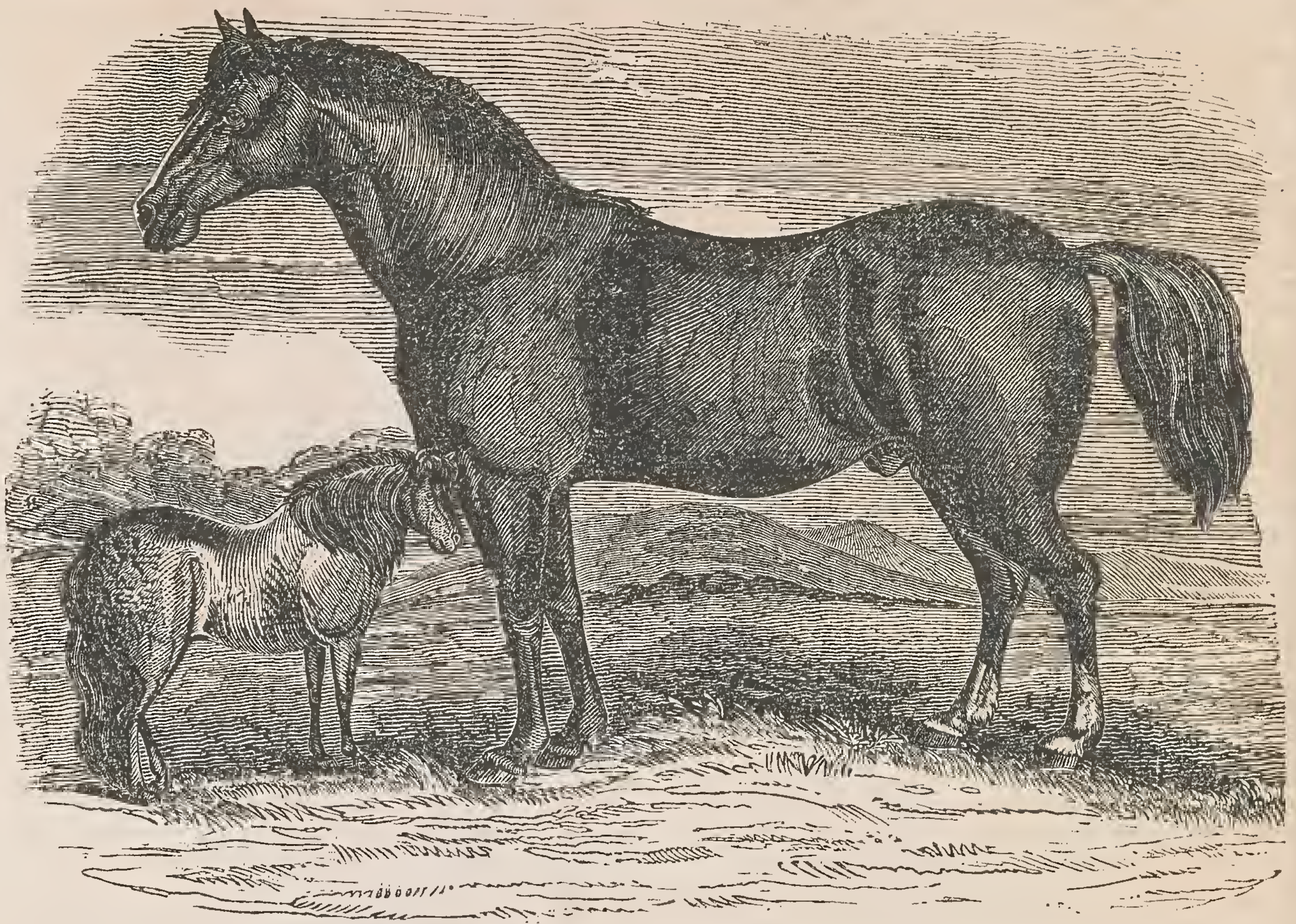
"The fourth, is of the same grade, full of burrs and dirt; may be cleaned for two cents per lb., and may be purchased abroad at the lowest rate above stated, or 3½ cents per lb.

"The fifth, is a sample of wool about the same grade as the two former, short and fine, cleansed in South America, very white and clean. We were much surprised when the importer assured us that this wool cost in South America, positively less than 8 cents per lb., and was imported duty free.

"The sixth, is very similar to pure merino wool, and the sample which we have washed in hot soap suds, is beautifully white and clean. When compared with some wool from the Hon. Isaac C. Bates' flock, we were unable to decide which was the finest, and so we called in a third person, who declared Mr. Bates' a little the finest, but the difference was trifling. This wool being uncleaned, cost less than 8 cents, and was imported duty free; while the cloths manufactured from such wool, by the compromise act have been protected by a duty ranging from 50 to 21½ per cent, down to June, 1842."

IMPROVEMENT IN THE QUALITY OF WHEAT.

COL. LECOUTEUR, the most skillful grower and improver of wheat in England, in some tables lately published in one of the English periodicals, has given the results of some of his long continued experiments in improving wheat by crossings and selections. By continuing to select and propagate only those varieties that gave the most and best flour with the least bran, he now obtains over 2400 pounds of superfine flour to the acre, and so thin is the skin of his best wheats that from an acre of 52 bushels, only 542 lbs. of bran, middlings, and shorts were given. One hundred pounds of this flour, as repeated and careful experiments have proved, will make from six to twelve per cent more bread, of the first quality, than the same quantity of the best common market flour. The beauty, purity, and weight, of some of the specimens sent by the Colonel to the Fair of the Royal Ag. Society, surprised all who noticed the samples, and most strikingly proved the improvement that skill and perseverance can effect in the most common cultivated plants.



THE CLYDESDALE HORSE AND ZETLAND PONY.—(Fig. 66.)

WE copy the above portraits from the 10th part of Prof. Low's "Illustrations of the Domestic Animals of the British Islands," in which we find the following account of the Clydesdale breed of Horses:

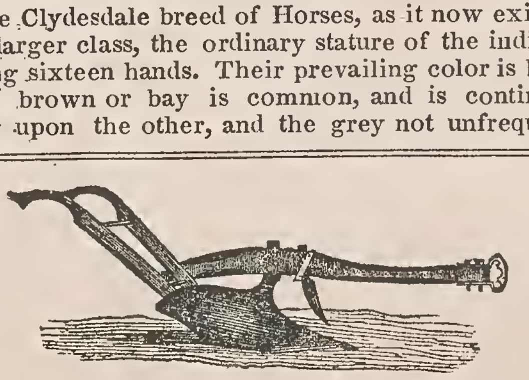
"The Horses of Scotland employed in labor, pass by gradations from the smaller varieties of the mountainous districts to the larger breeds of the plains and cultivated country. It is in the Lowlands that those adapted for the heavier labors, and properly termed Draft Horses, are reared. Although varying in size, form, and properties, in different districts, they have been gradually approaching, with the increased means of general intercourse, to a greater uniformity of characters. The part of Scotland which had early become the most distinguished for the production of the larger horses for draft, was the county of Lanark, otherwise termed Clydesdale. This district, intersected in its whole extent by the river Clyde, comprehends a large portion of that vast field of coal to which Scotland owes its existence as a manufacturing country, and contains within its bounds the city of Glasgow, which, from a secondary town, has become, within the period of less than a century, one of the most rich and populous cities of the empire. The rapid and continuous increase of this great manufacturing city, and the prodigious land-carriage in the rich mining district connected with it, created a demand for horses of superior strength and size for the purposes of draft. The kind of carriage employed for the transport of minerals and all kinds of goods, being the single horse-cart, the Horses required were those which should combine with weight of body a considerable degree of muscular activity. Those of the district have become, in an eminent degree, adapted to the conditions required, and being intermixed in blood, and formed on a common model, a breed has been produced with well defined characters. It is termed the Clydesdale Breed, because the individuals are mainly derived from that district.

"The Clydesdale breed of Horses has a manifest affinity with the Black Horse of Holland and the Netherlands; and universal tradition refers to an importation, at an early period, of a number of Flanders stallions to the neighborhood of Hamilton, by one of the Dukes of that name. It may likewise be believed, that horses from different sources have been from time to time introduced into the popoulous mining and manufacturing district of this part of Scotland, and that thus the breed of Clydesdale is really of very mixed lineage, although its distinctive characters have been communicated to it by the blood of the Black Horse.

"The Clydesdale breed of Horses, as it now exists, is of the larger class, the ordinary stature of the individuals being sixteen hands. Their prevailing color is black, but the brown or bay is common, and is continually gaining upon the other, and the grey not unfrequently manifests itself, although the parents should have been dark. They are longer in the body than the English Black Horse, and less weighty, compact, and muscular; but they step out more freely, and have a more useful action for ordinary labor. They draw steadily, and are usually free from vice. The long stride characteristic of the breed is partly the result of conformation, and partly of habit and training; but, however produced, it adds greatly to the usefulness of the horses, both on the road and in the fields. No such loads are known to be drawn at the same pace by any horses in the kingdom, as in the single horse carts of carriers and others in the west of Scotland; and in the labor of the fields, these horses are found to combine activity with the physical strength required for draft.

"The horses of this breed are now reared all over the counties of Renfrew, Ayr, and Dumfries, but they are still produced in the greatest numbers in Lanarkshire. They have fair justice rendered to them when young, by their being allowed their natural exercise over a large range of pasturage, until the age at which they are taken up for work. Although not pampered, the mares, when in foal, are kept in good order, by means of turneps, potatoes, and similar food. The only kind of horses, too, reared by the farmers, being those of the native stock, there is no mixture of breeds, and little employment of those half-bred mares which are common in other breeding districts. On the other hand, the rearing of draft horses being more a part of the regular routine of the farm than elsewhere, the farmers are usually satisfied to obtain a fair average stock, without seeking to produce horses of superior figure and higher price. Fewer examples of very fine horses may be presented here than in other breeding districts, but fewer fall below the standard aimed at.

"The Clydesdale Horses, although inferior in weight and physical strength to the Black Horse, and in figure and showy action to the better class of the draft horses of Northumberland and Durham, yet possess properties which render them exceedingly valuable for all ordinary uses. On the roads, the individuals perform tasks which can scarcely be surpassed, and in the fields they are found to be steady, docile and safe. It is important not only to the district which produces them, but to all the others to which they are carried, that a due attention be given to a development of the useful properties distinctive of the breed. In Clydesdale, some breeders apply themselves to the rearing of Stallions, and exhibit in their practice the skill and liberality which can be desired; but in the case of the mass of breeders in the district, no peculiar energy or skill is exhibited. They are often too easily contented with cheap and inferior mares, and not always sufficiently aware of the importance of employing stallions of the first class."



THE WISKONSAN PLOW.—(Fig. 67.)

THIS plow is highly recommended by those who have used it, for its ease of draft, and the perfect manner in which it inverts the sod. It is the invention of Mr. E. G. Whiting, and is manufactured at Rochester, N. Y. by A. J. Langworthy.

MINERAL PHOSPHATE OF LIME.

MR. KIMBERLY has presented to the R. E. Ag. Society, a specimen of native phosphate of lime from the mountains of Estramadura in Spain, which when analyzed by Mr. Phillips was found to contain 90 per cent of the phosphate. As the Society supposed that this must be a most valuable manure, it resembling bone dust essentially, so far as the phosphate of the dust is concerned, Prof. Daubenny offered to undertake at his own expense, a journey to Spain, to examine its geological position, quantity, facility of obtaining it, &c. provided the British Government would grant him the passports necessary to ensure safety in that wild part of the kingdom. The Report of Prof. D. will be looked for with much interest.

Notices of New Publications.

Elements of Scientific and Practical Agriculture; intended as a text-book for Farmers and Students in Agriculture. By Alonzo Gray, A. M.

It is a subject of congratulation to every well wisher to the cause of agriculture, that the means of a thorough acquaintance with the principles which govern its progress, are being brought within the reach of every tiller of the soil. Ten years since no publisher would have hazarded the publication of a work on agriculture in this country. Now, there is no difficulty in finding publishers; and what is of more consequence, so far as effect is concerned, finding readers. In our last we noticed Dana's "Muck Manual," a work of great merit on the subject treated, and which we are glad to hear, is passing through a second edition; and now we are presented with another work, more comprehensive in its details, admirably written and arranged, and adapted to the wants of multitudes in our country. Hitherto the farmer has not had a book to aid him in his inquiries, such as is found in every other pursuit. There has been no textbook in the language, suitable to give the student a full knowledge of the elements of agriculture, or which could be advantageously used in schools; hence Mr. Gray's book is most opportune, and we will not doubt, will be most acceptable.

The object of the work is thus stated by the author in his preface. After adverting to the inconsistency of the states in making ample provision for almost every branch of knowledge with the exception of agriculture, the art on which all depend, he adds—"To supply, in some degree, this glaring deficiency in our popular system of education, and to call the attention of those who are interested in the prosperity of our free institutions, to the importance of having the sons of republicans well instructed in this most noble art, have been the principal inducements, for giving this work to the public in its present form. For we are fully persuaded that agriculture will never be held in the high estimation it deserves to be; that it will never attain to that perfection to which it is susceptible; until it is made a regular branch of study by those who practice it as a profession; until it is incorporated into our systems of education.

"But, although this work is designed for students in agriculture; it is not intended to be studied exclusively by those who are attending at some public institution. It is designed for the farmer, at whatever stage of his education he may have arrived; for we believe it is as true of farmers, as of any other class of men, that they are 'never too old to learn;' and that, unless they are very stupid, they generally do learn something every day of their lives."

There are but few of our primary schools, in which a class studying the "Elements," might not be advantageously formed; and we should be glad to hear it was used in this manner extensively. The arrangement is such that there is scarce a subject connected with plants, soils, or their management, that is not very fully treated. In a work on subjects where there are so many points not yet clearly understood, it is not to be wondered at if some should be left open for discussion; or that some of the opinions advanced should receive from all, only a qualified assent. We hail the appearance of this work as not only useful to the public, but in its execution honorable to the country. For real utility to the agricultural interest, the "Muck Manual," and the volume before us, are unrivalled by any of the numerous European publications on the same subjects.

The work is very well got up, in a volume of some 370 pages, 12 mo., Dayton and Newman, New-York, publishers.

BARCLAY'S AGRICULTURAL TOUR.

In our last we acknowledged the receipt, from . Boyle, Esq., England, of this new work, and have since had an opportunity of perusing it, and shall proceed to give a brief notice of its contents.

The object of Capt. Barclay's visit and tour in this country, was to determine whether an intended purchase of land for a near relative, should be made in the U. States or in U. Canada. The tour was made in the summer of 1841. He arrived at Boston in May. He says—"From the quantity of well fed beef and mutton I saw in the butchers' market, I inferred that the land about Boston must be good, and feeding well understood. The fish and poultry markets were also excellent, and, in short, there appeard to be in Boston no want of the good things of this world." He visited some of the country around Boston, and says—"I could not discover any appearance of a regular system of farming. The implements of husbandry were clumsy and uncouth." On the 8th of May, he came on to New-York, via Stonington, and on the 11th and 12th visited Long Island and Staten Island. Of the first he says it is the garden of New-York, but that its agriculture is without system, and that no regular effort is used to make the most of its great advantages. On Staten Island he found "large tracts of rich meadow land applied to comparatively little profitable use. They mow a considerable part of the meadows, but I saw very little stock—no sheep—and such cattle as were to be seen were of the most heterogeneous breeds, bad Lancashires, Scotch and Welsh, no two bearing the least appearance of consanguinity. The farming implements are of a rude and awkward description; and, in a word, here is a fine tract of land which, as regards the matter of agriculture, is almost neglected."

On the 14th he left New-York, and on the 15th was in Albany. Here he met with Mr. Sotham, and inspected Messrs. Sotham and Corning's Herefords, and Mr. Prentice's Short Horns. From thence he proceeded, on the 18th, by rail-road to Utica, Syracuse, Auburn; and by stage to Canandaigua. This last mode of conveyance calls forth sundry exclamations not savoring of praise, and deep condemnation of our roads and coaches; but the "admirably broken and high spirited horses," and the skill of the whip, was some compensation for the grumbling. He was delighted with the country from Geneva to Canandaigua, but regretted to see such fine land "evidently mismanaged and its intrinsic value lost." From Canandaigua he proceeded, on the 20th, to Gen. Wadsworth's, at Geneseo. "He lives," says our author, "in a fine house, exactly resembling that of an English squire, picturesquely situated on a rising ground, and commanding views, similar in character, and not excelled in beauty, by the prospects from Richmond Hill, or Windsor Castle." Col. Wadsworth's system of farming finds little favor in the eyes of Capt. Barclay, and he again regretted "seeing land so valuable covered with stock of so inferior a description. The Red breed of cattle, which I had seen all over New-York, Col. Wadsworth informed me, are considered to be Devons. If so, they are much degenerated, being of diminutive size, coarse and evidently bad feeders, averaging not more than from 25 to 30 stones."

As a fair representation of the farming of this country, the course of cropping, management of manures, rotation, &c., Capt. Barclay dwells at considerable length on Col. Wadsworth's methods, and finds little in them to approve. The plowing in the clover for wheat, instead of feeding it off on the land, and the waste of such vast quantities of straw, is pronounced a "most improvident mode of agriculture." One of the greatest defects in our system, Capt. B. considers to be our renting lands to tenants, the landlord receiving a portion of the produce in kind, instead of leasing it to them for a term of years, as is practiced in England. In the first case, the tenant is only anxious to get as much from the soil as possible without regard to the future; in the latter case, it is for his own interest to farm well, and make all the improvement possible.

Capt. Barclay much admired the control and action of our farm horses, but their blood like form appeared rather slender, and he thought that a cross of the Suffolk, Clydesdale, or heavy Lincolns would be an improvement.

From Geneseo, Capt. Barclay proceeded to Niagara, by the way of Caledonia, (where he visited several Scotch emigrants who had become wealthy,) Batavia, and Lockport. The Falls disappointed him; and from Niagara he crossed the Lake to Toronto. On entering Canada, he was much struck with the difference existing in favor of the United States, and at a later period he says—"This was my early impression, and every thing I have since observed, or by inquiry ascertained, has served to confirm it, and to satisfy me, that, of the two countries, the States hold out, for agricultural pursuits, by far the greater advantages to persons possessed of any capital." That Capt. Barclay's judgment in the matter is not influenced by his political opinions, and that his loyalty is undoubted, we have a right to infer from various passages, and particularly his high wrought eulogium on Sir Allen McNab.

From Toronto Capt. B. recrossed the lake to Lewiston, proceeded to Buffalo; up Lake Erie to Erie; from Erie to Pittsburg, by stage; (which again draws forth sundry maledictions on the American roads;) from Pittsburgh to Wheeling; from Wheeling to Baltimore, Washington and Richmond, which was the extent of his journeyings to the south. His object in visiting Virginia was to inform himself as to the true state of American slavery; and he was happy to find "the condition of the slaves physically one of great comfort and enjoyment, in comparison with that of our own manufacturing population; by thousands of whom, I cannot doubt, it would, in relation to the necessaries of life, be looked upon with envy."

At Richmond he had a good opportunity of witnessing one of the best specimens of southern farming, on the estate of Mr. Marx, but he was sorry he could no more approve of Mr. Marx's system of husbandry, than of that he had remarked elsewhere. One great cause of the light crops of grain in the United States, he attributed to the light seeding, we not using in general more than one-third that used in England.

Returning to Washington, he visited congress, and heard some speeches on the McLeod affair, and from what he heard of congressional eloquence, pronounces the principal speakers "superior to many who figure in the house of commons." Proceeding to Philadelphia, Capt. Barclay was delighted with the fine farms in the vicinity of that city. "The stock was of a superior kind, but blood or pedigree seemed to have met with no attention." Capt. Barclay here makes some very judicious remarks on the propriety of cultivating more roots for stock, although he admits that "the cultivation of corn supersedes here the use of green crops as food for stock." From Philadelphia, our traveler returned, through New-Jersey, to New-York, and on the 17th of July sailed for England.

Capt. Barclay's concluding observations contain many valuable reflections, but we have little or no room here to refer to them. One is, that "where nature is bountiful, man is apt to be indolent;" as explaining the little skill shown by us in agriculture. Another is that, although wages are nominally less here than in Europe, the quantity of labor a given amount will purchase, is equal to that of England. This he illustrates in several ways; and we think few will doubt it, who have compared American with foreign laborers at most kinds of farm work.

An appendix is given, detailing the proceedings of a dinner got up in honor of Capt. Barclay, in 1838, at his farm in Ury, at which most of the nobility and gentlemen of the country were present. At this meeting the chairman gave, as a toast, "Prosperity to the Royal Glenury Distillery," of which Capt. Barclay was the founder and proprietor. Capt. Barclay returned thanks, and stated that the consumption of grain was 80,000 bushels per year in the distillery. We hope the Scotch will think better of this matter, and come to the conclusion that the way to supply a starving nation with bread, is not to use 80,000 bushels of grain annually in a single distillery.

ROYAL ENGLISH AG. SOCIETY.

By a report in the Gardener's Chronicle of the meeting of the above Society on the 16th of March, we find a very favorable notice of Mr. Hatch's machine for sowing grain, seeds, plaster, &c., of which a figure has been given in the Cultivator, and of which a model machine had been presented to that Society, by our friend Mr. Rotch, of Otsego. Since that time, a copy of the cut given in the Cultivator, with the description, has appeared in the London Farmer's Magazine, and the machine seems to have attracted much notice from its great simplicity and effectiveness.

At the meeting of the Council of this Society on the 18th May last, "on motion of the Duke of Richmond, seconded by Earl Spencer, Professor Liebeg, and Mr. Henry Colman, were unanimously elected honorary members of the Society."

The following is the statement of the present amount of members; no less than 500 new members have been elected during the last six months:—Life Governors 101, Governors 211, Life Members 328, Members 5,195; total 5,824.

At the annual meeting of the Society, May 23, the Earl of Hardwicke, was elected President for the ensuing year.

The annual Cattle Show for the present year is to be held at Bristol, commencing on the 14th of July.

GUANO MANURE AND POTATOES.

We have before alluded to this new manure, which is exciting so much interest in England, as one of the most efficient yet known. In C. W. Johnson's great work, the Farmer's Encyclopedia, now publishing in numbers, we find under the article Guano, some facts which, as exhibiting several matters comparatively, are of interest to the farmer, we give for the benefit of our readers. From a series of careful experiments, Mr. J. considers 35 bushels of Guano equal to 70 loads of good rotted manure, in its effect upon crops. Guano, it may not be amiss to add, is the dung of sea fowls, and found on some islands in the Pacific, on the shores of Peru. Considerable quantities have been imported to England, and as the quantity is apparently inexhaustible, the use of it promises to extend rapidly. It consists of the most active ingredients, bone earth, uric acid, and ammonia. The experiments of the table below were made by Gen. Beatson; and in every instance 35 bushels guano, 35 loads of horse dung litter, and 35 loads of hog dung litter per acre, were used. The potatoe was the root planted, and the table will show in what manner.

Depth planted.	Guano. bush.	Horse dung.	Hog dung.	Simple soil.
Large Potatoes planted whole.				
12 inches deep.	499	492	408	397
9 " "	466	460	427	327
6 " "	554	583	447	395
3 " "	531	479	414	811
Large Potatoes cut in pieces.				
12 inches deep,	505	648	369	285
9 " "	557	589	434	382
6 " "	589	531	466	408
3 " "	557	511	375	414
Middle eye of Potatoe cut out.				
12 inches deep,	382	479	298	165
9 " "	375	479	298	210
6 " "	576	563	405	337
3 " "	453	382	485	343
Small Potatoes planted whole.				
12 inches deep,	492	401	592	369
9 " "	557	512	525	440
6 " "	628	583	544	570
3 " "	557	414	440	440

The comparative produce in lbs. of potatoes from these manures, was therefore as follows:

Guano,	639
Horse dung,	626
Hog dung,	534
Simple soil,	446

The effect of different depths in planting, is as follows, in the total produce of bushels at each depth; a difference worthy the notice of the farmer, as showing that a depth of six inches is better than one greater or smaller.

12 inches deep,	7181 bush.
9 "	6828 "
6 "	8177 "
3 "	7106 "

Another result is shown in this experiment, and that is the difference in the crop where large or small potatoes, whole ones or cut, are employed for planting. In Gen. Beatson's experiment, the advantage is greatly in favor of small potatoes planted whole; and there are not wanting many farmers in this country, who maintain the same position.

Large potatoes planted whole,	7390 bush.
" " cut in pieces,	7620 "
Middle eye of potatoe cut out,	6230 "
Small potatoes planted whole,	8464 "

Condensed Correspondence & Inquiries.

THE MORGAN HORSE—AGAIN.

After our last paper went to press, containing the statement of Justin Morgan, Esq. of Stockbridge, Vt., that his father brought the original Morgan horse from Springfield, Mass., we received a communication from Mr. John Morgan of Lima, in this state, confirming the statement of Justin Morgan, that the sire of the celebrated Morgan horses of Vermont, came from Massachusetts instead of from Canada, as has heretofore been supposed. Mr. John Morgan informs us that he resided in Springfield, Mass., near Mr. Justin Morgan, senior, previous to his removal to Vermont, and that the two years old stud which he took with him to Vermont, as stated in our last paper, by Mr. J. Morgan, Jr. "was sired by a horse owned by Sealy Norton of East Hartford, Conn., called the 'True Britton, or Beautiful Bay.' He was kept at Springfield one season, by the said Justin Morgan, and two years after I kept him two seasons. This horse was said to be raised by Gen. Delancy, commander of the refugee troops on Long Island, and rode by him in the revolution. It was said that one Smith stole the horse from the General at King's Bridge, while the General was in the tavern: ran him across the bridge and took him to the American army, near White Plains, and sold him to Joseph Ward, of Hartford, Conn., for $300. It was also said at that time, that he was sired by the noted imported horse called the 'Traveler,' said to be kept in New Jersey. Ward was a merchant, and kept the horse three or four years for a saddle and carriage horse, and traded him off to Norton, and Norton kept him for mares while he lived. The description of the Morgan breed given by Mr. G. Barnard, answers well to the description of the stock of 'True Britton.' His stock was all bright bays, some inclining to sorrel. I have always understood that Morgan kept the colt for a stud at Randolph, and was very celebrated for his stock."

PREVENTION OF BLOATING—IMPROVED SHAKER—IMPROVED CHINA PIGS.

We make the following extracts from the letter of a correspondent in Bucks Co. Pa., April, 1842.

"As the time is approaching for turning cattle to pasture, I will give a plan that was successfully tried here last season to prevent bloating on fresh clover, or other grass, and I should like to have others try it and report the results. It is to put a common bridle bit in the mouth of the animal, and fasten it there by a strap or string passing over the head."

"I think I have made an improvement in the shaker to my fanning mill, and will try to describe it on paper. The riddle of my mill was shook by a knocker on the end of the axle of the blower, which projects two or three inches beyond the frame of the mill. This axle being square, I put a whir upon it about seven inches in diameter, with two deep grooves for a band turned in it, one of them an inch less in diameter than the other. I next put an upright shaft with a whir turned on the lower end about three inches in diameter, with two sharp deep grooves for the band corresponding with the other, and as much differing in size, so that the band may be changed without altering the tightness. Let the whir on the upright shaft be horizontal with the whir on the wind shaft, and it will not throw the band. Let the top of this shaft extend as high as the top of the riddle, three inches in diameter, turned off square and smooth, with a neck an inch and a half from the end, and fasten it to the side in any way most convenient opposite the front end of the riddle. Then by boring small holes in the top of this shaft, at different distances from the center and inserting an iron in them, a crank will be formed from an inch to five inches or more. There should be a small piece of good wood attached, or framed across the front part of the riddle or shoe, to which the iron forming the crank can be attached. Take about a quarter inch round iron rod, turn one end at a right angle, one inch, to go in the holes bored in the upper end of the upright shaft; flatten the other end and punch a hole that will take in a large screw, fasten it to the middle of the riddle, and it is complete with the exception of the band, which I have found best when made of wool. It turns easy, and you can give it any desired shake."

"I wish to know your opinion of the improved China hog, compared with the Berkshire—which will make the most pork with the least expense—and which is the thinnest skinned, and the best meat? I bought some pigs for China hogs, and they turned out wild, hollow backed, thick skinned and unprofitable."

Remarks by Eds. of Cult.—We have seen it stated that a band of straw placed in the mouth as the bit is recommended to be, would relieve the bloat. If the bit will prevent it, or will cure it, a great point may be considered gained. We hope it will be tried.

We see no objection to the shaker of our correspondent, except that the working of the iron crank in the holes in top of the upright shaft, would soon wear them too large. If our friend could see some of the mills of the farmers in the wheat districts of western New-York, we think he would prefer their methods of shaking the riddle, for ease and durability, to the one he has described.

The China is the only perfect hog; and the only way he can be improved for the farmer, is to cross him with a breed giving more weight and substance. On the breed selected for this cross, depends the value or the injury of the improvements. The imported Berkshires have been produced in that way; and as the original stock of Berkshires was a capital hog, the cross with the China has given a breed that will be rivaled with difficulty. From the account our friend gives of his China hogs, we fear that in his purchase, he was, as they say down east, "a leetle sucked in;" as they had not a single point in common with the Chinese.

SAW DUST—COTTON GIN.

A correspondent at Demopolis, Ala. says,—"My business is running a steam mill. Having last year made a simple contrivance by which I burn saw dust to much advantage, I am induced to mention it for the benefit of others. I have a door, say sixteen inches square, in the side of my furnace, just behind the fire grates. At this I throw in the saw dust; here it is brought immediately in contact with the flames, and answers a double purpose. Having no fire wall, I make in lieu thereof a wall of fire. My furnace has a strong draft which may be necessary to success.

A Gin for cleaning cotton has been invented by a gentleman in this place, on the roller principle; which by competent judges it is thought will supercede the saw gin. Preparations have been made for their construction, and they will come into use this fall. J. B. C."

QUEEN BEES.

We have received a communication from Mr. H. Palmer of New Marlborough, on the subject of bees, in which he says: "this is the third paper he has sent us, to which he has seen no reply or notice." If Mr. P. will turn to the 7th vol. page 152 of the Cult. he will find a respectful notice and reply to his first communication. His second was of a nature, in our opinion, requiring neither notice or reply, and was laid aside.

Our readers are aware that it is the common opinion, that a swarm of bees is divided into three kinds, the drones or male bees; the neuters or workers; and the queen bee which deposits the eggs from which the young are produced. Such has been the opinion of the ablest investigators, from the first notice we have of the history of bees. So thought Swammerdam, Bonnet, Thorley, Reamuer, and Huber; and so thinks Kirby, Spence, Wilson, Cuvier, Harris, and what may be thought as much to the purpose, so thinks every practical apiarian we have heard give an opinion on the subject, either in the old world or the new, with the exception of Mr. Henry Palmer of New Marlborough, who stoutly denies the existence of any such creature as the queen bee. We cannot think Mr. P. has followed our advice to make himself acquainted with some of the latest writers on bees, particularly Mr. Weeks, or he would not have hazarded the assertion that Mr. W. "has not said one word about a queen, and in so doing has shown his wisdom, for he, nor no other man knows any thing about a thing that never was."

As to proving that which no one (Mr. P. excepted,) doubts, we must be excused; but if some of our bee-keeping friends, should opportunity offer in the course of the season, would send us specimens of the several kinds of bees, we would endeavor to give Mr. P. an opportunity of satisfying himself, by the study of their well marked, external characters, that the whole world has not until the present time, been in an error upon this point. We have supposed that if any point in Natural History had been satisfactorily settled, the existence, functions, and use of the queen bee was one. Still, as all former observers may have been mistaken; and as a grain of truth is more precious than the accumulated errors of ages, Mr. Palmer may yet claim and receive the honor of discovering the grain that belongs to this matter. All we have to say is, let the right prevail.

"BLOOD OF A BLACK CAT."

Our correspondent, Eli Westfall of Dutchess co., enters his protest against the classing by 'Commentator,' of the use of a black cat's blood as a cure for the shingles, among "absurd and ridiculous superstitions." He says—"A few years ago, traveling in the eastern part of this county, I happened to be in the company of an old experienced physician. I wished him to examine my wife's neck, on which was a spot as large as her hand, full of small eruptions, and very disagreeable and painful. She had tried various remedies without effect, the disease constantly increasing. He immediately pronounced it the shingles, and directed that as soon as we got home, we should apply the warm blood of a black cat, and she should at the same time take small doses of Epsom salts. This she did a few times, and though the application was painful, the cure was speedy and complete. I might bring a respectable number of persons to testify to the efficacy of this method of cure, where the skill of the physician had failed, but shall give only one. The man that works my farm had this complaint desperately. All the doctor *did* was of no avail; it continued to spread until it had nearly surrounded his body, when he made use of about three cat skins applied warm with their flesh sides to the body, making use of the blood too, and a speedy cure was the result. I am not prepared to say that the blood of a black cat is any better than that of a cat of any other color; be that as it may, it is as easy to cut off the tail or the head of a black cat as any. I think I can perceive a vast difference in the superstitions of the influence of the moon on meat, or of lucky and unlucky days, alluded to by 'Commentator,' and that of curing the shingles by the blood of a cat. In the latter case there is a direct and tangible application, and unless Commentator can prove that the component parts of a cat's blood are not good for the shingles, I shall continue to believe my own eyes at least. I trust Commentator will forgive the liberty I have taken, as I can assure him that my wishes for the eradication of all superstition, are at least equal to his own."

"I hope Mr. George Woodfin will not fail to make public his method of manufacturing manure from night soil, and the effects resulting from it."

Note by Editors.—Those of our readers who have read "Coxe's Four Years on the Columbia River," will remember a cure of apparently confirmed consumption in a young lady, the daughter of the Superintendent, by direction of the Indians, performed in the following manner: A horse was killed, and the viscera, entrails, &c. removed with the utmost despatch; and the young lady placed in the cavity so formed, in such a manner that her head only was free. Here she was kept until the temperature was sensibly reduced, when she was removed. A few repetitions of this treatment completed the cure. Coxe does not say whether the horses were black or white.

YAM POTATOE.

Mr. Horsfield of Wyoming Co., after cautioning farmers to beware of paying extravagant prices for new things and advising them to avoid another Rohan humbug, adds: "But Mr. Smith's *new* Yam potatoes are new only in name. He says they are "*new to him;*" perhaps they are; but from the description which he gives, they are an old acquaintance of mine, and I can inform Mr. Smith that the same article precisely is cultivated in this section of the country, in great perfection; and that I will agree to furnish them in any quantity, at one dollar (instead of six,) per barrel. I will also join most heartily with him in recommending them as highly as he does, for their excellent qualities not only, but for their productiveness also."

Mr. H. has not stated the name by which Mr. Smith's 'Yam' potatoe is known at the west, but it appears to us to be the same known to some as the calico potatoe, and to others as the blue potatoe; the first name arising from the appearance of the interior, and the latter one from the color of the skin, which is a dark purplish blue. They are a first rate potatoe for cooking, of good or even large size, and so far as our experience with them goes, produce abundantly. It must be remembered, however, that local names are not the best marks to distinguish potatoes, they having very different names in different places.

"AN ONONDAGA FARMER," AND MR. ALLEN.

We have received from Mr. A. Bickett, a paper in reference to the communication of "An Onondaga Farmer," in a previous number of the Cultivator, some parts of which the writer will pardon us for omitting, as dealing too much in personalities, and apparently founded on misapprehension. After stating that he had seen in the Boston Cultivator, the paper of "An Onondaga Farmer," quoting some of his opening remarks, comparing him to a "certain important personage who on the pinnacle of the temple, quoted scripture to the wisest and best being the world ever saw," &c. Mr. B. goes on to say:—

"If this voucher for Mr. Allen, (if the twain are not one flesh, in a sense somewhat different from the scriptural one,) had given his real name, and his particular whereabouts, your readers would have been more able to put a just estimate on the value of his "conviction." There is enough of doubt existing already about the soundness of some of Mr. Allen's statements, (that on the subject of Short Horns not excepted,) without adding any more to it by the evidence of a person writing under a fictitious signature. It is high time that both Mr. Allen, and the author of the article referred to, (if they are two persons,) should understand that assertions are not proofs, whether they are made under real or fictitious names, however high authority the person or persons who make them may think themselves to be. It is one thing to assert that there is "only one man's herd in England that can improve our own," and another thing to prove it; and if either Mr. Allen or "An Onondaga Farmer," or both of them *can* prove it, they will do more than I expect—and I hope for their credit and our information, they will try; but I suppose this part will devolve on the latter of these two gentlemen, as the former has got more to do than he can accomplish to prove some of his own assertions. His doctrine about making Ayrshires, beats Transcendentalism all hollow."

After a series of comments on the remarks of "An Onondaga Farmer," respecting the danger to be apprehended from the importation of cattle affected with the prevailing epizoatic disease in Great Britain, denying there is any danger to be apprehended from that source, and insinuating that such an attempt to alarm the agricultural public could only have arisen from selfish motives, Mr. Bickett adds:—

"But I venture to assert, that so long as the frequent importation of animals continue, that the interests of some of the would-be-monopolist breeders of these animals in this country, (does 'An Onondaga Farmer,' or Mr. Allen, know of any such? I only ask the question, 'hope I don't intrude,') will be in much danger; and if the 'damage' to their interests would not 'be estimated by millions of dollars,' it would be estimated by dollars to some extent; and if any bugbear can be got up under a plausible pretence for the public good, that will prevent importation, it would certainly enhance the value of those already imported, a thing which would no doubt be very desirable in some quarters. Mr. Allen raises a ghost about the 'expense of importation' being enormous; but he says nothing about the 'enormous' prices paid for animals of the improved breeds in this country. But as the old Scotch proverb says, 'it is not for nothing that the glid whistles.' 'An Onondaga Farmer' tries to impress the idea on the public mind, that we have enough of cattle of the improved breeds to supply our present wants; but that man must be but slightly acquainted with the country, who does not know that we have but a small fractional part of what is required for any speedy improvement: for both the 'enormous' high price and the great distance that farmers at present have to take their cows for the purpose of crossing with these breeds, causes them to spread so slowly, that a long time must elapse before 'An Onondaga Farmer' will realize the 'immense improvement' he is looking forward to, with so much 'pleasure.'"

BUTTER—TEMPERATURE AND SALTING.

A correspondent, speaking of the importance of a knowledge of the proper temperature of cream for making butter, says a gentleman of his acquaintance finding his family frequently baffled in their efforts to make butter, sometimes the cream being supposed to be too cold, when hot water was added; and sometimes too warm, when it was diluted with cold water; or if these were not added, the cream was transferred from the cellar to the fireside, or vice versa, finally recollected reading an article on the manufacture of butter, in which the proper temperature was stated; and purchasing a thermometer, found that by regulating the temperature, there was no difficulty whatever in making the butter from the cream. This temperature he thinks was 66°.

Our correspondent further says—"We purchase all the butter used in our family, and for fifteen years have had our winter supply from one individual. It has been put up in stone pots or jars, and only one parcel has ever been inferior. I showed this to the maker, and he was at a loss to conjecture the cause, as it was all made in the usual way, except one pot, which was made by his tenant, and their butter was as good as his own. I asked if it was not salted with Liverpool salt. He said not; as they never used it for dairy purposes, knowing it was unfit for that, or for meat: and that himself and his tenant, use the best Rock or Turk Island salt. Further inquiry, however, proved that the wife of the tenant, overlooking the facts of the unfitness of that salt, had used it for several pots of butter, one of which we had, and thus the inferiority was accounted for. Dr. Mitchell in a paper on the use of salt, deprecates the Liverpool as unfit for the dairy, or provisions of any kind; and ascribes the ill health and death of seamen in particular to that cause. Such salt may do where the article is to be used immediately, but not where it is to be preserved for any considerable time."

NOTE BY EDS. OF CULT.—From experiments made by Dr. Barclay, Mr. Allen, and by Mr. Ballantyne, it was found that the proper temperature to commence churning, was from 50° to 55°, and that if it exceeded 65° at any time, the effect was injurious on the quantity and quality of the butter. Mr. Ballantyne found that the temperature of cream rose in churning. Thus 15 gallons of cream at the temperature of 50° was placed in the churn; at the end of two hours it was 56° and at the end of the churning was 60°. Mr. B. found that the greatest quantity of butter was obtained at 60°; and the best quality at 55° in the churn just before the butter came. When the heat exceeded 65° or 68°, the milk could not be detached from the butter without the aid of salt.

STACKING STRAW.

"MESSRS. GAYLORD & TUCKER—At page 30, of the current volume of the Cultivator, I observe your remark about feeding sheep and cattle at stacks, in which you state that it has been your practice for several years to stack your straw in such a manner as to have it eaten out at the bottom; and that as it is thus eaten out, it gradually settles down until the whole is consumed; and that it is a mode of feeding straw more economical and useful than any other you have tried. My object is to request you to describe your manner of constructing such stacks.

Castile, Wyoming co. N. Y. J. HORSFIELD."

Select some convenient position in relation to the yard, barn, and the manner in which the straw will be delivered from the threshing machine, and then set four strong posts firmly in the ground, in a square form, some 14 or 16 feet from each other. These posts may be three or three and a half feet in height. If they are not crotched, deep notches must be cut in their tops to receive a stout pole, one of which is placed on each side of the square. The poles must be carefully notched together at the corners, so as to preclude slipping. Over these, and pointing to the centre, smaller poles, or smooth rails are laid at intervals of from 8 to 12 inches, at an angle of some 30°. The bottom part of the rails will rest on the ground, supported by, and lying across the large horizontal poles, and pointing upwards and outwards for the reception of the straw. After a small quantity has been put into this frame work, the rails must be equally and properly placed, and then the straw may be thrown on till the stack is complete, when the upper part will project some 8 to 10 feet over the poles. If the rails are laid too flat, the straw as the bottom is eat out, will not settle easily and equally, so as to be always within the reach of the cattle, as it will do when their inclination is greater. If the quantity of straw is great, such stacks may be made of any length; and as animals can go on all sides of them, they form while they last, an excellent protection against storms of rain or snow. We have been in the habit of occasionally throwing a little salt over the straw as the process of stacking was going on, and believe we have found a decided benefit from the practice. We prefer this mode of stacking, or rather getting rid of our straw, for these reasons:—it is as easily disposed of in this way as any other; it is always available as food for animals; it requires no labor in feeding out; it forms a good shelter for a considerable part of the winter; and the manure made when so eaten, will more than compensate for all the trouble. In getting out the manure, the rails and poles are removed. The posts alone remaining.

THE BEST MEANS OF PROMOTING AGRICULTURAL KNOWLEDGE.

WE have received from our correspondent F. Burt, of Ohio, a long communication on the subject of National and State Agricultural Societies, in which the writer contends strenuously against the right or the policy of the General or the State governments, to appropriate funds for the aid of such societies, he maintaining that the whole system of premiums is founded in error, and calculated to do more harm than good. Mr. B's remarks are principally in reply to "Commentator," and "Salmagundi;" but as he has been already heard in our columns, we have concluded to omit that part of his communication, and give that part in which he unfolds his plans of agricultural improvement, and in which we think he will find many of the warmest advocates of Premium Agricultural Societies to agree in the main with him.

"I really wish some of the friends of fashionable Agricultural Societies, would give us some matter of fact statements and arguments, showing wherein such societies are going to exalt the character, and improve the mind of the farmer. I wish to see the character and interest of the farmer improved; he ought not to be a hermit wrapped up within himself, with no interest or feeling but what can be calculated by dollars and cents. He ought to take an interest in the affairs of his own state and nation, and he ought to take a great interest in the affairs of agriculture. I believe that the best plan to promote that knowledge, would be to form societies in every town for the diffusion of such knowledge; to meet together often, have addresses if any of the members feel disposed to deliver such, and have familiar conversations on all agricultural subjects. Here might also be a never ending source of information in reading and discussing agricultural topics; every one could learn something from his neighbor; every one could give his views, or his experience, in raising wheat, corn, or cattle; and the very wise might possibly learn something from those that are considered *marvellously ignorant*. We might also go on a larger scale, and once or twice a year have county meetings for the same purpose, which might pass off with a good public dinner, every one to eat at his own expense. The same may extend to the States, or the United States, if any think that good can result from it. In this way farmers can meet together as friends and equals, and part as such. They will not meet like a party of loafers around a lottery office, all anxious for the prize, and part after that is declared, some few triumphing, but by far the greater number disappointed and chagrined. The spirit of good feeling is what ought to exist among farmers; and this exalting one above another, or putting a handle to a man's name, because he has hauled out two hundred loads of dung, as proposed by Mr. Morrell in his Salmagundi, is folly in my estimation."

DICTIONARY OF FRUITS.

OUR correspondent J. Horsfield, asks whether "there is such a work in our country as a Dictionary of Fruits, or any publication giving a complete list of all the fruits cultivated or known in the United States, with a full description of each."

We know of none precisely answering this description; but we think the last edition of Kenrick's Orchardist, approaches so near it, that our correspondent will find it about the thing he wishes. If he wishes figures of the fruits, he will find them in the "Orchardist's Companion," a splendid work now in the course of publication in Philadelphia, and noticed in the last No. of the Cultivator.

THE WEATHER—SNOW STORM.

EXTRACT of a letter from a correspondent in Onondaga county, dated June 17, 1842.

"Fortune has hitherto had the reputation of being the most inconstant jade extant, but she has at last found a formidable rival in the weather. Only think of snow and frost the 11th of June, this blessed year 1842. The latter part of May was cold and ungenial; the forepart of June was the same, 'only a good deal more so.' On the 1st of the month there was a slight frost, but not to do injury. On the 7th there was a hard frost, which in the most exposed situations, killed corn, beans, melons, cucumbers, &c. Friday, the 10th, was a cold rainy day, wind from N. to N. E. Thermometer which was at 78° the day before, fell before night to 36°, and at ten o'clock in the evening snow began to fall. Saturday morning, the 11th, the hills in the south part of this county, and in Cortland, were white with snow. On the most elevated parts it was from two to three inches in depth, and did not disappear before 12 o'clock. On the morning of the 11th, at sunrise, the thermometer was at 30°; the snow which fell wet was frozen hard on to plants, trees, fruit, flowers, &c. presenting a most gloomy and singular spectacle. In districts or places particularly liable to frost, potatoes and corn were killed to the ground, but on the whole the damage was not so great, as there was at first reason to apprehend. Fruits were unharmed, but gardens suffered much. This storm was followed by another frost on Saturday night; since which time we have had fine weather, with seasonable showers and high temperature, which has given vegetation a great start. How far this untimely snow storm extended is not yet known, but it has been heard from, from Oneida to the west line of the state, along the elevated lands that separate the waters of the lakes from those flowing south. As it melted rapidly when falling, the depth would have been considerable had it remained as it fell, and sleighing in June might have become a reality instead of remaining a word to mark incredible things."

CORN FOR GREEN MANURE.

"MESSRS. EDITORS—Can you inform your readers the comparative difference between turning under with the plow, two crops of Indian corn during summer, (sown at the rate of from 4 to 6 bushels to the acre,) and cutting it, and feeding to cattle; whether the difference would be in favor of turning under, or feeding. My own opinion is, that this crop plowed under, is worth three times its quantity, passed through the stomachs of cattle, for the improvement of the soil. L. P."

We are unable to state positively the results of the two methods of manuring proposed by our friend "L. P's" question; but if, as is maintained by all late writers on agricultural chemistry, the value of manures is depending on the quantity of nitrogen they contain—that animal matter contains a much larger proportion of nitrogen than vegetable matter—and that animal manures contain large quantities of animal matter, and consequently of nitrogen, we think it very possible that the corn crops fed out, and the manure made applied to the soil, would produce more effect, than if simply plowed in for decomposition.

STRAW CUTTERS AND FANNING MILLS.

"MESSRS. EDITORS—Will you please to say in your next Cultivator, what cutting box is considered best for small farms where manual labor is to be used, and what make of winnowing machines is preferred for small grain.

Ridge P. O., S. Ca. R. WARD."

Green's straw cutter, every thing considered, is generally preferred among farmers, as it is very little liable to break or get out of order. Those who wish machines that will cut finer than Green's, can have Gilson's or Willis'. Of Fanning mills there are an almost endless variety, as any one can see by visiting the wheat growing sections of this state, all of which will perform good work, principally differing in the rapidity of execution. Good fanning mills can be had in any part of the state.

PROSPECTS OF THE ENGLISH GRAIN MARKET.

ALTHOUGH in the present state of things, we can expect to export but little wheat or flour direct to Great Britain, yet the state of the grain market there, will of necessity more or less influence the price of flour here; perhaps not the less because the greatest portion of American wheat enters England as Colonial produce, from its having passed through Canada in its transit from our wheat fields and mills to Europe. The following extract from the Mark Lane Express, the highest authority in all matters relating to the English grain market, may perhaps furnish some idea of the prospect existing for a foreign demand for our surplus products:

"That the last crop was deficient is undisputed; some parties went so far as to estimate the deficiency at a fourth, others at a fifth, and the most moderate at a sixth; it is also a well known fact, that at the time of harvest, the stocks of old English wheat were completely exhausted, and that the consumption was consequently immediately thrown upon the new crop. Calculating then that the total produce of wheat should in average years be 20,000,000 qrs, and supposing the yield of last year only one-sixth short, we should have a deficiency in round numbers, of 3,300,000 qrs.; and if to this be added the deficit caused by the decrease in weight, which cannot be taken at less than 3 lbs. per bushel, or 24 lbs. per qr., we shall have a further falling off of 1,000,000 qrs., making together, the enormous difference of 4,300,000 qrs. [Thirty-four millions, four hundred thousand bushels!] To make up for this falling off in our own growth, we had an importation from abroad of about 2,500,000 qrs., nearly the whole of which has already been consumed. It would appear, therefore, that the stocks now in the growers' hands, must be very much below what they usually are at a corresponding period of the year. As yet, we have scarcely felt the deficiency of our last crop, having hitherto had plenty of free foreign; now, however, it must soon become apparent, as the stocks of the latter kind are nearly exhausted."

England has a population of some 25,000,000, and it seems to be a startling assertion that the falling off in her principle article of bread stuff the past year, is equal to one-half the whole consumption of wheat in the United States, with a population of 17,000,000. England, it must be remembered, has not our immense crop of Indian corn to fall back upon for bread when wheat fails, as we should have; and hence the suffering and distress for want of bread in that country, with a prospect of a frightful increase of misery before the next harvest.

Original Papers from Contributors.

COMMENTS ON THE APRIL AND MAY NUMBERS.

Under the head of "Work for the Month," in the April No., several things are stated as settled matters, which seem to require farther investigation. The first is—Mr. Haggerston's opinion that a mixture of two-thirds muck and one-third stable manure, is as valuable and effective as the same quantity of stable manure alone. Now—unless this opinion is the result of very accurate comparative experiments, often repeated—I would respectfully suggest, that it is one of those novelties which requires a much fuller trial before it should influence general practice.

The second questionable statement is, that "stable and barnyard manures, when put unfermented upon land, should be covered." Many good practical farmers assert the contrary, and plead long experience in justification of their opinion. I mean not at present, to side with either party, but like old Sir Roger de Coverley in Addison's Spectator, will merely remark, that "much may be said on both sides," and therefore, that a final adjudication of the case should not yet be made.

Lastly, in speaking of Asparagus and Strawberry beds, you say, "None but compost manures of the best kind should be used for such purposes." It is within my own knowledge, that several very successful gardeners prefer for the first,—either salt, marl, or wood ashes, whilst others—from whose beds I have often seen cuttings which measured an inch and more in diameter—cover them in the fall with fresh horse dung mixed with straw, over which fresh wood ashes are strewed. Early in March, all the coarse parts of the manure are raked off, and the rest forked into the beds, over which some fine sand is then spread. A common notion prevails that it is wrong to disturb the roots, but I have known old beds to be materially benefited by running a single coulter through them.

On strawberry beds I have known marl, wood ashes, rotten chips, chaff or half rotted straw, to succeed quite as well as any other substances which I have ever seen applied to them.

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Under the head of "Nicking Horses," you have given, I believe, very proper directions; but I should greatly have preferred to have read the most severe reprehension of this barbarous practice that you could possibly utter. The pain inflicted upon the poor helpless animals subjected to it, is evidently excessive, to say nothing of its depriving them, during life, of that defence which nature has given them against the innumerable insects that for three-fourths of every year, are tormenting them incessantly. But what makes the matter still worse, it is all done—*not* to make the horses more serviceable—*not* for any benefit that it can possibly render to ourselves,—but merely to gratify a most false, barbarous and cruel taste, at the expense of our humanity. It is a pity but that the nickers themselves had tails—like their kindred spirits, the monkeys, and could be once subjected to only half the pain of the process; "I guess" it would speedily cure them of their barbarity to their poor horses.

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Your prescription for protecting "Poultry from Vermin," is probably very good; but I will add to it another, which I received many years ago, from a famous cock-fighter and breeder of game fowls, who said it was infallible. Make their nests and roosts of sassafras wood, and strew the leaves occasionally on the floors of their houses.

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I was much gratified, as I think every friend to truth and justice will be, by the remarks of the "Onondaga Farmer," upon that most unwarrantable attack on the character of the late Judge Buel, signed D. in "the South Carolina Temperance Advocate and Register of Agriculture." Whatever the writer may know about South Carolina agriculture, it is perfectly manifest that he is profoundly ignorant of its condition in other States, or he could not possibly have represented as incredible, accounts of corn crops per acre which have been surpassed in every corn growing state of our Union, from which we have received any authentic statements, (and such are very numerous in our agricultural papers,) in regard to the great productiveness of this highly valuable grain. It is equally manifest that this writer is quite as ignorant of the character of Judge Buel, both as a farmer and a man; for no one in the United States was more highly esteemed by all who knew him, nor did any man ever dare before to impeach his veracity. But pertness and self-conceit are always connected with dogmatism, and generally seek to attract public attention,—not by displaying any merit of their own, (for they have none,) but by attempting to destroy the merit of others.

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The annual manuring of peach trees insisted upon by J. Dille, is certainly not necessary in all situations; for I myself, have seen several peach orchards which bore very fine fruit, equally good during many successive years, and without manure. He makes another assertion which I have never seen verified; nor can I see any reason why it should be correct, although I do not mean positively to contradict him. It is, that "*no tree so soon exhausts the soil in which it grows.*" Now nearly all fruit trees, except the plumb and quince, are considerable larger, and of course have more roots constantly drawing nourishment from the earth. Consequently, it is at least probable, if not certain, that they exhaust more than the peach. Of this much my own experience has long assured me,—that peach trees will flourish in land too poor for either apples, pears, or cherries.

T. of New Jersey says,—"*it is well known that if briars are cut in the heat of summer, the roots generally decay and die.*" I wish I could confirm this from my own experience; but unfortunately, I know well that they (at least the variety called the dew-berry or running briar,) very rarely, if ever, *will die*, merely by being cut, in the country with which I am best acquainted.

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If your worthy correspondent who subscribes herself "A Farmer's Wife," calls such a breakfast as she decribes, "*plain and simple,*" I feel a strong curiosity to know what, and how many articles would compose such a breakfast as she would call the reverse of "plain and simple." Her bill of fare for only one man, consists of bread, meat, one doz. potatoes, a bowl of apple sauce, pickles, coffee or tea, mince and apple pies, with cakes and cheese ! ! But if "industry and sweet sleep," should give one man an appetite to devour even the half of such a medley of viands, I should fear that it would not take many such breakfasts to put him into his coffin. However, there is no disputing about tastes, and if the good lady has "a sure enough husband," or particularly desires one whose appetite craves, and whose stomach can safely stow away such a cargo, far be it from me to make the slightest objection to it, unless indeed, there was some danger of my being compelled to feed him for the customary price.

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I verily think the May number of your paper worth any three that I have yet seen of them, although I have been a subscriber from the beginning, and have never read one which I did not value at double the amount of the annual subscription. Your two statistical tables alone, would be a good bargain at two dollars, if they could not be obtained elsewhere.

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In your article headed "Work for the Month," you did not sufficiently regard differences of latitude, when you said, "May is the month in which Indian Corn should be planted;" for in Florida this work is commenced about the end of February, and is done gradually, later and later, as the latitude increases to the north. Corn planted in good land, even as late as June, will often succeed very well in latitude 37.

In speaking of the Irish potatoe, you say, "the Pink-eye and Mercer are the best table potatoes." My family are now (14th of May,) using the Chenango variety, and we all deem them fully equal, if not superior, to the two kinds which you recommend: although I can say nothing of their productiveness, having now planted them for the first time.

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The article under the head "Statistics—State of the Country," together with the two tables above it, contains information of very great interest; but it is deficient in one highly important thing, although it could not perhaps be easily obtained: this is a statement of the quantity of land actually cultivated in each state. This, if known, would enable us, when compared with the produce per acre of each kind of crop in the several states, to make a pretty fair estimate of the agricultural improvement in each; at least of the old states, wherein nearly all the arable lands are already in cultivation.

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In the article on "Stabling Horses," I concur entirely with the writer who signs himself "A Subscriber," in preferring earth floors to any I ever saw made of plank, or to any which I believe can be made of that material. My preference is founded upon an experience of more than 40 years, during which I have had many opportunities of comparing the two kinds of floors, and of hearing the opinions of breeders, trainers, and owners of horses, in a state, wherein I believe more attention is paid to this kind of stock, than in any other state of our Union.

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Mr. L. A. Morrell's "Salmagundi No. 5," has the same intermixture of the pleasant with the instructive, which characterizes every thing from his pen. But when he talks of justifying "a boy for striking his daddy," if he caught him feeding his sheep with "oats in the sheaf," *I* feel the same kind of inclination "to veto" his declaration, that *he* says he felt "to veto" your recommendation of this mode of feeding.

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The "Corn-stalk Cutter," recommended by A Farmer, who dates his communication from Montgomery co. Md., may be preferable to the one formerly described by Mr. Garnett, but I cannot perceive from the drawing and description, that it is either more "economical" or simple. Indeed, unless I misunderstand the manner of using it, as described by the Montgomery farmer, it will not cut the corn-stalks sufficiently close to the ground for sowing small grain. But, be this as it may, there is a corn-stalk cutter described some years ago, in the Farmer's Register, which seems to me, most manifestly superior both to the Montgomery farmer's and to Mr. Garnett's. It is simply a small hoe made sufficiently light to use with one hand. The edge is to be well steeled, and always kept sharp. In using it, the stalk or stalks are held by one hand, whilst the hoe, wielded by the other, cuts them off close to the surface of the earth, or even below it, which neither of the others will do. And the stroke of the hoe being the same as that to which the arm is accustomed, no soreness thereof is produced by the act of cutting.

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The "Distress in England," as represented in the short article under this head, is truly afflicting to any humane mind. Does it not arise—at least in a great measure—from the disproportion between manufacturing and agricultural labor, caused by injudicious and unjust legislation in regard to the two classes of Manufacturers and Agriculturists? If it does, let *our* legislatures take care not to follow an example so fraught with national calamity.

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Mr. Ives' article on "Rotation of crops," deserves the attentive perusal of every farmer desirous of making himself well acquainted with this important practice, as there can be no good farming without it. There is no apparent extravagance in any of his calculations, nor any result stated which might not reasonably be expected by any body who will carefully try his plan.

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The notion of Mr. Lyttleton Physick, about planting and cultivating corn, may suit the country in which he lives better than any other, for aught I know to the contrary; but he has against him, the opinions of all the corn growers whom I have ever seen south of Mason's and Dixon's line, where, I may say without presumption. that this matter is quite as well understood, as it is beyond it. Throughout this whole extent of country, at least, so far as I am acquainted with it, the corn growers therein, know well, from long and repeated trials, that no corn can be planted close enough in their climate, "to prevent the growth of weeds," and at the same time to make as much corn as would pay for the culture and gathering of it. They know also, and have often proved, that if they cease to work their corn when it has attained only "*one-third of its height,*" they might as well have saved themselves the trouble of working it at all. Such farmers might call themselves *corn planters*, if they fancied the title, but "I guess" they never would be *corn gatherers* of much more than their seed for another year.

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Under the head "Privet for Hedges," a second instance occurs in your paper, wherein it is confounded with the *Pyracantha*, to which Privet has no botanical relationship whatever. This may be easily seen by consulting Loudon, or the work of any other botanist, in all which they will find the Privet called a Ligustrum, and the Pyracantha a Cratægus.

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Under the head "Culture of Melons," you have omitted to state whether your directions for the treatment were intended for musk melons or water melons. If for the former, the distance of eight feet is too far for our climate, but not far enough for the latter.

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Your garden hints are very good, but I beg leave to remark that the shading of transplanted plants is unnecessary, if the operation be so carefully made with a transplanting trowel, (which every gardener ought to have,) as to take up with the plant, a ball of unbroken earth, as large as the trowel will conveniently hold, and deposit it without breaking, in a hole previously made large enough to receive it. I have often thus removed plants in very hot, and even very dry weather, and found them to grow perfectly well without shading, although this is best, unless the operation be carefully performed.

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I infer from Mr. Ellsworth's letter, as well as from what I have heard elsewhere, that some of his highly meritorious labors in behalf of American Husbandry, have met with sarcasms instead of thanks. This conduct, I must say, on the part of any farmer, is as unbecoming as it is unjust. If Mr. Ellsworth has published any errors, it cannot, for a moment, be justly supposed that he did it designedly; argument therefore, or a simple statement of facts, would have been a much more suitable refutation of them. But I confidently trust that he is not so sensitive as to be checked in the slightest degree, by such undeserved attacks, in his very useful and praiseworthy efforts to serve our cause. Onward let him go, and he will find thousands of other agriculturists always grateful to him for them, besides his and your friend,

May 18, 1842. Commentator.

CULTURE OF WHEAT.

Messrs. Gaylord & Tucker—I lately read a report made by a member of an English Agricultural Society, that "a farmer of his acquaintance had raised wheat in the same field several years in succession, and that the last crop was nearly double the weight of the first." He stated also, "that the material used was very abundant and very cheap," but did not mention what it was. As this is an object of the highest importance to our farming interest, I have examined the component parts of wheat as obtained by analysis, and flatter myself that I have ascertained by what means our agriculturists may attain the same result.

It will be admitted by every one capable of reflecting on the subject, that all the properties found in wheat must be supplied by the soil, manures, rain or snow-water, or by the atmosphere. How is it then, that land which once furnished large crops of wheat, will no longer produce it, even when the soil has been enriched by the best known modes of cultivation? The defect has evidently to be looked for in the earthy parts of wheat, as all the elementary portions can be obtained from the usual modes pursued in good farming.

In examining the properties of wheat as given by analysis, I can discover only one portion that is not supplied by the best routine of farming, and that is *silicate of potash.* Now as a given portion of this earth is absolutely necessary to the formation of wheat, and as our best soils and manures do not usually furnish an ample supply, it at once occurred to me that this was the one thing needful; and that if an adequate supply be added by our farmers to their wheat lands, their crops will be always good, and a succession of crops be obtained from the same fields, increasing annually in quantity, until it arrives at its maximum, which will probably be sixty or seventy bushels per acre, on land of first quality.

Having, as I confidently believe, pointed out an application by which our farmers can greatly increase their wheat crops, I shall now proceed to inform them how they can obtain an ample supply of the material, at a price that will enable them to use it freely. Glass of all kinds is a silicate of either potash or soda, and I think it can make no difference which is used, as both will probably produce the same result; it being well known that nitrate of soda is as effective when used as manure, as is the nitrate of potash. Hundreds of tons of broken bottles can be collected in New-York annually, and will only cost the labor of collection and grinding. I think it could be furnished as cheap as plaster. A sand paper manufacturer has offered to supply any farmer desirous of trying it, at fourteen shillings per barrel, ground as fine as flour; and as one barrel per acre would probably be an ample supply, the cost of trial would not be very heavy. Broken crockery of all kinds would furnish a supply of an inferior quality to glass. An inexhaustible supply could be obtained by calcining silecious sand with potash, and at a very cheap rate. It is more than probable, that fine ground silex, mixed with wood ashes or potash, would answer just as well as when chemically combined, for nature can produce combinations far better than man. Burnt clay would probably answer every purpose, by mixing it with wood ashes or potash, as clays contain from thirty to sixty per cent of impalpable silex. The other constituents of clay would be a valuable addition to the soil. Wm. Partridge.

New-York, 34 *Cliff st.*, *May*, 1842.

TOBACCO—ITS HISTORY, CULTURE, &c.

Its Discovery and name.—Tobacco is a native production of America, and was in common use among nearly all the Indian tribes when this continent was discovered by Europeans. Its original name among the natives of the islands, was "Yoli," and with those of the continent, it was termed "Petum." The Spaniards however, chose to call it Tobacco, a name in the Haytian dialect, designating the instrument in which the herb was smoked. But the systematic name, as understood and acknowledged by Europeans, is *Nicotiana*, after, or in honor of one Nicott, who first introduced it upon the continent of Europe.

Introduction—European Objections.—We learn that this plant was first introduced into Spain, then into Portugal and France, and at length into the countries of the eastern continent. Sir Walter Raliegh carried it from Virginia to England, and taught his countrymen the various methods of using it. But its introduction was attended with ridicule and opposition; pamphlets in various languages were issued, dissuading the people in the strongest terms from the use of it. James I. of Great Britain, circulated his "Counterblast to Tobacco." Pope Urban excommunicated those who took it into churches. Queen Elizabeth also prohibited its use in houses of public worship. An edict was published in Transylvania threatening confiscation of property to those who should plant it. The Grand Duke of Moscow and the King of Persia, prohibited its use under the penalty of the loss of the nose and even life. Notwithstanding the objections of those larger worms, that are now no more, and of the almost prohibitive duties laid on the article by foreign governments, the plant is in demand; although of itself, it is a nauseous weed, of an acrid taste and deleterious quality, yet its charms are such as to insinuate itself in the favorable opinion and use of men of every grade and shade, from the red man of the forest, to the priest who officiates at the sacred altar.

Its manner of Cultivation in Maryland.—As early in February and March as the weather will permit, we commence by selecting (if we have it,) a rich south hill exposure, or the best we have, even to a cowpen in the open field. Some burn on their beds much brush, others cannot, while all dig well, rake and perfectly clean and pulverize the earth. The seed is sown, raked, and then patted or rolled; they are by some covered with a light layer of brush, as a protection from frost. We have now, to be successful, to keep under or rather eradicate all the grass, or it will outgrow the plants. Our tobacco lots, having been prepared by fall or spring plowing, in good order, i. e. being checked off from two and a half to three and a half feet apart, and made into hills, giving from four thousand to seven thousand hills to the acre, as each one fancies best, we are now ready with the first good rain in the last of May, for transplanting, which is done similar to planting cabbage plants; and we continue at every rain to transplant and replant until the 1st of August; but it is often the case, such late work is left to the frost. We have now to keep the grass from it with the hoe, and work it every week, if we can, with the plow and cultivator, until its size stops such operation. It now becomes necessary to top it; and it requires some judgment to do this so as to suit the soil and the season, and allow no more leaves to remain than will be made perfect. If not cut in two weeks after this, it becomes necessary to go through it again; and the planter will find instead of Hercules' Hydra producing two heads for one destroyed, he will often find a half dozen shooting up from the joint of as many leaves, which had better be taken off. His attention will be arrested often at twilight, with the swift winged, gray butterfly, darting under the bottom or underside of the leaves, and there fixing her egg or embryo of a similar fly; in a few days he will see his tobacco disfigured and destroyed, and for his own interest, with all his humanity and mercy, be compelled to commence the work of death, or lose the reward of his labor. This tobacco, or horn worm, as it is generally called among us, is similar to the silk worm in crawling out of his old skin at certain periods, and lastly, going into the earth and through the crysalis to the butterfly. This fly may be seen at eventide, thrusting his long sucker down the petals of the jimstone and honeysuckle. The number of worms which we have, vary much from one to twenty to a plant, though it is rare to be so much overrun as was the case a year ago, when many fields were abandoned. When the tobacco is ripe, it turns spotted or a yellow green; in the meantime all such leaves as become yellow at the bottom, are taken off, and hung up and cured as scrub or ground leaf; those who straddle the stalk upon the stick, splint it standing before cutting. All cut it alike and let it lay to limber or fall; when at the house, some straddle across the stick, others drive a peg in the butt end and hang it up, and others dart it upon a stick by means of a dart made for the purpose, to receive the sharpened end of a stick. It is then either scaffolded in the sun a few days, or hung up in the house, to be fired or not, as suits the planter. In Nov. and Dec. we commence stripping, rarely finishing before it is time to commence a new crop. The tobacco is generally assorted when stripped, hung up to dry and condition at the time of stripping by some, and after being dry and again in good order, taken down to pack; others winrow by laying it in long rows one bundle deep and two or three high, and pick a time to pack, but the old time is best as I know from experience, which is to put it down in bulks of any size as stripped; weight it down. This course appears to be the chemical one pointed out by Liebig, who says it must absorb oxygen; but too high a heat must be avoided to secure a proper odor, and in this way, the substance necotin, which was not present before, will be produced by compactness and a proper heat, when the bulks get warm: they are then shook out, and handled afterwards to condition, as others tried to do at first by winrowing and hanging up, and when in order taken down and bulked for packing; this is a sure way, besides it gives a delightful flavor to the article, and there is no fear of having it condemned. The next job, once much dreaded, is packing; in the old way, one a day was called good work, but since improvement and invention is all the go, we have a screw press made by Mr. Elliott Richardson, of West River, Maryland, which he informs me, pressed for its owner, a Prince George planter, fourteen or fifteen hogsheads of tobacco, with inexperienced hands. This press appears to be worthy the attention of the planter. Its durability, faithful workmanship and cheapness, will recommend it to the notice of the public. The price, per advertisement, is $125, to be worked with hand or horse power.

Its use and abuse.—According to Dr. Culling's Nosology, as seen in Hooper's Dictionary, we find tobacco used as a narcotic, as a sialagoge, as an expectorant, an emetic, a cathartic, and a diuretic. In Eberle's Materia Medica, we read that tobacco destroys the heart, by rendering it insensible to the action of the blood, and causes death. It has been successfully employed in cases of dropsy and dysury. Dr. Fowler says it will produce copious diaresis. It is good nephritis calculoso. Mr. Earl advocates tobacco injections in certain cases as being very good. Dr. Westburg administers the tincture of tobacco in ischaria; and many other medical writers could be named who found tobacco a useful article, and there may be some few out of the host who use tobacco from a perseveringly acquired habit, that know and feel its worth. As to my own experience and knowledge upon this head, it is profitable to raise, when I can clear forty to fifty dollars to the acre, and keep the stocks and trash to smoke the musquetoes away from my cottage in summer. More than this I desire not, believing, that by habit it is abused by a large portion of its consumers.

Its effects upon the soil.—General opinion is that the culture of tobacco exhausts the soil; from the circumstance of so large a crop of vegetable matter produced in so short a time, it gives weight to this opinion; when we see forty and fifty thousand pounds of vegetable matter produced in three or four months, and yet it is a good crop to get one thousand pounds of the leaf cured. To repeat this crop in the old way, it is without doubt a great exhauster. But by such systems in rotation, as I have advocated in a former number of this paper, I have given positive proof it may be no exhauster, but a great convenience. Liebig says, "on soil containing potash, both wheat and tobacco, may to advantage, be raised in succession; the first taking up the phosphates of salts, the latter the alkalis and food containing nitrogen." A correspondent, "I. C." in the Phil. Cabinet, says, "it is not to be forgotten, that no crops exhaust (comparatively,) the soil until they begin to perfect their seed; blossom buds are not furnished with returning sap vessels, and it is therefore they that exhaust the soil." Taking for granted, his theory to be correct, I desire no better argument; the matter is settled, and why—because every good planter will prevent the like taking place, and only turn out as much to seed as may be wanting for another crop. The chemical opinion of the two gentlemen just named, will confirm my position and settle my practice in this matter; that is, that fallowing clover in the spring for tobacco, succeeded by wheat, gives almost an extra crop, and by suffering the same to remain to be turned up in July and August, and then sowed in wheat, is not a difference of more than ten or fifteen per cent. in favor of wheat. Yours respectfully,

D. G. Weems.

Tracy's Landing, Anne Arundel Co., Md., 1842.

REARING CALVES—CARE OF STOCK.

Messrs. Editors—I have seen in your Cultivator, different ways of rearing calves, none of which did I think, was preferable to my own, which is as follows:—I take the calf after he has sucked a few times, tie him up under shelter, as near the house as convenient; feed him 8 or 10 days on new milk, and then on skim milk as long as convenient. I take a trough about three feet long and nail or fasten it down on the sill, so as not to be easily moved. I then make a small rack over the trough, against the side of the building; tie one calf on each side so that I can go between to feed them; put hay in the rack, which the calf will soon learn to eat. I make a floor raised a little above the ground, for the calf to lie upon, that he may not have to lie in the mud; and there I keep them until after harvest, or until fall feed comes; then the milk, whey, &c., is turned into the swill tub, out of which I feed my hogs and calves, putting in occasionally a little meal or bran, if it gets too thin. The calves will soon learn to drink any thing that I see fit to give them; it needs to be a little warm; always careful to keep hay in the rack; they will never scour, and when they become cows they will eat any kind of slop, which in my opinion is all-important in a cow. I had rather have one cow that will eat anything I see fit to give her, than two that are dainty, and will not eat their slop unless it is just so nice and clean.

I believe the greatest error our farmers run into, is the miserable manner of wintering their stock. There are very few stocks of cattle that I am acquainted with, that are wintered as they should be, to make them profitable to the owner. The general calculation is merely to keep them alive until grass comes, and then it takes them until midsummer to get recruited, and by that time the flush of feed is over, so that they give but a small quantity of milk, and the final result is there is little or no profit arising from their cows over and above their keeping; when if they were fed as they should be, they might be made to pay for their bodies every year. I have been in the habit of feeding my calves at least once a day for the first year. When I turn them out after harvest, I endeavor to keep them in some field near the house, and give them drink out of the swill tub every day. The consequence is, they are large and sleek, and attract the notice of strangers, who inquire what breed they are of. Through the winter I feed my cows in the stable, and when I turn them out, I learn the calves to go in, and there I feed them on roots regularly every day, and they are sure to come in at two years old, when they are larger than common three year olds, and make first rate cows. They are always ready to eat anything I see fit to give them; always saleable, and command a good price.

I was formerly in the habit of fattening my calves if they did not come in as soon as April, but now I care but very little what time they come. If I have a choice cow and wish to raise her calf, I raise it with very little extra trouble.

In the fall previous to our temperance reformation, our minister was anxious to form a temperance society. I met him one day in the road, when he told me he had just had an interview with one of our neighbors on the subject of temperance, who asked him what we should do with our overplus grain if the stills were put down. He said he wished that that question could be answered satisfactorily, as it had been put to him a number of times, and he did not know how to answer it to his own satisfaction. I told him there was no such thing as overplus grain. It was a contradiction in terms. A farmer might as well inquire what he should do with his overplus manure; there would be as much propriety in it as to ask what we should do with our overplus grain. One man might have more than he wanted, but there was no more in the country than was wanted by the country. All the grain that was distilled was wronged out of the stock to which it might have been fed to greater advantage and better profit than to distil it, even if alcohol had been a good thing. Look over into that slaughter yard, and see those cattle brought there to be slaughtered, in nothing more than good wintering order; our pork is tolerably good, but our beef is wretched; I presume there is not a solitary animal there that has been stall fed. All the coarse grain in the country might be fed to our beef to good profit. Sending it to the distillers, is like the farmer selling his manure because he could realize the avails sooner than he could by putting it on his land.

Galway, Saratoga Co., N. Y. 1842. P. Otis.

CUTTING GRAIN AND HAY.

Messrs. Editors—As the time is rapidly coming when this important branch of husbandry must be done, it will be well for the farmer to study this point well. With regard to cutting grain, I believe that most farmers are apt to wait too long. Some seem to be governed by the color of the straw, and think it necessary that the straw should be all turned, before they cut it. The grain itself is the thing to be watched, and when you find the kernel is filled and projects out of the ear, then don't delay in cutting it, be the color of the straw what it may; and you will find the grain to be more full and better, than if you let it stand till the straw all turns yellow. We noticed last season, that we cut our crop when the straw was quite green, and we noticed also when we threshed that they retained a green fresh color, and do so at the present time. With regard to cutting grass, as to the best time, farmers will of course differ. I think grass should get its growth before it is cut, and I like to have it cut and cured so that when we pitch it off the mow in the winter, it will retain a greenish color. For timothy, or herds grass, we prefer to cut it when the blows are just filling up, as we think the stalk retains the juice better than when the stalk is dead ripe. Clover we think should be cut after it is blown out and the seed is formed, and it should be cured in cocks as much as possible, as in that case the leaves are saved. L. DURAND.

Derby, Ct. May, 1842.

AGRICULTURAL THERMOMETER.

MESSRS. EDITORS—I feel in duty bound to express some grateful feelings for the favorable notice you gave in your March No. of the Agricultural Thermometer, and also for some other notices of your correspondents since that time; as I presume you well know that no person would incur such an expense of time, study and labor, much less of money, as it cost me to construct my little thermometer, for such a purpose, who would not enjoy great satisfaction to find it producing favorable results.

You will, perhaps, find yourself under a mistake, as to the identity of the person to whom you impute the invention. You may find the inventor of the thermometer a person of greater pretensions in the acquirements of agricultural science, than the one you hint at, though perhaps less devoted, and less a proficient in fascinating horticulture.

With respect to the small dimensions of my implement, you must be aware that prudence forbids going great lengths at first, in hazardous untried experiments. It would certainly afford me great pleasure to extend its length sufficiently to indicate the highest flights of genius and of merit. But the task I had to perform, simply to test its practicability, was such as at least, to require some time to recruit, before commencing another upon a larger scale. Could you or your friends, understand the nature of the case, you would not, at any rate, expect it till the season of the year shall permit. You must remember that the precious liquid, the truly aqua mirabilissime is, as it is emphatically styled, "the spirit that dwells in flowers," and it can only be obtained at that season when the most glowing verdant heat has excited into action the utmost strength of blooming nature, and not when all nature sleeps in the frozen embraces of winter; and besides, were the season present, I could not but dread a repetition of the arduous labors I underwent in obtaining the first specimen of the article. I could never have effected it, had it not been for the joint aid of my friend, Monsieur, the French chemist, and the sage Wampoosum, the Indian doctor. No one but the latter knew the location of the flowers necessary, and no one but the former could "wring their shy retiring virtues out."

It is generally conceded that all men of great genius are eccentric. At any rate, these two were so; and the bent of their eccentricities were as opposite as the poles. They would neither ride in the same carriage, eat at the same table, nor sleep in the same room. The Frenchman's olfactory nerves could not brook the effluvia of bear's grease, with which the doctor's body was copiously annointed, nor could he endure to see him exercise his masticators on raw beef, nor dispense himself with any of the culinary items peculiar to his country; and the aboriginal genius was equally disgusted with the Frenchman's loquacity and ceremonious politeness. Even when thus separated, I was driven to the borders of hypocrisy, in being obliged to acquiesce assent to their embittered remarks against each other. The Frenchman would exclaim, "Ha! mauvaise sauvage—know noting—he have no regard for le chemie et les autres grands sciences—he be un brute;" and I had no alternative but to reply—"oui Monsieur, c'est bien vrai." And the Indian, perhaps in the same half hour, would greet my ears with "no lik'um Frenchman—he no good—he eat'um frog—he ro'sum meat all up—he talk'um too much." I was therefore subjected to the expense and trouble of providing for them separately; and of transporting them alternately from one stage to another, by ride and tye, like the man with his fox and goose and peck of corn. As the same aid will be indispensable, you will therefore perceive, Messrs. Editors, that it will be a most serious operation, even when the season arrives, to construct another and more extensive thermometer.

It would give me great pleasure to accomplish it, notwithstanding the vast fatigue and expense. But I am not certain of the aid of the wonderful French chemist, nor of that great scholar of nature, the Indian doctor, without both which I could not even hope for success. I can therefore only promise with great caution.

I must here be permitted to present my grateful thanks to your truly valuable correspondent, Commentator, for the kindness of disposition he imputes to me, in being more inclined to praise than to blame, at the same time confessing the fact. But with respect to the improvement he suggests, I would inform him that were I disposed to avail myself of the quality the instrument already possesses, it would be needless to add the liquid he proposes, as I have lately discovered that its effects, as to censure, though of a negative quality, are perfectly adequate. In applying it to several articles, which though I do not like to condemn, I could not praise, I found the liquid shrunk in bulk, accompanied with a sensible degree of coldness.

In a late conversation with a friend, on the stupid practices of some of the stubborn farmers of the old school, while merely holding the instrument in my hand, the liquid contracted almost to a single drop, while its temperature fell evidently below freezing, accompanied with a faint hissing and a sensation somewhat like that of a person in an ague fit. I shall still for the present, continue the occasional use of the instrument in its present state, for my own amusement, as I am convinced of its correctness as far as it reaches.

On applying the thermometer lately to the various articles from the pen of Commentator, as its effects were very peculiar, I was more convinced than I had ever been, of its correctness. It showed no marks of agitation, but became gradually luminous, giving out a degree of heat, and rising steadily to the top, the light and heat increasing, till both became intense, seeming to assume that position as its native home; and I have no doubt, if the instrument had been of sufficient length, it would have risen with equal tranquility to a much greater height. I hope, however, the gentleman will pardon the want of sufficient capacity in the instrument to do justice to his merits; should I succeed in constructing another, I hope it will make ample amends for the present deficiency.

On the application of the little tube to the writings of L. A. Morrel, Esq., the effects were no less singular. The magic liquid became slightly luminous, moving up and down, as if anxious for greater space. I was a little apprehensive of damage to the instrument, from the too violent agitation. I ventured, however, to bring it near, but not in absolute contact to any of his productions; the effect became more violent. The critique rose with alarming force to the top, and retreating as if to gather strength to make new attacks, with an apparent determination to force its way through the top of the instrument, all the time emitting brilliant scintillations. I was of course, reluctantly compelled to withdraw it; which I did, with a determination, as soon as the proper season arrives, if I can possibly obtain the aid of my two indispensable assistants, to attempt constructing another of sufficient capacity and length, to indicate the extreme ultimatum of genius.

A due regard to extraordinary talent, forbids my feeling any displeasure at the gentlemen, for having thus jeopardized my valuable instrument, but if he has any thing in store surpassing what has already been given, I hope he will exhibit it soon, that I may be better enabled to calculate the maximum degree of my contemplated enlarged thermometer. A. OF THE NORTH.

ON BREEDING SHEEP.

MESSRS. GAYLORD & TUCKER—There is not a writer of the Cultivator, whose communications I read with more unvarying pleasure, than those of your correspondent, L. A. Morrel. There is something so off hand, so racy, about him—and then how easily now and then he "*slides*" into the "*aromatic!*" The man who has devoted so much time and care on the protection of the dependant brute—who has so feelingly urged the same humane course on others, must have his *heart in the right place*—must be a true friend, a kind husband and father, and a citizen whose valuable influence and example is felt over a wide circle of society. In many, indeed I may say in *most* of the positions assumed by Mr. Morrel in the Cultivator, I am happy to say he has my hearty concurrence. But in the May No., he has advanced opinions which I am constrained to differ from. Nor is this all. He has evinced a want of that gentle charity which had previously characterized all the effusions of his pen. Mr. Morrel may disbelieve in crossing the Saxon or Merino sheep with the English varieties—but was it necessary for him to stigmatize every such effort on the part of others, as "some sudden impulse of ill-digested enterprise;" and to insinuate that it could originate only in the desire to "humbug" the public—to "find a soft one to gull," and "obtain one's price!" Have not A, B, or C, as good a right to raise cross-breed sheep, as Mr. Morrel has pure Saxons—and this too, without having their motives impeached? Is Mr. Morrel not aware, that even the fine wooled sheep of Spain, the parent stock of the Saxons, are usually considered the result of an early cross; that Durham cattle, Berkshire hogs, the English race horse, in short, the more valuable varieties of all kinds of animals, are the results of crosses? Where then, the iniquity, or the "humbuggery," of attempting to supply what one deems the defects of one breed, by engrafting on it the better points of another breed? The attempt may fail, but has not every one the right to satisfy himself on the point? Mr. Morrel says his conclusions "take not their hue from personal interest." I believe him. From the acquaintance formed with him through his writings, I believe him too much of a gentleman, to advocate falsehood merely to benefit his purse. But there are men whom I *know* to be just as elevated, and above wielding a mercenary pen, as I *believe* Mr. Morrell to be,[*] who are actually engaged in experimenting in the crosses between the Spanish and English varieties. Why should not some of these men turn round and impeach Mr. Morrel's motives? It is as easy to recriminate, as it is to criminate. And have the Saxons never had anything to do with "humbuggery"—never found any "soft ones to gull?" Let the men who have purchased them at $50, $100, or $150, a head, answer! And would it be less natural to suppose that a breeder of the variety, looked back with a certain hankering after a return of such times, than that other men, every way as elevated, looked forward to some new speculation? I again repeat, however, that I feel confident Mr. Morrel is entirely above any such consideration. I would only show him that it is never expedient to impute wrong motives, in a controversy, to men, who are no more interested in the result, and consequently no more likely to be influenced by such motives, than ourselves.

And on what grounds does Mr. Morrel thus scatter his arrows right and left, and defy the world to a controversy with him? Has he given us the conclusions of a long experience? Has he given us the results of accurate experiments? Has he given us the "knock-down facts" which he claims are so much better than "*attempts at guessing*," and "*mere speculation?*" Oh no! His denunciation of others, is based merely on his "*opinion*" of what their experiments *will* lead to! He *guesses* they will fail, and therefore he cries "mad dog," "speculation," *in advance!* He has not tried it, but by a rare species of intuition, not vouchsafed to ordinary mortals, he *knows without trying it!* Why, my dear fellow, are not other people's *guesses, speculations*, and *opinions*, as good as your own? Why demand that your *guesses* and *opinions* should be met only by facts—"knock down facts?" Is it not asking a little too much? STOCKPORT.

5th mo. 8th, 1842.

RACKS FOR SHEEP, &c.

MESSRS. GAYLORD & TUCKER—A writer from Poughkeepsie, wishes information of me relative to feeding sheep at stacks. He inquires if the rails, on which the stack is built, rest on the bottom rails of the pen, or on the ground; what is the effect of dust and grass seed on the wool, and whether there is not danger of the stack falling down and killing the sheep? The rails are laid on the ground; the only use of them is to keep the hay off the ground. With regard to hay seed and dust, they will get more or less in the wool on the head and neck; and so they will if fed in board boxes or in racks, or in any way that I am acquainted with, except feeding on the ground. As to the settling of the stack, there is no danger, (unless the blocks on which the pen is built, fall down,) until the stack is eat down so small that the top will go inside of the pen; and to prevent this, I generally put three or four rails through the pen under the stack; but I think the better way will be, when building the stack, after the pen is full and the hay a little higher than the top, to lay two rails on each side of the pole at equal distances, so that the upper part of the stack will rest on six rails, including the two outside ones of the pen. I design to build all my stacks in this way the ensuing summer. There is very little danger of the blocks on which the pen is built falling down, if they are as much as 18 inches in diameter, and both ends sawed off square and set level on the ground, and the two first rails to lay level on the top of the blocks; the two next that cross them should have wedges of wood or stones, the thickness of the first rail, put under them on the outer edge of the blocks. If built in this way, I think there will be but little danger of accidents; at any rate I have not met with any this winter. After the bottom is eat out, and the sheep have eat out between the rails on which the stack rests, it will be necessary to knock the rails a few inches to the right or left, that the stack may settle a little; if an axe is not heavy enough, a heavy rail, used as a battering ram, will be sure to answer the purpose. There are several advantages in feeding at the stack, and not the least is that the sheep are always foddered and fed, all, and no more, than they will eat; it cannot rain or snow on the hay that they are eating; the top of the stacks are not opened at all, and of course are not exposed to rain and snow. There is also a considerable saving of labor.

I have a cheap fixture for feeding straw or stalks, which I will describe. It consists of four round posts, about 8 or 9 inches in diameter, $9\frac{1}{2}$ feet long, set $2\frac{1}{2}$ feet in the ground; the upper ends champered nearly to an edge, and as large a notch or fork cut in the same as the timber will allow; in these notches lay two round poles 7 or 8 inches in diameter, for plates, and across the ends of these lay two similar poles; notch and saddle them together in the usual way of building a log house; then dig a trench from post to post 18 inches deep, and take small sized rails or round poles, set them in the trench about 9 inches apart, champer the upper ends so thin that a tenpenny nail will confine them to the plate; ram the dirt firm around the bottom of the rails, and pin on a piece of strapping to the plates to confine the upper ends, and put on a roof of split clapboards, or whatever is cheapest, leaving the gable ends of the roof open. Such a fixture, placed in the barnyard near the threshing floor, I found very convenient while I threshed wheat in the barn; and even now I find it very convenient to haul a few loads of straw or stalks, and throw in for oxen and cows that are stabled nights, to pick upon in the day time.

NICHOLAS TITUS.

Rutland, Meigs Co., O., March 14, 1842.

We shall be glad to receive the promised papers from Mr. Titus, on threshing wheat and clearing land.—EDS.

PRIVET FOR HEDGES.

MESSRS. EDITORS—In answer to the query of H. Long, Esq. of "Long Green, Ill.," in the Cultivator, vol. IX. p. 46, concerning the use of Privet for live fences, I would say that it has been fully tried in Illinois, and found wanting. Some 15 years ago, it was frequently seen either in garden hedges or as an ornamental shrub; but so far as my acquaintance extends, it has died out. This is its great fault: it will die out, and that very suddenly. It was propagated by cuttings and layers—not by seed. GEORGE CHURCHILL.

Ridge Prairie, Madison Co., Ill. May, 1842.

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[*] I would say to Mr. M. in my own behalf, that I have bred some English sheep, and seen more—that I have dabbled some in crosses, but only for my own information and amusement, never having sold any.

MAKING JOINTS WITH THE AXE AND JACK-KNIFE.

"QUID NUNC, what are you trying to construct with your axe and jack knife?" said I to my dilignte and economical neighbor, who was so busy with his work that he could scarcely glance his eye to see who had called on him.

"I was trying to construct a reservoir, to catch some rain water," was his reply. "The joints of my cistern were not made tight, and the earth has washed in and filled it."

O economy, thought I, *what a jewel thou art!*

Here we have it, Messrs. Editors, exactly the *modus operandi* of three-fourths of our farmers; and among them too, some who are constantly harping on *calculation* and *economy*. How striking the contrast between such farmers, and the man who spends his time, and exhausts his patience, in constructing a vat to hold water with a jack knife and axe.

The honest farmer, who is the spine, the bone and the muscle of the land, lives beneath his rights and his dignity. He suffers himself to be led about by the oppressive hand of the speculator, or the cash of the selfish nabob, as the patient ox is led to and from the stall, forgetting his superior potency, and unmindful that he has horns that may *hook*, or "heels that may kick" his first aggressor. The truth of the business is, too many of our farmers "blunder along" through the world, with little or no order, bad management, bad calculations. Too many spend their time in the old routine of business, without regard to improvement or system; are always doing and never done; and never know into which vessel to pour a fluid, for the joints of all are made with the axe and jack knife.

There is my industrious neighbor A., than whom a more systematic and economical man never lived, (as he thinks,) and one who has always attached the greatest importance to economy, in door and out. His father gave him a noble farm, which puffed him up with self-importance; he married the belle of the city, for she could drum neatly on the piano, or chant melodiously in unison with the guitar: but the organs of hearing were sadly pained at the vibratory tones of the frying pan, or the harsh notes of the dish kettle—it was too condescending to wait on the dinner table—she must parade in the parlor or lounge on the sofa—or ride in the chaise with her consort, and with the velocity of Jehu dash about town to make her fashionable calls. The upshot of the matter has been, A's farm has been taken away by the merchant, ten acres at a time—his costly furniture, his china, and silver plate, were sold at sheriff's sale—his costly cottage was taken from him, and he learned, as many others do, when too late, that tight joints cannot be made with the axe and jack knife.

Here comes Mr. G. What has he on board? Ah! he is going to the tannery with hides. He is a practitioner of the skinning system. He laughs at book farming; scowls at agricultural journals; and wonders how farmers can content themselves with fifty or a hundred acres of land, and be obliged to keep so little stock. The result was in his case, as it always is. He was always in a hurry; was obliged to do all things for the *present*, and not with reference to the *future;* must accomplish so much in a given time; keep so much stock on a given quantity of fodder; therefore, in the fall his straw was not properly secured, his corn stalks remained in the field, his roots not properly saved from the frost, and before spring, he is running about town trying to purchase a little straw, to keep his cattle out of the mud, and a little hay to keep them from starving. It is clear that Mr. G. has not learned that he cannot make a water proof cistern with the axe and jack knife.

There is my friend S., who has just begun in the world, but at the outset he imbibed the idea that cultivating the soil was a drug, and that the mercantile business was just the thing for him. He sold his farm, went in partnership with a friend as inexperienced as himself, and the consequence has been, his draw was made with the axe and jack knife, and his money all slipped through.

And here is his neighbor D., who is in trouble *up to his knees*. Spring has come on. He let out his teams during the winter, to be worked for their keeping, and they are now wholly unfit for work, and must be lifted up whenever they lie down. He, like too many others, loved to be independent in regard to threshing his grain. So he purchased a *two horse* machine, with which he could thrash when he chose, and with his own hands. The issue was, he could not thrash as much with his machine, as the hand required to tend it, could with flails; and further, it was always out of order, and a complete *kill-horse*. One word as to threshing machines—don't trust to these "pepper mills." Five and six horse machines are the only ones that should go into a barn. Threshing with these little half-built, dangerous machines, is like making a water tight vessel with the axe and jack knife.

Mr. F. is a pretending, but in his own estimation, an able jurist. His daily walk is to the store, where he keeps gentleman's company. He rants exceedingly; pronounces freely on the expediency of such and such topics of legislation; talks of Shakspeare; peruses Gibbon's Rome; makes now and then a journey to the county seat, and struts along the path with all the pomposity and ostentation of a blue hen with a speckled chicken. Meanwhile his fields are overrun with weeds; his fences scattered to the four winds of heaven; his cattle are the rulers of his domain; sheep, swine, and geese, feed from the same trough, and occupy the same cote; and those that get the most are the best fellows. Here is rigid economy practiced on an extensive scale; for the trough being made with the axe and knife, what falls through, the hogs and geese will pick up. In the next yard, horses, cows, and calves, feed from the same rack; the weak ones are driven about by the strong; the fat grow fatter, and the poor poorer; and before spring, he, like Mr. G., has a lot of hides for the tanner.

When shall we all learn that tight joints cannot be made with the axe and jack knife.

One word in closing. Let us then exert our influence; use our utmost exertions, to hasten the day when the farmer shall take the station which the great Jehovah designed for his occupancy: when penury and want shall be driven from the land, and vessels and implements be introduced, made by the *real artizan*, for those that owe their origin to the axe and jack knife. ECONOMIST.

SETTING GATE POSTS.

MESSRS. GAYLORD & TUCKER—In former numbers of the Cultivator, I have noticed several plans and descriptions of farm gates, furnished by different gentlemen, some of them very good. But the one figured and described in a late number, by your esteemed and very interesting correspondent, James M. Garnett, Esq. President of the "Agricultural Society of the United States," I think is the best one I have seen; and the iron "fixings" which he describes, strike me as being a great improvement, and peculiarly calculated to preserve the gate in its proper square form, without which it is impossible any gate should work well. But the most important part of a good gate—indeed a part upon which depends entirely and absolutely its successful operation—has been overlooked or omitted by these gentlemen, I believe without a single exception. I refer to the gate posts. Almost any farmer can make a gate, and a good one too, but very few can, or do put up the posts properly; and unless these are so put up, the best made gate in the world would be an aggravation, instead of a convenience. To make up in some measure this deficiency, I propose here to add what is believed to be, by at least one humble practical farmer, the best mode of setting gate posts; and if any of your readers know of a better, I hope they will let us have it through a communication in your columns, not forgetting to add that other very important though much omitted appendage, at the bottom, their real name and whereabouts.

Gate posts should be made of some durable timber, large enough to square not less than ten inches above the surface of the ground, and then full size left below; excepting about one foot on the gate side of the posts, which should be hewn for the end of the bed piece or sill to rest against. The posts should be set four feet deep, and the hole in which they are put, should be so large as to leave a space of four inches on every side, which should be filled up with small stones and leached ashes firmly beaten down around them. A bed piece or sill of round timber, ten inches in diameter, sawed square at the ends, is then snugly fitted in lengthwise between the posts, and bedded down in the earth so as to project three inches above the surface; this will prevent the posts from swaying towards each other, and if the gate should sag so as to rub on the bottom, a small wedge driven in between the end of the sill or bed piece and the post upon which the gate hangs, will immediately bring it up again to its proper position. This bed piece will also prevent swine from rooting under the gate to effect a passage; and being three inches higher than the surface ground, the gate may be hung to shut so close upon it, as to prevent the smallest pigs from crawling through. Some farmers have had this bed piece tenanted into the posts and firmly pinned, and the consequence was that the posts in the spring were found thrown up out of their proper place, by the action of the frost upon the bed piece. This will always be the case when the bed piece is fastened to the post, but if put in as I have directed above, this evil will be entirely avoided. J. HORSFIELD.

Castile, N. Y. April, 1842.

AMERICAN BREEDERS.

EDITORS OF THE CULTIVATOR—It is I think a true saying, that one extreme begets another, and whenever we permit ourselves to indulge in extremes, even in the best of causes, we create suspicion, excite jealousy, cause disappointment, and throw obstacles in the way of that sure, practical instruction, which, if ever, we receive it generally through our agricultural publications, must come from those who derive theirs from the stern realities of every day experience. Having been a tiller of the soil from boyhood, bred and fed some stock, sufficient perhaps to justify me in making a few remarks, I do not now attempt it, without being perfectly aware of my inability to impart much instruction to others, or feeling the necesssity of receiving much myself.

And first as regards the breeding of animals. How many there are who appear to be ignorant that there is any *art* in breeding, or that are aware, that if they were in possession of some of the best bred animals, they would inevitably, without the skillful and constant exercise of that art, soon see their produce rapidly retrograding to their original state. It is discouraging to hear the frequent outcrys against importing any more stock from abroad, and the assertions that we are now prepared to breed independently. Why just look around us for one moment. Where are all those fine Spanish Merinos that the owners were a short time ago, almost obliged to send a begging for purchasers, and sell at such prices as they could get? Why I venture to say, there is scarce a pure bred flock of those animals in the country; and where is the man that will now attempt the task of breeding the cross blood Saxons into such sheep as the Spanish Merinos formerly were? They were larger, longer lived, hardier, and would produce almost double the quantity of wool that the present mongrels do. The man who wishes pure Spanish Merino stock, must now import it; the old fashioned kind are not to be found; and I have no knowldege of any one in the middle or eastern states who is prepared to go ahead either in breeding sheep or cattle for any time, without fresh importations.

As for any one attempting to establish a distinct breed from our best cross blood animals, it is my opinion, if he would try all his skill for twenty years, the probability would be, that he would be no nearer the object of his wishes than when he commenced. It certainly requires great *art* and *skill* to keep up a breed when you have it, pure, but to attempt to establish a pure breed from mongrels, is just such a job as I should not advise any one to undertake, whenever they have the opportunity of breeding from pure blood stock. The want of opportunity to make the necessary crosses with different families of the same blood, is, I conceive, one of the greatest disadvantages under which breeders in this country have to labor. Even when we breed from pure blood always on the sire's side, we are likely to have discouraging obstacles to contend with, before we can feel much confidence; and when we have attained to what would be considered full bloods, it will be well if we are not sometimes disappointed in our expectations.

I would therefore advise every breeder to aim at breeding and maintaining pure blood, whether Devons, Herefords, or Short Horns; and let their choice of these depend on the quantity of feed their land produces. If this is abundant, any of them will do well; but if scant, the Devons are preferable.

As regards the partialities or prejudices of different persons to different animals and their breeders, I would most earnestly recommend every person who has a judgment of his own, in which he feels at all willing to confide, to examine for himself; for I verily believe that *self interest* is the mainspring that moves most of us in the cause. Far be it from me to dare to assert that there is but one man's herd in England that would improve our own; but I dare say with confidence, from personal observation, that I do believe there is neither quackery or "witchery" about Bates or his stock. I fancy it takes realities to induce the Royal Ag. Society of England to award prizes to, and toast their successful breeders. As to the representatives of Bates' stock in this country, I believe they are few. He has not been in the habit of purchasing of other breeders, to speculate on in the United States. I am, however, gratified in being able to say that I have one of them, (a three years old part, Yorkshireman,) and if some of the spirited breeders in your vicinity, would desire to see him placed along side of theirs, when they pass through Philadelphia on their way to the National Show, I should be willing to gratify them with an opportunity of seeing how he would compare with theirs. I remain respectfully yours,

JOSEPH COPE.

East Bradford, Chester co. Pa. 13*th of* 5*th mo.* 1842.

P. S. I hope some breeders will turn their attention to the handling properties of cattle; as I am convinced the knowledge so imparted, is of great importance in making correct decisions. To understand it, it is only necessary to practice handling different animals. J. C.

REMARKS OF "AGRICOLA."

MR. THRALL'S OAT CROP.—By reference to his statement, Cultivator, vol. IX. p. 48, Agricola will see that nine bushels are charged, which of course is the quantity sown on the four acres.

CUTTING UP CORN.—Alluding to Commentator's remarks on cutting up Corn, p. 52, Agricola says: "I apprehend that Commentator has not seen stalks put up in the right way. His stooks are perhaps made too small, and not bound sufficiently tight at top. The practice has of late years, become very general and very popular in the west."

HORSES.—It has frequently occurred to me that there was too little attention paid to horses, by yourselves and correspondents. There is no subject relating to agriculture, which may not be profitably discussed in your paper; and certainly there are but few matters more closely connected with the comfort and interest of the farmer than this. The draft horse, the carriage horse, and the saddle horse, are all in which he is interested, or at least which *legitimately* claim his attention. Hogs, cattle and sheep, have received all due attention—and it is right that it should be so—an interest has been awakened which has resulted in great good; and why may not the same interest be aroused in relation to the horse? A writer in the Cultivator (Mr. A. B. Allen, I think,) has remarked that there are but two classes of horses in Ky., the one adapted to the turf, the other fit for nothing. I quote from memory, but think I do not misstate. If this is the condition of that State, which has devoted so much attention to the subject, lamentable indeed must be the condition of those which have devoted none. But with all due deference, I will demur to this sweeping denunciation, and may at some future day attempt to prove to others, if not to himself, that there are other horses in Kentucky, besides the Woodpeckers, the Medocs, the Noaxies, the Franks, the Trumpetors, the Glencoes, and that thing with the speed of light, the famous Grey Eagle.

PARSNEPS—STABLING HORSES.

Messrs. Gaylord & Tucker—Of the Parsnep noticed on page 14, (current vol. of the Cultivator,) there was only one variety, the common garden, known in Britain, until of late years; it is a vegetable little esteemed. Loudon in his Encyclopedia of Gardening, says—"There is only one variety in general cultivation in Britain. The French possess three, the *Coquaine*, *Lisbonaise* and *Siam*. The *Coquaine* is much cultivated in Guernsey and Jersey; the roots are sometimes four feet long, and are rarely so small in circumference as six inches, having been known to reach sixteen. The leaves of this variety grow to a considerable height, and proceed from the whole crown of the root. The *Lisbonaise* does not extend to so great a depth as the Coquaine, but the root is equally good in quality, and what is lost in length is gained in thickness; the leaves are small and short, and proceed only from the centre of the crown. The *Siam* has a root of a yellowish color, not very large, but tender, and more rich in taste than the other varieties."

I am inclined to think that the degeneracy complained of by Mr. Jennison, may arise from one or the other or all the following causes: poverty of the soil; want of due attention in selecting the largest, smoothest, and best formed roots for seed; mixture with the common variety; or always growing from seed raised on the same farm; this last is a fruitful source of deterioration in a number of vegetables; for seed, the largest and best formed roots, free from fingers and toes, should be selected, when the crop is gathered, and laid aside to be planted in the spring, in a rich, light, deep soil: the main crop for use, should be sown on a similar soil, dug or plowed deep, well manured with decomposed dung; when that cannot be obtained and recent manure is used, it should be laid at the bottom of the trench or furrow.

Were attention paid to the above particular, I think the varieties would not degenerate, especially if due care is used to get the seed from a distance.

As already noticed, until of very recent date only one variety was known in Britain, and that little esteemed, and less cultivated; the other varieties being so recently introduced, are not yet to be had at the majority of the seed shops or stores. This I conceive to be the cause of Mr. Loudon's recommending the seed to be procured from Jersey or Guernsey, and not because the plant has degenerated in Britain; there, plants will not be so apt to degenerate as in this continent, as the growers (with few exceptions,) are supplied by the nursery and seedsmen around London, Edinburgh, and a few more of the large cities; and these spare no expense to raise true seed of the best quality, as their success in business depends on their doing so.

Since I came to this country, I have had my cabbage seed from New Hampshire, and in a pound of it, one true plant of the variety said to be purchased, cannot be obtained, nor two plants alike; but they rise up a motley crew of mongrels, Savoys, cabbages of all varieties, Ruta Baga, German Grenz, and Brocoli, all sported together, from want of atttention in keeping the seed beds duly separated.

I shall now make some remarks on the article headed "Stabling Horses," at page 21.

Mr. Stone's experience of the injurious effects to the hoofs of the horse, in allowing him to stand in the stable among his dung and urine, is what attends all such management. The crust or horn of the hoof is composed of numerous fibres held together by a glutinous substance, elastic and very tough; much of this elasticity and toughness is destroyed by keeping the animal in the stable, among litter saturated with urine and the juice of the dung, the horny substance of the crust becomes brittle, and liable to chip or break off.

The remedy recommended by Mr. Stone, I disapprove of. All oils are of a drying nature when exposed to the action of the atmosphere, and tend rather to increase than remove the evil, caused by injudicious stable management. Moisture is indispensable for keeping the hoof in a healthy state; oil, therefore, applied to the hoof, hardens it and prevents the dew and rain from penetrating and nourishing it, hence brittleness and contraction follow. It was a common custom in Britain, with the mail and stage coach proprietors, to oil or grease the hoofs of their horses, but it was very soon given up by all who attended to its injurious effects to the feet of their cattle. The appearance of a well groomed horse is certainly improved with its hoofs oiled, but the poor animal suffers for the vanity of his master or groom.

To prevent the injurious effects of the dung and urine to the feet, there is nothing better than a mixture of clay and cow dung, applied to the sole of the foot as soon as the horse is put into the stable; this I prefer to the piece of felt recommended in the "Horse Book," for this reason, that, unless frequently washed or renewed, gets saturated with urine, whereas the clay and cow dung is applied fresh every time the horse is put into the stable; in this climate during winter, it may be more convenient to use the felt than the mixture. Cow dung being of a cooling nature will do by itself.

About 25 years since, I had a horse lame from corns in the fore feet, which were cured by pairing the sole, and stuffing with the mixture.

Of the course pursued by Mr. Stone, the "Horse Book" (so strongly recommended by your intelligent correspondent Commentator,) says, "The common stopping of *tar and grease* is peculiarly objectionable, increasing the dryness and brittleness which it was intended to remedy."

Scotus.

Ascot, L. C. Feb. 17, 1842.

WEEDS OF AGRICULTURE.

[We are pleased to be able to present to our readers this month, the first of a series of papers on the Weeds of Ariculture, from the pen of Dr. L. C. Beck. They cannot fail, we think, to be acceptable and useful. Based, as the reader will see they are, on a valuable English work, we trust Dr. B. will see the propriety of rendering them as much Americanized as possible—that is, in the methods for destroying the weeds noted, adopting such crops and courses of farming as are best adapted to this country. It can scarcely be doubted by any one who has reflected on the subject, that the average farm crops are reduced at least one-fourth by the presence of such a multitude of various weeds as infest the most of our farms; and anything which shall have a tendency to diminish this evil, will be gladly received by all.]

On perusing a foreign publication with the above title, it occurred to me that a work of a similar kind might be useful to American agriculturists. I have, therefore, availed myself in part of the information there contained, and have made such additions as seemed to be necessary to carry out the object which I have in view.

I propose from time to time to furnish, for the columns of the Cultivator, short papers on the subject of these *vegetable loafers*, and should the plan meet the approbation of our farmers, I may hereafter be induced to publish the whole in another form, with such illustrations as may be required to identify the plants described. In the mean time I should be glad to receive descriptions of any troublesome "weeds" found in any part of the United States, and accounts of such methods as have been successfully employed for their extirpation.

It may perhaps be proper to remark that the essay which constitutes the basis of my communications, was written by Benjamin Holdich, Esq., who is represented to have been a practical farmer of great ability, as well as a man possessing the most extensive and correct knowledge on rural affairs. He was a native of Thorney, in the isle of Ely, England, and was born Nov., 1770. At the age of twenty-three he emigrated to this country, where he remained seven years, visiting most of the states, and the then uninhabited western territory. He returned to England, married, and settled in his native parish as a farmer in 1801–2. Subsequently he became the editor of the Farmers' Journal, a situation which he filled with ability until the time of his death, which took place in the spring of 1824.

In the introduction of the essay on the "Weeds of Agriculture," the author states that the work owes its origin to his receiving a letter as editor of the Farmers' Journal, from a gentleman in Durham, of which the following is an extract: "Would any of your numerous correspondents point out a work as a book of reference, for the destruction of weeds, to which a young farmer might refer? It should be alphabetical, with the Linnean and provincial names, and the best mode of extirpating them." To this correspondent he says, "it could only be answered that there was no such book; but on a little reflection it appeared highly desirable that such a book should be written, and the result is this essay. It did not appear, however, that an *alphabetical* arrangement was required; but rather that a proper division of weeds, as to their agricultural character and demerits, would be more useful, and would lead the inexperienced reader more readily to what he desired to find."

I will only add that the original essay of Mr. Holdich was quite imperfect, and was subsequently much improved by its editor, Mr. G. Sinclair, author of the Hortus Gramineus Woburnensis. Lewis C. Beck.

New-Brunswick, N. J.

The weeds of agriculture may be classified as follows:

1st. Those which infest samples of grain of different kinds.

2d. Rooted or fallow weeds, and such others as are hard to destroy.

3d. Those which are principally objectionable as they encumber the soil.

4th. Underling weeds, such as never rise with the crop, nor come into the sickle.

Under these heads, each weed in its respective division, will be treated of as to its deteriorating qualities and mode of destruction.

Weeds which infest grain of different kinds.

The weeds of this description are few in number, and it very rarely happens that more than two sorts are found associated in one sample of grain. They vary as to the soil so much that some of the worst weeds in fens and marshes are not known at all on clay, cold soils, and are but little seen on any sort of dry turnep land. Light loams and deep loose soils have naturally the greatest number of weeds. It would seem, therefore, to be desirable to treat of weeds in reference to the soils on which they prevail; but this end may be attained by remarks introduced into the notices of the several kinds.

I now proceed to notice some of the weeds belonging to this division:

1. Darnel, often known in this country by the name of *Chess*. Also called *Smoth rye* and *Brome grass*. It includes the two following species, viz:

Bromus Secalinus. *Linn.*

Botanical Description.—Panicle spreading, slightly subdivided below. Spikelets ovate, about ten, distinct, somewhat cylindrical. Florets smooth. Awns wavy, shorter than the glumes. Leaves slightly hairy.

Bromus Mollis. *Linn.*

Botanical Description.—Panicle erect, rather close, compound. Spikelets ovate, downy. Florets imbricated, depressed, ribbed. Awns as long as the glumes. Leaves and sheaths very soft and downy.

These plants mostly grow in fields, but are most hurtful among rye grass, which is mowed to thrash. In the sample, the seed is larger than the rye and has a shorter awn. It is just so heavy that it escapes the degree of wind which the rye grass will bear, and therefore infests the samples as they are offered by farmers; but the seedsmen who buy large quantities, take it out by means of a sieve which allows the rye to pass through.

The darnel, (*Bromus secalinus*,) is an annual plant, being in its growth and appearance similar to grain until it puts forth its characters of fructification. It is usually quite thinly scattered where it does grow, and it cannot be weeded out. It is seldom found except where it is sown with the seed grain; but where it has been sown, it is sure to be found in the crop. About the time that the grain begins to form, or somewhat later, the darnel throws out its flowering panicles, which, as the grain ripens, droop, each spikelet with its heavy load of seeds. These drooping spikelets are flat, somewhat short and nearly smooth, with the seeds much crowded. As they ripen, the leaves drop away and the straw rembles that of oats. The seeds, which are thicker and heavier than those of rye, contain a large quantity of nutritious flour, and fowls, pigs and horses are very fond of them.

The soft brome grass, (*Holcus mollis*,) is earlier than the preceding, and its seeds are, for the most part, shed before the harvesting of grain crops. This weed is, therefore, less pernicious in grain crops than the Bromus secalinus.

The objection to darnel, with the miller, is that it is tough and somewhat soapy, and thus dulls the stones. When a sample of wheat contains so much of it as to be rough in hand, its value is considerably reduced. The farmer should be very careful not to sow these seeds with wheat. It is said that they have not been observed in any spring crop.

On reviewing the description of these weeds, we can at once see what has given rise to the common, but mistaken notion, in regard to the change of wheat into chess. Such is the general resemblance between the two kinds of seed, viz: those of darnel and wheat, that without much care they may be mixed and grow up together. If such a change as this can take place, the wonder is that wheat should not have undergone other changes, and finally been entirely lost. We cannot entertain such notions without at once forgetting all that is known concerning the permanency of species and their mode of reproduction.

2. Cockle, often known in this country by the name of *Corn campion.*

Agrostemma Githago. *Linn.*

Botanical Description.—Whole plant, except the petals and capsule, covered with soft hairs. Calyx longer than the corolla. Petals entire or slightly emarginate or naked.

A well known annual weed, of rather an ornamental appearance, bearing purplish red flowers. In the spring its leaves are long, downy and slender, and the plant is strong and conspicuous at weeding time. It grows somewhat tall before it branches, and is in full flower and bearing when the wheat is ripening, growing two feet and a half high. The seeds are very numerous and contained in bulky capsules; they are black and rough, resembling a rolled up hedge hog, are nearly as large as small wheat kernels, and are filled with white flour. The miller's objection to these seeds is that their black husks are reduced to so fine a powder as to pass the boulters, and thus render the flour specky. Moreover, as the seed is bulky, if there be much in the sample, it detracts considerably from the produce in flour.

3. Melilot. *Yellow clover*, or *common melilot-clover.*

Melilotus Officinalis. *Willd.*

Botanical Description.—Stem erect, branching. Leafets lanceolate-oblong, obtuse, remotely serrate. Spikes axillary, paniculate. Legume 2-seeded, rugose. Style filiform, as long as the legume. Seeds unequally cordate.

This is an annual plant growing with an upright stem, from two to three feet high, branched and furrowed with spikes of yellow flowers. The capsules containing the seed are very tough and wrinkled, growing in bunches. Each capsule is generally one, or sometimes, two-seeded, but thrashing does not dislodge them; so that in samples of wheat, the wrinkled capsule is called the seed.

This is, of all others, the most pernicious seed in wheat, a few seeds communicating a very strong smell to the flour. The plant delights in stiff soils. It is very palatable food to all sorts of cattle, and has a pleasant odor when cut down and dried. Nevertheless, as a weed in arable land, it cannot be too much guarded against, and ought never to be sown with seed corn. Moreover, it should be carefully rooted up by weeding in the spring, for when it has once been introduced, it propagates itself by scattering many seeds before the crop is ripe. Hence wheat, on land so infested, should always be sown on a naked fallow.

Tares.—This name is applied to two distinct species, viz. *Ervum tetraspermum* or *smooth tare*, and *Ervum hirsutum* or *hairy tare.*

Ervum tetraspermum. *Linn.*

Botanical Description.—Stems cespitose, branching. Leafets 4-6, oblong, mucronate. Stipules lanceolate, semi-sagitate. Peduncles 1-4 flowered, filiform. Segments of the calyx unequal, broadish, shorter than the tube. Legume oblong compressed smooth. Seeds subglobose, black.

This plant, which is often met with in the northern states, flowers in May or June. The stem is very slender, the flowers small and of a bluish white color.

ERVUM HIRSUTUM. *Linn.*

BOTANICAL DESCRIPTION.—Leafets linear, obtuse, mucronate. Stipules semivagittate, narrow. Peduncles 3-6 flowered, shorter than the leaves. Segments of the calyx linear-lanceolate, equal, longer than the tube. Legume oblong, compressed, hairy, finely reticulate. Seeds globose, variegated.

Widely diffused through the United States, and like the last, flowering in May or June. The stem is two or three feet long, much branched and diffuse. Leaves cirrose. Flowers very small and bluish white.

Our author states that it is said that on dry soils, in wet seasons, these plants have destroyed whole crops. He has seen several samples of wheat and barley very much infested with the seeds of tares, but he always took them to be the seeds of the cultivated tares, especially of the winter sort; yet the spring tares may grow amongst barley; and both in this way become injurious weeds. The seeds of these are much larger than those of the wild tares.

The miller's objection to these seeds is, that they have a strong taste when ground in the flour. Hence it seems to become an important consideration, whether field tares should be suffered to go to seed, or rather to be fed off, and plowed down soon enough to prevent it. Also for soiling, small patches may be set apart, and seeds, at last, may be raised therefrom. For it seems to be a doubtful advantage in agriculture, that the introduction of tares should overrun our fields with new enemies.

5. WILD OATS.—Sometimes also called *Bearded Wild Oats* or *Haver*.

AVENA FATUA. *Linn.*

BOTANICAL DESCRIPTION.—Panicle erect, compound. Spikelets pendulous. Florets about three, shorter than the calyx. Seeds bristly at the base, with an oblique scar, all awned.

This weed, according to our author, used to abound on stiff clays, in open fields. It prevailed to such an extent in some wheat fields, that at harvest the whole crop would appear to be wild oats. The seed is sometimes larger than common oats, of a dark brown color, and has a very rough awn or beard. Of course millers may well object to them; for when many prevail in a sample of wheat, they occupy a considerable portion of the measure.

It does not appear that in the spring these weeds can be sufficiently distinguished from the wheat plants to be selected and weeded out, which is also the case with darnel, and is the more to be lamented, because the best system can hardly be expected to eradicate those weeds, in regard to which the hoe and hand cannot be brought in aid of the fallow and row culture. But this ought to be strictly attended to, as being the strongest argument possible, why these seeds should not be sown with seed wheat. So far, the farmers who pay attention, are masters of these weeds; and it must be a wilful neglect not to act accordingly.

LETTER FROM SOLON ROBINSON.

WE give the following extract of a letter from our friend Robinson:—"I have received several letters, enquiring why I have discontinued my correspondence to the Cultivator. I assure you that it is not in consequence of any disinclination on my part. I am as anxious to gratify those of my friends, who are pleased to read my communications, as they can be to read them; but a great pressure of business has wholly prevented me during this spring. I have been so hard at work that I have been obliged to forego the pleasure that I always feel when engaged in contributing my share of instruction or amusement to my fellow laborers.

But I assure you, and you may assure your readers if you see proper, that the time is not far distant when, I hope, many of your readers will be pleased to see again the familiar name of their old friend

SOLON ROBINSON.

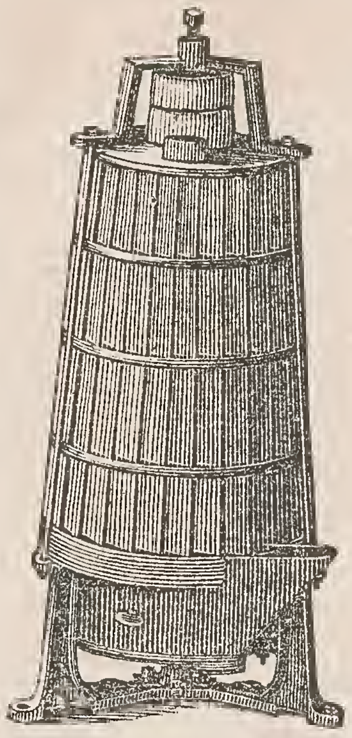
Lake C. H., Ia., June 8, 1842.

NO NEST EGGS.

MESSRS. EDITORS—In one of the late numbers of the Cultivator, I observed an article on having hens lay perpetually, by allowing them neither cocks or nest eggs. Until the present season I have always been careful to leave a nest egg for my hens, and during the time there was danger of their freezing, chalk eggs were substituted for the others. This year I have about 40 hens, mostly pullets, and three cocks. They commenced laying in the latter part of January, and up to the last of April, about 90 days, have given me about 120 dozen of eggs. For a short time I used chalk eggs for nest eggs, but they were soon picked to pieces and eaten by the hens, and since then no nest eggs have been allowed. No dissatisfaction has been manifested by the hens in consequence of this treatment, and I have not known a single nest deserted because the eggs were all removed. I have kept corn in the ear, where the hens had constant access to it, and I kept a box of sand, lime, gravel, ashes, &c., in which they could pick and dust themselves. I prefer allowing the hens to help themselves to corn, to shelling and feeding it to them; as in the first place they will eat no more than they want, and a few will not keep fat at the expense of the many; and, secondly, there are few animals on the farm that pay better for good keeping than fowls. They would pick a few kernels of corn and then be off to the straw yards, or to their nests. Young hens, I have found, are much better layers than old ones; but they should be early chickens, or they will rarely begin to lay early in the next season.

A YOUNG FARMER.

BAILEY AND RICH'S SMUT MACHINE.—(Fig. 68.)



THE undersigned announce to the public, that they can, in their opinion, supply millers with a better smut machine than has ever before been used, and at a moderate price.

With only a velocity of about 450 revolutions per minute, it will clear off the fuz from the ends of each kernel, and expell all the smut and dirt even from damp grain. The small machine will clean 15 to 25 bushels per hour, and the large one 75 to 100 bushels.

It is so constructed that there is a strong current of air passing horizontally through the machine, operating upon every kernel of grain while in motion and forcing from the grain every particle of dust as soon as created.

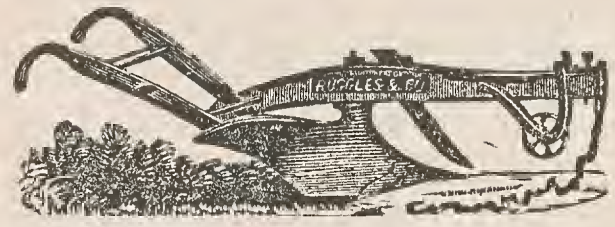
The machine is wholly composed of iron and steel. The heads and staves of cast iron, shaft of wrought iron and boxes and pivots of cast steel, (there are only two boxes and two pivots to a machine.) The machine is put together with screw bolts, and can easily be taken to pieces and put together again.

The small machine is three and a half feet high, and twenty one inches in diameter, and weighs about 350 lbs., and will be sold at 100 dollars each, upon a trial of three months, warranted to suit.

The inventors, T. R. Bailey and Ezra Rich, *mill wrights*, have been 14 years experimenting upon smut machines, and have at length succeeded in producing that simple, efficient and durable machine so long desired by millers.

The machine was patented last year. All letters on the subject, to be addressed to BAILEY & RICH.

Shoreham, Vt., June, 1842.



WORCESTER PLOWS—AGAIN.—(Fig. 69.)

MESSRS. EDITORS—In the April No. of the Cultivator, I took the liberty of calling the attention and recommending the farmers to look at some plows manufactured by Messrs. Ruggles, Nourse & Mason, of Worcester, Mass., on sale at the store of Messrs. Pruyn, Wilson & Vosburgh, in State st., Albany, which I am gratified to say was promptly responded to, and the sales have exceeded their most sanguine expectations. And to show I "practice what I preach," I obtained one of their Eagle plows and put it immediately in operation, first where I grew ruta bagas last year, and since on a strong sward which it turned over twelve inches wide and seven inches deep, with two common sized horses, and with as much ease as three horses before one of our common plows.* Why, there is as much difference in its gliding through the soil, as there is between the sailing of a Baltimore clipper and an old fashioned Albany sloop. I think the Eagle plow, for such a soil as I have to improve, far superior to any other I have ever had in use. I do not say this with a view to flatter, or from a wish to injure any one engaged in manufacturing plows, but on conviction, from *actual experience*, of its truth. Several of my neighbors have seen its performance, and assured me they had never seen such plowing before.

Of all the implements of husbandry in use among us, there has been none susceptible of greater improvements than the plow; and from the great and laudable competition at present existing among manufacturers, (and which I think should be fairly encouraged,) I hope yet, if possible, to see this invaluable implement brought to still greater perfection.

It is now above sixty years since James Small made the great improvement, which consisted in giving the mold-board a curved figure, and made of cast iron. Previous to this invention, the mold-board was made of wood, straight, and covered with thin plated iron. It is only about seven years, since the writer of this was surprised to find some of this description of plows, still in use in Connecticut, between New-Haven and Guilford.

In respect to Small's improved plows, Lord Kaimes, who was a good farmer, said "That no plow would cut the furrow so clean, or turn it so nicely over for receiving benefit from the atmosphere, and none so easily drawn." Could he have lived to have witnessed the operation of the Eagle plow, I think he would have altered his opinion.

As much of our success in crops, depends in a great measure, on the proper breaking up and subsequent plowing of our land; and as a good plow is therefore highly necessary, I confidently recommend the Eagle plow, as admirably calculated, for strength, durability, and cheapness of repair, and it may be considered a most valuable acquisition to our catalogue of implements. It enters and raises the soil like a wedge, while a surface of polished metal of those parts which come in contact with the soil, lessens the friction. And here I would remark, that in the whole length and breadth of the mold-board, not a particle of earth was lodged, showing most conclusively, that it is formed on correct and scientific principles, and that they will perform their work with more ease to the team.

Farmers, if you have any feeling for your team, or regard for your corn crib, I again advise you to lose no time in furnishing yourselves with one of these plows. But to be honest, there is one objection to them, especially where there is more than one plowman, on the farm, as each must be furnished with one, or there will be "trouble in the camp," and in the present depressed state of the times it is no easy matter to raise the wherewith to purchase many.

If any one doubts what I have said, all I ask is to satisfy themselves by actual experiments; or if they will take the trouble to call at my farm, I shall take great pleasure in showing the superior work performed with the plow. C. N. BEMENT.

Three Hills Farm, May, 1842.

FLAX AND HEMP PULLING MACHINE.

MESSRS. EDITORS—As your publication is by all acknowledged to be the best medium of communication extant with the agriculturists of this country; and believing it would be both profitable and interesting to a great portion of your readers, I have obtained leave of the patentees of the flax and hemp pulling machine, Messrs. Brittain and Silvers, to use this medium of making their invention more public.

It is well known to the flax grower, that one of the greatest difficulties connected with the flax crop, is to get it pulled in season; if allowed to stand but two or three days too long, it is not easy to reckon the loss and the difficulty of pulling; the loss occasioned by its standing may be obviated by the use of this machine, which in itself is very simple, to accomplish so complex an operation. The machine consists of a platform borne up by three small wheels; the power is obtained from a revolving axle by cog gearing, which, by the use of a band, gives motion to a vertical drum placed on one edge of the platform, and as the machine passes along one side of the flax or hemp, it is gathered by a finger, and embraced between said drum and band, when it is pulled from the ground and deposited on the platform. The machine is easily drawn by two horses, and managed by two hands, and will pull from three to five acres per day. Mr. Lewis, a neighbor of mine, has a machine with which he pulled sixty acres last summer, and he says that it was admitted, by a number of persons he pulled for, that it pulled the flax cleaner, and saved more of the seed than in the ordinary mode of pulling. I have been engaged in the manufacture of flax for a number of years; a considerable portion of the flax I have dressed and manufactured for two years past, was pulled by this machine, and so neatly does it accomplish its work, that it would baffle the skill of a practical flax breaker to define whether it had been pulled by the machine or by hand. There was a considerable number of machines in use in this county last summer, and I have no doubt that the number will be at least double the present season. Machines are manufactured and sold by the patentees at Mount Airy, Hunterdon county, N. J. They will also have one in operation for pulling hemp the present season. The price of machines at the manufactory, is 90 dollars. Yours truly,

JOHN WALKER.

Sidney, Hunterdon co., N. J., June 16, 1842.

"FREE MARTINS."

WHEN a cow has twins, one of which is a bull and the other a heifer, the last is known by the name of free martin, and the general impression is that such are always barren. In a late note to us, J. Cope, of Chester co. Pa., says—"Having spoken last year to some of my friends, of two instances in which it was probable that heifers were likely to breed, both of which were twins to males, I can now state that they have both produced calves this spring. As it is supposed by most people that this circumstance can only happen when the heifer was the larger of the twins, I have made some inquiries on this point. In the first case, the female was decidedly the larger of the two; in the latter case, from what I could learn, I think there could be little doubt there was the same condition existing in the two, although the difference in size may not have been as marked as in the first instance."

THE Wellington (U. C.) Agricultural Society will hold their next Fair at Guelph, on Tuesday, the 11th of October next.

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* Since writing the above, I find in the last No. of the Cultivator, I am supported in the opinion expressed of its execution and ease of draft, by one of the editors, who has one in use.

TO MANUFACTURE CORN FOR EXPORTATION.

Messrs. Editors—By your request, in favor of Mr. C. L. B. of Ohio, the following is at your service:

Contrive to wet the kernel, sufficient to loosen and toughen the hull, either by steam or water; it may be sufficiently well done, by lowering it into the water in a basket, and raising it immediately, letting it drain half an hour or more, but a large business could not be done to advantage in this way. I am inclined to think that steam for this part of the operation, can be used to the best advantage. After which, is required, a pair of good burr millstones, very nicely hung on a stiff horn, if exclusively for this purpose, but common loose hangings will do, if the stones are well trimmed and balanced; by these the corn is to be cracked and hulled, by running it through as coarse as possible and have every kernel broken; from which it is passed through a wire bolt, calculated to separate three or four grades of meal, the coarsest of which, is from thence passed through a machine similar to a bolt, made wholly of iron, and in the place of cloth, sheet iron is used. At the lower end is an arch for fire, the flue passing the whole length under, and leading to a chimney at or near the upper end. There should also be a perpendicular flue, continued from the higher end of the cylinder, to create a draft of air through it, which will very much facilitate the departure of the dampness. From this it passes through a machine similar to a common smut mill, which separates all the hulls left by the bolt, and the soft parts that adhered by the dampness, when it is ready for market, and will keep any length of time, as well as rice.

In this process the corn requires but little drying, none in fact, if it be dry enough to grind well to begin with, and not wet too much in the operation. The chit and all the soft part being separated from that intended for market, leaves it perfectly safe from the injury complained of in its natural state, the chit being the only part in fault, when the heating process takes place.

I have prepared corn in this way for my own use, and find it a great improvement, aside from the convenience of keeping, from the quality of the food prepared from it, which may be used in various shapes. The coarse part may be used whole in place of rice, for puddings, &c., or it may be ground as fine as flour, and used for similar purposes. In the hands of an ingenious cook, I consider it one of the greatest luxuries among our articles of food; for cakes and puddings, if managed right, there can nothing surpass it.

There is no waste in this process; although the western corn may be too soft to yield a large proportion for market, yet what is left is as good to feed, as it would be with the other.

A building for this purpose, should be very high, to economise machinery for conveying from one machine to the other, that the process may not be laborious. I am now erecting a building, seventy feet high on the lower side, and about forty-six feet above the surface of the mill pond, which I intend for an apparatus of this kind, in connection with a grist mill. I did intend to take out a patent for the operation, but have made up my mind, if it will benefit our common country, by enabling our western friends to export their surplus corn, almost the only limits to which, would be the demand for it, not to take advantage of a law, that is a curse to our country in the way it is administered.

As regards the casks for putting up the manufactured corn, it requires nothing different from those for rice or pearled barley; it may be transported in barrels, boxes, or bags, with the same care and convenience required by rice or flour. I think your correspondent of Ohio, will find the cheapest casks or conveyance that will be sufficiently safe, to be the best, without regard to the ultimate purpose for which they may be designed; as nine purchasers out of ten, would prefer it in its cheapest shape, and the tenth would probably let the empty casks go to decay, whether they are worth anything or not.

Yours respectfully, D. S. Howard.

Lyonsdale, N. Y. April 5, 1842.

COBBLE STONE HOUSES.

Messrs. Editors—In 1835, I built me a house of cobble stone, of the following description: front 45 by 23 feet, 2 stories, forming an L in rear of 65 by 23 feet, single story, for kitchen, wash room and wood shed. My plan for thickness of wall was, the cellar wall 20 inches thick to first floor, drop off 2 inches to second floor, then drop off 2 inches and extend out to top. Sort your stone so as to have the outside courses 3 or 4 inches, with straight lines for cement. Take the coarsest of sand for the stone, and a fine sand for brick. I used the common stone lime, one bushel of lime to seven of sand for stone; and the same kind of lime, one bushel to two of sand, for brick. I furnished all materials on the ground, and paid my mason $3.75 per 100 feet. He furnished his own tenders and made his own mortar: built his own scaffolds, and tended themselves. I boarded them. I think I have as good a house as can be made of the same materials. There is not a crack in the walls that you can stick a pin in as yet; the stone I do not consider any expense, as it frees the land of them; there is no painting to be done to it, as is required to brick or wood; it makes the strongest of wall, and I think the neatest and cheapest building that can be built. You may calculate the expense of a building at so much a perch, according to the size you wish to build. I did not keep an exact account of my building, as the stone, sand, and lime, were brought at leisure spells. P. P. Bonesteel.

Victor, Ont. Co. N. Y., March, 1842.

RAISING INDIAN CORN FOR FODDER.

In compliance with a request in the Cultivator, for some experienced farmer to give information on sowing corn broadcast, for soiling cattle or horses, I submit the following remarks, which are based upon three years experience in that mode of feeding. This spring I have sowed my fourth crop for this purpose. My mode of feeding is to sow one acre the first of fifth month, one acre the first of sixth month, and one acre the first of seventh month, more or less, according to the number to be fed. Three acres as above, will feed about 20 head, if on good land, and sown two and a half bushels to the acre of small grained corn, which is to be preferred to larger. The stalk being slender, is eaten by the cattle, and nothing wasted. I have generally had from about 60 to 70 tons of green food to the acre, and think it decidedly better than grass, for either beef or milk.

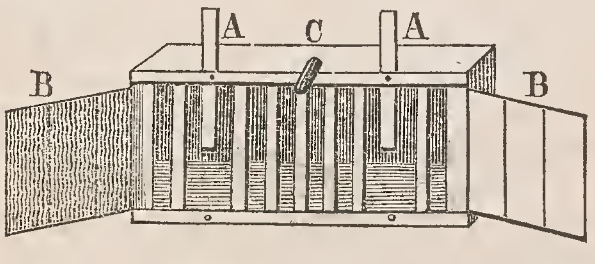
Having made a few experiments on my regular corn crop, this spring, it may not be amiss to communicate the results to the farming community. My object was to exterminate the cut worms and ants, to effect which, I tried the application of salt, by scattering it over my hills. The ants disappeared immediately. I have only tried it on a few rows, but it has done so well, I think I shall go over more. Some of my neighbors encouraged by my success, are also trying it. When the experiment is fully tested, we may give more satisfactory information.

I have allotted a part of my corn ground for raising corn to manufacture sugar from next fall, and should be glad if some one already experienced in the process, would communicate it through the columns of the Cultivator. David Miller.

Luzerne township, Fayette co. Pa., 1842.

MANAGEMENT OF FOWLS.

Messrs. Editors—I have managed thirteen hens the past season, according to the directions given in the Cultivator, and I am happy to state that I have more than realized my expectations. Although I have no convenince but a common barn to keep them in, I think they lay quite as well when rightly attended, as they would in a hen house. I have tried several kinds of grain, and am satisfied that corn is the best. I have read in some paper, that hog's lard, mixed with meal, (say a piece as large as a walnut,) is a good article to induce hens to lay. I have tried it, and proved it to be so. My hens are of the Poland breed. They have layed from the middle of January to the 9th of April, 476 eggs, and continue to lay at the same rate.



Hen Coop.—(Fig. 00.)

The above cut is a coop of my invention, which I think is very convenient. It may be made of inch boards, long enough to admit of any number of fowls. A, A, slats to be raised for admitting the hens—B, B, doors to be shut at night, to prevent the intrusion of any kind of vermin—C, button for fastening the doors.

A few words in regard to the benefits arising from taking the Cultivator. Four years ago, our orchard consisted of wild trees, bearing very sour and crabbed fruit; now we have eighty thrifty trees, grafted to the most excellent kinds. Now, Messrs. Editors, do you think these eighty trees could be purchased for the three or four dollars paid for your valuable paper?

And to close, I would advise all young persons, if they feel any interest in the welfare of their country, to read some agricultural paper; and to study it as they would their school books, that they may be prepared to be good farmers when grown up. Yours, &c.

Lawrence Smith.

Middlefield, Mass., April 9, 1842.

TO DESTROY THE CANADA THISTLE.

Friends Gaylord & Tucker—I have resided for many years past on land that was infested with Canada thistles; it was my practice to sow my corn hills to spring rye, and I found by experience that the earlier I got my crop in, in the spring, the heavier it was; and my farm being of a sandy soil, I was enabled to plow early in the spring, so that I was in the practice of sowing by the middle of the 4th month, (April:) consequently my land was plowed frequently before the frost was all out of the ground. The effect of this mode of cultivation, was an almost entire extermination of the thistle. One piece of two acres or more, where the thistles were very thick, I plowed the forepart of the 4th month, (April,) and sowed it to rye as usual, about the middle of the month; the result was a heavy crop of rye, and a complete extermination of the thistle, there being but two stools found while harvesting the crop. I have therefore come to this conclusion, that early in the spring before vegetation starts, the root is hollow, and plowing at that time severs them, and leaves the roots exposed to the leaching of the earth, and whenever water penetrates the roots, death ensues. Ab'm Merritt.

Stillwater, N. Y., 1842.

Domestic Economy.

LADY CONTRIBUTORS.

Messrs Editors—Your paper is devoted to the farmer, and every thing that relates to his interest or benefit; why then may we not consider it as devoted to his wife and his daughters? They are intimately connected with him; they have the management of his household affairs, and they are the ones to whom we should go for lessons in domestic thrift and economy. I can see no good reason why there should not be as many lady contributors to a farmer's paper as to any other; the volume of nature is open before them, and experience proves they are skilful and tasteful observers, and they have here as wide a field for their genius as men. To them belong the garden, the flowers, and fruit, and in particular, every department of household industry and economy. I was very much pleased at seeing the Farmer's Breakfast, in the Cultivator, by A Farmer's Wife. Pray encourage your fair correspondents in the use of their pens.

A Young Farmer.

While we would express the pleasure we have felt in the reception of so many valuable papers from our fair correspondents, we would repeat the wish of our correspondent above, (who dates from the Mississippi valley,) that we may be more frequently favored by contributions from their pens. It is unnecessary for us to assure them, on behalf of ourselves and readers, that they are always most welcome.

MAKING BUTTER.

Mr. Were of London, who has been for more than thirty years engaged in the butter trade of that city, has furnished a paper to the New Farmer's Journal, on the best methods of preparing and keeping butter, from which we extract the following:

"Solidity and firmness, is, I think, of more consequence than is generally allowed; the nearer butter can be made of the consistency of wax, the longer will it retain its flavor. * * To accomplish this object, I recommend salting the cream, by putting in rather more fine table salt than is used when applied after churning, because a part will be left with the buttermilk; or instead of salt, use strong clear brine to mix with the cream or butter. * * * Brine is preferable to salt, as the butter is smoother and better flavored. If salt be used, it may be in the proportion of half an ounce of fine dry table salt, mixed with two drachms of saltpetre, and two drachms of sugar, both made fine, to every pound of butter. If the butter be made into lumps for the market, I should recommend that each lump be wrapped round with a piece of calico, soaked in brine made from fine dry salt, that will carry an egg; for if the brine is weak, it will be injurious. If the butter is put into a firkin, the cask should be made of white oak, ash, sycamore, or beech, well seasoned by scalding out several times with *hot* brine, made from pure and clean salt. If very choice butter, I would recommend a salt cloth around the butter, also on the top and bottom; the cloth to be kept in its place by a hoop, which can be removed as the cask fills." Mr. Were deprecates the use of the hand in making butter, and recommends the use of wooden pats, not unlike our farmer's wive's butter ladles, for beating out the buttermilk or packing in casks. "These pats must be always (except when in the hand for use, kept in a tub of cold fresh water, which will prevent the adhering of the butter, and keep them cool."

SCOTCH DRINK.

Messrs. Editors—Judge Buel says in the 2d vol. of the Cultivator, of "Harvest Drinks"—"A Scotchman not liking our Yankee drinks, begged a little oat meal, that he might just make a wee bit o' Scooth drink. He was indulged, and by degrees our Yankees, Irish, and English, for we happen to have all these about us, became so partial to Scotch drink, that it was adopted as the field drink by general acclamation. It is cooling, strengthening and allays thirst; it is truly, victuals and drink." I invite my brother farmers to try it. "To make this Scotch drink, denominated crowdy, put a tea cup full of oat meal into two gallons of water, and stir well before drinking." L. Durand.

Derby, Ct. May, 1842.

CURE FOR WORMS IN CHILDREN

A writer in the Farmer's Register, who being a slave holder has a large family under his care, says that for nearly 30 years he has found the following preparation a certain cure for worms. "Take the fat of old bacon, sliced and fried in a pan until the essence is all out of it, take out the rind first, then put in as much worm seed (vulgarly called Jerusalem Oak,) as is necessary, as much sugar or molasses as will make it palatable, and give it three mornings in succession. The children will eat it freely—some you will have to restrain from eating too much. Incredible as it may appear, I have known as many as one hundred and twenty or thirty large worms come from a child three or four years old. I usually give the medicine spring and fall."

TO STOP THE EFFUSION OF BLOOD.

"A Subscriber," near Frederick, Md., gives the following from Ewell's Medical Companion, as a powerful styptic. "Cranesbill, (*Geranium maculatum*,) called by some crow-foot geranium. It grows from six inches to two feet in height, in meadows and woods, has long slender stalks, with seven long narrow leaves at a joint. The root has an astringent taste and an aromatic flavor. Applied externally, it is highly extolled as a styptic in stopping severe hemorrhages of wounded vessels. The root powdered, or a decoction made in milk, is excellent in obstinate diarrhœa."

"Touchwood, *Boletus egniarius*, called by some punk, and generally used for catching fire with flint and steel, especially that which grows on the oak, is considered a valuable styptic. If powdered and applied to violent hemorrhage, it will in most cases be found to stop the bleeding." A number of cases showing the efficacy of the Geranium or cranesbill, may be found in Mead's Medical Museum.

EDS. CULTIVATOR—The long necked squash, sliced and cooked like the egg-plant, is as good if not better than the egg-plant. W. T.

Silk Culture in the United States.

COCOON FRAMES, &c.

MESSRS. GAYLORD & TUCKER—Silk worms begin to spin cocoons in from 25 to 35 days from the hatching. The time may be shortened or prolonged, by proper or careless management. If the different hatchings have been kept carefully separated, and the worms properly arranged on different hurdles at each molting, nearly or quite all the worms on each hurdle, will commence their cocoons on the same day. Their readiness to spin will show itself by their transparent appearance, their wandering about, and throwing out silk fibres on the leaves and hurdle frames.

Various contrivances have been adopted for spinning frames, and probably no two individuals use exactly the same. In most parts of Europe, small brush formed of oak twigs, are set up in hedge form across the hurdles, the tops spread out and pressing against the bottom of the hurdle above, the bottom resting on the floor of the hurdle on which the worms are. For some years I used broom corn in the same way, and preferred it to brush or any other contrivance, as being much neater, more easily prepared, and equally useful. In a late French work, I observe they are now adopting broom corn in France, for the same reasons. If the lath hurdles described in a former paper, have been adopted, a large portion of the worms will climb the broom corn and spin between the lath of the upper hurdle. With this view a row of broom corn may be set up across the middle of the hurdle, and another in the middle between that and each end. These three rows of brush with the laths above, will form space enough for all the worms on the hurdle to spin in; and if there are any worms that have not yet began to spin, they may still be fed between the rows of brush. A frame of sawed laths may also be easily and cheaply made, by tacking wide tape on the ends, as described in a former paper. When made, this frame resembles a Venetian window blind, except that each alternate lath is inclined in an opposite direction; the inner edges approaching within half an inch of each other, and the outer edges say two inches apart. This may be suspended by the ends of the tape to the hurdle above, at each end and in the middle of the hurdles. It serves both as a ladder for the worms to climb to the laths above, and for a spinning frame also; as the position of the laths forming an angle, is very convenient for the worms to commence their cocoons. The edges of the laths at the inner angle, should not approach so nearly as to prevent the worms passing between them.

The great value of properly separating the worms at the hatching and moltings, will now be apparent to the attendant. If they have not been thus separated, the worms on each hurdle will be from a week to ten days in commencing to spin; that is, it will be that long from the time the first began to spin, before the last begins. This is not only extremely inconvenient, but often detrimental to the operator's interest; as those that have not began to spin, must be fed until they do commence; and this too, amidst the spinning brush and frames; by which the spinning worms are greatly disturbed in their work when they ought to be in perfect quiet, and thus imperfect cocoons are produced. Loss is liable to occur from the millers of those that began first to spin, cutting out of the cocoons before the last have finished. All this is obviated by properly separating the hatchings and moltings in the first instance. But if these separations have not been attended to, the evil may be partially obviated by the use of extra lath hurdles, to be placed immediately under the regular hurdle above, to receive the worms that may mount each day, and gently removing it in the evening with such worms as have begun to spin, to a separate stand, marking it with the day the worms began to spin. This is a troublesome method, and requires the preparation of a great number of hurdles, more than will be necessary when a proper separation of hatchings and moltings has been attended to.

The worms should be allowed four full days to finish their cocoons, before they are disturbed; after which, the cocoons may be gathered, flossed and reeled, or *cured* for future reeling. Here again, the importance of all the cocoons on a frame being of the same age, is apparent. If the cocoons on a frame were begun on three several days, or more or less, four days must be allowed after the *last* began to spin, that all the cocoons may be finished; bearing in mind, that if the weather be very warm, the millers will begin to cut out on the tenth day after the cocoons were commenced; and that it will not be safe to allow more than five days mountings on the same frame.

If the cocoons are to be *cured* for future reeling, the best method is to place them in a perfectly tight box and sprinkle them with pulverized camphor. A box to contain a hundred pounds, may be made like a chest, perfectly tight. Three ounces of camphor, in powder, to be sprinkled among them as they are put in the box in layers, first sprinkling a small portion on the bottom. Then shut the box tight, and leave it thus three or four days. Then take them out, and spread them in the shade till they are perfectly dry. The box may be made perfectly tight by pasting strips of paper over all the joints. When cured in this way, Miss Rapp, (from whom I obtained the plan,) says the cocoons reel just as easily as if they were perfectly fresh and had not been cured. Other plans of curing cocoons, have been practiced: such as baking them in ovens, steaming them, spreading them out in the hot sun, placing them in hotbed frames under glass, &c. Baking in ovens is the mode generally practiced in Europe; all which harden the gum by heat, and make the cocoons more difficult to reel, and sometimes injure the silk. The camphor process of Miss Rapp, I think is incomparably the best. I must not omit to mention another process, which has not, however, been tried to a sufficient extent, to authorize any thing more than an experiment to ascertain its practicability. It has all the recommendations that reason and philosophy can afford, and ought to be thoroughly tried. It is to prepare a tight box, as is done in the camphor process, put in the cocoons, paste up all joints and crevices; then apply an *air pump* to an aperture made for the purpose, and exhaust the air from the box. Let the box remain a few hours, say twelve to twenty-four hours, then take out the cocoons and spread them out to dry, as in the camphor process, in the shade. I have no doubt this will be an effectual, and if so, it will certainly be the cheapest and best of all methods, to cure cocoons. After the cocoons are cured and dried perfectly, they should be put in bags or nets, and hung up in a dry airy place, to secure them against mice, roaches, &c. till wanted for reeling or for sale. Great care must be observed not to crush or indent the cocoons in handling them, as it renders their reeling more difficult. G. B. SMITH.

Baltimore, June 9, 1842.

The Garden and the Orchard.

SEASONABLE HINTS.

ALTHOUGH August is generally considered the best month for budding or inoculating fruit trees, yet there are some on which that operation will succeed as well or better in July, than at a later period. All the stone fruits are better propagated by budding, than by grafting, though the latter may be successfully performed when circumstances render it advisable. In budding, should the operation fail, the stock is not destroyed, and the process may be repeated at pleasure. For the peach, plum, cherry, and apricot, inoculation is peculiarly adapted, and every farmer should make himself acquainted with the best methods of doing this, as described in the previous volumes of the Cultivator. A poor fruit tree occupies as much space as a good one, and the cultivation and management is as expensive. Profit as well as pleasure then, would seem to indicate the propriety of paying more attention to the propagation of the best fruits. To the fruit grower, "Kenrick's American Orchardist," of Boston; or "The Orchardist's Companion," a periodical of the highest merit, by Mr. Hoffy, of Philadelphia, will be found a great acquisition.

It will be well to look frequently to your plum and cherry trees, so as to detect the first blight or rust upon them, as on the prompt attack of this disease its eradication is mainly depending. Spare no branch on which these unsightly protuberances appear; but cut and burn them at once. Thousands of the best fruit gardens in the United States, have been ruined within the last five years by a neglect of this evil, trifling indeed in its commencement, but increasing with alarming and frightful rapidity. Those only are exempt, who never allow the blight to show itself, without immediate extirpation, thus at once destroying the insect that causes the mischief, and the means by which it is multiplied. Good fruit, of these kinds at least, can only be secured at present, by active care and exertion; and those whose fruit gardens are at present exempt, should be watchful, lest ere they are aware, serious damages are perpetrated.

The garden will require much care during the month of July. All your onions, carrots, beets, &c., should be properly thinned, and the earth frequently stirred about them. No where in the garden should a weed be allowed to show itself with impunity. Do not allow too many melon or cucumber plants to grow in a hill. If too crowded the vines will lack nourishment, and the fruit be inferior. Some cut off the vine of the melon, after one or two have formed upon it, thus forcing the plant to give all its nutriment to these alone; but where the plants are at suitable distances, and properly thinned, we have preferred leaving the vines to take their own way in perfecting their fruit. Cucumbers and melons while forming their fruit, require a plentiful supply of water, and if not furnished by rain, it must be given them by hand. All watering of plants should be done at evening, as the evaporation is less rapid during the night, and the plants are more benefited by the application.

There are many herbs which should be saved for use as they arrive at the proper state, which is when they are beginning to flower. They should be cut when free from moisture, and cured in a dry place. There are some herbs which every farmer who keeps horses, &c. should preserve, as valuable for veterinary purposes; unless he goes upon the principle that it is better in all such matters, to trouble those who show a little forethought, than to exercise it for himself. Seeds too as they ripen, should be gathered, carefully cleaned, neatly done up in papers, and labelled, so that you can lay your hand on them at once. Change of seed is doubtless at times important; but farmers could, with a little attention, raise at least as good seeds as those usually sold.

THE GARDEN.

EDITORS OF THE CULTIVATOR—Judging from my own feelings in similar cases, I presume you have, in passing by a house in the country, in some unsightly, craggy, shapeless situation, felt a degree of sympathetic regret that the inhabitants were destitute of a proper site for a handsome garden; such a garden perhaps, as we sometimes, but not too frequently, see with delight, in passing through some pleasant village or a smooth extensive plain. But to relieve this regret, my own reflections have suggested, and perhaps yours have done the same, that the level is not the indispensible pre-requisite in a beautiful location, but that the same disgusting roughness, if ingeniously modified and tastefully worked on, may be found to constitute the very quintessence of beauty, capable of attracting our highest admiration.

I had peculiar confirmation of the truth of this remark, in a recent visit to a cordial friend, who resides a few miles north of me. My friend is an aged gentleman, who lives at his ease, on the income of several hundred acres of valuable land; but age has had but little effect in dimming his bright eyes, and still less in abating his sprightly and entertaining conversation. As was said of Dr. Franklin, "His mind is ever young; science, which never grows gray, has always been his mistress."

The location of his mansion, was originally such as a superficial observer would have considered any thing but interesting. It stood on a small eminence, facing the east, with an open front view, and pretty fair rural prospect; but the scenery around it rather rough and unsightly, and a ledge of rock in the rear excited no particular interest in its favor.

On a former visit, I had hinted at some little improvements of which it might be susceptible. But how pleasing was my astonishment on the last visit, to find those hints not only improved on, but the whole subject carried infinite lengths beyond any thing my fancy anticipated; and those very points which many would have considered deformities, now constituted its principal beauties. Indeed, the whole establishment now presented a most delightful appearance.

But the garden, and the rock which enclosed it, were truly enchanting. The garden consisted of about an acre, principally enclosed on two sides, and entirely on the farther end, by the ledge, the two ends of which, commencing several rods back of the house, at a small elevation from the ground, rose gradually as it receded back, to sixteen or eighteen feet in the rear, forming on the inside a complete wall of rock; while about half an acre of ground on the outside, was equal in elevation with the top of the rock, and swelling very gently each way, afforded on each side a good collection of native and foreign trees and shrubs, and a delightful situation for rural walks, or for any kind of cultivation.

The form of the enclosure by the rock, as nearly, perhaps, as it can be expressed mathematically, is the central, longitudinal section of the frustrum of a cone, the larger and open end towards the house, and the smaller or farther end enclosed by an outward course of less than a semi-circle. This ledge, or rather garden wall, is being covered with vines and creepers, producing a fine variety of flowers. An ornamental fence encloses not only the garden, but the ground for some distance from the top of the rock, and closes the opening left by the rock.

A worthless little brook was transformed into a pretty stream, and managed with consummate skill to produce effect; entering the ground on the left of the ledge, and keeping along the elevated ground within the outward enclosure, turns to the north and passes off between the house and the garden; a Chinese bridge is now being made to cross it in going to the garden. The brook being sufficiently elevated to be conveyed to any part of the garden for the purpose of irrigation, if necessary, and also to supply artificial fountains, or to fill small basins to contain fish.

The garden is well stocked with fruit and ornamental trees, and flowering shrubs; also an interesting collection of flowers, both indigenous and exotic, of almost every kind the climate, with the most careful nursing, will permit to live.

Thus, this originally rather rough situation, is, by the efforts of industry, less directed by a refined taste, made to present infinitely more and stronger attractions than any human art could produce upon a smooth and extensive level. MAGNOLIA.

USEFULNESS OF TOADS.

EDITORS OF THE CULTIVATOR—I will take the liberty of stating to you some facts relative to the protection of garden vegetables from the attacks of the cut worm, and some others of the same tribe. Some years ago, when dressing my garden, I discovered a toad nested under a plant, and shortly after hoed up a cut worm, which I shoved near the toad, who snapped him up as soon as he got sight of it. The thought occurred to me, as the toads and worms both came out at night in search of food, it would be good policy to gather up the toads and put them in my garden to catch the worms. I did so, by catching all I could find about my door yards, hopping about at night-fall, put them in my garden, and was not troubled with the worms that season. I have repeated the experiment with the same success ever since. I consider it also an act of humanity to keep them out of the boy's way, who are apt to torment the poor creatures, when hopping about in search of food. If the heads of families would prevent their small children from destroying the toads, and larger boys from shooting and pelting with stones the birds which feed on worms and insects, they would come around our premises, and do a great deal in relieving us from their depredations on our fruit and gardens. S. McCoy.

McLand, April 20, 1842.

Veterinary Department.

ROYAL VETERINARY SCHOOL AT ALFORT.

This is one of those institutions under the care of the French government, connected with the agricultural farms, the establishments for improving animals, and the *haras* or collections of horses intended by the government for furnishing cavalry horses for the army. It is a Veterinary school on an extensive scale, where any student may make himself acquainted with the diseases and their treatment, to which most animals are subject. From a summary of the Annual report which has been placed in our hands, we make a few extracts. During the last year there were admitted into the Hospital, 569 horses, 2 asses, 8 mules, 4 bulls, 2 goats, 294 dogs, total 879. Of the horses, 515 were dismissed cured; and of those that died, 17 were of glanders. Of the dogs, 260 were cured, and 30 died.

There were brought for consultation, 2129 horses, 10 cattle, 41 dogs, and 2 pigs, total 2182. The horses that were sent for operations of various kinds amounted to 252.

To the students of the fourth year, the care of the out-door patients is confided. These amounted to 280 sheep, 104 pigs, 8 cows, and 94 horses.

"An agriculturist in the neighborhood of the school, had, in 1819, a hundred pigs, which were suddenly attacked by disease, and they were all dead in 15 days. In June last he bought another hundred, which were soon attacked, and seven of them died in less than 48 hours. M. Delafond observed in those that died, and on eighty-eight that yet lived, acute inflammation of the roof of the mouth, and of the tonsils, with the formation of false membranes. The Professor, assisted by two of the pupils, lightly cauterized the affected parts, and applied to them a mixture of honey and hydrochloride acid, in such proportions as to produce a slight degree of causticity. Out of the eighty-eight that had been attacked, eighty-five recovered."

In the Report, the singular fact is stated, that the beech mast, (*fagus castanea*,) or as it is called in this country, beech nuts, and which in many districts of our country, form no inconsiderable item in the means of fattening pork and keeping store hogs, is a violent poison when fed to horses. Bad effects having ensued from feeding the cake, remaining after the pressure of the oil from the nuts, to horses, M. Lefort of Champlette, sent to Alfort some of the oil cake made from the nuts, and some of the nuts themselves, for experiment. The horses evinced much disinclination to the feed, but the director forced on some of them a portion of the oil, and on others some of the cake from which it had been expressed. They all died within twelve hours after the administration of both. This furnishes another curious instance of articles of food, perfectly innocent to one animal, and yet fatal to another. Beech mast is the favorite food of the common pigeon, (*Columba migratoria*,) and multitudes of pigs have been wholly wintered, the last winter, on this fruit.

VETERINARY LITHOTOMY.

We are much obliged to our correspondent A. P. Tuttle, for the communication below, on the successful performance of the operation of Lithotomy, or extraction of the stone, in a horse. It is the first attempt of the kind that we have known in this country; although it may have before been performed here. Mr. Youatt says, "the symptoms of stone in the bladder, much resemble those of spasmodic colic, except that on careful inquiry it will be found that there has been much irregularity in the discharge of urine, and occasional suppression of it. When fits of apparent colic frequently return, and are accompanied by any peculiarity in the discharge of urine, the horse should be carefully examined. He should be thrown. If there be stone in the bladder, it will, when the horse lies upon its back, press on the rectum, and may be distinctly felt if the hand be introduced into the rectum. Several cases have lately occurred of successful extraction of the calculus; but here it is necessary to have the aid of a veterinary practitioner." Mr. Tuttle's paper would have appeared in the May No. as desired, but did not reach us until that No. was in the press.

Messrs. Editors—If you please, you may insert in your valuable paper, the following account of the operation of Veterinary Lithotomy. The case was of a horse twelve years old; had been a valuable horse, but ailing somewhat for the year past. On the 16th inst., [April,] I operated upon him for stone in the urethra. The stone was lodged in the urethra about three or four inches below the anus or rectum. We cast the horse for the purpose, as for castration. I made the incision through the integuments, and then through some considerable thickening of the parts between the integuments and the urethra; the incision externally, was about one and a half inches in length. I cut down upon the calculus at once, as near as possible. On extracting it, I found it of a perfectly globular form, three and a half inches in circumference, and weighing above half an ounce. It was evident the horse could not have lived long in that situation, as he had not passed his urine for two and a half days, and was suffering extreme pain. Since the operation, the horse has been doing well.

Yours respectfully, A. P. Tuttle.

Truxton, Cortland co., April, 1842.

CURE FOR THE HOOF-AIL.

Messrs. Editors—While reading a cure for the Hoof-Ail, in the Cultivator, vol. VIII, p. 16, I was reminded of my own experience in attempting to cure that disease.

In May, 1825, I had a cow violently attacked with the hoof-ail, or foul hoof, as it is frequently called; and being but little experienced in the management of cattle, or the means of curing the diseases to which they are subject, I applied to my neighbors, who I thought were best informed on such subjects, for the necessary information. They directed me to draw a hair rope through the cleft of the foot, until it became raw or lacerated. I followed their direction, but found little or no benefit resulting from the operation. The animal still grew worse, hobbled about on three legs, declined in flesh, and was almost worthless for milk, the remainder of the season. A year or two after, I had another cow attacked by the same disease; and thinking it somewhat similar in its nature to a felon, I became convinced of the propriety of opening it. Therefore, when the cow lay down, (which she frequently did,) with a sharp knife, I made an incision lengthwise through the skin on the bottom of the foot, where it was most swelled and inflamed. It bled pretty freely, and in a day or two after, I perceived matter making its way out from the cut, and in a few days the animal was well.

Since that time, I have had a number of cows attacked by the disease, and (when bad,) I have always applied the same means, and invariably with the same success.

H. Clark.

Minisink, Orange Co., N. Y., April 8, 1842.

BLOODY MURRAIN.

In a communication from J. C. Stone, Esq. Deep Water, Mo., we find the following description of the disease among cattle called Bloody Murrain, as it appears in that section of the country, where it is very prevalent and fatal; and he requests such information as to its cause, treatment, and remedy, as may be in possession of our correspondents.

"The symptoms of the disease here, are stupidity, hanging, and shaking of the head; as it progresses, it is attended with constant scouring, with frequent discharges of bloody matter from the bowels and urine, and frequently from the mouth and nostrils, in the last stages of the disease. The attack generally comes on very suddenly, and from the time the bloody discharges commence, (which is frequently the first knowledge we have of the existence of the disease,) the animal seldom lives more than from 12 to 36 hours. Bleeding, which I have often tried, *copiously*, I am sure hastens the animal's death. The frequent use of salt as a preventive, I have found ineffectual, as also most of the remedies generally recommended."

We have never had cattle affected with murrain, but have been inclined to believe the disease to be the result of bad pond or ditch water, having never known it occur where cattle had pure water to drink, free from bloodsuckers, and the other reptiles that infest stagnant pools in the hot months. As a preventive, the use of a portion of quick lime with the salt fed to the stock, has been found in some districts of Michigan very successful, and we think that pure water, with a supply of such salt, would in most cases prevent the disease.

RELIEF OF CHOKED CATTLE.

Messrs. Gaylord & Tucker—As I was perusing the January No. of the Cultivator, I noticed that your correspondent J. V. recommended a hickory ramrod (or piston,) to relieve choked cattle. I have known cattle killed by the use of such an instrument, it bursting or breaking the pipe. The best method and easiest, is to take a lump of lard (cold,) about the size of a hen's egg, and a spoonful of powder mixed with it, and haul out the tongue and throw it into the throat; let the tongue go back, and they are relieved in one minute. J. Judson.

MICHIGAN LAND AND TAX AGENCY, DETROIT.

The subscriber, residing at Detroit, Michigan, informs those owning lands in that state, that the sales for lands upon which taxes of 1838 are unpaid, will take place in the early part of August next, in the respective counties. The taxes can *now* be paid at Detroit. Those interested who wish their taxes paid, can have their business done faithfully and promptly by the subscriber. The taxes of 1841, now bear 50 per cent interest. Letters addressed to the subscriber, postage paid, containing description of land with remittances will meet with prompt attention. WM. T. YOUNG.

Detroit, May, 1842

NOTICES TO CORRESPONDENTS, &c.

Letters have been received from correspondents during the month of June, as follows: James M. Garnett, John Morgan, F. Burt, Roedale, G. Cook, N. N. D., H. D. Grove, S. W. Jewett, Magnolia, G. B. Smith, A Young Farmer, David Miller, G. Churchill, Solon Robinson, A. of the North, Commentator, Baily & Rich, E. Cornell, P. R. S., Geo. Billings, P. L. Simmonds, A Subscriber, Seth Whalen, E. Lockwood, D. Miller, Economist, and A. B. Allen. [We shall publish Mr. A's. reply to Dr. Martin next month, as Mr. A. thinks justice to him requires it. Had his request been received in season, it would have appeared in this number.]

Books, Printed Papers, &c.—Half a dozen copies of a "Letter to Lord Ashburton, on the importance of the Corn and Flour Trade with England, via the St. Lawrence; and the Advantages to be derived from introducing Maize into Great Britain, as a cheap food for the Poor"—Addresses of J. M. Garnett, before the Henrico and Essex Ag. Societies of Virginia—Bell's Weekly Messenger, The Mark Lane Express, a Treatise on Swine &c. from P. L. Simmonds, Esq. London—The weekly Nos. of "*The New Farmer's Journal*," for May, from the Editors—"Elements of Scientific and Practical Agriculture, intended as a text-book for Farmers and Students in Agriculture, by Alonzo Gray, A. M., author of Elements of Chemistry, and Teacher of Chemistry and Natural History in Phillips' Academy, Andover, Mass., from the Author—"A Discourse on Education, by John Quincy Adams," from B. V. French, Esq.—Transactions of the American Institute for the year 1841, from Alex. Walsh, Esq.—Proceedings of the Alabama State Agricultural Convention, held at Tuskaloosa, Dec. 6 and 7, 1841, with the addresses of the Rev. Dr. Manly and Prof. R. T. Brumby. From some unknown friend.

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BARNABY & MOOER'S PATENT SIDE HILL AND LEVEL LAND PLOW.

Messrs. GAYLOLD & TUCKER—I wish to avail myself of your valuable journal, to inform the agriculturists of Maine and Georgia, that I have purchased the patent right for the above justly celebrated premium Plow for those states, and am prepared to make arrangements for their immediate introduction, either by the sale of rights to those who wish to manufacture the plows on the spot, or by shipping the plows to the order of responsible persons in either of the above states. Communications on the above subject, addressed to me at Ithaca, Tompkins co. N. Y., will receive prompt attention. The prices of the plow will be the same as advertised by Mr. Henry Mooers, in No. 3, vol. IX of Cultivator.

It is my present intention to spend the remainder of the summer in Maine, and the approaching winter in Georgia; when I hope to be able to show the farmers and planters of those states, their interest in the introduction of the above plow in the cultivation of all varieties of soil, both level land and hill side.

Ithaca, June 11, 1842. E. CORNELL.

WARREN'S PATENT HORSE POWER AND THRESHING MACHINE.

The patentee of these well known machines having made extensive arrangements for their manufacture upon improved plans, and at prices much below those charged for any other machines of the same nature, is now prepared to execute promptly, all orders that may be forwarded to him.

The horse power is very simple and compact in its construction, being only four feet long, two and a half feet wide, and eighteen inches in height, and is especially applicable to the driving of Cotton Gins, Turning Lathes, Circular Saws, Cider Mills, Sugar Mills, and threshing machines for rice, wheat, or other small grain, and for the last named was originally intended.

The Threshing Machine is also very simple and at the same time more effective than any other, while it is also worked with much less power; as with one horse, forty bushels of grain may with ease be threshed in one hour, in a clean and thorough manner. The undersigned, might without violating the truth, go beyond this statement, but desirous of avoiding the appearance of exaggeration, leaves to actual experiment the proof of the surpassing power of this machine; and such is the simplicity of its construction, that any person may without instruction, manage it with the greatest ease.

Price of one horse power,	$40
" two " "	50
" first size Threshing Machine,	20
" second " "	25
" one horse pw'r and thr'ng machine, combined,	60
" two " " " " "	75

All letters may be addressed (post paid,) to the undersigned, who is authorised to receive all orders.

LEONARD BOSTWICK, 58 Water st., New-York.

May, 1842.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO.

THE CULTIVATOR.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

AGENCY FOR THE CULTIVATOR IN NEW-YORK.—Our agents, Messrs. DAYTON & NEWMAN, booksellers, have removed from the corner of Fulton and Nassau sts., to 199 Broadway, where complete setts of the Cultivator can at all times be had, and where subscriptions are received for the current volume.

STATE AGRICULTURAL FAIR AT ALBANY.

As the premiums to be awarded on stock at the Cattle Show of the New-York State Agricultural Society, are confined to animals owned in this state, it has been thought best, as an inducement to gentlemen from other states to send stock to the Fair, to encourage the opening of sweepstakes, free to all who choose to enter. At the suggestion of the Executive Committee, and on the authority of different breeders, we announce the following sweepstakes, to be decided at the State Fair—entrance $5,00, unless a different rate shall be agreed on, in special cases, by the subscribers, at the time of the exhibition. The judges to be selected by the subscribers:

For the best Bull Calf—best yearling Bull—best two years old Bull—best Bull over three years old.

For the best Heifer Calf—best yearling Heifer—best two years old Heifer—best three years old Heifer—best Cow.

For the best long-wooled Ram—best long-wooled Ewe.

For the best South Down Ram—best South Down Ewe.

A gentleman of Connecticut proposes the following:—For the best two years old Bull, $25 entrance.

A gentleman from Vermont, proposes the following:—For the best Merino Ram—entrance $20.

PLOWING MATCH.—The following proposition comes from a farmer of this county. We should be glad to see some of the good plowman of Berkshire enter the lists with him:

MESSRS. EDITORS—Being fond of good plowing, I propose a sweepstakes of five dollars each, to be plowed for at the State Fair, upon the following terms:

1. The judges are to be selected by the Ex. Committee of the State Society.
2. The quantity of ground to be laid out and plowed in at least two lands, as well as the time within which the work must be done, to be named by the judges.
3. The furrow slices are to lap on each other, to be 5½ inches thick, and the part uncovered to be also 5¼ inches broad.
4. The lands to be as nearly flat as possible, from water furrow to water furrow, when finished.
5. No driver allowed the plowman. Nor is the plowman allowed to leave his team during the trial.
6. The plowman not allowed to touch the flag with his hands. He may tramp it with his feet however, provided he does not let go the handles of his plow at the same time.

NORMAN'S KILL.

☞Any persons wishing to have their names entered as subscribers to any one of the stakes, or to open a new one of any kind, will please to give notice to L. TUCKER, Albany, previous to 15th September.

SHIPMENT OF FINE STOCK.

FOR THE WEST.—Mr. SANFORD HOWARD, of Zanesville, Ohio, recently left this city with a well loaded boat of stock for the west. It consisted of a bull and several other animals, chiefly a cross of the Durham and Hereford breeds, bred by Mr. J. W. HAINES, of Hallowell, Maine—a full blooded Durham heifer calf, also bred by Mr. Haines, whose stock, we are told has proved itself highly useful for the dairy and the yoke—the well known Durham bull "Leopard," purchased of E. P. PRENTICE, Esq. of this city, the sire of so many of the beautiful herd of short horns at Mount Hope, which prove him to be one of the best stock-getters in the country—a Durham cow, and two pure blooded Hereford calves, male and female, selected from the extensive herd of Messrs. CORNING and SOTHAM, of this city. The bull-calf was by a son of "Matchless," out of one of their best cows; and, to complete the assortment, several sheep of the Leicester, South Down and Merino breeds—Berkshire and improved Bedford pigs—Westphalia or Bremen geese from Col. Jaques of Charlestown—Brazilian turkeys, Rotterdam hens, and a fine large breed of white hens which Mr. H. considers superior to the Dorkings.

This stock, we are informed by Mr. Howard, is owned by several individuals, who have associated themselves together in the purchase, among whom it is to be divided on its arrival at Zanesville, and some of it will be taken to Illinois in the autumn, one of the purchasers being a resident of that state. The pair of Herefords included in the lot, we doubt not will attract much attention, and at a proper age will enable the breeders at the west to test their qualities with the Durhams and other breeds, as adapted to the wants of that country. We hope the owners may be adequately rewarded, as we are sure they ought to be, for such an effort, at a time like this, to promote the improvement of the domestic animals of the west.

FOR THE EAST.—Mr. HAINES, the gentleman above spoken of, who accompanied Mr. Howard on his return from Maine, to this city, purchased while here two very superior bull calves,—a Durham of Mr. PRENTICE, and a Hereford of Messrs. CORNING and SOTHAM. The Durham came from Mr. Prentice's splendid cow, "Apollonia," whose portrait was published in the 7th volume of the Cultivator, by "Leopard." The Hereford was from Corning and Sotham's highest bred stock, and both were animals of which Mr. Haines may well be proud.

BRITISH AGRICULTURAL JOURNALS.

SUCH is the ease and certainty of intercourse between G. Britain and this country, that the foreign journals are received almost as quickly, and with as much regularity, as our own. We find on our table, brought by the late arrivals, the Q. J. of Agriculture; Journal of the Royal Ag. Society; London Farmer's Magazine; New Farmer's Journal; Gardener's Magazine and Chronicle; and the Mark Lane Express, &c. The new corn law system appears to meet with little favor from the agricultural interest in Great Britain. The following extract from the Farmer's Magazine, will show the bitter nature of the feelings with which it is regarded:

"We cannot give employment, at the same time, to foreign and to home agriculture. It seems to be the determination of the British legislature, however, to give the preference in this respect to foreign serfs, boors, and American field laborers. * * * Although the Americans were not entirely satisfied with our amended corn law, still they promised themselves a favorable market thereafter, for the surplus of their wheat crops; and they also calculated on the speedy establishment of a new description of commerce, as likely to arise out of our new tariff of duties, from the shipment of cured provisions for the consumption of the inhabitants of the United Kingdom. In New-York, and indeed in all the large cities and towns in the American Union, beef was plentiful at 3d. per pound for the best quality, which is inferior to none, save perhaps the best descriptions in Leadenhall market. The means for increasing the growth of cattle in the United States, are absolutely boundless, and in a few years it may possibly not be necessary for our farmers to pay rent for marshes, or to grow winter food for cattle, for preserving meat in a sound state is an easy and cheap operation; and no doubt it will be attended to, and acted on, in due time, by our transatlantic brethren."

SHIPMENT OF BONES.—The ship Savannah recently cleared from Philadelphia, with a cargo of 400 tons of bones, which were purchased at $12 to $13 per ton.

CENTURY PLANT—*Agave Americana.*

THERE is one of these splendid flowering plants in the green-house of Gen. STEPHEN VAN RENSSELAER, of this city, which is about to flower for the first time since it has been in the possession of the family, which is more than half a century. Some two years since, it was placed in a house by itself, the temperature of which has been kept at 80°, that it might have a better opportunity to develop its character. The flower-stalk is now 17 feet high, and is increasing about eight inches per day. It will begin to put forth flowers about the first week in August, and will probably continue in bloom for two months or more. We learn with pleasure, that Gen. Van Rensselaer, at the request of the Managers of the Orphan Asylum, has consented to its public exhibition for the benefit of that Institution, only reserving a free admission to his visitors, and to the tenants of the Manor of Rensselaerwyck. Arrangements have been made, at a considerable expense, to accommodate the public, who will now have an opportunity to gratify their curiosity in viewing this rare and splendid flower, and of aiding at the same time one of the best institutions in our city.

AGRICULTURAL FAIRS.

WE wish to give in our next number, as perfect a list of Agricultural Fairs, to be held the ensuing autumn, as possible; and shall be greatly obliged to such of our friends in the different states, as will apprise us, where it can be done free of postage, of the times and places in which Agricultural Fairs are to be held in their respective states. We should be glad, also, to publish a complete list of all the Agricultural Societies in the United States, together with the names and post-office address of their Presidents and Secretaries; and we beg leave to suggest to editors of Ag. Journals, the propriety of publishing such lists for their respective states, from which a complete register for the Union might be formed.

AMERICAN INSTITUTE.—The 15th annual Fair of this Institution, is to be held at Niblo's Garden in New-York, commencing on the 10th of October next; and the managers invite all interested in agriculture, manufactures, and the arts, to lend their aid by contributions of their best specimens, "that this intended epitome exhibition of a nation's resources may be honorable to the Institute, and truly illustrate the progress of improvements, and the present condition of the arts in our country."

"SPIRIT OF THE TIMES."—A recent number of this "Chronicle of the Turf, Field Sports, Literature, and the Stage," was embellished with a superb portrait, on steel, of the celebrated horse "Grey Eagle," owned by A. L. Shotwell & Co., of Georgetown, Ky. It is one of the most splendid of the beautiful prints with which "The Spirit" is so frequently embellished.

COTSWOLD SHEEP.—We see it stated in a Detroit paper, that Mr. Geo. Hentig, of Marengo, Mich., sheared this season, 12 Cotswold sheep, (of the importation of Messrs. Corning & Sotham, of this city,) whose fleeces averaged over 11 lbs. They were two years old. The largest fleece weighed 14 lbs. 3 oz.

CLOVER IN S. CAROLINA.—A correspondent of the S. C. Temp. Advocate, who has been very successful in the cultivation of the various grasses suited to the climate of that state, gives the following directions for cultivating clover:—"A stiff clay soil is the best for this grass. After preparing the soil well, sow in September, *two gallons* of clover seed to the acre, mixed with the usual quantity of rye or oats, that is suited to the strength of the soil. The rye or oats serves to shade the clover, the first year from the scorching rays of the sun, and enables it to become well rooted by the time the small grain is removed. The second year it will be fit for pasturage or harvesting."

KILLING WORMS.—Hellebore, it is well known, is an active poison, and fatal to most animals, and in the form of the powder of the shops, or in a strong decoction, has proved a most efficacious agent in freeing gooseberry and currant bushes from the myriads of worms that at times infest them. If used dry, the powder is dusted over them from a flour box; if in decoction, from the nose of a fine rose watering pot. A writer in the Gardener's Chronicle, says that he mixed the powder with soap suds, watered his bushes, and in six hours the bushes were free from worms, they having fallen dead by thousands. Might it not be used to destroy other worms as well as these.

Notices of New Publications.

A Letter to the Right Hon. Baron Ashburton, on the Importance of the Corn and Flour trade with England, via the River St. Lawrence: and on the Advantages to be derived from introducing Maize into Great Britain, as a cheap article of Food for the Poor and Laboring Classes. New-York: 1842.

Such is the title of an anonymous pamphlet laid on our table, evidently written by an Englishman, but one very well acquainted with our country, its productions, and the natural course of trade between G. Britain and the U. States. The pamphlet contains many interesting statements and statistical tables, which, if not absolutely new, are valuable from the facts they contain. The letter is in two parts; the first is devoted to the impressing upon the mind of Lord Ashburton, the importance of the trade in wheat and flour, which within a few years has sprung up along our northern frontier, by which wheat and flour from the States is taken to Canada, and from thence is shipped to England as Colonial produce. By this course, American grown wheat finds its way to G. Britain with the payment of a mere nominal duty; and the rapid improvements making by the Home and Provincial governments, in the communication between the upper lakes and the lower St. Lawrence, are calculated greatly to facilitate and extend this trade. To the farmer of Western New-York, Ohio, Illinois, or Michigan, it can make little difference whether his wheat goes to Montreal or New-York; the price is what he looks at; but to the finances of this state, it does make all the difference in the world, whether the western wheat finds an outlet through the Erie canal or the St. Lawrence. The discussion of this topic, however, more properly belongs to the statesman than the farmer, and we shall not pursue it, although it cannot with safety to our interests be overlooked by any.

From a careful survey of the trade from the various points on the northern frontier, the writer estimates the export of wheat, the staple product of the North, through this channel, at six millions of dollars, and thinks that ere long it will perhaps treble that amount.

The writer sums up his remarks on the first subject of his letter, in the following manner:—

"That America should supply England with food is natural enough, because one abounds in fertile soil, and the other with population; but we give the preference to the supply passing through Canada, for the following reasons:—1st. Because the St. Lawrence is the natural outlet for all bulky articles from that part of the North American Continent. 2d. Because from the rates of duty on the frontier and in England, wheat enters the ports of G. Britain by this route, under very superior advantages. 3d. Because, when the Welland canal becomes enlarged, and the impediments in the St. Lawrence removed, the navigation from the upper lakes to Montreal and Quebec —the ports of shipment—will be so easy, that flour and grain may be transmitted thither, and shipped at a lower rate than at any other port on this continent; and 4th. Because by this operation, G. Britain can give admission to the American products on terms more favorable and exclusive, than if her ports were opened generally to all nations. And it is advantageous to offer this favor to America, because America will take British goods in exchange."

But we are inclined to attach the most importance to the second part of our writer's essay; or that part which treats of the introduction of Indian corn into England, as an article of food. The quantity of corn we could furnish is illimitable, were there a demand to call out its cultivation; and when kiln dried, there is no obstacle to sending it on ship board to any part of the world. There could in all probability be no measure adopted for the ultimate relief and prosperity of the states north of the Ohio, equal to the opening of a market for their immense corn product. There are only two obstacles in the way; the difficulties of transportation, and the British corn laws. The first are in a fair way to be removed; the latter are more doubtful; but if the pressing wants of starving millions produce their natural result, such modifications may take place, as to justify the anticipations of our author.

We have room for only a few of the author's deductions and conclusions, although every person acquainted with corn meal, will agree with him in his statements of its value as an article of food. A few of his conclusions are as follows:—

"1. That the laboring classes and the poor of Great Britain, require a *cheaper article of food than wheaten bread.*

2. That although wheat contains a larger portion of *gluten*, or the nutritive ingredient, *bulk* is necessary, not only to satisfy the cravings of hunger, but to promote digestion by the "stimulus of distention," which bulk alone can give.

3. That the craving of hunger being removed or alleviated by the quantity of food taken, the mind is more at ease, the mental irritability consequent upon hunger is assuaged, and man goes to his labor with cheerfulness and vivacity, becoming a more peaceful citizen and perhaps a better man.

4. That maize possesses a great superiority over rye, barley, oat meal, or potatoes—not that it contains a greater portion of *gluten*, but that its constituent parts are better proportioned, and consequently make a better article of food.

5. That admitted into England duty free, it would be a cheaper article of food than any of those above named, besides being vastly superior to them in nutritive and healthful properities."

It will be at once seen that the questions discussed, and the positions advanced in this letter, are such as will interest every one, and particularly the farmers of the west. On them the action of this Canada trade is direct; on the farmers of the east indirect; but its influence will be every where felt. That a very large portion of the wheat of the states bordering on the lakes, has this season been purchased for the Canada market, is well known; and it is certain that a still larger part of the coming crop will follow in the same channel. To us, it appears evident, that a train of causes are at work which will tend materially to modify the course of trade and exchange on our whole northern frontier. It is the province of the statesman to see that the interests of the farmer suffer no detriment.

The Book of the Farm. By Henry Stephens, *Editor of the Quarterly Journal of Agriculture.*

This is a work publishing at Edinburgh, in numbers of about 100 bages each, price 4 shillings sterling a number, and of these the first four numbers are now before us. The high reputation of Mr. Stephens; the extensive, and varied information he has exhibited in conducting the Q. J. of Agriculture; and his intimate acquaintance with all that relates to the farm, and the improved methods of husbandry, had led us to form raised expectations of his forthcoming work, and thus far it appears we shall not be disappointed. "The Book of the Farm is intended to be a guide to those who wish to learn husbandry with the purpose of becoming practical farmers." The work is divided into three portions. The *first* shows the pupil the obstacles he has to encounter, and the best way of surmounting them; the second details the various modes of farming practiced in Great Britain, with suggestions for improvement; and the *third* introduces the young farmer into the world, points out the qualifications of a good farm, and the capital necessary to furnish and manage it. In the second part, the course of the seasons is followed in describing the successive processes of farming, and every information relating to these processes will be given in the amplest manner. Numerous engravings, and wood cuts of animals, implements, and practices of husbandry, will be given in the course of the work, drawn from the most authentic sources, and illustrating the topics discussed in the text. The whole will be comprised in twelve numbers.

The first number gives an interesting account of the several Agricultural Schools that have been established in the different countries of Europe; the Templemoyle Seminary in Ireland; the establishment of M. Fellenberg of Hofwyl, in Switzerland; the German institution at Möeglin under the direction of Von Thaer; the French model farm at Grignon under the management of M. Bella; and the lectures and classes of Agriculture in the Edinburgh College. He also gives a synopsis of a farm school, such as he thinks would possess every desired advantage, and furnish every requisite instruction to the pupil. A liberal extract from this part of Mr. Stephens' "Book," will be found in another part of the present number of the Cultivator.

The "Book of the Farm" is one, which, so far as we are able to judge from these numbers, will be useful to farmers generally, as embodying a vast mass of practical instruction.

The Farmer's Land Measurer, or Pocket Companion, showing at one view, the content of any piece of land, from dimensions taken in yards, with a set of Useful Agricultural Tables. By James Pedder, *editor of the Farmer's Cabinet.*

This work has recently been published by Thomas, Cowperthwaite & Co., Philadelphia, and consists, first, of a set of tables so constructed as to enable any farmer to ascertain the dimensions of his lots, large or small, in an easy and practicable manner. All that is necessary, is to ascertain the length and breadth in yards, when a reference to the tables will at one view show the amount in acres, roods and perches. The measure being in yards, most farmers may readily ascertain the size of their fields, with sufficient accuracy for ordinary purposes, by *pacing* their length and breadth, without recourse to the rod and chain. In addition to these land measuring tables, which occupy about 120 pages, the work contains tables for manuring lands, of planting distances, for plowing, measurement of live cattle, &c., &c., making it altogether a truly useful *Pocket Companion*, which should be in the possession of all farmers who wish to learn with a good degree of exactness, the result of their operations.

Silliman's Journal, No. 87—July, 1842.

This number of the American Journal of Science and the Arts, contains a greater variety of papers than usual, and the most of them are well calculated to interest the general reader, as well as the man of science. The notice of the coal mines in Virginia; the Human Foot Prints at St. Louis in solid limestone; a capital description of the Wisconsin and Missouri mineral region; the Third Annual meeting of the Association of American Geologists and Naturalists; the Notice of Dr. Danas' Muck Manual, and the Properties of Wood Ashes examined, are all papers which cannot fail to instruct and interest.

The paper of Dr. Plummer on the dangerous properties of wood ashes, should receive an attentive perusal by every housekeeper, and we doubt not, would prevent many of those disastrous fires which prevail so frequently both in city and country. Perhaps one third of our farmers, as well as others, preserve their ashes in wooden boxes, or barrels; and if each new addition of ashes is kept from actual contact with the vessel, no danger is apprehended. The numerous and varied experiments of Dr. Plummer, prove that such an opinion is fallacious in the extreme; and that by the application of hot ashes and coals to the surface of a quantity of coal ashes, the whole may be ignited, and the destruction of the vessel holding the ashes, or perhaps the building itself, ensue. It cannot be too forcibly impressed on the minds of all, that ashes should never be desposited in wood.

The notice of Dr. Dana's Muck Manual is of the most favorable character, and reiterates the opinion expressed by us in the June number of the Cultivator, that as a a work of real value to the agriculturist, "the Manual would not suffer by a comparison with any other." Less elaborate and learned in appearance, less dogmatical in its theories, but infinitely more common sense and practical in its instructions than some foreign contemporary publications, we cannot doubt that the Muck Manual in its successive editions will greatly advance the cause of agriculture among us.

American Eclectic, No. X—July, 1842.

If any additional evidence were wanting of the deep hold which the cause of Agriculture has taken on the public mind, it would be found in the readiness with which Journals purely literary and scientific, admit and invite to their pages, articles on the theory or practice of Agriculture, Horticulture, and their kindred arts. The Eclectic, a valuable bi-monthly of New-York, devoted to a dissemination of the most valuable papers to be found in the literature of the world, gives in the July number an able review of Liebig's Organic Chemistry from the London Quarterly Review. Speaking of the importance of potash to the production of some classes of crops, the writer of the article relates the following anecdote, for the truth of which he says he can vouch, having heard it attested by the parties themselves. "A distinguished professor of chemistry in Germany, in discussing with Prof. Liebig the question of the use of alkalies, and in particular the necessity of potash for the growth of wheat, mentioned as unfavorable to that view, the fact that fine crops of wheat were obtained from a purely calcareous soil, lying over limestone, in Hanover. "Then," answered Prof. Liebig, "you may rely upon it, that the limestone contains potash." His friend took an early opportunity to investigate the matter, and found, to his surprise, that the limestone in question did contain a very notable proportion of potash, a fact previously unknown. He found potash also in other fertile limestones, and in every specimen of clay he examined, even in the purest pipe-clay. We doubt not, therefore, that potash will be found in some form, in every soil in which wheat thrives."

We make this extract, because we do not recollect to have ever before heard potash mentioned as a constituent part of limestones; and because if such is the fact, it would seem to throw some light on the cause of some kinds of limestone being so much more valuable as fertilizers than others, a result which the experience of many farmers in England, and we believe in this country, would affirm. The writer in the Quarterly, attributes many of the obscurities complained of in Liebig, to the defects of translation, occasioned by the haste necessary to have the volume laid before the British Association at its meeting of last year; defects, which the new edition now in press, and carefully revised by the author will doubtless remedy.

Address on the formation of the Agricultural Society of Essex. By James M. Garnett.

An Address before the Ag. and Hort. Society of Henrico, at their Anniversary meeting, May 25, 1842. By James M. Garnett.

We have read these Addresses, for copies of which we are indebted to the respected author, with great pleasure; and, did not the crowded state of our columns forbid it, should be gratified to lay copious extracts from both, before our readers. There is a directness of purpose, a clearly defined effort to promote the great cause of Agriculture, in all that proceeds from the pen of Mr. Garnett, which renders his writings acceptable and usefu to the public. He not only aims to make our farmers good reapers and mowers,—good tillers,—good managers of stock and industrious collectors of manure, but also to impress upon them the fact, that high intellectual and moral culture is equally essential to form the complete and accomplished agriculturist. "Nay, more," says Mr. G. in one of the addresses before us, "I deem it my duty to assert our just claims to the highest rank in public estimation—on the score of general utility;— to point out the chief means necessary to the attainment of this rank;—and to impress on every member of our numerous fraternity, this all-important truth, that the owners and cultivators of the soil are, in fact, the foundation, the main pillars, and chief support of our great social edifice. Other classes have their uses and value, as essential elements of every civilized, well constituted community. But let it never be forgotten, that all are dependent, even for their subsistence, on the agricultural class. Deeply, then, does it concern every member thereof to aspire to something more—something infinitely higher—than merely to make good crops, and to enrich his land, or he would deserve to rank, in the scale of being, but little above the horse, the mule, or the ox that he drives. Would he either reach or maintain that exalted standing among his fellow men to which he has so just a title, let him make himself worthy of it by the diligent culture and unremitted care, not only of his fields, but of all his faculties—both intellectual and physical. Let him qualify himself to the utmost of his power, not only to feed and clothe the bodies of his family from the products of his farm, but to imbue their minds with knowledge and virtue from the store-house of his understanding."

Report of the American Institute, on the subject of Agriculture, for 1841.

This Report has been issued as a Legislative document since the adjournment of the Legislature. It contains the doings of the Agricultural Department of the Institute for the last year, embracing the reports of the various committees, descriptions of implements, premiums awarded, statements of claimants for premiums, &c., &c., most of which have heretofore been noticed in the Cultivator.

A Dictionary of Science, Literature and Art, comprising the history, description and scientific principles of every branch of human knowledge. By Prof. W. T. Brande.

Messrs. Wiley and Putnam, New-York, have commenced the publication of an American edition of this valuable encyclopœdia of useful knowledge. It is to be issued in semi-monthly parts of 56 octavo pages each, at 25 cents per part, the first and second of which are now before us. It is printed with beautiful nonpareil type, in double columns, on paper of the best quality, and illustrated with a great variety of wood cuts. With Prof. Brande, the general editor, are associated fourteen other gentlemen, eminent in the arts and sciences, to whom the different departments are committed, such as Mr. Loudon, who furnishes the articles on Agriculture and Gardening, Prof. Lindley on Botany, &c. &c. It is to be completed in 24 parts, making a volume of about 1500 pages, and "will be found to be a convenient manual or reference-book for all descriptions of persons on all subjects."

North American Review, No. 116—July, 1842.

The present number of the Review is a capital reading one, all the papers being on interesting subjects. Of the whole we think 'The English in Afghanistan,' and 'Cleveland's Voyages,' about the best. It is not often that we find Yankee enterprise and perseverance, proverbial though they are, more strongly illustrated than in the case of Capt. Cleveland. We miss in the present issue, the usual paper on Agriculture; an omission which does not often occur.

Answers to Inquiries, &c.

CURE OF COARSE GRASSES.

"Messrs. Editors—I have several acres of low wet meadow, or rather what should be such, but it produces little else than coarse swamp grasses, which make poor hay, and are of no value when I have attempted to pasture it. How can these grasses be exterminated, and the cultivated grasses be made to take their place?

Inquirer."

The first step in the process of reclaiming such lands, is to *drain them thoroughly*. This is indispensable; and until this is done, nothing else can be undertaken with any prospect of succcss. When this is done, if the soil is sufficiently firm, as it doubtless will be, invert the sod with the plow, roll and harrow, and re-sow with the seeds of such grasses as you wish to cultivate. Herds grass and redtop, will do well in such cases. Or if you choose, you may take a crop of potatoes from the piece, and the next spring seed down with oats. If you can apply a dressing of ashes, (and those that are leached will be better than none,) or compost made of ashes and manure, the benefit will be apparent, both to the crop and to the soil. When the soil will not admit of plowing, after draining, a covering of gravelly earth, road scrapings, mixed with lime refuse from the kilns, or coal ashes, will give a foundation for the better grasses. These materials may be drawn upon the meadow during the winter while the ground is frozen, when the softness of the soil prevents such operations in the summer. It is said that where the coarse grasses, or rushes, grow in tufts as they sometimes do, common salt applied at the rate of a handful to a tuft, will cause them to decay and disappear. As a general rule there can be no difficulty in substituting the valuable grasses for the inferior ones, when the land on which the latter grow has been drained. Coarse grasses are the natural covering of soils abounding in stagnant waters, and a removal of the cause, will of course effect the cure.

USE OF LIME.

"Messrs. Editors—Is lime made from stone really a manure for any kind of land? If it is, what kind of land? In what quantities should it be used? At what season, and in what manner? What crops does it suit best? In a dry season, will it not burn up any crop on any kind of land? J. W McCall."

Laurens District, S. C.

The influence of lime on soils, or in the production of crops, is owing to several causes. 1st. It acts in modifying the mechanical texture of soils, rendering them where it exists more friable, and better suited to the purposes of cultivation. 2d. It forms in many plants a part of the vegetable structure, and is properly inorganic food, having been received and assimilated by the organs of the plant; as such it may deserve the name of manure. 3d. It acts an important part in correcting the acidity of soils, as may be seen by applying it to fields where sorrel or other acid plants flourish to the exclusion of the more valuable ones. 4th. Lime exhibits its functions most powerfully and beneficially by the conversion of the vegetable geates or humates into vegetable food, or rendering them fit for the nourishment of plants. We think also, that like other alkalies, it contributes to the electro-magnetic action to which the circulation of plants is doubtless owing, and may therefore be regarded in the light of a stimulus to vegetable life.

It will be of no use to apply lime to land in which decomposed animal and vegetable matter is wanting, or the salts they have formed. There must be the elements of fertility, or lime will be unavailing. On exhausted lands the effect is slower, than on soils where the materials to act upon exist in abundance. Lime may be used in quantities of from fifty to one hundred bushels per acre with benefit, and instances are on record where several hundred bushels have been applied without any injury.

It is a common practice where lime is used, to spread it over the fields the year previous to their being plowed for crops. Another practice is to draw it upon the ground where it is wanted, after the fallowing has been mostly completed; deposit it in small piles at equal distances, so as to ensure an equal distribution; cover these piles with earth, which will cause the lime to slake equally, and then after thoroughly mixing the mass, scattering it over the field. It is then to be plowed in, and the seeds sown. Lime is useful in preparing soils for any crop, but is considered most suitable for wheat, and is most generally used as a preparative for that crop. We have never known a crop burned in any season, by the use of lime, nor can there be any apprehension of such a result, unless applied in extravagant quantities. Limestone containing large quantities of magnesia, from its remaining caustic much longer than pure limestone, would be more apt to produce such an effect; but the immense quantities of this kind of lime used in the best agricultural districts of Pennsylvania and Delaware, prove that danger from this source is mostly ideal.

NEW WEED.

"Messrs. Editors—I send you a few roots of a new pest to the farmer. The first I noticed it was in 1840, and its spread has since been unparalleled. The root you will see is a small bulb or nut, and those sent I have this day taken from the furrow. Last year one of my pieces of corn, planted on the 10th of May, was almost destroyed by this weed. I plowed and hoed it four or five times, and within a week or fortnight after going over it, it would look as though neither plow nor hoe had touched it. I should be much gratified to receive some information respecting the history and destruction of this root which threatens to become a formidable enemy to the farmer. J. V. B. Johnson."

Piermont, N. Y. 1842.

We are unacquainted with any weed or plant having roots like those sent by Mr. J., and the condition of the leaves or shoots rendered it impossible to trace it. If any of our botanical friends are able to recognize it from Mr. J.'s description, and will furnish us with the name and habits of the plant, they will no doubt confer a favor on the public. Judging from their present dried appearance, the roots when fresh would be nearly the size of a robin's egg.

CULTURE OF SAFFRON.

"Messrs. Gaylord & Tucker—As I am now engaged in the culture of saffron, and being a subscriber to your paper, I have to ask one favor of you. If in your power, will you publish the best method of cultivating saffron, curing it, &c. Yours truly, H. Clark."

Petersburg, May, 1842.

We are glad to learn that the cultivation of this valuable dyeing material has been entered upon in our country. It is a native of Asia, and is used by the Chinese for giving the beautiful rose, pink, scarlet, purple, and violet colors to their silks. In Germany, where it is an article of culture, the seeds are drilled in good ground, in rows 18 or 24 inches apart, and four inches between the plants. The ground must be kept clean and light by the hoe or otherwise. The gathering forms the most considerable item of labor, it being calculated that for one month while the plant is in blossom, every acre will keep four or five girls constantly employed in gathering the flowers. In drying them, the blossoms must be kept free from all moisture, and be kept in positions where the air can circulate freely. They must be thoroughly dried, or they are apt to mold when packed. From some experiments we have made, there can be little doubt that the culture of saffron will yield a handsome reward.

"DO CANADA THISTLES GO TO SEED ?"

This is the heading of a communication received by us, from L. W. Beebe, of Lima, Livingston county, and of this question he seems inclined to take the negative side. This opinion he founds on an experiment made by him, of planting some heads of the ripened thistles; as well as some observations made on the manner in which this pest of the farmer spreads. He admits at the same time, that there "is something mysterious about it in his own mind," and requests the opinion of some of our correspondents on the subject.

We well remember the time when respectable farmers contended that the Canada thistle formed no seeds, but we had supposed such opinions had passed away, and that no one now doubted either the formation or germination of thistle seed. That this is the case, the evidence is just as decisive, as that corn or wheat mature their seeds, and that such seeds germinate. We have seen this experiment of germinating Canada thistle seed tried so frequently that not a doubt—indeed we never had any—remains, that this troublesome weed is propagated as many other plants are, both by the roots and by the seed. We can attribute the hesitancy which some feel on this point only to the fact, that a large portion of the seeds are usually blighted or immature, and that in some years, whole patches of this thistle will produce very few, if any, seed bearing heads. There are some farmers who maintain that chess never germinates, and consequently take no pains to free their seed wheat from its presence; it would be a still more fatal error, should farmers generally allow their thistles to remain uncut, under the impression that they produce no seed, or that such seeds will not grow.

SORREL—MANURES.

The following are extracts from a letter written by G. Billings, Esq., of Carlisle, Mass. to the editors of the Cultivator:

"I have noticed that much of the grass lands, or as we call it, mowing fields, are greatly overrun with sorrel. Much of this land is of a good soil, capable of producing from 1½ to 2 tons of hay to the acre, although much of it at present falls short of this. Why is it that land produces sorrel, the poor as well as the rich ? and what is the best method to rid the soil of it ? Will sorrel be as good as clover, or other green crops plowed under ? Our soil in these parts is mostly light and sandy; with peat or bog meadows in abundance." * * *

"As the use of manure is claiming attention in all parts of our country, not more, however, than it deserves, it becomes all of us to make ourselves acquainted with the best method of preparing and applying it to the soil. Many of the farmers in this section of the country pitch it over in April or first of May, and let it ferment till they want it to plant corn or potatoes, and then put a shovel full or more in each hill. This method is getting out of use, as it is thought it causes the worms to injure the plants, and makes them more liable to be effected by the dry weather. Some, after it is pitched over and fermented, apply it to the surface, and harrow it in as they call it. Others again take it from the heap, just as it is thrown from the barn, put it on the land and plow it under, either on grass land, or such as has been tilled one season. Which of these three ways is best, say when the soil is a sandy loam ? The first is attended with the most labor; the second many object to as they say the sun dries the manure up too much ; and in the third it is said you bury it too deep, and so lose the good of it. I have read Mr. Garnett's mode of applying his manure; this is attended with the least expense, and by his account, it is the best way; if so, we ought to adopt it. as a great expense in time and money might annually be saved for other purposes. The time is fast coming, and even now is, in many parts of our country, when our heaps of manure must be our chief dependance for our crops. To the farmer, then, it is all-important that he should know the best and cheapest mode of applying it to the soil."

The acid of sorrel is the oxalic, and sorrel will only grow in soils where this acid is in abundance. To destroy sorrel it is only necessary to neutralize the acid that produces it, and this may be done by any alkali, but the most common and the cheapest is lime. Sorrel plowed under will not fertilize soils like clover, for the evident reason that it contains in itself a principle fatal to the more valuable grasses and grains, and mere plowing does not neutralize or destroy it.

In using manures we should prefer the third mode, that is, spreading it fresh from the yards and plowing it under at once. Not too deep, however, as the roots of plants would not reach it while young, the time when they need the influence of manure to give them a vigorous start. In heaping manures, there is much danger the fermentation will be too rapid, and ammoniacal gases escape, which would greatly lessen its value. It has been found in England that the best method of employing stable manure for the turnep crop is in the rotted state, when the process has been performed in such a way that the manure retains all its fertilizing qualities. Had we "peat and bog meadows in abundance," we should use our barn-yard manure in the manner recommended by Dr. Dana, and practiced by many of the most skillful farmers of Massachusetts; that is, we should use it for converting those substances into compost, instead of applying it directly and alone to the land. The farmer in the use of manures should keep a few plain things in view; and he cannot widely err. The manure in preparation should be allowed to lose none of its most essential qualities; this may be done by rapid fermentation in masses, or it may be exposed, so as to have all its soluble parts washed away and lost. In its application it should be placed where the roots of the plant can readily reach it, and that at the time when most wanted. Shallow covering we prefer to deep covering in the management of manure, although deep plowing in the preparation of the soil is indispensable.

BERMUDA GRASS.

"A Subscriber" in Wilkes county, Georgia, says, "We wish to be taught some mode of cultivation by which we can extirpate from a field or farm, root and branch, the Bermuda grass. You are aware that although *not* propagated from seed, each root and sprig is so tenacious of life, that we have, so far, been baffled in every attempt to rid ourselves of it. If you, or any of your correspondents can suggest any kind of grass that will *root* it out, and can itself be got off either by the plow or by grazing, or any other mode by which it can be destroyed, the matter will receive the attention, and be acted on, by at least a portion of those whose farms are infested with this grass."

We have found repeated plowings more effectual in getting out "root and branch," any weed or grass we wished to destroy, than any other course pursued by us; but as we have never tested the vitality of the Bermuda grass, we shall be happy to receive from some of our friends, who are acquainted with that plant, the information desired by "A Subscriber."

COMPOST.

Messrs. Gaylord & Tucker—In your last number I observed Dr. Dana's remarks on muck for manure, mixed with ashes in the proportion of one load of ashes to three of muck, or peat. What I wish to know is, whether shell lime will not do as well as ashes. I have already burned some six or eight hundred bushels of such lime, mostly slacked fine, and if I can use them in this way, I should like to know the proper proportion and the best method of mixing them.

Troy, June, 1842. E. Lockwood.

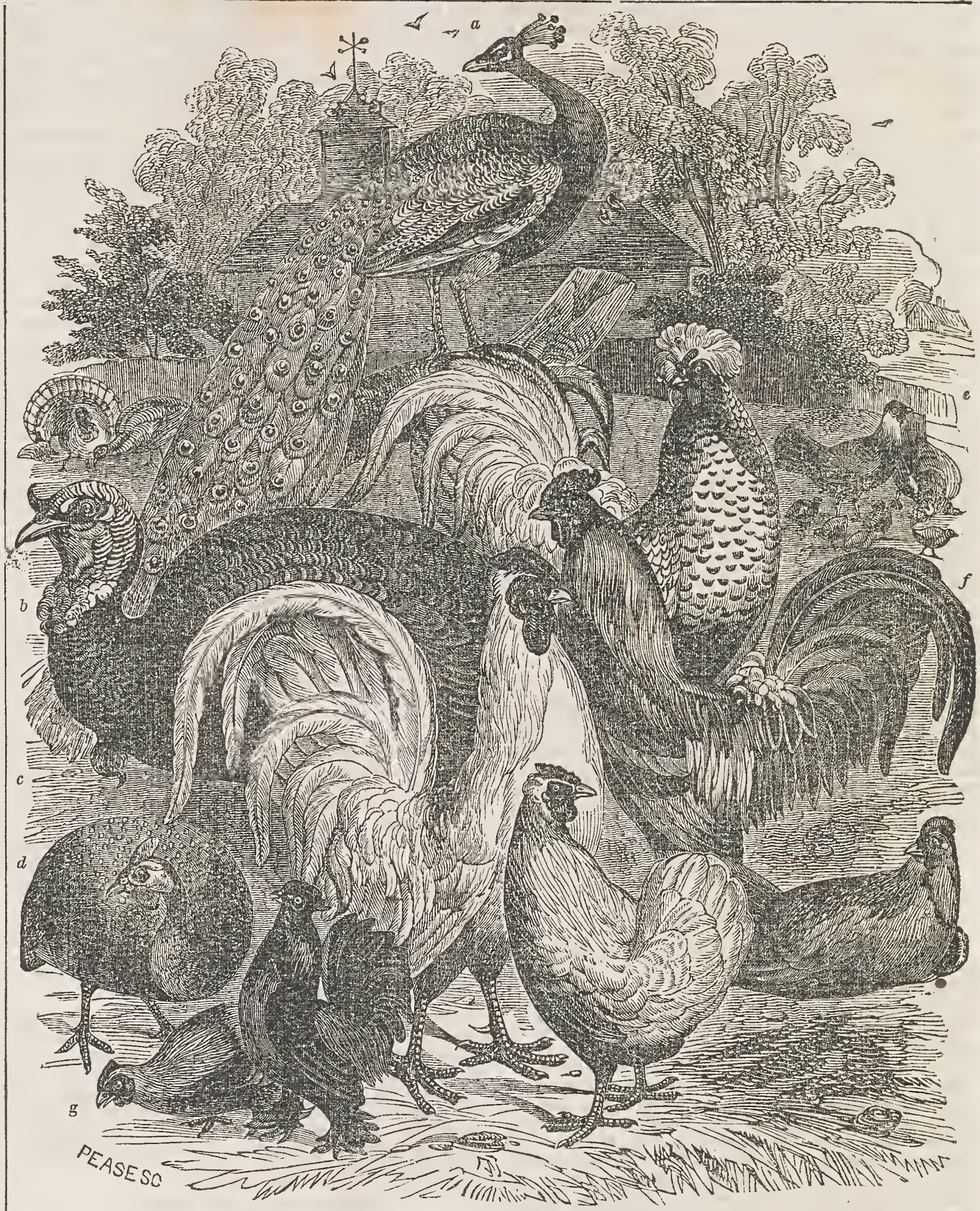
Lime may be used in preparing such composts, but the quantity used must be small, compared with the ashes directed by Dr. D., and for reasons assigned by him. "The properties of lime and geine, are here to be remembered. *Lime in excess, renders geine insoluble, granting it to have been in a soluble state. Lime changes vegetable fibre into soluble geine, but being applied in excess it forms an insoluble salt.*" Lord Meadowbanks failed in his attempts at preparing compost from peat with lime, by not understanding this law. The author of British Husbandry says, "Not only does peat, when compounded with a small quantity of lime, obviously undergo the putrefactive fermentation, but it is well known to many farmers, that such composts form excellent dressings, particularly for grass lands." Low in his Practical Agriculture remarks that "the best earthy materials for mixing with lime, are those which contain a certain proportion of decomposing organic matter, such as the scouring of ditches and the sediment of pools. The lime may be applied at the rate of two bushels to the cubic yard, and fifty cubic yards of this mixture to the acre, will form an efficient manuring for almost any soil."

The failure in the corn alluded to by Mr. Lockwood, in another part of his letter, was doubtless owing to the seed having been slightly heated before, or on its passage from the south. From our experience in this matter, we are confident that more failures in planted corn arise from this source than any other. Corn intended for seed should never be put in barrels or deep cribs, but traced up in the ear when gathered.

REARING CALVES.

In reply to "D. B. C.," in the Cultivator of last year, on the raising of calves, a "Dairyman Farmer," says, "In 1838 I reared five heifer calves as cheap, and I think as well as calves can be reared. They were calved in April. I allowed them to suck the cows for four or five days, taking part of the milk at the same time, so that the calf should have but 2, 3 and 4 quarts, increasing the quantity to six quarts twice a day at five days old. I then took them off, and fed them on new milk for a week; then on skim-milk for a fortnight, when I began making cheese. The calves were then fed on whey, about 8 quarts each per day, giving them hay until the grass was started and the weather mild. They were then turned out, and the whey continued until July, when they were put into a fresh pasture where there was plenty of good water. They received plenty of salt from the first. From the first of November they were stabled at night, and in stormy days, with what hay they would eat. In January finding they were lousy, I gave each one a quart of corn and cob meal, with a tea-spoonful of sulphur, which I continued until they had taken four ounces each, giving it once a day, which cleared them from the lice. After this they received the same quantity of cut potatoes daily until the first of May, when they were turned out to pasture in fine order. They all came in at two years old, and for size, beauty, or dairying purposes, cannot easily be beat. They were as large at two years old as three year olds usually are. The dairymen in this section of the country, think that heifers that come in at two, make the best cows for milk, and some of them will not keep one over that does not come in at that time.

Turnep Fly.—One of the most serious obstacles to the culture of the turnep, is found in the turnep fly, which frequently, in spite of every effort, will destroy the young plants almost as soon as they show themselves above ground. Soaking the seed in currier's oil, is said to be a perfect remedy for the fly, and is so easy, that it should be tried by every turnep grower. For the cabbage, radish, and plants of that class generally, it would doubtless be equally useful. In England, another remedy has just been discovered, an account of which we copy from the Mark Lane Express. The writer says—"I have great pleasure in communicating to my brother farmers, that I have discovered that gas lime, sown upon turneps before their coming up, is a sure preventive against the ravages of the fly. When gas lime cannot be obtained, gas tar, reduced with common lime, may be successfully applied between the drills, carefully avoiding the plants."



THE POULTRY YARD.—(Fig. 71.)

We are confident the most of our farming friends would find that more attention to their poultry yards, would add essentially, not only to the comfort of themselves and their families, but also to the aggregate of their annual farm profits. Without any particular effort, or any extra buildings or yards, from 50 to 100 fowls may be kept on every farm of a hundred acres, and the contributions they will make in eggs and chickens to the products sold, will amount in the end to a very handsome sum. It is true, to be made a source of profit they must receive attention; the eggs must be gathered daily, two or three hens must not (as is frequently the case,) be allowed to set on one nest; coops must be provided for the chickens, as they are hatched, and they, as well as other domestic animals, must be fed. Fowls will sometimes, perhaps, do a little mischief; if allowed access to grain fields, they will break down and destroy more than they will eat, and if they find the planted corn, they will show a perseverance and dexterity in tracing out the rows, and extracting the plants, worthy of any featherless biped that lives by his wits and the plunder of the public. The true way to put an end to such troubles at once, is to confine the depredators, when you do not wish to kill them; and then a little extra feed is all that is necessary to save both your crops and your fowls.

Domestic poultry usually do much better that run at large, than they will if restricted to narrow limits in the coop or yard. Their health is improved, their flesh is finer and better tasted, and they will produce more eggs, at large, than in confined situations. The Turkey, in particular, is a strenuous advocate of the largest liberty. Hens in a garden are a pest, but there is no necessity of being troubled with them there. A common picket fence five feet high will effectually exclude them; it being well known that fowls rarely attempt flying over such a fence, and when made plain, such a fence costs perhaps as little as almost any other.

To have the poultry yard profitable, the fowls should not be kept until they are old. There is no objection to preserving a favorite cock so long as he is active and lively, but hens after three years will not produce as many eggs as those of one or two years. Much, however, is depending on the breed kept, but more on the manner in which they are kept, so far as good layers are concerned.

The cut which accompanies this article, copied from a London magazine, very faithfully represents some of the most common domestic fowls. The Peacock *a*—Turkey *b*—Dorking cock and hen *c*—Guinea hen *d*—Hamburg, Poland or Top-knot *e*—Game cock and hen *f*—Bantum cock and hen *g*—are here shown in a single group. The common fowl is too familiar to all to require illustration. The Dorking breed is one of the best breeds at present in the country. They are readily distinguished by their having five toes. Mr. Bement, in his valuable article on Poultry, in the Transactions of the New-York State Ag. Society for 1841, says, "the genuine color of the Dorking is a yellowish white. The flesh is good flavored and of a yellowish or ivory shade. This is the variety generally made into capons. The eggs are large, and the flavor good. They lay well, fat well, and rear well, are handsome alive, and show delicate ivory white when dressed."

The Game cock breed, and the Bantum breed, are not generally kept, except by amateur poultry breeders, rarely by farmers, as they afford little profit as layers or rearers of chickens. The chickens of the game cock breed are so pugnacious as to be constantly fighting with one another, and in this way sad devastation is made among the broods: the Bantums are so small as to be undeserving of notice, except as objects of curiosity.

One of the most beautiful of our fowls is the Hamburg, or Poland Top-knot, and it is also one of the best with which we are acquainted. Both Mowbray and Boswell in their works on Poultry, speak highly of this breed; the first saying, "they are one of the most useful varieties, particularly on account of the abundance of eggs they lay, being least inclined to sit of any other breed, whence they are sometimes called *everlasting layers*, and it is usual to set their eggs under other hens;" and the last remarking, "this is a kind we esteem above all others, both for their appearance and usefulness, and we regret they are so seldom to be met with pure in this country." Mr. Bement, in the paper alluded to, says, "They are hardy, enduring well the extremes of heat and cold, although they are not so thickly covered with feathers and down, as some other breeds. Their color is of a shining black, or a deep glossy changeable purple, with a large white top-knot of feathers, covering so much of their head as almost to blind their eyes, and often require clipping. The contrast of this perfectly white crown, with the black plumage is truly beautiful, but that of the cock differs from the hen; hers being broad and erect feathers, while his are narrow and hanging down in every direction." We have seen a few instances, in which a small tuft of brilliant red feathers existed in the center of the white knot, almost realizing the appearance of a splendid flower.

PEAT AS A MANURE.

We are inclined to the opinion that one of the greatest discoveries of the age in favor of agriculture, so far as manures are concerned, is the facility with which that hitherto inert or valueless substance, peat, can be converted into an efficient manure. Swamp muck may very properly be classed with peat in this respect, although muck is more easily available as a manure than peat, and has consequently received more attention. Peat is a collection of vegetable matter, containing the elements of the greatest fertility, but usually combined with so much tannic acid as to preserve the materials from further decomposition. Examination shows that it is generally composed of coarse bog moss and grasses, such as the Splachnums, Equisetums and Carexes, and the gradual accumulation of these form masses from a few inches to several feet in thickness. Continual submersion in water, seems necessary to the growth of peat, or the moss must at least be constantly saturated. Swamp muck is usually a deposite; peat is the result of growth on the spot. Peat, when fresh dug, contains from 70 to 90 per cent. of water. When drained as dry as it will in favorable situations, "it will contain about two-thirds its weight of water, and a cord of peat when first dug, becomes one-fourth to one-third of a cord when dry."—(Dr. Dana.)

Formerly the mode of preparing peat for manure, was by drying and burning it. Large quantities are still so prepared in Flanders, and the celebrated Dutch ashes, the use of which produces such crops of clover, is nothing more than peat ashes. According to Professor Johnston these ashes are composed of—

Silecious earth,	32 parts.
Sulphate of lime, (gypsum,)	12
Sulphate and muriate of soda or glauber and common salt,	6
Carbonate of lime,	40
Oxyde of iron,	3
Loss,	7
	100

The earths, carbonates, &c. vary very considerably, according to the nature of the substratum, but the quantity of gypsum shown to exist, is sufficient to account for the efficiency of these ashes on clover, as a source of general fertility. Some peat bogs are entirely barren, or according to Professor Johnston, are composed of inert vegetable matter, or according to Dr. Dana, of insoluble humus or geine. There are other peat bogs moderately fertile, and in these the vegetable matter is undergoing decomposition, or conversion from insoluble to soluble matter. Experience has proved that it is impossible to render peat fertile, or convert it into a soil fit for cultivation, without first draining it thoroughly, or covering it with earth. Some process must be resorted to to effect decomposition; the insoluble must be rendered soluble; the acids must be neutralized; and the mass undergo aeration to a greater or less degree, before any favorable results can be expected. These things are indispensable, whether the peat remains in its original place, or is removed: the first takes place when a peat bog or moss is rendered fertile; the latter when it is converted into manure.

It is to agricultural chemistry that we are indebted for a knowledge of the causes that rendered a substance so rich in the elements of fertility as peat was known to be, of no value, and also the method of removing the evil. The discovery that the fault lay in an acid, showed that an alkali would be the corrective; and acting on this principle, the change of peat or swamp muck from an inert substance, to one of the most convenient and active of the fertilizers, has become as easy as it is common. Manure, an ample and abundant supply of manure, is the grand desideratum in agriculture. All around us were vast masses of what should be manure, but which was by its constitution effectually locked up from the farmer's use. Chemistry has thrown him the key which unlocks the treasure, and already is the gift beginning to be properly understood and appreciated. It is probable that in this country peat will be more used for manure than for fuel, the use to which, in some parts of Europe, it is now mainly applied. The only question now is, as to the easiest and cheapest way in which peat and swamp-muck can be converted into manure. How shall the farmer give to peat the active decomposition necessary to generate ammonia, and thus change it into a substance not widely different from animal manure ? The answer is ready, apply an alkali. The way in which this is best and most easily done, is to make the peat into a compost, either by mixing it with green dung in the compost heap, in which case one cord of fresh stable manure will convert two cords of peat or muck into manure as valuable as a fertilizer as the stable manure used alone; or by covering the cattle or hog-yards to the depth of from eight to twelve inches, according to the probable quantity of manure that will be dropped upon it, with fresh peat or muck. This latter has one essential advantage over the former method, as by it the liquid manures, which are mostly lost in the ordinary way of making manures, is in a great measure saved for use. The alkalic salts in these animal manures, completely neutralize the acids which rendered the peat ineffective; they convert the insoluble into soluble geine or humus; and by their combination or absorption in the mass of vegetable matter, are retained for the use and benefit of plants. Peat is an important ingredient in the preparation of poudrette, and is far preferable for that purpose to the common mould which is sometimes used. In the preparation and use of peat as a manure, the farmers of Massachusetts, (and it should be recorded to their honor,) are much ahead of those in any other section of our country. This manure has already been the means of giving fertility to large tracts of land, hitherto worth very little; and has given a value to the peat and muck lands which they did not before possess. Used in connection with leached ashes, it is found that peat, or swamp muck, are invaluable, and the practice of selling off all the ashes made on the farm is there fast becoming obselete, as it should every where else. Every farmer needs more manure. Almost every one can have a supply of peat or swamp muck for his yards or his compost heap. Let them try the experiment of converting this into manure, and we doubt not the result will be most satisfactory.

AN AGRICULTURAL SCHOOL.

BELOW we give from the "Book of the Farm," the plan of an Agricultural School or Farm, which strikes us as very simple in its mode of operation, and calculated to produce the good results which may reasonably expected from such institutions. There are farmers in this state possessed of ample means to carry into effect a school of this kind, contemplated by Mr. Stephens, and it is to be wished they would ask themselves whether they could confer a greater benefit on the country, or more effectually promote their own interests, than by establishing an institution of the kind:

"To afford all the requisite information to the pupil in the highest perfection, and to assist the farmer in affording it to him in the easiest manner, I propose the following plan of tuition for adoption, where circumstances will permit it to be established. The more minutely its details are explained, the better will it be understood by those who may wish to form such establishments.

"Let a farmer of good natural abilities, of firm character, fair education, and pleasant manners, leasing a farm of not less than five hundred acres, and pursuing the mixed system of husbandry, occupy a house of such a size as would afford accommodation to from ten to twenty pupils. The farm should contain different varieties and conditions of soil,—be well fenced,—well watered,—and not at an inconvenient distance from a town.

"With regard to the internal arrangements of the house, double-bedded rooms would form suitable enough sleeping apartments. Besides a dining-room and drawing-room, for daily use, there should be a large room, fitted up with a library, containing books affording *sound* information on all agricultural subjects, in various languages; forming at one time a lecture-room for the delivery of lectures on the elementary principles of those sciences which have a more immediate reference to agriculture, and at another a reading or writing room or parlor for conversations on farming subjects. There should be fixed, at suitable places, a barometer, a sympiesometer, thermometers, one of which should mark the lowest degree of temperature in the night, a rain-guage, an anemometer, and a weathercock. No very useful information, in my opinion, can be derived by the *farmer*, from a bare *register* of the heights and depths of the barometer and thermometer. A more useful register for him would be that of the directions of the wind, accompanied with remarks on the state of the weather, the heat of the air as indicated by the feelings, and the character of the clouds as expressed by the most approved nomenclature. The dates of the commencement and termination of every leading operation on the farm should be noted down, and appropriate remarks on the state of the weather during its performance recorded. A small chemical laboratory would be useful in affording the means of analyzing substances whose component parts were not well known. Microscopes would be useful in observing the structure of plants and insects, for the better understanding of their respective functions.

"The slaughter-house required for the preparation of the meat used by the family should be fitted up to afford facilities for dissecting those animals which have been affected by peculiar disease. Skeletons and preparations for illustrating comparative anatomy could thus be formed with little trouble. A roomy dairy should be fitted up for performing experiments on the productive properties of milk in all its various states. A portion of the farm-offices should be fitted up with apparatus for making experiments on the nutritive properties of different kinds and quantities of food, and the fattening properties of different kinds of animals. A steelyard, for easily ascertaining the live-weight of animals, is a requisite instrument. The bakery, which supplies the household bread, would be a proper place for trying the relative panary properties of different kinds of flour and meal. Besides these, apparatus for conducting experiments on other subjects as they were suggested, could be obtained when required.

"Another person beside the farmer will be required to put all this apparatus into use. He should be a man of science, engaged for the express purpose of showing the relation betwixt science and agriculture. There would be no difficulty of obtaining a man of science, quite competent to explain natural phenomena on scientific principles. For that purpose, he would require to have a familiar acquaintance with the following sciences:—with meteorology and electricity, in order to explain atmospherical phenomena, upon the mutations of which all the operations of farming are so dependent:—with hydrostatics and hydraulics, to explain the action of streams and of damned-up water on embankments, to suggest plans for the recovery of land from rivers and the sea, and to indicate the states of the weather which increase or diminish the statical power of the sap in vegetables: —with botany and vegetable physiology, to show the relations between the natural plants and the soils on which they grow, with a view to establish a closer affinity between the artificial state of the soil and the perfect growth of cultivated plants; to exhibit the structure of the different orders of cultivated plants; and to explain the nature and uses of the healthy, and the injurious effects of the diseased secretions of plants:—with geology, to explain the nature, and describe the structure, of the superficial crust of the earth, in reference to draining the soil; to show the effects of subsoils on the growth of trees; to explain the effects of damp subsoils, on trees, and of the variations of the surface of the ground, on climate: with mechanics, to explain the principles which regulate the action of all machines; and which acquirement previously implies a pretty familiar acquaintance with the mathematics:—with chemistry, to explain the nature of the composition of, and changes in, mineral, vegetable, and animal substances:—with anatomy and animal physiology, to explain the structure and functions of the animal economy, with a view to the prevention of disease, incidental to the usual treatment of animals, and to particular localities. All young men, educated for what are usually termed the learned professions,—theology, law, and medicine,—are made acquainted with these sciences, and a young man from either faculty would be competent to take charge of such an establishment. Of the three I would give preference to the *medical* man, as possessing professionally a more intimate knowledge of chemistry, and animal and vegetable physiology, than the others. But the most learned graduate of either profession, will display his scientific acquirements to little advantage in teaching pupils in agriculture, unless he has the judgment to select those parts of the various sciences, whose principles can most satisfactorily explain the operations of agriculture. Ere he can do this successfully, he would, I apprehend, require to know agriculture practically, by a previous residence of at least two years on a farm. Without such a preparation, he would never become a *useful* teacher of agricultural pupils.

"On the supposition that he is so qualified, his duty is to take the direct charge of the pupils. His chief business should be to give demonstrations and explanations of all the phenomena occurring during operations in the farm field. The more popular demonstrations on botany, animal and vegetable physiology, and geoloy, as also on meteorology, optics, and astronomy, whenever phenomena occur which would call forth the application of the principles of any of those sciences, would be best conducted in the fields. In the library, short lectures on the elementary principles of science could be regularly delivered,—conversations on scientific and practical subjects conducted,—and portions of the most approved authors on agriculture, new and old, read. These latter subjects could be most closely prosecuted when bad weather interrupted field labor. In the laboratory, slaughter-house, farm-stead, and dairy, he could command the attendance of the pupils, when any subject in those departments were to be explained.

"The duty of the farmer himself, the governor or head of the establishment, is to enforce proper discipline among the pupils, both within and without doors. He should teach them practically how to perform every species of work, explain the nature and object of every operation performing, and foretel the purport of every operation about to be performed. For these important purposes he should remain at home as much as is practicable with his avocations abroad.

"The duties of the pupils are easily defined. They should be ready at all times to hear instruction, whether in science or practice, within or without doors. Those pupils who wish to study practice more than science, should not be constrained to act against their inclinations, as science possesses little allurement to some minds; and it should be borne in mind by the tutors, that practical farming is what the pupils have chiefly come to learn, and that practice may prove successful in after life without the assistance of science, whereas science can never be applied without practice.

"The duty common to all, is the mutual conducting of experiments, both in the fields and garden; for which purpose, both should be of ample dimensions. All new varieties of plants might be first tried in the garden, until their quantity warranted the more profuse and less exact, though more satisfactory, culture of the field. On ridges in the fallow field, with different kinds and quantities of manure, and different modes of working the soil and sowing the seeds, experiments should be continually making with new and old kinds of grains, roots, tubers, bulbs, and herbaceous plants. In the course of time, the sorts best suited to the locality will show themselves, and should be retained, and the worthless abandoned. In like manner, experiments should be made in the crossing of animals, whether with the view of maintaining the purity of blood of one, the improvement of the blood of another, or the institution of an entirely new blood. In either class of experiments, many new and interesting facts, regarding the constitutional differences of animals, could not fail to be elicited."

SALE OF STOCK AT THE STATE FAIR.

From what we hear from various quarters, we think there can be little doubt but that those who wish to purchase fine stock, will have a better opportunity to select such as they may want at the New-York State Fair, than has ever before been presented them in this country. They will then be able to compare the herds and flocks of different gentlemen, which will save them much trouble, and enable them to make their purchases much more satisfactorily than when under the necessity of selecting from a single yard. In addition to the extensive collection of pure bred animals from our own state, many of which will be brought for sale as well as for exhibition, we expect to see more or less from the adjoining states, as we are already apprised of the intention of several gentlemen from abroad, to send specimens of their fine animals to our Fair, in the expectation, in part, of finding an opportunity to dispose of them.

We publish with pleasure, the annexed letter from Mr. Clift, on the advantages which the State Fair offers both to buyers and sellers:

Messrs. Gaylord & Tucker—I was gratified to learn from the last No. of your paper, that you have some assurances that the coming State Fair, which is to be held at Albany, in September next, will be well attended. You say "that you are inclined to think, notwithstanding the state of the times, this Fair will far exceed, in the number and quality of the stock, implements, &c. exhibited, as well as in the attendance of the public, any thing of the kind ever got up in this country." The very convenient location selected for the Fair, the efficiency of the men composing the Executive Committee of the State Society, and the spirit that is prevailing in respect to it, and I may add the good beginning that was made last year at Syracuse, I should think would warrant all you have said.

It has occurred to me that it will not be thought improper, but highly important, in order more fully to produce and realise such grand results, that every man who designs to exhibit good blood stock at the Fair, either for sale, or to enter for competition, would timely give such notice through the columns of the Cultivator, or that in some way it should be made public, that all persons whether residents in the state or out of it, and who are desirous of obtaining blood stock, may have some more positive assurance that if they will attend at the Fair, there shall not be wanting an opportunity for them to make purchases.

Our annual State Fairs cannot be made what they ought to be, until it becomes perfectly a matter of reciprocal interest for the breeder and purchaser to attend them, the one to exhibit and sell his stock, the other to make his purchases. There must always be one advantage to the purchaser at such Fairs, as there he has the opportunity to compare and test the quality of animals of the various breeds, side by side, and can select according to his own judgment or fancy, much better than he could do, by viewing only a single herd or flock, and then he is of course at his own option, to purchase or not; whereas the breeder, perhaps, after all his toil, trouble, and expense, in attending the exhibition, &c. will have to sell at a sacrifice or not at all. He will however have an opportunity to learn one thing, and the sooner he learns this the better for him as a breeder, viz: if he is breeding a bad kind of stock, he will here, most likely, find it out by the same comparison.

With these views, Messrs. Editors, you will permit me to say to the readers of the Cultivator, and especially to those of them, with whom I have not had the honor of a personal acquaintance, but with whom I have had the pleasure of a correspondence in relation to my sheep, during the last four or five years, that if life and health be continued to me and mine, I intend to be at the N. York State Fair, with quite a number of my most choice selected Lincolnshire sheep, bucks and ewes, their ages from one to two years old, with perhaps a few lambs, from a late cross; I shall take them to the Fair for sale and show, and hereby invite honorable competition and inspection, with all others that may be exhibited at that time and place. Leonard D. Clift.

FEEDING CATTLE.

We find in the Philadelphia papers, an article on stall feeding cattle, from the pen of Dr. Mease, Vice President of the Philadelphia Ag. Society, which contains some valuable hints for those engaged in the business of feeding cattle, and the substance of which we propose to lay before our readers.

Dr. Mease says that animals on which it is intended to lay an extra proportion of fat should be in good condition whent put up—otherwise they will not pay for the cost, feed and care. Each beast should have a handful of fine salt three times a week. The hay fed, should be of the first cutting (if clover,) and well cured. It should be cut before the leaves and blossoms are turned black, should be turned and exposed in curing as little as possible, and housed without being wet when it can be done.

Dr. Mease dislikes mixing timothy with clover when the growth is for hay, as they do not come to maturity at the same time, and the clover if left to stand for the timothy to mature, will be nearly ruined. Orchard grass mixed with clover, is not liable to the same objections; as they progress equally to maturity, and if cut when in full blossom, and not left too long in the field, make a hay which cannot be exceeded. From considerable experience with both timothy and orchard grass in connexion with clover, we are inclined to think Dr. Mease is right in this particular.

In feeding hay to the cattle, it should be given three times a day, and no more allowed than they will eat before the next feeding, as all animals dislike the food that has been breathed upon, or impregnated with the stable effluvia. All that is left at the times of feeding must be taken away, not mixed with the fresh allowance. Animals while fattening require water twice a day, and if they are obliged to walk some little distance for it, it will be no injury to them.

From 10 to 16 quarts of Indian corn and oats ground together, is to be fed to each animal three times daily during ten days; then half a peck of boiled mashed potatoes, with a handful of corn meal strewed over them. The water in which the potatoes have been boiled, must be thrown away, as I know it to be hurtful to animals. In a week a change may be made of chopped pumpkins, or sliced Swedish turneps, or sugar beet, for the potatoes. Changes of food improve the appetite, and prevent cloying, but corn meal, with or without oats, must be the never failing accompaniment of any other food. The ground corn meal or oats, is to be fed after the hay is eaten, at the several times of feeding. Great care must be taken not to over feed, and the appetite must be carefully watched. The farmer should take the alarm the hour that he sees the animal leave any of his usual allowance in the trough or rack, clean out both, and by a daily walk, extra carding, and if necessary a dose of Glauber salts, try to restore the appetite. The food, other than hay, should be given in a box, and in the trough, alternately, that they may be daily washed or dry-scrubbed and scraped, to prevent any food from remaining and becoming sour, which will infallibly disgust the animal. Cleanliness here is a point of the first importance, but it is one too often overlooked by the feeder. Flax seed jelly with corn meal, fed occasionally, will soften and loosen the skin, and produce that "kindly feel" so essential in all fattening cattle.

Carding the animal thrice daily with proper cards, is an all-essential part in the process of feeding. Its effect is excellent on the animal, and is always highly grateful, as well as salutary. Medical men are well acquainted with the intimate connexion subsisting between the state of the human corporeal surface, and the stomach, and viscera connected with digestion, and the same connexion is observed in the ox when feeding. Regularity in the hours of feeding and watering, is an essential thing in feeding any animal.

Clean, sweet, cut straw, sprinkled with corn meal and salt, may be given for change, and will be eaten freely. The stalls must be properly ventilated, as fresh pure air is necessary to the health of any animal. Attention must be paid to their feet, and if the cleft is obstructed or sore, a dossil of tow dipped in spirits of turpentine morning and evening, for three or four days, will be a good application. The stalls must be kept clean, and straw in abundance, for bedding, provided. They should never be allowed to stand or travel in wet manure, as their feet will in most cases be injuriously affected, and a consequent loss of appetite ensue.

NECESSITY OF ECONOMY.

There have been few years in which the necessity of economy in the farmer, and general prudence in the management of his affairs, has been more apparent, than the present. The low price of produce, and small decline in the price of labor; the difficulty with which remunerating sales are made of animals and farm crops, and the general firmnnss of price in the articles he is compelled to purchase; all indicate the propriety of paying particular attention to his income and his expenditures. This is particularly the case with him who is in debt; or who having little in advance, is dependent on the annual proceeds of his farm, and his labor, for support. There are a few classes that the pressure of the times, the price of produce, or the scarcity of cash, scarcely reaches. They are those who subsist on the fees of office, or the interest of their money. Such do not stand in need of lessons of economy.

But it is well for all to remember, that there is a wide difference between economy and parsimony; between prudence and coveteousness. If reform in expenditure is proper, the farmer should see that it falls on those things which are least essential to his present or future prosperity. It would be the height of folly to commence a system of curtailment by dispensing with any of the necessary implements of the farm; the want of these, would certainly produce the evil he designs to avoid. Equally erroneous would he be were his retrenchment to fall on any of those things necessary to enlarge and inform the mind; and thus promote the intelligence, respectability, and consequent happiness of himself and family. Far better would it be to dispense with a new coat, than with the means of instruction; to forego the dainties or luxuries of the table, than to starve the mind. The importance of this point cannot be too strongly urged on the mind of the farmer; or the truth too forcibly or frequently impressed, that economy, or we should rather say parsimony, here, is a serious crime, and the means of inflicting irreparable injury. So too, if the farmer concludes to have little to do with his mechanics, when he requires the product of their skill, and is able to reward their labor, he is indirectly injuring himself, and positively injuring them. He is compelling them to forsake their work benches, or their anvils, and commence farmers, a result which would have a tendency directly, by increasing the quantity of produce thrown into the market, to reduce the price of his own, and thus injure himself. Besides, the mechanic cannot be dispensed with by the farmer, and the soundest dictates of economy would demand that he should receive the encouragement and support, his merits and his wants require; or his services, when most wanted, may not be within reach, or available. It is not in these and similar things, that economy should be begun; but let the farmer, when he is tempted to purchase any thing, ask whether it is necessary to possess it; and if he will further make it a rule to invariably pay down for what he purchases, he will be astonished at the aid it will give him in becoming properly economical. Thousands of farmers have been ruined by having such excellent credits. A man's credit is in some respects like his stomach; neither can be overloaded or overtasked with safety; and the surest sign they are in a healthy condition, is when their functions are performed without his cognizance or attention.

WORMS.

If we may credit the accounts which are reaching us from all parts of the country, the present year will be as noted for the ravages of worms, as for snow storms in June. By the way, we find some of our eastern and southern friends are inclined to doubt the truth of the statements that great numbers of sheep perished in some of our middle and western counties during the storm of rain and snow of June 11. There is no room for doubt. A sheep stripped of its fleece, and within a few hours exposed, and this was the case with thousands, to a temperature of 30°, could scarcely escape with life. We have known many die after shearing, from exposure to a storm, much less cold and severe than that of June. But to return from this digression. It seems that the damage inflicted this season on the farmer, and fruit grower, by worms has not been confined to one kind as is frequently the case, but that all varieties or species of these depredators have multiplied and thriven, and that in spite of rain or snow, apace.

In the south and west the army worm has done immense damage. Cotton and corn fields have been ravaged; and wherever the millions of this foe have shown themselves, from Wisconsin to Louisiana, the crop and the hopes of the farmer have disappeared almost in a twinkling. In the east the canker worm has committed its usual depredations on fruit and forest trees, and given ample opportunity for testing the preventive qualities of the lead or tin troughs so justly recommended. Every where the catterpillar has appeared in thousands, and the disfigured and defoliated orchards that are seen wherever we go, prove the prevalence of the pest, and we add the negligence of the farmer. There can be no good reason given why these ravages of the catterpillar should be permitted. If taken at the proper season, while the worms are in their nests, a little time and care will exterminate the whole race; but if left till they are scattered over the tree, or if their nests are destroyed while the occupants are abroad feeding, the efforts at destruction will avail little. It will take years for some orchards to recover from the damage they have this year received, even should they not perish; and as for fruit, the owners will in vain look for it on these trees so closely stripped of their flowers and foliage. While some of these tribes of depredators have been carrying on their operations above ground; another, and scarcely less numerous class, have been as active beneath the surface. From all quarters we hear complaints of the damages caused by the wire-worm and the cut-worm, and perhaps the farming public have suffered more from these, than from all the others combined. The first has been most destructive to all kinds of spring grain, and has spared few, if any, of the young shoots of the germinating plants. Whole fields of corn have perished, and there are few that have not more or less suffered. Potatoes were much damaged by them last year in some places; the wire-worm penetrating them by boring, and rendering the surface rough, and subject to decay. In the gardens and corn fields, the cut-worm has done much damage. Cabbages, beans, melons and cucumbers have been cut down, and in some places, or where constant attention has not been paid to killing them, the gardens may be said to have been destroyed. It is somewhat singular that the extreme cold of the winter, the backwardness of the spring, or the extraordinary low temperature of the forepart of June, seemed alike ineffectual in preventing the development of these catterpillers and worms, or retarding their progress. The origin, the transformations and the habits of the most of these insect destructives, have been very satisfactorily determined; yet the laws which govern their appearance, causing them in one year to appear in countless myriads, and in another to be almost unknown, have not yet been revealed. Their ravages, however, clearly demonstrate that there is no creature so insignificant in itself, as not to be able when sufficiently multiplied, to become one of the most formidable scourges that visit mankind.

Encouragement for Farmers.—General Dearborn, in a late lecture before the farmers in the Massachusetts Legislature, declared that 97 out of every 100, who obtained their livelihood by *selling*, *failed*, or died insolvent. These facts were collected from custom house books, banks, probate offices, &c. &c.

DICTIONARY OF TERMS USED IN Agriculture and its kindred Sciences.

HUMUS.—Plants are supposed in some form to derive their nourishment from a peculiar substance in the soil, called *humus*, and which is the result of the decomposition of other and previous plants. "Humus is described by chemists, as a brown substance, easily soluble in alkalies, but only slightly soluble in water, and produced during the decomposition of vegetable matters by the action of acids or alkalies." "Woody fibre in a state of decay, is the substance called *humus*."—(Liebig.) There are various modifications of *humus* known to chemists; those which are soluble in alkalies are called *humic acid*, while the insoluble modifications are called *humin*. Dr. Dana applies the name of *geine* to this substance, and divides it into soluble and insoluble geine, and considers that in the three states of vegetable extract, geine, and carbonaceous mold, it is the principle which gives fertility to soils long after the action of ordinary manures has ceased. He pronounces it to be the "decomposed organic matter of the soil." That *humus* owes its origin to decayed vegetation, can scarcely be questioned: but the manner in which it produces the fertilizing effects on the soil, or rather in what manner it is made subservient to the growth of plants, is a question which is exciting no little interest, and is certainly one of importance to the farmer, as well as the vegetable physiologist. The more common opinion has been, that *humus* was no further available than it was soluble, and that in this state it was taken up by the roots of plants and converted by their vital action into the substance of the plant. Others, and among these are the celebrated chemists Liebig and Raspail, maintain "that *humus*, in the state in which it exists in the soil, does not yield the smallest nourishment to plants." That plants *may* receive some nourishment from *humus* in the shape of humates, or humus combined with an alkali, such as humate of lime, would seem probable, as such humates become soluble in water: but the ingenious experiments of Liebig prove that but a small part, if any, of the nourishment of plants is actually derived from that source. Humus, then, must be available in some other way than by actual absorption by the roots, and this way, Liebig contends, is by its gradual conversion into carbonic acid gas. Several furious attacks have been made on the German chemist for his assertion that humus, as it exists in the soil, is of no avail to plants, but if humus is only the decayed matter of plants, it is clear that, no matter how fine its particles may be, it must undergo some change before it can be taken up by the plant, or converted to nourishment in any way. The modern doctrine is, that plants derive most of their nourishment, or in other words, the carbon which constitutes the most of their structure, from the carbonic gas of the air; and that *humus* is only or chiefly useful in furnishing a constant supply of this gas for the use of the plant. It seems to us, however, that as carbonic gas is readily soluble in water, or combines with it in large quantities, that in this form it is presented to the roots of plants, and appropriated by them to their growth or nourishment, as well as from the air by the leaves. This opinion is sustained by the remark of Liebig, that every root and leaf acquired by the plant, gives it a new mouth and stomach. Common manures, such as are derived from vegetables principally, are of little use until decomposition has been effected, and the formation of carbonic gas has commenced. Those manures in which the nutritive and stimulating properties are combined, or those in which ammonia exists with the carbon, are found to be the most efficient, and the earliest in their action on plants. The prepared manures belong to this class.

HURDLES.—In the cultivation of silk, various methods have been adopted for the feeding of the worms, so that the dangers arising from crowding, or from the filth of their excrements and fragments of leaves in feeding may be avoided. In consequence of a neglect of these things, disease is engendered, and the whole of the worms are not unfrequently destroyed. To prevent this, it has been proposed to feed them on a kind of network called hurdles, through the interstices of which all offensive matter falls, and by turning which, the rejected leaves are easily removed without disturbing the worms. Several American silk growers have directed their attention to this point, particularly Mr. Morris of Burlington, N. J., Dr. Goodsell of Utica, Mr. Fox of Mt. Pleasant, Ohio, and perhaps others, and very great improvements have been made, combining neatness and ease in feeding, and contributing much to the health and productiveness of the worm.

HYBERNATION.—That state of inaction and rest which some animals and many plants undergo during the cold season of the year is called hybernation, and exhibits some remarkable phenomena well deserving the attention of the naturalist. On the approach of winter, the badger, marmot, ground squirrel, frog, toad, snakes, &c. betake themselves to their retreats in the earth, where in a torpid, motionless state, with but just circulation enough to preserve vitality, they remain until the returning summer rouses their dormant faculties to action once more. Those instances in which animals and insects have been found in positions where they must have remained for centuries, as toads, frogs, bees, &c. in solid rocks, are examples of continued hybernation, produced by being placed in a position where the temperament and the confined state adopted at the commencement of the hybernation, is continued by causes afterwards superinduced. Thus, the bats enclosed in the old mine at Cheshire, Connecticut, by a slide from the mountain, while in a state of hybernation, remained in that state for more than a quarter of a century, and were so found at the reopening of the mine. Thus, toads, hybernating in swamps, if covered while in that state to a depth which would prevent the usual effects arising from the changes of the seasons, would remain in that position, and the subsequent conversion of the covering matter into stone, would enclose them forever in the rocky mass. It is to this indurating process that we must ascribe the wonderful preservation and continued vitality of those reptiles which are found in the sandstones of the transition series. The condition of plants too during our winters, in which the sap ceases to circulate, or circulates but to a limited extent, and in a languid manner, is a species of hybernation. It is a rest of the plant, a cessation of its functions, growth ceases, and what may be called a sleep of the plant ensues. Other causes may produce this rest of plants. Numerous instances occurred the last fall, (1841,) in which a second blossoming has taken place, and the flowers of the first of October have vied with those of May or June. This reviving of the plant has been noticed in the apple, plum and pear. It is unquestionably to be attributed to the check which the extreme hot and dry weather gave to the trees, and which produced on them an effect similar to that of the hybernation of tropical plants. The functions of the plant were for a time partially suspended: heat had performed the effect of cold; the secretions of the plant which prepare it for blossoming and re-production had been performed, and when rains succeeded the drouth, their blossoming in October as well as in May, was the natural result.

HYBRIDS.—When copulation takes place between different species of animals, the progeny, which in some cases is the result, is termed a *hybrid*, as partaking of the qualities of both, yet distinct from either. Thus a connexion between the ass and the mare produces the mule; and between the horse and the female ass, the hinny, the two most common hybrids among animals. Hybrids among animals do not have the power of re-production; a proof that muling is a violation of nature's law, by which the races as distinct species is governed. There is at present in the Highlands of Scotland a hybrid between the stag and the mare, the first ever known. Hybrid plants are quite common, and there is no so certain way of producing new varieties, as by muling or cross breeding; and in the language of Professor Lindley, "it is to this process more than to any thing else, that we owe the beauty and excellence of most of our vegetable garden productions." The operation of producing hybrids, or of muling plants, is very simple, consisting in nothing more than the applying the pollen of one plant to the stigma of another. Some precautions are, however, requisite in this, such as depriving the flower intended to be fertilized of its own anthers, otherwise the stigma will be self-impregnated, and the pollen must be applied at the proper season, when the peculiar mucus which detains the pollen is present on the stigma. The power of muling is among plants however confined within narrow limits. Mr. Knight, who was probably more successful in the process of muling than any other man, and to whom we are indebted for some of the finest of our modern fruits, was never able to make a cross between the Morello and the common cherry. Professor Lindley says he has "in vain endeavored to mule the gooseberry and the currant," and the apple and the pear, the blackberry and raspberry, have never mixed though such a result might reasonably have been expected.

HYDATIDS.—These are animals, generally pear shaped, found in various animals, where they are parasitic, and resembling a vesicle or bladder filled with water. It was for a long time doubted whether they had an independent existence, but as they have evidently a voluntary motion, and as they have the property of acting on matter in such a way as to convert it into a substance like that which constitutes the agent, (which according to Roget, demonstrates a vital power,) there is no reason to suppose it has not a distinct animal existence. Hydatids occur sometimes in man, but more frequently in animals. In hogs it causes the measles; in sheep, in the brain they cause the staggers, and in the liver the rot; and some of them are lodged in the tissue of the muscles, while another, the *Hydatis globosa*, is frequently observed on the intestines of pigs. Sheep are best cured of these parasites by a removal from all wet, low land, to dry pasturage. They have in some desperate cases, where the affection of the brain was indisputable, been cured by trepanning and the extraction of the hydatids.

IN-AND-IN BREEDING.—This is a term applied by the breeders of animals to that kind of propagation where both are of the same blood, and the nearest relations possible. Although some of the most decided improvements have been made by following this system of breeding in-and-in, yet it has only been done by the most judicious selections, and the exercise of cautious judgment, while in the hands of the ordinary breeder it is sure to run out a stock, degenerating them rapidly, rendering the males impotent in many cases, and the females of little value as nurses or breeders. Experience seems to have proved that crosses of the same variety of animals, but of another family, have made the best animals, and such a course is to be preferred to breeding in-and-in. In some cases, where there is a marked superiority in any race of animals, which it is wished to retain, a cross with a race less perfect in some respects, perhaps, but more vigorous, making what Berry calls a strong cross, and then breeding directly back to the favorite blood, has been very successful. The first attempts to improve the short horns, Berkshires, &c. received serious checks from this system of in-and-in breeding, and both Berry and Collings found it necessary to give more vigor and constitution to their animals, by an infusion of different, and in some respects inferior blood.

INDIAN CORN, (*Zea Maize.*)—One of the most valuable of the plants cultivated for the use of man, or animals; a native of America, but now spread over a large part of the habitable globe, and where cultivated, constituting an article of bread in perhaps more general use than any other. Corn requires a warm climate, a rich soil, and good cultivation; under these circumstances the product per acre will rise high, many instances being reported of crops from 100 to 150 bushels. In England and Scotland the average temperature of the summer is too low for corn, and few attempts are made to cultivate it; while in the United States it is extensively grown in all parts; and in parts of the middle, and over the entire south, it constitutes the chief or only source of bread. There are many varieties of Indian corn. In the excellent treatise on this plant, Dr. P. A. Browne, of Pennsylvania, 11 kinds of yellow corn are enumerated; 9 kinds white corn; 10 of red corn, or red cobs; 2 of blue corn; and 4 of varieties not properly classed with either of these; making some 35 in the whole. Since this treatise was written several new varieties have been noticed, among which is the singular corn called rice corn. Some of the varieties of the white corn differ from each other but by slight shades, and the same remark may be made of the yellow. We have the present year cultivated some 26 varieties, most of them very distinctly marked, but some of them with variations very slight, and which we can hardly consider permanent. This is particularly the case with two or three of the small eight rowed whites. Corn differs in the shape of the grain, in the color, in the color of the cob, and in the number of rows on the ear. Northern yellow corn is considered as the most nutritive, is preferred in distilleries, and can be preserved longer in a perfect condition than any other; but the southern white is generally preferred for bread, or rather for the hot cakes, in which form it is most commonly served up in the south. In cultivation that corn is to be preferred which gives the greatest weight of stalks, cobs, and corn per acre, where the climate is such as to ensure its ripening; but where it is necessary that early maturing kinds should be chosen, that variety which has a large kernel and small cob is to be preferred, as the cob is the last part of the ear that reaches maturity, or that state of dryness in which it is safe from mould. At the north the Canada white flint, Toronto yellow, Oswego long white corn, twelve rowed yellow, Dutton and Brown corns are much cultivated; while in the south the white and yellow gourd seeds, Dent corn, &c. are most esteemed, and where the soil is of proper richness grow to a great size. No part of the world seems so well adapted to the culture of corn as the Mississippi Valley, and the quantity already produced, is almost incredible. It is cultivated with so much ease, the labor required is trifling, and the product per acre so great, that it will in some way, constitute the great staple of the west.

IRRIGATION.—The importance of water to vegetation is known to every farmer, yet very few are the instances in which this natural want is supplied by artificial means. In most cases by a wise dispensation of providence, showers supply the requisite moisture, and of all water that can be applied to plants, rain water is found the most suitable; but there are some soils and some crops which require more water than others, and which are greatly benefitted by artificial supplies. Thus the drifting sands of Arabia, are arrested and covered with vegetation by water; the rice fields of India and the south are flooded to secure a crop, and irrigation, or an occasional flowing of water from brooks, rivers, or springs, over meadows is found to add much to their productiveness. All water contains more or less matter essential to plants. The soluble salts, the finely divided organic matters, and the richest parts of all soils are continually passing away in the streams by which our fields are watered, and it is this cause which forms one of the drawbacks on their fertility. To arrest and detain these matters from wholly passing away, and being lost to the soil, is another important end of irrigation. The more foreign matter any water contains, the more valuable it will be for irrigation; thus river water is better than that of springs, and rivers below large towns, are found to act far more effectively than above. Of this there is abundant evidence in the use of the Thames water below and above London, and particularly the celebrated Craigintinny meadows below Edinburgh. Water generally contains sulphate of lime, at least all hard waters do, and a single flowing of a meadow with such water for a few days, besides the other materials it deposites will leave more of this sulphate or plaster, than is usually applied per acre by farmers. Some of the best meadows and lands of England, have been formed by flowing them and increasing the deposit until poor lands have become like the richest alluvion. In this country, few instances of irrigation have as yet been attempted, but where it has been done by system, and with reference to permanent results, they have proved most successful; and the practice, as the soils become older and other methods besides manuring become proper to promote fertility, will doubtless be common.

To accomplish much, a man must live as if he were immortal.

Original Papers from Contributors.

CURING AND PREPARING PROVISIONS FOR THE ENGLISH MARKET.

THE revision of the tariff upon provisions, by the English government, will have a much more important bearing upon the agricultural interest of this country, than any, and indeed all the changes that could be safely made in their corn laws. At present prices even, without any change in the duty, both beef and pork could be sent to the English market at a profit, if it had been cured in the same manner, and put up in the same kind of packages, which has been so long the custom in that country. It is useless to expect a whole nation to change their customs to suit our views; and if we would avail ourselves of their markets, we must conform to their customs and prejudices; if the fixed and unchanging habits of a whole nation must be called so.

Foreseeing that at no distant day the provision business must become the great business of the country, while in Europe last winter I endeavored to make myself perfectly familiar with every thing connected with the provision trade. I visited the great curing and packing establishments in Ireland, and made myself master of the whole subject of curing and packing provisions. I then visited the great markets of Europe, Liverpool and London, and under the instruction of some of the oldest and most respectable provision merchants of those cities, endeavored to make myself thoroughly acquainted with every thing relative to the wants and peculiar shades of the different markets. While abroad, I gave you the result of my observations relative to butter and cheese. I now give you, in as condensed a form as possible, the best method of curing and preparing for the English market, Beef and Pork, and hope it will not be without interest and profit to your numerous readers, especially in the west and southwest.

PORK.—There are various kinds or divisions of Pork—depending upon the size and quality of the hog, and the market for which it is intended. There is Bacon singed and scalded, which is divided into whole side Bacon or Middles. Barreled Pork is divided into Prime, and Bacon Mess, and is put up into barrels and tierces.

In some parts of England they will not purchase or use scalded bacon, in others they make no difference. In this country the market requires but one kind; and there is but one kind that can be shipped to any profit, and that is known as tierce middles.

Whole side bacon is prepared by cutting out the chine or back bone, cutting the head off close at the ears as possible, and the legs at the knee joint. The ribs are broken by passing a fine saw across them two or three times, the shoulder blade taken out, and the whole side trimmed and made to look smooth and sightly. If it is from a heavy hog, the knife is run into the ham so as to enable the salt to penetrate readily to the knuckle joint, and sometimes about the fore shoulder. From the cutting block, it is passed to the rubbing table. Here all the holes are filled with salt, and salt is spread freely over it, and rubbed in by men with a kind of iron glove upon their hands. After the salt has been well rubbed in, the sides are piled up on the floor in layers of from six to ten deep, flesh side up, salt being freely put between each side. During the process of curing, the sides are repacked several times, depending upon the weather, sometimes as often as every other day. In about ten days the meat is sufficiently cured for market. The salt is brushed off clean with a twig broom, the side again carefully trimmed, scraped and smoothed down by beating it with a flat board, and then passed to the baling or packing room. Five sides are put together, with a thin layer of salt between each, and then sewed up in a coarse kind of bagging manufactured for the purpose. In this condition it is shipped to the London market, and with a little care will keep in good order for months. Hams and shoulders are cured in the same manner, except some use saltpetre with the salt when first rubbed in. Many prefer their bacon and hams dried rather than smoked, but when smoked great care is taken to keep the meat of as white a color as possible. To do this well, the meat should be quite dry when hung up in the smoke. Competition is very keen among the Irish and Continental provision curers, and great skill is used to make the best article. Hence the utmost pains are taken in curing and putting up their bacon, hams, and dried beef, and many of the most intelligent men of the country are among the provision merchants of Ireland and Hamburgh. Tierce Middles are the middle or broadside of the hog, between the ham and shoulder. It is cured in the same manner as the whole side, but in preparing for the English market, I should recommend to put it up clear of all bone, and should therefore take out not only the chime, but all the ribs. It is put up in tierces holding about 300 lbs., and treated the same as salted pork.

A profitable trade might be carried on between Western New-York and the New England states, during the fall and winter, in *baled bacon*, if freight could be carried over the Utica and Schenectady railroad at reasonable rates, and Boston would become our best market for most if not all kinds of provisions, as we should not be compelled to keep our pork or beef on hand until the opening of navigation in the spring.

Pork is cut into 4 or 6 lb. pieces, according to the size of the hog. Where the carcase weighs 250 and under, it is cut into 4 lb. pieces; large hogs are cut into 6 lb. pieces. The hog is first split through the back bone in half. Then passed to the trimming block where the half head and legs are cut off, the leaf and tender loin taken out, and the whole side split lengthwise through both the shoulder and ham, and as near the center as is consistent with the proper shape and size of the different pieces. From the trimming block the strips pass to the scales, where the weight is ascertained, and called to the man at the cutting block, who divides each strip into the requisite sized pieces. Both the splitting and piercing require skill and judgment, as much depends upon having the pieces well and sizeably cut. From thence it goes to the rubbing table where each piece is thoroughly rubbed in salt in the same manner as in curing bacon. After the salt has been well rubbed in, it is put into pickling tubs holding from three to five hundred pounds, well covered with salt, but no water or brine added. Here they remain from 8 to 10 days. It is then taken to the washing trough or vat, where each piece is thoroughly washed in clean brine, trimmed, and *tormented*, as the process of trying is called. The *tormentor* is an instrument of wood or metal, the size of a small dish, and is thrust into the lean parts of each piece, to ascertain that it is properly cured and free from taint. It is then messed and weighed, so that the requisite number of pieces shall weigh exactly the number of pounds for the barrel or tierce. It is then put up in the proper package, and freely salted while packing, and saltpetre added at the rate of a common wine glass full to the 100 lbs. The last layer is pounded in by a heavy iron weight, and capped with coarse salt. It is then passed to the cooper, who puts in the head, and puts on to the barrel one, and on to the tierce at least three iron hoops at each end. The package is then filled with clean strong brine, bunged tight, branded, and is then ready for market.

The great utility of this method of curing consists in the certainty of the meat keeping in good condition for years in any climate. The blood gets all drained out of the meat before it is barreled, and hence one great cause of injury is avoided. I saw pork and beef which had been two years in the barrel, which was as sweet as when first put up, and the brine was perfectly clear. A friend in London, unpacked several packages of Irish and Hamburgh cured provisions, by the side of American. The contrast was anything but flattering to our taste or skill. I could very readily see why our beef and pork bore so bad a name in the market, and was so much of a drug. The meat was not inferior, but it was badly messed, worse cut and cured, and the brine nearly as red as blood, and presenting by the side of the other, not a very *palatable* appearance. The large hogs or heavy pork, which is uniformly cut into 6 lb. pieces, is packed in tierces, and is called India or navy pork. The 4 lb. pieces are put in barrels.

A barrel of *Prime Pork* should contain from 25 to 30 pieces, cut from the ribs, loins, chines, and belly pieces, all lying between the ham and shoulder, forming what is called the broad side or middle. 3 hands and 2 hind leg pieces, or 3 hind leg pieces and 2 hands, and 15 or 20 pieces from other parts of the hog, except no part of the head. The meat must be of prime quality, firm, and well fattened, cut into 4 lb. pieces, exactly 50 to the barrel, and weigh not less than 200 lbs. net, and must have a good capping of St. Ubes, or other coarse salt. This is indispensible. *Bacon Mess Pork*, is so called, when the full proportion of prime pieces in *Prime Mess* is withheld; there is therefore various classes of Bacon Pork. Tierces contain the same number, that is, 50 pieces of 6 lbs., and the same rules as to messing, are to be observed, as in the barrel. The tierce must have not less than 300 lbs., and well capped with salt. It is usual to put in 52 pieces. In Bacon Mess, the number of prime mess pieces should be marked upon the head. No part of the hog's head is allowed in any instance.

Beef is uniformly cut into 8 lb. pieces, and cured in all particulars, precisely as pork, except a larger proportion of saltpetre is used in packing. Beef is almost entirely packed in tierces. For export, tierces only should be used.

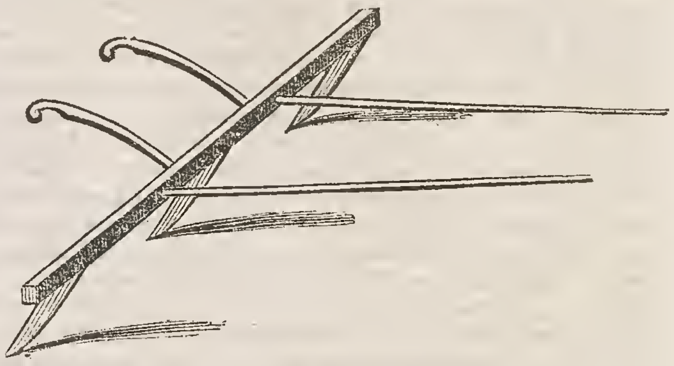
A tierce of Prime India Beef, should contain 42 pieces, 8 lbs. each, and weigh not less than 336 lbs. net. It should be made from well fed bullocks, and contain 32 pieces of loins, flanks, rumps, plates, buttocks and briskets; 10 pieces, consisting of 4 chines, 2 mouse buttocks, 2 shells of rumps, 2 pieces cut close up to the neck, with bone taken out; no shins, thigh bones, or necks. To be well salted, and capped with St. Ubes or other coarse salt.

A tierce of Prime Mess Beef, should contain 38 pieces of 8 lbs., and weigh not less than 304 lbs. net. It should be made from prime fat cows and heifers, 28 pieces of prime, from loins and chines, with one rib in each, flanks, rumps, plates, briskets and buttocks, with 10 coarse pieces, consisting of 2 neck pieces, not the scrag, 2 thighs or buttock bones, with some meat to them, 2 shells of rumps, 2 or even 4 chines, not cut too close to the neck, and 2 shoulder pieces with part of blade bone in them, well salted and capped with St. Ubes or other coarse salt. The tierces, whether for beef or pork, must be made of well seasoned oak, with 8 wooden, and 3 iron hoops on each end.

No pains to be spared in preparing and putting up, as the neat and tasty appearance of the packages will insure a more ready sale, than if put up in a slovenly manner.

There is much that one cannot well make intelligible upon paper, and can only be learned by personal observation. I have endeavored to communicate enough to enable any experienced butcher or packer to prepare provisions for a foreign market, if desirous so to do; and the method described is the one in general use in Europe, and if adopted in this country, will enable us to enter the English market in successful competition with the Continent. I trust the season will not pass without finding several establishments preparing and curing provisions according to the Irish method. I had intended to have given their method of preparing Lard, but this article has gone to such a length already, that I must defer it until another number.

Darien, Genesee Co. N. Y. T. C. PETERS.



STRAIGHT ROWS, AND CORN GROUND GUAGE MARKER.—(Fig. 72.)

MESSRS. GAYLORD & TUCKER—How few there are among the agriculturists in this extensive country, who, when preparing their ground in the spring, for the reception of the seed, (and I say it with regret,) *mark it out in perfectly straight rows.* But the reason?

First, say they, "it is of little or no consequence to have the rows entirely straight, for more corn will grow in a *crooked* row, than in a *straight* one; and it will grow just as well, and just as large."

And secondly, "if we are going to be so *particular*, and undertake to have every row exactly straight, we *never* shall finish planting; and so we must go ahead, and finish it at some rate or other."

Now, I am one of those sort of chaps, who will *baulk, square from the mark*, at such half-way, any-how business. My motto is, *be sure I am right*, and then *go straight ahead, or not at all.*

But the idea, that too many cherish, that more corn will grow in a crooked row, than in a straight one, is altogether wrong; and it will require no profound logic to refute it; for when rows run both ways, there are just as many hills in a row, if it crooks half way across the field.

And, furthermore, when the rows are entirely straight, and exactly parallel with each other, the horse and cultivator will pass between them, with little or no danger of treading down or tearing up any corn; whereas, if they stand like the honest Indian's trees, so that *two* only will range, it might be a matter of expediency to have leather goggles on the fore end of the cultivator, in order to avoid running over those hills that might be in the way.

In my travels, I have observed, with the eye of a connoisseur, the many fields of grain, and the rows; and the number which were marked out entirely straight; but a vast majority of them, look *for straightness*, says Orson Cardin, "as if the grain sprang up spontaneously from the seed, which was scattered there by the wind, or as if some harum scarum had planted in the mark made by a crooked rail, which had been hauled across by a zigzag streak of the electric fluid."

Straight rows are the *beauty* of the corn field, as straight fences exhibit the *order* and *neatness* of the farm; and, in my humble opinion, are in a measure characteristic of the intelligent and systematic farmer.

Who can look on a field of corn, just after the tender spires have emerged from the fertile soil, and view the beautiful green leaves expanding wider, and shooting higher, to catch the refreshing dew, which on them glitters in the sun beams of the morning, "like diamonds in sockets of gold," and not experience, in some degree, a kindling up of his feelings into rapture?

But many consider it almost an impossibility to work corn ground entirely straight; the reason is obvious, they undertake to perform that difficult piece of labor, with a very improper tool. Some use the sleigh, others a couple of pieces of wood pinned together, and a variety of other tools, with which I would defy the face of clay to make a straight mark; and thus they are obliged to guess at a part, and then take up with crooked rows.

Now this is absolutely out of order, as every one may see; and the difficulty may be remedied, by using the guage marker, a cut of which, I transmit to you.

It is simple in its construction, performs its work with the greatest accuracy and perfection, makes the rows of an uniform width, and in fact, *is just the utensil for that business.* We have used this *only*, for a number of years to mark with, and experience clearly demonstrates that it is superior to any thing now in use. But to the description.

The head, into which the thills, handles and markers, are morticed, is a piece of timber six inches in diameter, and seven feet in length, so that the marks will be three feet distant, (more or less, if necessary.) The markers incline backward at an angle of forty-five degrees, and the outside ones return in their own mark, in order to gauge the distance, which is guessed at when we mark with the plow, &c. By taking a little pains, in making the first mark straight, the whole field may be marked as straight as we can draw a line. This is just such a machine as each farmer should have; for it will mark as fast again as the plow, and will make the mark on the surface of the ground, which is all that is necessary for corn.

Farmers, try the gauge, and my word for it, if you use it right, (which, by the way, one in fifty cannot at first,) I will guarantee your rows so straight, that a cannon ball would clip every hill in a row. Yours truly,

Lansing, Tompkins co., N. Y. S. E. TODD.

SHEEP HUSBANDRY.

Editors of the Cultivator—Although this is a busy season of the year for the farmer who devotes his time practically to the management of his farm, and he has but little time to write long essays, yet I cannot refrain from addressing you a few lines on a subject, which from early life, has drawn my attention more than any other branch of Agriculture, namely, the raising of domestic animals, but more especially that of sheep. And first, let me say that I experienced much pleasure in reading the remarks of Mr. L. A. Morrell, in the May number of the Cultivator, on the subject of crossing the fine wool with the coarse mutton sheep, and am glad he has invited a discussion on the subject. I agree with him that the great mass of our farmers are lamentably ignorant on this point. There seems to be a fatal delusion to produce too large carcases, not only in sheep but cattle also, at whatever cost; and that in proportion as you increase the weight or size of your sheep, is their profitableness enhanced, without taking into consideration cost of production. Is this the true principle of good husbandry? If it is, then have I been mistaken all my life. My motto is—and it was inculcated in me in early life—*that to produce the greatest profit or amount of value at the least expense, is the most profitable husbandry;* and it should be that of every farmer. Am I right or wrong? If I am wrong, I wish to be corrected. But in the various experiments that I have made in farming, I have always found when debit was larger than credit—however SHOWY the result, and plausible the THEORY—it was a *losing game,* and I abandoned it as unprofitable husbandry. It convinced me that facts were much more valuable than mere *show* and *theory.*

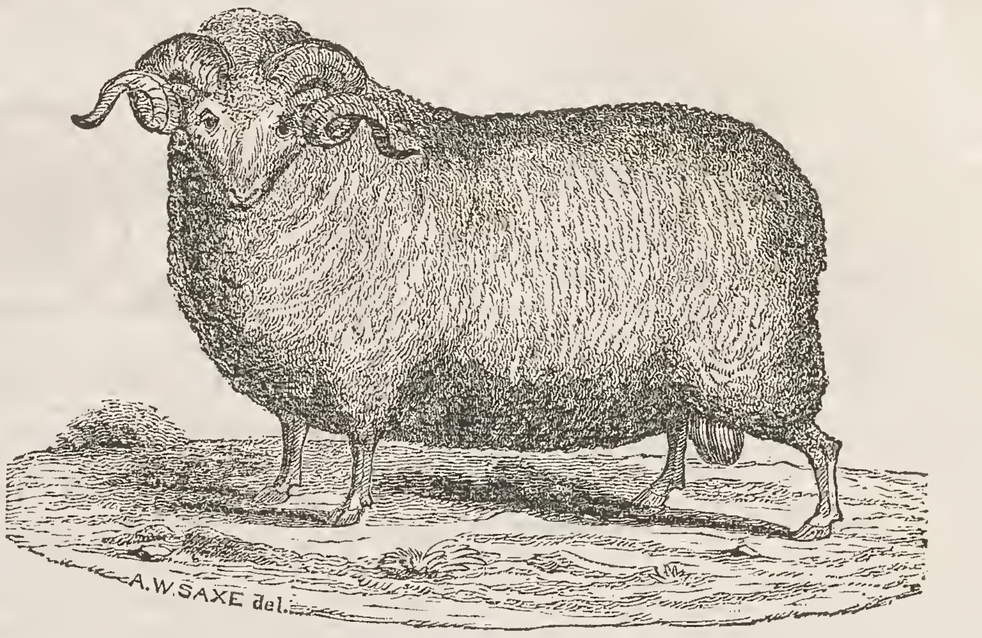
Much has been effected by crossing the fine with the coarse wool sheep: namely, thousands of fine flocks have been ruined by it, within the last half dozen years, and thousands more will be ruined before the delusion passes over. I can respond to Mr. Morrell's sentiment, that were I to consult my individual interest, I would say, "GO AHEAD"—*go on crossing your fine flocks with coarse mutton sheep, until you have nearly ruined every fine flock in the country; my interest will thereby be promoted.* But believing it to be decidedly wrong, and having witnessed much of the different crosses, and knowing that it is much easier to ruin a fine flock, than to build up one, I cannot remain silent longer, but raise my feeble voice to arrest the evil.

It has been said that we must import the fine descriptions of wool and woolens, and admit them under a low duty; and doubtless the importing merchants and some *farmers,* favor the idea; but would this be for the interest of the country? I think not. What, a country like ours, possesing such diversified climate; having many advantages over Europe for growing wool; inhabited by an intelligent, energetic and industrious people, to be dependent on Europe for the better article of wool either in the raw or manufactured state! The idea is really humiliating! But I trust no such state of things will soon occur; and I would say therefore to my brother wool growers, *persevere,* keep improving your flocks, even if they are already highly improved; they are susceptible of still further improvement, until you bring them to perfection. It has been said to me, "You oppose their cross with a heavy mutton sheep, because it is for your interest." My interest lies the other way, and my reasons therefor, have already been stated. And I emphatically state that I am the owner of a flock of Saxony Merinos, and have not the most distant idea of shifting them. Nor am I inclined to adopt a cross with any coarse breed, however large their carcase, fat their mutton, "fine?" and heavy their fleeces are recommended to be, and however they may be extolled for other good properties, (and that they possess good properties is undeniable, but these may clearly be traced to *high keeping.*) Experience and many years observation admonish me, (I mean no disrepect or offence to any one,) to receive such recommendations with great caution—nay, even distrust—and to place but little reliance upon them unless they are accompanied by well authenticated facts. Quackery in agriculture—breeding of domestic animals—as in physic, is on a par with humbugging in politics, and not worth the value of a straw to the farmer, but on the contrary is an injury to him. Have we not had too much of it already?

The cross of coarse upon fine sheep, has been thoroughly tried in Germany, with great exactness—*not by guessing*—and conducted with intelligence, skill, and at much expense, for a series of years; the result was a failure; and though mutton—indeed meats of all descriptions, bears a much higher price in that country than it does in this, yet the increase of carcase did not compensate the loss of quality of wool and the increased expense of keeping. On a close investigation of the subject, the same results will make themselves manifest here, as wool is the primary and mutton the secondary object of the flockmaster. If the flockmaster of Germany, who receives as much again for his mutton as we do, cannot find his account in crossing with mutton sheep, I would ask what prospect of success is there for us in this country? But this experimenting has had its good effects in Germany, (as I hope it will have here,) it has established the fact that to cross the Saxon Merino with the coarse mutton sheep of England, is incompatible with sound principles. The produce falls as much short of being "*equal to the Spanish Merino,*" as that of a Durham short horn Bull and our best native milkers, "*I should guess,*" of being like the Ayrshire cattle. But instead of that, the Germans have steadily improved their fine flocks and brought them to a high degree of perfection; and so firmly are they convinced of their superiority over any other breed of sheep, that at this moment, breeders (stock rams) of superior excellence, are selling at higher prices than at any former period. I could give you extracts from letters on this subject confirmatory of this declaration, but must bring my communication to a close. I cannot however do so without expressing my thanks to "*Commentator,*" for the able and impartial manner with which he comments on the contents of the columns of the Cultivator. I sincerely hope he will continue them in future, even if at times he touches a "*tender spot*" of some of your correspondents. Don't be afraid Mr. Commentator, but give us your views without "*fear or favor.*" It's just the thing we want; good will result from them—they are just after my own heart, and when I read them, old associations are brought to my mind, and I imagine myself in "*mein Vaterland.*"

I am yours, very respectfully,

Hoosick, N. Y. H. D. GROVE.



MR. JEWETT'S PAULAR MERINO BUCK.—(Fig. 73.)

Messrs. Editors—The enclosed drawing (fig. 73,) is a very true picture of one of my stock Bucks. It was taken the 13th day of last June, the day on which he was shorn of his fleece, by Dr. Saxe, a portrait painter. It represents him in his fleece at full length, which was seven days short of one year's growth, and weighs fourteen pounds; his wool being of great length, gives him in the profile, a rather short appearance.

It is my intention to exhibit some of my best stock at the Albany Fair in September. Not being a citizen of your state, I cannot enter stock for premiums, but the pleasure of exhibiting may fully remunerate me, especially if I can show as handsome sheep as any one at your State Society.

The wool from these Paular Merinos is not as fine as some other varieties, but I think they should be classed among the fine wooled sheep. At the last State Fair, at Syracuse, I was honored as one of the committee on fine wooled sheep. Immediately the question came up, and there was a difference of opinion, what should be termed fine wool; or whether the coarser merinos should be considered under Class III, "fine wooled?" It strikes me that the whole varieties of merinos, should come under that class, and the premiums should be awarded to the handsomest and most profitable variety—taking into consideration the greatest production of wool and mutton for his keep—the most hardy, best form, and best milkers, which is essential in rearing the lambs.

There is no doubt in my mind, but this Paular variety can withstand our severe winters better than any other that has been introduced among us; their wool being admirably adapted for protection, (not by tariff,) being so very thick, and filled with a natural oil that will repel the severest storms. Their form is also broad and stout; they always look full, if they can get any thing to eat, and are able to shift on very scanty keep.

I put out my bucks the first of December. Stable them about twelve hours each day; give them hay and about one pint of corn, at the time of taking up, and letting out also. This sheep described, is now four years old; has tupped on an average, each year, 123 ewes. We raise about 95 lambs to each hundred ewes. The two years old buck, described in the March No. of the Cultivator, sheared 11 lb. 3 oz. washed wool.

Yours truly, S. W. Jewett.

Weybridge, Vt., July 12, 1842.

COMMENTS ON THE JUNE NUMBER OF THE CULTIVATOR.

Messrs. Gaylord & Tucker—I like much your remarks on the "Season and Prospects;" but fear that you expect more from the liberality of mother earth than she can possibly achieve. "The breaking of banks—the repudiation of their debts by several of the states—the bankruptcy of governments—and the half distracted condition of our financiers"—all go to prove, with the most heart sickening conviction, that a moral cancer has eaten into the very vitals of the body politic, for which earth alone, amidst all her richest gifts, has no cure. It is a deadly malady that seems to have left hardly enough disinfected individuals to manage either the public or private concerns of society.

—

As to the "National Agricultural Society," I apprehend with you, that "the enthusiasm—the *esprit du corps,*" so essential to its beneficent existence, are spirits yet to be evoked from "the vasty deep;" and I know none of its friends sufficiently trumpet-tongued to call them forth. But it is too soon to be faint hearted about the matter. Better times perhaps—so far as better crops can propuce them—may cause the Society to put on quite a different aspect at its next meeting.

—

In regard to "*Sugar from the Maple,*" I have never yet seen any of it, out of numerous samples of the best, which was entirely free from a taste of the sap. This circumstance, I think, must in a few years, greatly lessen, if it does not entirely put an end to the making it, as the sugar from corn stalks, which can be made abundantly in every state in the Union, so perfectly resembles the cane sugar, that no palate can detect any difference.

—

Your review of Dr. Dana's "Muck Manual," has excited in me a strong desire to see it, which I hope soon to do, having taken means to procure a copy. This work, together with Prof. Johnston's Lectures on Agricultural Chemistry, and Mr. Webster's second edition of Liebig, will surely entice very many of our brethren to study their profession as a science. Mr. Peters says, "*we only want a judicious and well digested system;*" but we must first get the science necessary to form it, and to prepare the minds of the generality of our brethren for its adoption. We must learn to walk—which many of us are hardly yet doing—before we can run.

—

Under the head, "*Large yield of Corn,*" the crop of 39 barrels per acre, made by Mr. Young, of Jessamine co. Kentucky, greatly exceeds any account yet published of the productiveness of that most excellent grain. Marvelous as the statement really is, it seems to be sufficiently well authenticated to be believed. If so, ought it not forever to put to rest the notion maintained by so many farmers, in the absence too of all proof, that the cutting of corn roots is very injurious to the crop? In the culture of Mr. Young's crop, we are told that "*nothing but the plow was used after the harrow.*" We are farther informed, that the corn grew four stalks in a hill, and only three feet each way! Now, if any man can believe it possible to plow corn thus thickly planted—without cutting great numbers of the roots, or, that such cutting could do any appreciable injury to a crop which produced 195 bushels per acre,—he can believe that the moon is made out of green cheese, or any other absurdity whatever.

—

I perceive that you call the Honey Locust, Robinia viscosa. Other botanists call it Gleditschia triacanthos, which is right—for I do not know? [G. triacanthos is right.]

—

Among the advantages of "sub-soil plowing," you say that it "*gradually converts the sterile sub-soil into fertile mold.*" If you have not yourself seen this effect produced by it, I should doubt whether the mere frequent separation of the particles of any sub-soil, without changing their relative position, could possibly so change their nature. To convert them into "*fertile mold,*" seems to require the addition of some other substances besides "*water and air,*" which other substances are only to be obtained by gradually deepening the plowing, and mixing therewith those particular elements of fertility of which all sub-soils are destitute.

—

Under the head "*Indian Corn,*" you assert that "*it will flourish in no other than a rich, warm dry soil.*" Although it is perfectly true that such a soil suits it best, I have seen many very large crops per acre, made upon land which was neither warm nor dry. In fact, one of the great advantages which Indian corn has over all other cultivated plants, is, that it will grow well in a greater variety of soils than any other. Richness, however, is indispensable in every soil to the production of very large crops; but *this* being imparted, even to cold, stiff, moist lands, properly drained, such crops may certainly be expected in seasons generally favorable.

—

Your Georgia correspondent from Hancock county, in speaking of "hill-side ditches," remarks—"*it is matter of some surprise that the agricultural journals of the country should have so long preserved silence upon the subject.*" Had he ever seen any of the early numbers of that excellent paper, the Farmer's Register, by Mr. Ruffin, of Virginia, he would there have found many communications, strongly recommending these ditches, by farmers who had long tried them, and thus proved their great utility.

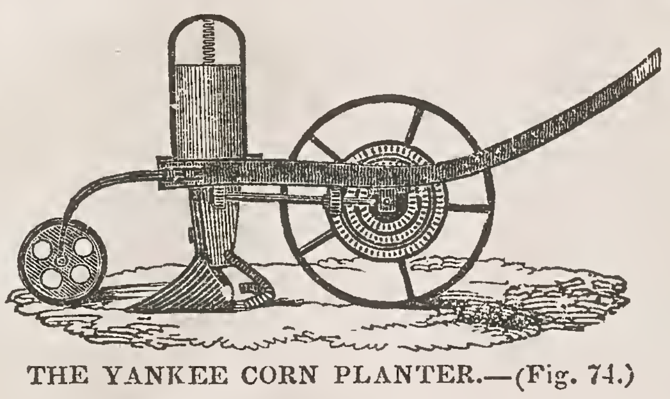
I agree with your correspondent, Mr. John Moxon, of Monroe county, N. Y., in thinking that the late condemnation of the Potatoe oat has been too hastily made. If the circumstance of these oats, when unground or uncooked, passing in an undigested state, through horses' stomachs, be sufficient to condemn them as food for these animals, then all the varieties of this grain, as well as of corn and rye, must be rejected, for all kinds, when thus used, will partially pass through undigested. The potatoe oat is one of the heaviest kinds yet known among us, and must therefore be presumed to contain more nutritive matter—measure for measure, than any lighter variety—until actual analysis proves the contrary. How then can it be less nutritious? With us it has long been cultivated, and by numerous other farmers besides myself, yet I never heard any complaint about them, until I saw Mr. G. B. Smith's publication.

If Mr. Peters will excuse my former doubts in regard to the correctness of his assertion, that "*we were not 30 years behind England in our Agriculture,*" I will promise to utter no more, until I have as good an opportunity of comparing the two as he has had. But I must say, that unless he knows of his own personal knowledge, what "*England was 30 years ago,*" his assertion that the great mass of her farmers were then, "*not one step more advanced than this country is now,*" rests upon no better grounds than my doubts. Should Mr. Peters live to "*his three score years and ten,*" as I hope he will, in health and happiness, it is my sincere wish that he may "*see our Agriculture fully equal, if not superior*" to that of England; but in my humble opinion, equal density of population, and much more aid from our government than we have ever yet received, must both concur to produce even an equality of advancement.

I have read Mr. Lyttleton Physick's communication with close attention, and confess if I understand either his principles or their application, that he has thrown me into a complete quandary,—at least, in regard to Indian corn. This grain I have been cultivating for half a century or more, and began to conceit that I knew a thing or two about it; but if he is right, then am I "clear out of my reckoning." For instance, he commences by promulgating what he calls two laws of nature. The first of them is a law "*which keeps the earth covered with vegetable production, and which is necessary for the continuance of vegetable growth.*" If this is really a law of nature, and not a mere notion of his own imagination, it seems clear that we should either sow our corn broad-cast, in order to "keep the earth covered with vegetable production," or, that as soon as possible, after planting it at any particular distance, we should suffer the grass or weeds to form this necessary covering. The second law is expressed in the following words: "*All organic productions being possessed of a set of generant organs for re-producing their kind, cannot be disturbed, when these functions are developed for procreation, without injurious results.*" Without stopping to inquire whether an organ and a function mean the same thing, as Mr. Physick represents them, I would ask, if the generant organs of the corn plant be the tassel and the silk, what corn grower has ever followed or recommended any practice by which *they* should be disturbed? So far therefore, as corn growers are concerned, the promulgation of this law—to say the least of it—is somewhat supererogatory.

Mr. Physick's next step,—after laying down these two laws of nature, is, to tell us, in three brief precepts, what should be the practice of farmers. The first is—"*to restore fertility to exhausted soils,*" to which, I presume, all will agree. But the second is one which appears to me to forbid all culture of corn or any thing else. It is in the following words:—"*To prevent as much as possible, the escape of gaseous matter from the soil.*" This precept taken in connection with his first law, (I beg pardon—nature's first law,) would certainly put a stop to all stirring of the earth by the plow, or any other implement. But what renders the matter still more incomprehensible, is, that Mr. Physick, himself, violates both the law and the precept; for he told us, in a former communication, that he actually worked his corn, although not after it had attained one-third of its growth. During this working, however,—if it resembles any other known to corn growers in general—not only must the soil on which it grew, remain without any covering of "vegetable production," on the spaces between the corn, but much gaseous matter must escape *from* these spaces, for the want of this covering, should his opinion be correct. And *if it is*, then the opinions of all other writers on agriculture, whom I have ever read, must be utterly wrong; for *they* recommend deep and frequent tillage for the express purpose of admitting gaseous and other matters into the soil; whereas Mr. Physick's notion seems to be, that all the requisite gaseous matter is already in the soil, and should not be permitted to escape, as he affirms it certainly will, unless the earth be constantly covered with some "vegetable production." But it is proverbially true that doctors will differ. Yet it is equally true, I believe, that where there is only a single doctor of one opinion, and some hundred or thousands against him, the safest plan will be to side with the majority.

COMMENTATOR.



THE YANKEE CORN PLANTER.—(Fig. 74.)

MESSRS. EDITORS.—I send you an engraving (fig. 74 of T. & J. Lewis' Yankee Corn Planter and Seed Sowe , for insertion in the Cultivator. I have used it in planting corn and sowing garden seeds, and can say that I think it the most perfect machine of the kind, which I have ever seen. By the use of a set of rotary plates, fitted to the hopper, seeds of all kinds may be deposited in hills or drills, from three inches to six feet apart. The cost of the planter is $15. SETH HOLDEN.

Barre, Mass. July, 1842.

The above was accompanied by a certificate, signed by Wm. L. Russell, of Barre, and John J. Pierce, David Long, jr. and Alfred Wells, of Greenfield, in which they say that they "have used T. & J. Lewis' corn planter and seed sower, exhibited by Seth Holden, to plant a small piece of corn this spring, and that it answered every expectation. It furrowed, dropped and covered, at the rate of 6 or 8 acres per day, and the corn all came up admirably; and they can safely say it is the most perfect machine of its kind they have ever seen."

USE OF MUCK.

EDITORS OF THE CULTIVATOR—As I promised a short time since, to give you some account of my experience in muck, I now proceed to state that in the winter of '39—'40, I drew from a large mill pond on the Kayadarosseras, 1,000 loads, and put on a poor worn out field of 17 acres; soil, sand and gravelly loam; planted to corn the following spring; product 50 bushels to the acre. This field had gone through the genuine skinning process previous to coming into my hands, and grew nothing but sorrel and mullein. The extra product I counted at over 20 bushels per acre. In the fall of '40, I drew from what had been a black ash swail or narrow strip of swamp, 300 loads, and put on 4 acres of almost barren sand; planted to corn in '41, and though the drouth was severe, yet the produce was at least 50 bushels per acre. In the winter of '40–'41, I drew from the pond aforesaid, about 700 loads, and applied to two other fields; planted to corn the following spring, produce equal to anything in the neighborhood. I drew last fall and winter, from the ash swail, about 500 loads and put on 8 acres; now planted with corn and looks first rate. After corn, I have sown oats and seeded down; the seed which before was invariably lost for want of nourishment, has, since the muck application, taken in the most perfect manner. The fields are all renovated, and I consider the experiment a complete triumph, to the great discomfiture of certain wiseacres, who prophesied on my commencement, a failure. I have the happiness to state that several of my neighbors, who "seeing, believed," have adopted the practice, and as uniformly successful, when applied to light worn out soils, for which it is, in my estimation, pre-eminent. For heavy loams, or clay, an admixture of lime or yard manure, would be indispensable. The muck of my mill pond is making new accessions at each freshet, and where I first began removing it there has nearly as much more accumulated. I intend making large and continued drafts on these "banks of deposite," finding thus far, the dividends fat, and repudiation and protest unknown in the matter.

Respectfully yours, SETH WHALEN.

Whalen's Store, Saratoga co. N. Y. June 7, 1842.

WOBURNS vs. BERKSHIRES.

MESSRS. GAYLORD & TUCKER—Upon reading Doct. Martin's reply to me in the March No. of the Cultivator, the arguments appeared so unfair, and the tone of it was so different from the mild and gentlemanly character I had heard of him, that I at once dismissed the subject from my mind, determined to take no farther notice of it, as this communication of his, I thought, would carry its own best answer and refutation with it. I have so great a repugnance to anything like controversy, that I had rather suffer some injustice at the hands of an adversary, any time, than engage in it, particularly after it has assumed the character that Dr. M. has chosen to give it. But inasmuch as some of my friends are mixed up in the affair, their importunity forces me to a reply; which I am determined shall be my last on this subject, and confined to as strictly a negative character as possible. I can only regret now, that I had not known the spirit of this article when in Kentucky, for had I, one thing is certain, I should have never crossed the threshhold of Colbyville, under the imputation of some charges made in it.

If I can understand Dr. M.'s language, he misapprehends and misstates my argument about the ship stuffs and corn.

He makes a difference of 250 per cent, between the gain of one of his Woburns in warm and cold winter weather. I can only say that northern hogs are generally fattened during this same cold weather, and gain rapidly, and were I disposed now to pause here and make an argument, I should add that this only shows the worthlessness of his particular breed, and that the Doctor generally seems equally unfortunate when he comes before the public with his animals. They don't thrive in cold weather, and they die in hot;* and every time to be fed on trial, they either have an abscess, get sick, or are foundered, or have to be physicked, or something of the kind. But I am not disposed to dwell on such themes, or class the "*fact*" of this difference of gain of 250 per cent, with another equally extraordinary "*fact,*" of his Courtency making 30 lbs of flesh, and filling up on 52 lbs. of corn in ten days! which is certainly the most wonderful feeding and gain I ever heard of. Could not pork with such animals, be manufactured from corn for one cent per pound, and prove the most profitable business that the farmer or planter could possibly engage in during these hard times? I only ask for the benefit of those employed in pork raising; for this certainly beats Berkshires, according to a western expression, "by a forty horse power," and almost equals the pretty little Chinese, which I have half thought sometimes, would live upon air.

He finds it convenient to slide over my trial of Berkshires when fed at Columbus, and easily beating his Woburns, which I am confident they will ever do on a *fair* trial. As to the "poor Berkshire boar, &c. to show off against his fat Woburns," I had both oral and written testimony from several gentlemen in Kentucky, whose candor and veracity I could not impeach, asserting the fact. It was such evidence as would have been received in any court of justice in the land. It is not improbable that they might have seen the Berkshire at some particular time, rather wanting in condition, by the side of some fat Woburns; but whether this be so or not, the words, "malicious and destitute of truth," are pretty strong terms to apply to persons of the respectable standing that I know them to be in the society of Kentucky. They might have been *mistaken* in their judgment, but as for the other part, I suspect Doct. M. in his cooler moments, will have regretted making use of the expression.

Mr. Fanning, doubtless, called his Berkshires "very superior," in comparison with others in Tennessee, but the reports of their weight proved them small by the side of the larger families of this breed, kept in other parts of the United States.

For the next paragraph of Doctor M., I refer as answer to what I said in Dec. No. of the Cultivator, about the different varieties of Woburns. If he is satisfied with the insinuations of the closing sentence, very well. I leave those who better know me, to judge whether they are correct or not.

Doct. M. asserts "the breeders of Berkshires write big bantering letters, but never come up to the trial." I believe Mr. Curd, and others of Kentucky, have repeatedly challenged him to a contest; and certain it is that Mr. Mahard, of Ohio, concluded if he would stop the boyish trials which he so solemnly paraded before the public in a chapter of "*nine facts,*" (I won't be under oath as to the exact number—pity, though, they had not been a baker's dozen,) equal in importance, probably, and something like the "nine wonders of the world," and place an equal lot of pigs with him in the hands of a disinterested person, to be kept in the common farm way in the west of making pork, for a year or so, and then be driven to market and slaughtered; and the animals found to drive the best, and that had given the most and best pork on the quantity of food consumed, &c. to be declared the victors, he would enter some Berkshires against his Woburn. To this Dr. M. has consented, and I hope next fall to hear of a result worthy to be recorded. I would, most gladly, long ago have challenged the Doctor to a similar trial, but residing at least 800 miles apart, this was out of the question.

Doct. M. asserts that myself and brother have done much to prejudice the public against his white Berkshire boar Albion. I have not the agricultural periodicals to refer to for all our writings, but should be glad to see him point out where Albion is mentioned by either of us, previous to his communication of Dec. last. If apprised of it, the knowledge of his owning such an animal never dwelt upon our memories; we only wrote against white Berkshires in general, believing them to be a *spurious breed.* If the Doctor can convince the public that they are not, we shall be happy to hear him; we only hope he will be more fortunate than he was in making that famous "Martin" breed of swine, which, to use another western phrase, "were going to whip out all creation," and not have "*one drop* of black Berkshire blood in them either!" Query. Did any one ever see a pure "black Berkshire," without a white hair in him? Or did Mr. Hawes, their first importer, ever call them "black," to distinguish them from "white." I suppose if we were sent a *white-black-Scotch-Galloway,* from the other side of the water, with a certificate of pedigree, that the unbelieving American public would be obliged to open its boa constrictor mouth, and swallow him whole, without winking.

As I get on in writing, I find that a little of the high pressure steam with which I started, is, like Bob Acres' courage, "oozing out at my fingers ends," and as I keep a general hospitality account in the Miami Valley, the Doctor has my *carte blanche* for bacon and eggs, and request that he take a jaunt up there, and stop with friend Hendrickson, over a day and night, or two, or a whole month if he pleases. He will there see Windsor Castle,

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* See Western Farmer and Gardener, Kentucky Farmer, and other publications, and particularly an account of Woburns sent Messrs. Affleck & Foster.

a bit of a runt of a Berkshire, only about 3 feet high, and 7 or 8 feet long, (including his tail though in this measure, so as not to be beyond the mark,) which will rather open his eyes to this breed of "*humbug*" hogs; he will also see Master Kenilworth, and Countess Amy, a pair of 6 months white pigs, I brought out from England last October, in size and fine points, young as they are, almost equal to Windsor; also a *runt* shoat or two, of the cross of the Berkshire in the great Miami hog, standing 3½ to 4 feet high, and weighing from 900 to 1,200 lbs., of tolerable mellow handling, fine hair, thin skin, good form, neat limbs, and active travelers. Now if I were going to set up for the Bakewell of America, here is a model to start upon, that will beat any Woburn or Martin hog, that it is the good fortune of the Doctor to have ever owned. But all this is only *my opinion*, and if others think differently, very well, I am glad of it. It takes all sorts of folks to make a world, and all sorts of animals to please such folks, and as this is a *free* country, I like to see every man have his own way in these matters. Indeed, I sometimes question whether it would not be politic if I wished to make Berkshires in vogue, *to go against* them, and advocate Woburns upon the principle of the Irishman, who driving a pig along the highway very comfortably one day, was questioned where he was going with him. "Arrah, now, my honey," he says, stepping up and whispering in the enquirer's ear, "just whist and be aisy, will ye—I'm driving him to Galway, but in starting, I let him believe, faith and if he was going to Cork."* A. B. A.

Cincinnati, O., March 29, 1842.

FOREST TREES.

It must be a subject of astonishment, to observe the wonderful intermixture and seemingly inseparable connexion between both moral and physical good and evil —to see that the same thing which we at one time dread with abhorrence, at another time, and perhaps under a little different circumstances, becomes a subject of pleasing admiration. We often hear heart rending tales of the gloomy and dismal forest, and yet to a person of good taste, there are no charms in the compass of nature's works, surpassing those of the forest.

The emigrant to an unsettled country, looks upon the trees as so many savage enemies, which he must conquer and exterminate before he can hope for the enjoyment of peace and tranquility. When other emigrants settle around him, and they begin to direct their united efforts towards arriving at a state of civilization, they see nothing in their mind's eye, but cultivated fields, with meadows and pastures, with all the stumps eradicated, and not a single cluster of trees to interrupt the view. If a single patch is left for firewood, it is often sneered at, as it is cheaper to buy wood than to devote the ground to its incumbrance.

But the population increases, perhaps becomes a city. The demand for firewood increases, and timber is wanted in all the various departments of ship and house building, and every patch of forest vanishes before the footsteps of cultivation, like patches of snow before the vernal sunshine, until, as is the case in some countries in Europe, and even in some parts of this country, every piece of timber has to be brought from great distance, if not even imported from a foreign country, and coal dug from the earth for fuel.

In this state of things, sober reflection, which though a slow, is often a correct teacher, shows us by costly lessons what it would have taught before, had it been consulted, that if, instead of wastefully destroying and exterminating the forest trees, they had been used with prudent economy, when necessary, and skilfully managed and preserved when not, they might have contributed largely to pleasure and to profit. The same follies have been extensively committed by other nations; but they have long since discovered their error, and are in many instances setting us examples, worthy of imitation, in retrieving it. If we profit by their example, it is still in season to avoid the error in many parts of our extensive dominions, and where it has been already committed, we can by a judicious course, do much towards making amends in our own days, and avoid entailing on posterity, a vast amount of unnecessary trouble and expense.† The clearing of a country of forest trees, produces no doubt, atmospheric and meteorological changes more or less connected with health; but we choose to leave that part of the subject to those who are professionally the guardians of health, and to speak of it only as it relates to the common comforts and conveniences of life.

The uses of forest trees to which we refer, are shade, for fuel, for timber, and for protection against wind.

Of shade trees, both for timber and ornament, we have indigenous, a greater variety than any other nation. It would be useless to attempt forming a catalogue, but a few may be worthy of particular notice.

As an ornamental tree, the sugar maple—*Acer saccharinum*—for avenues or the streets of towns, stands unrivaled; the wood, valuable in the arts; maple orchards a profitable investment.

Yellow Locust—*Robinia pseud acacia*—a most valuable timber, much in demand for mill cogs, ship trunnels, fence posts, etc.

Shell bark Hickory—*Juglans regia*—ranks with the first class of our forest trees, timber of great strength and elasticity, wood as an article of fuel, unsurpassed; produces delicious nuts; the trees worthy of cultivation for their fruit alone; the nuts may be increased to twice their usual size by cultivation.

White Oak—*Quercus alba*—timber in high repute; accommodates itself to almost any soil.

Chestnut—*Castanea*—attains a large size, prolific in valuable sweet nuts, susceptible of great improvement.

White Elm—*Ulmus Americana*—a general favorite, often reaching an altitude of 80 to 100 feet.

Black Larch—*L. pendula*—for timber or picturesque effect, worthy of cultivation. The tree much neglected.

White Ash—*Fraxinus Americana*—the wood in great demand for farm implements, by the wheelwright and carriage maker. The Pines and Firs add much to the beauty of home, and for bleak and exposed situations form a good shelter. The Balm of Gilead Fir—*A. balsamea*—a beautiful evergreen; and the White Pine—*P. Strabus*—the king of its genus; its beautiful stately form will add much to rural embellishment.

A stranger traveling through almost any part of the United States, would think he had met with the strangest anomaly ever presented. He would have heard, no doubt, that the Americans were a people of refined taste, awake to all the beauties, not only of nature, but of poetry and romance; and yet, perhaps, in a day's ride, passing the dwellings of the rich and poor, he would scarcely see a tree connected with a house for beauty or for shade, much less the rich and elegant groups of trees he would have anticipated finding. To such a traveler from almost any other civilized country, to see a decent country house standing like a hay stack in a meadow, the conclusion would be that its inhabitants, whatever fame might have reported of them to the contrary, were as destitute of taste as those animals of the meadow who fed upon the hay stack.

There is nothing in the compass of inanimate nature so interesting as trees. They speak a language to the heart which none but a heart of utter insensibility can fail to understand. They awaken to recollection the memory of scenes long past, not only in the innocent sports of childhood, but often those of deeper interest. It must be noticed by every observer, that even the brute creation feel a veneration for trees. A tree is a house, furniture: it may be made clothing and even bread: "It forms part of almost every implement and every machine by which the genius of man has taught him to lighten the labor of his hand. There is that in a tree, considered as an individual work of the creator, which may well excite our attention, and most amply reward our study."

For fuel, and more especially for timber, economy alone, without the aid of good taste, would, if consulted, be sufficient to plead for the preservation of forest trees.

But when the folly has been committed, and its consequences are beginning to be sensibly felt, what remedy can be applied, if not to afford immediate relief, at least to prevent posterity from suffering by its effects? The still small voice of common sense, confirmed by the examples of several nation of Europe, points to the remedy. The first step is to establish nurseries, where all the most valuable trees could be obtained at moderate prices; a few would avail themselves of their advantages, and the force of example would soon excite the multitude to follow them, and in a few years, those who lived to see our dwellings, which now stand as unornamented as milestones, tastefully surrounded by beautiful trees, and their value doubled in the eye of most purchasers; they would see our public roads lined with extensive rows of valuable trees, and last, though not least, our farm houses would be sheltered in their situations from bleak and destructive winds by belts of the pine and fir trees, and their cattle and sheep would find protection in winter, and places of repose from the sultry summer heat.

Magnolia.

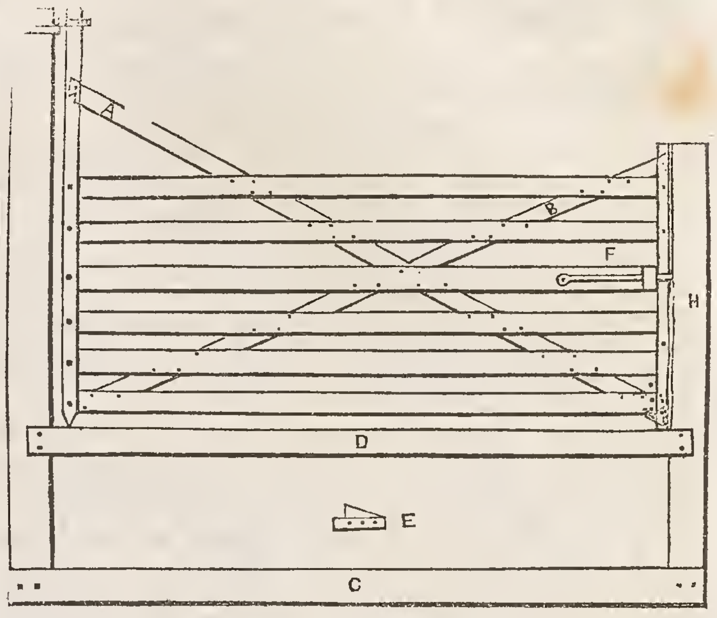
THRESHING MACHINES.

Messrs. Gaylord & Tucker—I have seen in the July No. of the Cultivator, a communication signed Economist, and wish to make a remark on what he says about threshing machines. We have a machine in this county of one or two horse power, called the Endless Chain, made by Mr. Ashman Hall, of Hyde Park, Dutchess co.; with which it is not called a very hard task for two men with one horse to thresh and clean sixty bushels of oats per day, and take care of the straw. The machine is not likely to get out of repair, neither is it a complete killhorse. Economist's five and six horse machines would not be the thing for this part of the country, (except for job threshing,) for the reason that farmers here feed their straw, and they think it is best when fresh threshed, and as they have generally plenty of time during the winter season, one or two horse endless chains thresh fast enough for their purpose, and require less help.

La Grange, N. Y. July, 1842. A Reader.

INQUIRY.

Mr. M. L. Colton, of Vermont, wishes for information through the Cultivator, in regard to the process of boring or drilling in rocks to the depth of 20 to 30 feet, for the purpose of testing the value of minerals embedded therein—a description of the implements used, accompanied with a drawing if convenient—the manner of doing the work, and the best way to obviate any difficulties which may be met with during the process.



A FARM GATE.—(Fig. 75.)

Messrs. Gaylord & Tucker—I herein take the liberty to send you a pattern of a gate, which is one of my design. The posts should be fourteen inches square, set in the ground at the depth of four feet, one twelve, and the other nine feet four inches long; the end pieces three by four inch scantling, one five feet four inches, and the other eight feet long. The rails and braces are sawed one and one-fourth inch stuff, four inches wide, and thirteen feet two inches in length, making the gate in width thirteen feet. Space between rails, as follows:—commencing at the bottom, 4, 4, 6, 8 and 10 inches. The brace A, is let in dove-tail form, and the brace opposite side of the gate, B, is let in square, as described in the figure, and nailed; also nailed across the rails to strengthen the gate. The sill D, and the bed piece C, are composed of durable timber; C, put in at the bottom with a mortice, fourteen by three inches, with a correspondent tenant in posts to enter, and pinned, which I think will prevent being raised by the frost, (if incorrect, some one will please to rectify;) and D, laid just at the surface of the ground, and morticed into posts to prevent the settling of the gate. It is hung principally by its bottom set into the sill D, with a ferule on the end piece, and one to set it into the socket—to facilitate in opening and shutting—and at the top fastened with a hook and eye; the hook with four holes punched in the end, projecting through the post, one inch and a half a part, with a good wedge to drive, so as to raise the gate if desired, &c. The ketch is composed of iron, as shown at E, to be put on with three screws at H, upon the inside of said post, cut in one inch. Latch at F, fastened at the fourth rail from bottom, by a screw and staple passing through the end piece near the middle, with a hole large enough to pass over the ketch E.

Yours, &c. E. H. Northrup.

Shoreham, Vt., April 1, 1842.

Messrs. Gaylord & Tucker:—I have not had time to peruse your late numbers of "The Cultivator," until within the last few days, having been much engaged in the practical part of agriculture.

I think it is very important that writers for this valuable paper should confine themselves to *well founded facts*, and not make assertions that have no foundation; it not only leads the *weaker part* of the community into error, expense, disappointment, and deprives them of enterprize, but gives them a total *dislike* to the author; while substantial facts produce a lasting friendly feeling, and command respect and admiration. Writers are too apt to show their learning, by introducing figurative language for display, without producing the *desired effect*; the plainer statements are made, the more substantial they appear, and are more readily understood; therefore, come on with *facts*, and let *far-fetched terms* be dispensed with.

I have read Mr. Morrel's Salmagundi with pleasure; but there are some sentences that do not meet my views, to which I shall reply when at leisure. No. 4 shows plainly he is a one-sided writer on cattle; and decidedly a short horn man. I ask Mr. Morrel what indications his *judgment* rested upon when he issued the remark, that our Herefords "*showed good keeping?*" I would defy him to move any of their old coats, nor did it begin to leave them, until they had been to grass a fortnight; this can be *proved* by the neighbors, and is positive proof that grass was their *richest food*, and no cattle can possibly have thriven faster since they left their stalls. This I say as a *just* vindication against *prejudice*.

I must say to Mr. Randall that Mr. Rust's ox is decidedly descended from a Hereford, although it seems to be his wish to deprive him of it, by saying "there is no good reason to suppose that this noble animal possesses a drop of any foreign blood, other than that introduced by the first settlers of the country." My opinion is that the first settlers brought with them the Irish breed of cattle; and if Mr. R. will take a "*tour*" through Ireland, he will find exactly the same stamp as the common cattle of this country, and he may select the "*best*" if he chooses, and breed from them until he is the age of man, and my word for it, he will never breed a beast that a *good judge* would condescend to put his hand upon.

A breeder of cattle ought to be able to distinguish one breed from another, and if he cannot do that, he should not attempt to decide on their blood.

Wm. H. Sotham.

Albany, July 18th, 1842.

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* Galway and Cork, are on opposite sides of the island.

† Massachusetts is doing her duty. Among her state premiums, are noticed one for the most extensive forest of any sort of trees suitable fot timber, raised from the seed, not less than 1000 trees to the acre, which shall be in the most flourishing condition, and more than five years old in September, 1845, $50. Another premium of forty dollars for the best plantation of oak or other forest trees, suitable for ship timber, not less than 1000 trees per acre, to be raised from the seed, which shall be in the most thriving condition, and more than three years old in September, 1847

WEEDS OF AGRICULTURE.—No. II.

6. Hariff. Known also by the names of *Goose tongue, Cleavers, Cliders, Catch weed, Goose grass, &c.*

Galium aparine.—Linn.

Botanical Description.—Stem weak, branching, aculeate backwards. Leaves 6–8 in a whorl, linear lanceolate, mucronate, with the keel and margin rough with reflexed prickles. Fruit with hooked bristles.

This is a very scrambling weed, and runs to the length of four or five, or even eight feet, increasing in weight of branches and foliage, as it obtains the light, and gets through whatever it grows with. It is usually found in deep, loose and mellow soils, especially those which are moist. It is seldom troublesome in clay soils.

This weed, where it abounds, is one of the very worst kind. It increases excessively on loose deep soils, when once introduced. The flowers are white, small, and numerous, being situated on axillary and terminal peduncles. The seeds are didynous, roundish, with a channel on one side, as if rolled up. They are exceedingly rough, and adhere to whatever woolen stuff they touch, so as not to be easily dislodged. They are also heavy enough to resist dressing, and large enough to escape the screen. They are, moreover, the toughest of all seeds, and hence millers may well object to them, for if they be numerous, "they will almost make the stones whistle." In samples of oats they are abominable; horses can scarcely grind them.

The best mode of destroying this weed, and indeed all annuals is, to encourage the seeds to vegetate and then to kill them with the plow. It may, however, be useful to some, to show by what rotation it may be effectually subdued. Suppose a quantity of this weed to grow with a crop of oats; after harvest, as rains come on, the scattered weeds will vegetate on the surface. This will be much encouraged by getting off the stubble and harrowing; and when the opportunity occurs, the land should be plowed a shallow tilth and again harrowed. Much surface rubbish may now be raked and carried off, and the land may then lie till spring. After spring seeding, plow this piece a seed furrow, pitch and harrow it: clean it from twitch and roots, and let it lie to be green over with annuals. It may then be manured, and the manure plowed under. After a little harrowing and hand-picking the twitch, the land may lie till you choose to sow it; the best crop is rape, if the land be light, which should be sown rather late, and perfectly well hoed and cleaned. The crop may be stocked with sheep in February, but it should not be eaten too close down. The surface, as the spring advances, is to be kept clean with hoes, and the rape is to stand to be threshed; after which the surface must be discharged of the stalks by pulling, and the land may be sown with wheat at once plowing. This crop may be cleaned with a little exertion, by weeding; and in the spring the land should be sowed with the best mixture of grass seeds that can be procured. Though light land does not suit wheat, especially as to quality, yet depth and penetrability of subsoil will generally give you produce enough. It grows too tall and flaggy, and is easily brought down with wind and rain; but if it be clean it will make good seed for other soils; and you can by no other means obtain so much profit, *without deteriorating the soil*, by any other rotation of the crops.

The same views might be beneficially extended, as they apply to the cultivation of dry black-mould land, of deep texture, having some dry peat remaining and a clay bottom, too far below to be plowed up, except in spots and patches. This land will by no means lie profitably in permanent grass, neither can any four fields of it be rendered convertible, because the continuance of plowing pulverises the soil to dust, and the encroachment of the couch requires much exertion to master it.

The usual rotation in the drier part of fen lands, is either from paring or burning the grass surface for rape, eaten off with sheep, to oats the second year, and wheat the third year; or Heligoland beans after rape and wheat the third year. If with the wheat, the land were returned to grass, no fault ought to be found; but the cultivator will not part with the arable system so soon. After wheat he goes to fallow, and here begin the *powder* and the weeds. Fourth year fallow, rape; oats the fifth year, and then wheat and grass seeds. No management on earth can subdue weeds on light deep soils upon such a plan. Those which naturally prevail in the soil, and such as may be sown with the crops, are perfectly triumphant. Horse hoeing is here impracticable, the soil being so light; hand hoeing and weeding have been followed, to the expense of five or six and twenty shillings an acre, without being able to clean the crop. The mode adopted is to get a thick crop of corn if possible, and when the crop is a foot high or more, to put weeders in it, who break off and crop and batter down the biggest of the weeds, and leave the others to contend with the crop as nature and the season may rule. As to hariff, where it abounds, they sometimes drag the crop (if wheat,) with a horse drag. Sometimes the weeders make themselves short rakes, and scratch and tear the crop in pieces, as well as the weeds. These methods never did much good; for that which pulls the corn, away, opens the path for weeds to grow again. Where patches of this weed grow through a thick crop of wheat in the spring, nothing better can be done than to crop off the superior shoots within the wheat leaves, and leave the wheat crop as entire as possible, to smother the plants below.

But after a great deal of experience, which I have had in the cultivation of dry-bottomed and deep black mold lands, I recommend short rotations of cropping between longer intervals of grass lay. Nothing else can subdue the weeds, which are so numerous and rampant in such soils.

7. Black Bindweed. *Climbing Buckwheat.* Also called in some places *Bearbind*, or simply *Bindweed.*

Polygonum convolvulus.—Linn.

Botanical Description.—Stem long, climbing, angular, somewhat rough. Leaves petioled, oblong, hastate-cordate, with the lobes spreading and acute. Flowers in lax spikes, octandrous. Styles three-cleft. Segments of the perianth bluntly keeled.

This annual is found in cultivated grounds in various parts of the United States. It is often a companion to the preceding: in the same soils in which it has been introduced by sowing, it runs to as great a length, getting above the corn that is *laid* and covering the crop by patches. The flowers, which appear in various districts from June to September, are white or reddish, and are arranged in terminal interrupted spikes or racemes. The seeds are brown, triangular, hard and smooth, and are quite as nutricious as buckwheat. They are heavy and large enough to resist dressing, and in wheat samples are objected to for the same reason as those of cockle. In oats they are really no objection to the buyer, horses being very fond of them. The farmer, however, has good reason to stand in fear of this weed, on account of the destruction which it brings to his crops, and the injury done to the samples.

8. Shepherd's Needle. This is also known in England by the names of *Venus' comb, Needle chorvil, Beggar's needle*, and *Crow needles.*

Scandix pecten.—Linn.

Botanical Description. Fruit nearly smooth, with a bristly edged beak. Umbels simple, solitary or in pairs. Bracteas jagged. Petals inflexed at the point.

This is a bushy and troublesome annual, especially in barley crops. It flowers from June to September. The seeds are long and bent, of a rough texture and brown color. They are seldom seen in samples of wheat, being a little short of growth; but barley, being mown, must necessarily be infested if they be in the crop, for no dressing can separate them.

This weed has not been introduced to any extent into the United States.

QUEEN BEES—LICE IN POULTRY HOUSES.

Friends Gaylord & Tucker—On looking over the Cultivator for this month, I observe, under the head "Queen Bees," that Henry Palmer denies the existence of a queen bee. Remembering a circumstance which occasioned me to have a different opinion, I will relate it for the information of inquirers.

I had two swarms of about equal age and strength; one of them swarmed twice; the other had the appearance of being ready to swarm when the first swarm came out as above; and although the bees continued to be outside for two or three weeks, yet no swarm came off. One morning as I was looking at the two swarms, which stood near each other on the same stand, admiring what coul be the cause of the difference, out came the queen bee (according to the description I had read of them,) from the hive that had swarmed twice; and having no wish for that to swarm again, and apprehending there was a deficiency of queens in the other hive, I caught her, and placed her at the door of the said hive, where she run in, and in about an hour, a very large swarm came off, which was hived and did well.

I also noticed in the same paper, sassafras wood and leaves, recommended to prevent poultry from being infested with what is called hen lice, which I approve and use; but a more effectual method of killing these insects, is to burn the hen house, I had almost said; I proceed as follows: I take a bunch of hay or straw, tie it to a pole of suitable length to reach the highest part of the hen house; this I set fire to, and while blazing I move it gently around the walls, roof, and roosting places, which I repeat about three times during the warm season; at first I used the precaution to keep a pail of water by me, but I now find it unnecessary, as it is done effectually without any risk. I speak from twelve years experience, and remain your friend. Rob't Sinclair.

Clairmount Nursery, near Baltimore, July 11, 1842.

ST. MOOR FARM.

Editors of the Cultivator—Distinction is natural to the pride of man, and it should be the peculiar care of the tillers of the soil, to allow the *well earned* claim to it of every member of this noble employment, who has improved the art, added to the mass of information on the subject, or set an example worthy the imitation of a neighborhood, a county, a state, or a nation.

The extraordinary results of judicious management on the farm, designated by the name at the head of this article, in a brief period, well deserves to be recorded in the pages of the "Cultivator," the chronicle of the Agriculturist. This farm contains about 1,400 acres, and is the patrimony of Philip St. Geo. Ambler, Esq. the present proprietor. When he took possession of it, it consisted of little else than abrupt red hills, abounding in gullies, many of them very formidable in extent. These hills were separated, *with three or four exceptions*, by narrow vallies of great original fertility to be sure, but which for many consecutive years had been the receptacle of the earth washed from the adjacent hills, which had buried the generous soil far too deep for the touch of the plow share. Situated in a tobacco country, the land had been cleared wherever the soil was found adapted to this plant, and much injury had been thereby done to the convenience and appearance of the fields. The buildings were all in the most dilapidated condition—more than a third of the open land had been turned out—the stock of all kinds had deteriorated, and the crops were barely equal to the support of the farm. This state of things continued until 1834, when Mr. Ambler employed Mr. James F. Satterwhite, of Goochland co. Va., to whom he confided the exclusive management. Mr. Satterwhite introduced the five shift system—three horse plows—and a liberal use of clover seed and plaster. As soon as circumstances permitted, he commenced making manure, and has ever since been applying this indispensable, in immense quantities. This system, with the exercise of extraordinary judgment in the management and application of the labor on which he relied, indefatigable perseverance, untiring zeal, and unremitted attention, have in eight years rendered this farm one of the most productive highland farms in Virginia.

In 1834, the crop of wheat *including* seed, amounted to six hundred bushels. In 1839, the crop, *exclusive* of seed, (upwards of 300 bush.) amounted to two thousand six hundred bushels; this latter quantity was actually delivered in the mill. Every part of the farm, not in cultivation, is now covered with luxuriant grasses. The crops of tobacco, corn, and oats, have increased in proportion. The stock of all kinds, (especially the cattle, sheep, and hogs,) has improved as rapidly as the land; and a very handsome brick dwelling house has been erected during Mr. Ambler's recent tour through Europe, which commenced in August, 1839, and terminated in September, 1841.

Whatever may be thought of these results, in sections of our country where agriculture is more advanced, they are admitted to be unequaled in this vicinity, and therefore are thought worthy of record in your valuable periodical, by a farmer in the neighborhood, who is also your

Lynchburg, Va. April 20, 1842. Subscriber.

PREPARING FOOD FOR SWINE, &c.

Among the various modes of preparing food for fattening swine, I do not recollect seeing in "The Cultivator," the favorite plan of the writer of this note, viz: That of having all kinds of meal from grain intended for fatting hogs, instead of boiling or steaming, put into water in vats or tubs of sizes in proportion to the number fatting, and there remain until fermentation takes place, before feeding out to the swine—not giving any meal to hogs or pigs, until this acid fermentation is observable. In this state I have never known swine to become cloyed by overeating, however freely fed. On farms where cheese is made, I have found, as I apprehend, not only a safety but profit in putting the new whey into the vat where this process was going on. The consistency of this preparation, I think, should not exceed that of good cream. In this way I have seen swine fatten faster than from meal given in any other form, and seen less marks of food having passed the animal undigested, which is often visible when food of a farinacious kind is freely given, unprepared; and I may add, according to my experience, (though on a very limited scale,) the most profitable.

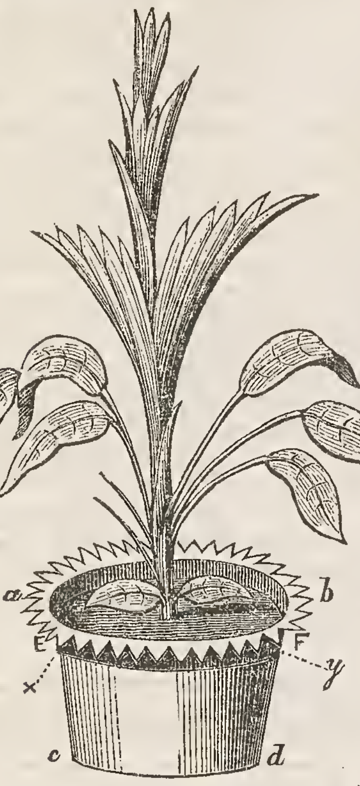
The Yankees of New-England have long since discovered, that the point of an old scythe, rendered unfit for mowing grass, by long usage, or broken by accident, sixteen or eighteen inches long, attached to a handle of wood, at right angles, or somewhat obtuse, serves all the purposes for cutting up corn, that the more formidable machine proposed by our Virginia farmer would—and almost without expense. A Farmer of R. I.

CULTURE OF POTATOES.

Messrs. Gaylord & Tucker—Gen. Beatson's experiments, (page 109 current vol. of the Cultivator,) in planting potatoes, show decisively that potatoes planted six inches deep yield the best; how can that be done unless the ground is plowed six or eight inches deep, as I stated in my article to you some time ago should be done? Your correspondent L. B. L., under the head of Philo Commentator, seems greatly surprised at my plowing the enormous depth of six or eight inches. From my practice, I am satisfied that manure should be mixed well with the soil, to the depth of six or eight inches, for potatoes; but for winter grain it should be left near the surface, and a less quantity will answer; but where I am located, winter grain is not profitable, wheat is an uncertain crop, and rye is not worth raising. The average value of an acre of good potatoes here, for several years past, has been eighty dollars; they are raised for the New-York market. I sold my crop last fall for $1,12½ the barrel, (the barrels returned,) that being forty cents the bushel. I raise the mercers, the rohans will not sell in the New-York market, and the kidneys will not grow here. I plant one potatoe in a hill, about the size of a hen's egg; 500 will make a bushel, if they are planted two and a half feet apart in squares; that will make about 7,000 hills to the acre, of course it will take 14 bushels to plant an acre; too much seed produces small potatoes, the marketable size is more profitable than a greater number of bushels of small ones, as we do not raise them for feeding cattle or hogs; we feed out the small ones only, and the fewer we have of them the better. Different soils and locations require different management, and we must not expect one system of farming will answer every where; our soil and location must be considered before we commence the operations of agriculture.

Yours, &c. Tyler Fountain.

The Garden and the Orchard.



GALVANIC PLANT PROTECTOR.—(Fig. 76.)

Editors of the Cultivator—The London Mechanic's Magazine contains an ingenious application of Galvanism, for the purpose of preventing the attacks of molluscæ on dahlias, and other delicate plants. I send you the above drawing of it, in hopes that it may prove useful to that portion of your readers who are florists, and that some similar arrangement may be devised for preventing the ascent of worms and insects on our fruit trees. The original inventor of this apparatus has tested its utility during 12 months, and not a plant thus protected was injured; while those which were unprotected, suffered severely. The Protector is a conical ring of zinc, 4 inches deep, adjusted to the interior of the flower pot, the top end of which, a, b, is flaunched off about half an inch, and cut into vandyked points; immediately under the flaunch, and on the outside of the ring of zinc, a ring of copper, E, F, is neatly fitted.

In order to use the protector, press the inferior edge of the zinc ring, c, d, into the earth, until the inferior edge of the copper ring, x, y, is about 1½ inches above the surface of the soil. The molluscæ may crawl up the zinc with impunity; but on coming in contact with the copper, they receive a shock which causes them to fall back to the ground. If the larger of this tribe attempt to stretch across and above the copper belt, avoiding contact, they would be incapable of holding by the points. The protector acts in wet or dry weather, and is always in action. There is nothing said in the memoir, respecting the influence of the instrument on the growth of the plants under its protection, but my impression is that the constant electric action must stimulate the growth of the plant, and increase the size and beauty of its flowers.

N. N. D.

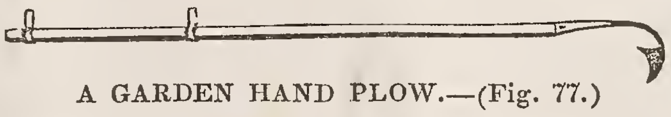
BLACK RUST ON PLUM TREES.

In the June number of the Cultivator, a writer complains of what he calls the Black Rust in Plum Trees, and asks what will cure it. This plague, which is also fatal to several species of cherry trees, came from the southwest, and has traveled to the northeast, and within the memory of the writer, was unknown in New-Jersey.

It is evidently caused by an insect in the fly state, and these traveling only in fair weather, are carried by the prevailing winds in summer, in the direction mentioned. The evil was known in New-Jersey long before it reached New-York. The limb of the tree is stung by the insect, which deposits its egg in the tender wood. An excrescence is formed around the wound in which a worm is hatched, and after a time, eats its way out of the confinement, and no doubt drops on the ground, which it enters, and keeps secured until the next season, when assuming the fly state it renews its operations of laying its eggs. If not assailed until the excrescence assumes the black color, it is too late, for the worm has escaped from confinement and is out of danger from an attack upon its nest. The trees must be watched, and as soon as the limb swells, it must be cut off and burnt. This plan, which the writer has followed, if it does not entirely remedy the evil, will lessen it, so that little damage will ensue; but it is obvious, that as long as my neighbors neglect the means to destroy the insect in the bud, the fly from their trees will reach mine, and lay eggs in them to my damage.

That the insect remains all winter in the same place where hatched, is very evident from the fact that trees partially injured one season, if neglected are much worse the next year. How far paving around trees or hardening the ground to prevent the worm from penetrating to find a winter's residence, and keeping small chickens in the garden to eat them up, may answer, I cannot say. Digging the ground deep just before winter gets in, may destroy this insect as it does many others, but the destruction of the egg is better than either. By this method, the writer has kept his plum trees almost entirely free from the pest in question, but whenever it has been neglected, the trees are sure to suffer.

P.



A GARDEN HAND PLOW.—(Fig. 77.)

Messrs. Gaylord & Tucker—From reading your paper, I discovered much matter, which is calculated to be highly useful to the regular farmer, and also many plans for fine gardens: but as the improved Scotch plow, or any other improved plow (drawn by a span of horses,) would make rather ugly tracks in such fair premises, and as the hoe is rather a tedious and stooping employment, I will endeavor to introduce a new implement, which I have had constructed, and term a *Garden hand Plow.* First, the socket of the plow is 12 inches long, and two inches in diameter at the muzzle, narrowed down quite tapering, as in the drawing above; then 18 inches more must be gently curved—12 inches of this flattened, and a wing 6½ inches wide at the top, and narrowed down to one inch at the point. This wing can be set on either side, according to the hand which a person uses foremost in working. So much for the iron work. Now a staff to fit the socket: have this about 8 feet long, and towards the extremity of the staff, have two small handles attached, at convenient distances, for holding; then buckle a leather strap between the handles, and in working, pass the head and arm through as in slinging a horn or flask. To work this, move *back sideways,* and draw it after you. I can do good work with this plow; and all that I will ask of any one who may try this description of tool, is that they will publish in your paper a better plan if they have one, as I am desirous of keeping pace with the improvements of the age.

A Subscriber.

Wetumpka, Alabama, June 7th, 1842.

THE FRUIT GARDEN.—By David Thomas.

I have derived much pleasure and instruction from the perusal of the essay on the "Fruit Garden," by David Thomas, of Cayuga Co., published in the vol. of Transactions of the State Ag. Society; indeed, so highly have I appreciated it, and believing that others will also, that you must permit me to recommend a republication of the whole, or parts of it, when convenient, in the Cultivator; for it is a rarity to meet with so much valuable information, so perspicuously conveyed, and so well condensed. The value of the essay is greatly enhanced, from the fact that probably few men in our country, are in possession of a larger amount of scientific, and none of more correct practical knowledge, applicable to this subject; and consequently, the utmost confidence may be placed in what he has expressed and recommended.

He has very properly recommended "*lime white wash*" for fruit trees. My own experience fully establishes the benefits derived from its use; he making, however, a qualified exception in regard to the cherry tree, by saying "that the experiment should be cautiously conducted." In what respect he means, we are left in doubt; but I have made no distinction, and have not been able to perceive any injury to follow, notwithstanding the wash has been applied to several varieties of the cherry, and prepared alike with that used for other trees. Nevertheless, since David Thomas has said, *be cautious,* it is well enough to be so, for he has had more than thirty years experience as a professed fruit culturist. If there are any of your readers who are skeptical of the benefit of white washing fruit trees, their doubts would be removed if they could see my own, with the polished smoothness of bark, and healthful appearance they present; indeed, I purposely left several trees unwashed this season, in order to convince my neighbors, and others of its virtues. By the way, when lime cannot be readily obtained, lye of ashes is a good substitute, either destroying the moss which attaches more or less to all our fruit trees; but perhaps the latter is not so effectual in eradicating that variety of the *aphis,* called the tree louse. As has been the case for five years past, my most valuable plumbs this season, have been destroyed by the *curculio,* and I am determined to resort to the remedy another season, proposed by David Thomas, as follows: "Finding many of our trees nearly unproductive, we determined in the early part of last summer to call these depredators to account. Accordingly, we followed the same plan that we recommended some years ago in the New-York Farmer; spread sheets under the trees, and jarred the branches violently. The little marauders taken by surprise, fell down by dozens; and the contrast of colors, enabled us to detect them at a glance. We chose the cool of the morning for this purpose, when they were slightly benumbed; and persevered till we had destroyed nearly 1700. In consequence, all the trees that we visited, bore fruit in abundance; and to prove that our labor was rewarded, a tree that was overlooked bore *three* apricots, while another of less size bore a *half a bushel.*" I could go on and fill my sheet with information as valuable to the farmer, who prizes his fruit, as the above.

I must take an exception, however, to one of friend Thomas' recommendations, which is not in keeping with his kind and benevolent nature, for which he is so much distinguished, namely: destroying birds which pilfer our fruit. He says, "treat them according to their doings. Make *pies* of the robins, orioles, and cedar birds—one chicken is worth a dozen of them for business; but save and protect the blue birds, warblers and sparrows." Now, I am not distinguished for "womanish" feelings, but I declare I have not the heart to kill a bird of any sort; no, not even crows, for they are useful to the farmer, and can easily be prevented or deterred from doing any mischief to our corn fields, by suspending twine at intervals along and within the enclosure. When seeing the cedar bird nibbling at the cherries, often have I said to myself there is *enough* for us both; and with Uncle Toby, when he let go the fly, there is, also, "*room* in the world for us both." No, spare the birds, "nature's songsters," and the farmer's best friends.

But friend Thomas lashes another kind of biped pilferers, in good earnest, and most justly. Hear him: "Unfortunately for the moral character of our population, fruit is too generally considered lawful plunder. The culturist is allowed to have a full and exclusive right to his corn and potatoes,—it would be infamy to steal them,—but no exclusive right to his fruit, if they can get it. Thousands of honorable exceptions to this charge, indeed may be found, but it is not the less true that a great part of our population is tainted, and deserves to be branded with reproach.

"The native fruit of a thinly populated country, growing without culture, and free for all, has doubtless had its share in producing this laxity of morals. 'I would sooner have a hundred Irishmen around me than one Yankee,' was the declaration of a sufferer, whose fruit had been plundered near the line of the Erie canal, when that great work was in progress. But Europeans are generally more exemplary on this point than Americans. Shame on us! When Professor Stowe was in Prussia, where the roads are lined with fruit trees by order of the government, he observed a wisp of straw, attached to particular trees, to protect the fruit: a sufficient guard; but he suggested to the coachman that in America, it might only prove an invitation to plunder. 'Have you no schools?" was the significant reply. Yes, we have schools; but how many where the child is taught to respect his neighbor's property? Too often he acquires literature and vice at the same time. The state of New-York is famous for her schools and her prisons: the latter to supply the defects of the former system, which they do however, very imperfectly. Better let the mandate go forth, that the *morality of the Bible* shall be *one* of the chief objects of instruction. *Teach her children to be honest,* and then with science and literature, a foundation for true greatness and prosperity would be laid."

Now that is what I call capital, and well told, too.

L. A Morrell.

P. S. "Stockport," a town in Columbia Co., and the signature of a very clever correspondent in the last Cultivator, for whose several compliments, I duly appreciate and thank him. He has quite misapprehended me in several particulars, which in my next will be duly explained; want of time forbidding the gratification of doing so at present. *Lansing, Tompkins Co.*

THE PEACH TREE.

Your anonymous correspondent from "The Plains," in Virginia, recommends a pile of stones, 12 or 15 inches high, around peach trees, as an effectual protection against the worm which is so destructive to them. Every such statement should be corroborated by the name of the writer,—especially if it has any thing extraordinary in it. No hoax will then be suspected, and there will be a greater probability of his recommendation being tried. But in this case, even if the prescription be a good one, there are very extensive tracts of country in the Carolinas, Virginia, and probably in other States, wherein it would be entirely useless; for you might travel a long days journey through them without finding even a single stone as big as a hazle nut.

Some two years ago, I myself was tempted to try one of those anonymous recommendations. It asserted that any fruit tree might be made to hold its fruit by paving around it with brick. Having an obstinate prune tree which always dropped its fruit, I forthwith made a brick pavement extending upwards of 3 feet in every direction, from the stem. This has now been standing for two years, but de'il a bit would the tree do any better; the prunes have all dropped as they did before.

Commentator.

CHERRIES—PEARS.

"Messrs. Editors—I propose going into the nursery business extensively, and I wish to know whether the English or improved cherries can be worked upon stocks of the common varieties, as I have been informed they will not succeed unless worked upon the Mazzard or English cherry, and these stocks are more difficult to procure. How will pears do worked upon apples?

F. K. Phœnix."

Delavan, Walworth Co. Wisconsin, 1842.

McIntosh in his late splendid work on the Orchard and Fruit Garden, says in his introduction to the culture of the cherry, that "the best and most permanent stocks are those originated from stones of the wild black or red cherry. The stones of the cultivated kinds should not be used for this purpose. The Morello is often chosen as a stock when dwarf trees are desirable; it is also said to render the tree more productive." The Heart cherries, Mazzards, &c. have a more vigorous growth than the Dukes and Morillos, to which the common varieties belong; and as the improved English cherries mostly belong to the first class, if worked on the latter, an unsightly bulge will be formed at the point of union. That when so worked, they will grow, and bear well, we know by experience, and if grafted low in the ground, the deformity does not appear. The same remarks are applicable to the pear. If worked on the apple, the graft grows more rapidly than the stock, and though it bears more quickly than if worked on a pear stock, it will be much shorter lived. In all propagation of this kind, the stock should be worked as low as possible, and some have preferred grafting directly upon the root. Pears succeed best on free or wild pear stocks, producing durable trees, and fruit of superior quality. They will also succeed on stocks of the crab apple, quince, or thorn.

ROSE BUGS ON THE GRAPE.

MESSRS. EDITORS—I have on my farm about 1000 grape vines of different kinds, which were set out last year by the gentleman who then owned the place. Though still so small, (from having been cut down,) as to require nothing more than poles the present year, they promised to yield abundantly until the rose-bugs made their appearance, when I discovered that they attacked them so greedily, that unless I found some means of stopping them, my hopes of a crop would be destroyed. At first I tried going through and picking them off every morning, but soon found this to avail little against the myriads of enemies. When I received the June number of the Cultivator, I found in it the notice of the discovery that whale oil soap was an effectual remedy against these disgusting insects. I accordingly procured a jar of it, and a syringe, but did not find it to answer the purpose, however strong it was mixed. A few of the insects on which I tried it died, but most of them recovered, and the moment the leaves were dry, they were again covered with bugs. However, I did not regret procuring the soap, for I found it perfectly effectual in destroying catterpillars, red spiders and other insects. The rose-bugs have now mostly disappeared, and at least three-fourths of my grapes have diappeared also. Now I expect my vines to be large enough to yield abundantly next year, and I am anxious to learn some means of saving them. If I were to plant roses about my grapes, would they prove sufficiently attractive to draw the bugs from the grapes? I have thought this probable, from the fact that one of my neighbors has a grape-vine in his yard, which has abundance of roses near it, and his grapes have been untouched. If you can give me any information on the subject, you will greatly oblige your constant reader. H. W. S. C.

Burlington, N. J., June 24, 1842.

We are unable to answer the request of our friend satisfactorily; and hope some of our subscribers acquainted with the culture of this fruit, will favor us with the results of their experience in the matter. The rose is doubtless the favorite food of the bug alluded to, and it was for the purpose of destroying him on this shrub, that Mr. Haggerston invented the remedy of whale oil soap, and which has been entirely successful in multitudes of instances. Is it not possible that a strong decoction of Hellebore would be as fatal to these insects as it is known to be to most worms and catterpillars? But we leave the subject to our correspondents.

RHUBARB.

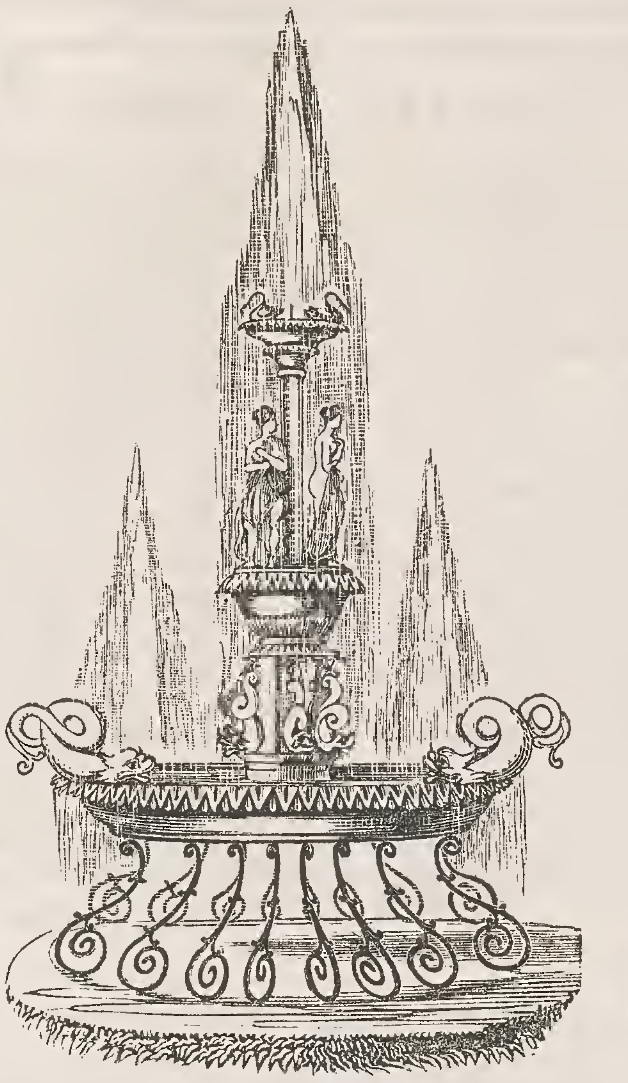
MESSRS. EDITORS—I see published in the April number of the Cultivator for the present year, an account of the proceeds of the "Retreat Garden." The article that attracted my attention most was that of "Rhubarb, 300 lbs" Is it *Rheum palmatum* that is spoken of? Was it raised at the garden for medical purposes, or for the table? How is it cultivated and manufactured for medical use, and how for the table? How long is it in coming to perfection, and is it reared from the seed or the root?

A READER OF THE CULTIVATOR.

Croleys, Arkansas, 1842.

The Rhubarb mentioned in the article alluded to by our correspondent, we presume was the Rheum rhaponticum, and not the Rheum palmatum; and that it was raised not for medical but table use. For a long time it was supposed there was but one kind of Rhubarb, and all are now used for medicinal purposes, but the Palmatum is rather the most efficacious. The Rhubarb plants of all the varieties, may be grown from the seeds or the roots. A root of four years old, will afford twenty or thirty eyes, each one of which will produce a plant, half an inch of the old root being sufficient to ensure germination. In Tartary and China, where Rheum palmatum is extensively grown for medicine, the plants are allowed to grow until the fourth year, when the roots are taken up, cleaned, sliced across, and the pieces laid on long tables, where they are frequently turned for a few days. They are then hung on cords, so as not to touch each other, and dried in the shade. When fit for market they have lost about seven-eighths of their weight. If cultivated for the table the stems (which are the parts wanted,) should not be cut away until the second or third year, or until offsets have begun to form, and never too closely, for though the plant may live, the vigor will be lost. There are at the present time, a great variety of hybrids, originated from the several kinds of Rheum, which for culinary purposes, are vastly superior to the old kinds. We have one of these hybrid varieties, grown from seeds sown two years since, which has the present season thrown out stems of more than twelve inches in length, and four and three-quarter inches in circumference, and these large stems in several instances have been broken down by the vast leaves they were obliged to support.

ROSS' PHENIX STRAWBERRY.—A notice of this new and valuable seedling strawberry, with an engraving, will appear in the next number of the Cultivator.



CAST IRON FOUNTAIN.—(Fig. 78.)

Having been furnished with an engraving of the Fountain (fig. 78,) for which a gold medal was awarded to Mr. D. L. Farnham, of New-York, at the last Fair of the American Institute, we copy the description of it from the report of the committee on Garden Ornaments, of which ALEX WALSH, Esq. of Lansingburgh, was chairman:—"This superb article might truly be said to form the climax of garden ornaments. It was got up by Mr. D. L. Farnham, of New-York, in a style which would do honor to any country, and displaying a taste and skill which richly entitles them to patronage. It consists of an extensive and lovely basin of clear water, in which gold fish were sporting over a bottom embedded with shells and aquatic plants, and surrounded by four Tritons sitting on the edge, each throwing up a jet of water like a burnished silver wire, to the height of six or eight feet, and meeting another jet from the center, the whole falling into a little basin, which forms the cap of a highly ornamental column of three or four feet high, from which it trickled over the edge, falling down on three female figures of great beauty, which surrounded the sides of the column, and thence returned into the fountain. A few tasteful gardens scattered about the country, each exhibiting such a fountain, would do much towards awakening a better taste in rural matters. Where there is a small stream of water near a garden, especially if any part of the stream is above the garden level, the cost of such a fountain will be but trifling, and even where the water must be supplied by artificial power, there are abundant ways and means to facilitate the procuring a cheap supply."

THE AMERICAN ALOE.

MESSRS. EDITORS—Please add to past favors, by an insertion of the subjoined; it is from my book of extracts and occasional remark: "*The Horticultural Garland, or a Boquet of useful and amusing trifles,*" principally relative to the garden: and oblige yours, &c.

MAGNOLIA.

THE GREAT AMERICAN ALOE—*Agave Americana.*

THE flowering of this valuable plant, used to be considered as a very rare occurrence, and as not taking place till it attained the age of one hundred years: but the specimens being now numerous, the delay in flowering is found not to be fact.

The height of the leaves of the Agave are from 4 to 6 feet, with its branches extending about the same circumference; the leaves are a foot wide and from 8 to 10 inches thick; the edges are prickly, and the points are armed with very strong spires, and bend towards the ground.

This plant bears some resemblance to the pine apple in its leaves, only they are thicker, stiffer, and less numerous: The outside leaves stand around in a star, or crown; and the middle consists of a thick spire of leaves, so firmly twisted together, that the edge of the one impresses, the other with a seal.

The flowering-stem rises from the centre of the tuft of leaves from 30 to 40 feet: branches that bear the individual clusters of flowers come off very gracefully in double curves, which have the bend downwards near the stalk, and upwards near the flowers. The appearance not unlike that of a majestic candlestick, with successive branches, for a great portion of its height, and tall as the stem is, the form of the leaves give it the appearance of great stability. The plant is a native of tropical America, but it abounds in the dry and warm places of the south of Europe, along the sandy shores of the Mediterranean, and esppecially in the south of Portugal, and in the dry districts on the confines of Spain.

Like most plants which grow in very hot and dry places, the rind, or epidermis, of the leaves resists powerfully the action of heat, so that the interior of the leaves is very juicy. The juice contains a good deal both of alkali and oil, (the ingredients of which soap is composed,) so that in some places of the peninsula, it is used as a substitute for soap; the pulp forming a lather with water. Cattle are also fed on the sliced or bruised leaves, at those seasons when the pastures are burnt up by the drouth. So that it is a useful plant, even in those parts of Europe, where the vegetation of more temperate climes is apt to fail.

In Mexico, it is far more useful; and is, indeed one of the most valuable products of the soil, answering some of the purposes which are answered by rye in the north of Europe, barley in the middle latitudes, and the vine towards the south. The wines and spirits of the country are prepared from it. Its leaves make excellent cordage and its roots supply a brown sugar called dulce.

☞ THERE is one of these plants in the green-house of Gen. STEPHEN VAN RENSSELAER, of this city, which is expected to flower in the course of this month. We hope to be able to give a correct drawing of it, as it appears when in full bloom, in the next No. of the Cultivator.—EDS.

Silk Culture in the United States.

THE SILK CULTURE.

MESSRS. GAYLORD & TUCKER—The vast importance of the silk growing business in this country, cannot fail to awaken deep interest in the mind of every one who possesses a spark of patriotism, and is acquainted with the subject; and that subject having for several years occupied a considerable portion of my attention, I feel impelled by a sense of duty, and no less by natural inclination, to offer a few remarks on it, through your widely circulating paper, which privilege you will possibly grant, on the score that this is the first time I have troubled you.

There is, perhaps, no other branch of rural industry which has proved so infallible a source of national wealth as silk growing; and there was never before a time and place where it was introduced under such a concurrence of favorable circumstances, as meet to invite its introduction into this country at the present time.

The immediate success, however, of this vast, but not difficult undertaking, depends almost entirely on the plan adopted, or rather on the course pursued at the commencement. A large fleet starting together for a foreign port, if they pursue with unity of purpose and of action, the most judicious course, will probably arrive together, in due season, at the point of destination. But if each takes the course which uninstructed fancy may dictate, some of them may attain that point some time or other, and some, probably never. Thus, in the silk business, though it must ultimately succeed, at some period or other, its benefits to the nation at the present crisis of pecuniary, or rather impecuniary embarrassment, depend entirely upon the correctness of its first operations.

That the United States will arrive at the summit of perfection in manufacturing silk, I have no doubt, but like all other great operations of a similar nature, it will be by slow degrees at first, but progressing with constant acceleration, will in some few years enable us to bid defiance and a final adieu to the silk looms of Europe and Asia.

But however desirable this result, and whatever national benefits may be derived from the manufacture of silk, the present policy urged by the strongest dictates of common sense, is to apply our united efforts to the growing and preparing raw silk for exportation.

This embraces two distinct branches, growing the cocoons and reeling. The first naturally belongs to agriculture; and requires no more skill than growing a crop of turneps or potatoes. It requires no capital, and may be commenced and successfully pursued by the poorest family, and is by far the most profitable branch connected with the silk business. But reeling not only requires skill and judgment, and a greater degree of expertness and dexterity of the eye and fingers, than almost any other manual operation, but it also requires specific instructions to prepare the silk in such manner as to command a sale in the European markets.

In this state of things, if we wish to take the path that leads, if not to immediate national wealth, at least to speedy relief from national as well as individual embarrassments, it lies open and plain before us. Let every family, and every individual, who can feel any confidence in the business, (and they must be ignorant of it, or very stupid who cannot,) grow as many cocoons as they can, without derangement to other necessary concerns. As soon as it can be effected, let filatures be established in such number and in such situations, as to furnish convenient markets, where all the cocoons can find sale at their fair value. These filatures must be furnished with skillful reelers, who will instruct others as business increases; and the silk thus reeled, when prepared in such manner as to meet the approbation of the European manufacturers, will be purchased by them with avidity, and bring a return of wealth, not in bank rags and lamp black, but in gold and silver. As new reelers become instructed, many will return to their homes and produce domestic reeled silk, perhaps equally marketable with that reeled at the filatures. But the samples of reeled silk, now being exhibited from time to time, though they afford cheering evidence of what may be done and of a spirit to do it, yet from their heterogeneous nature and from other causes, they would be of little or no use to the manufacturer, and of course would bring nothing. Let us see for a moment, what would be the result of our plan.

There are 17 millions of inhabitants in the U. States. Suppose one person in every thousand should engage in growing cocoons, and should appropriate one-fourth of an acre each, to the multicaulis, to feed the worms. This with skilful management, would produce 100 bushels of cocoons, which would yield more than 100 pounds of silk. But suppose we deduct one-half, and say fifty bushels. This, at $4 per bushel, would yield the grower $200 for one quarter of an acre of ground, and less than two months labor; except in preparing accommodations for the worms, which of course will be kept for future use. The cocoons will yield 50 pounds of silk, which if well reeled, would command from $6 to $7 per pound. But say only $5; $250, the price of 50 pounds of silk, multiplied by 17,000, would amount to $4,250,000, and this for the first year.

It has been proved by numerous instances, that the bounty granted in this and several other states, is equal to the necessary expense of growing the cocoons, leaving the proceeds of sales a nett gain. It would be strange if such encouragement did not induce each adventurer to double the quantity of land employed, and consequently of silk produced, annually, for at least four years, as this would only require two acres for the last year. The aggregate of silk the last year, at the same ratio, would be 6,800,000 pounds, and the return in cash, $34,000,000. This vast sum can be annually realized from the employment of one person in a thousand in an easy and pleasant business, not over three months in each year, with the assistance, the third and fourth years, of a few children to each person, who would otherwise earn nothing.

This is no exaggerated calculation, merely to make a delusive show on paper. There are persons now doing the business on a more extensive and equally profitable scale, and there are many more than the proportion I have named, who are anxious to engage in it. There is no other article we can produce, which would command so fair and so steady a price in the European markets, as silk; and those markets could not be glutted till it had raised our nation to independent wealth.

When we are supplied with good raw silk, the manufacturing interest will commence its growth spontaneously; and though, as I have stated, by small and simple beginnings, the natural acceleration of its progress will enable it in due season to reach its destined perfection. The course I have described will inevitably produce the results I have named, and probably in a much greater ratio. But if its early operations are left to the guidance of the promiscuous dictates of unassociated and uninstructed individual fancy, we may, perhaps in a few centuries, arrive at equal perfection in the silk manufacture, with the Chinese, which by the proper course, would be surpassed in a few years.

The laudable ambition displayed in samples of sewing silk, though it shows conclusive evidence of the power of ultimate success, if properly directed, is, for want of such direction, rendered perfectly useless in a public point of view; for the best sewings can never be made without machinery and the skill acquired by experience. With their aid it is now produced in perfection, from the very poorest quality of silk, and with a facility with which domestic labor cannot compete. The best silk is worth more in its raw state from the reel, than if twisted into even good sewings. Besides, even a national monopoly of the entire business of sewing silk, would be, as an object of national importance, but as a grain of wheat to a bushel, compared with the production of raw silk for exportation.

The manufacturers want no twist given at reeling, nor would they accept it so twisted, at any price. The twist to suit each occasion, is given by the silk throwster, who has machinery for that purpose. The various machines which have been sold throughout the country, however they may have answered the purpose of their ingenious constructors, can be of no earthly use in reeling silk for market; for every one acquainted with the subject, well knows that reeling and twisting silk cannot be done to any advantage by one and the same operation. This may meet the disapprobation of venders of those machines, but I feel it an imperious duty to undeceive the public, and I pledge myself to prove what I have stated, by the experience of all Italy and France, if so much proof is necessary. S. Blydenburgh.

SILK CULTURE—REELS, REELING, &c.

The most difficult part of the whole business of silk making, is that of reeling the cocoons; without which, all the previous operations will have been fruitless. It is at this point, that thousands of persons who have begun the culture of silk, under high hopes and expectations, have been arrested in their progress by what they called insurmountable difficulties, and abandoned the whole business in despair; there being no market accessible to them for the sale of the cocoons. In vain have they been exhorted to persevere in the trial with patience and industry for a few days—in vain have they been told, that the devotion of one week's time, and half a dozen pounds of cocoons, would be sufficient to teach them the art. The process seems so tedious, the result so trifling, that, after a few hours trial, they give it up, and thus ends their career in the silk culture. Thousands of instances of this character have occurred; not more than one person out of every hundred that have made the trial, has persevered to the end, and really learned to reel silk. It is to this cause that a large portion of the obstruction to the progress of the silk culture is to be attributed. Thousands of bushels of cocoons are stowed away in garrets and out-houses, and eaten by roaches and mice, in the United States, because the producers had not perseverance enough to learn to reel. Had each producer of cocoons learned to reel, and reeled the cocoons he produced, he would not have abandoned the business, but would the next season have commenced on a larger scale, and with greatly increased prospects. For the encouragement of those who wish to learn to reel, I can and do assure them, that, when any intelligent person has persevered for one week, he has invariably become an expert reeler in that time. Many have become so in less. Any person, therefore, that will devote one week and five or six pounds of cocoons, steadily and perseveringly to the object, will be certain of accomplishing it. It requires almost Job-like patience, but patience was never better paid for. Let this be an invariable rule with all who would learn to reel: Take 5 or 6 pounds of cocoons, set apart one week of time, with a determination to *waste* all the cocoons, if necessary, and to allow of no interruption, during the time, and then go ahead. If, in two or three hours you find yourself making a good thread, all the better; but don't be discouraged if you presently find that thread becoming worthless from some cause or other, but take it off the reel and begin anew. Who ever heard of a young woman learning to spin cotton, wool, or flax, even in one week's trial, or in a month's? Why, then expect to perform a much nicer operation *by intuition?* Persevere, then, and you will learn. Let me, for further encouragement, inform young beginners, that I have taught many persons to reel by writing one letter to them, describing the process, which letter forms the basis of the following instructions:

The Silk Reel.—The substance of the following remarks has been published by me in various forms, at least twenty times, in the course of the sixteen years I have devoted to the business, and I have as yet seen no cause to change a syllable of them. Indeed, my opinion has been sustained by the experience of every successive year, and by every observation. The Reel most proper for the purpose, is the one established by the Piedmontese government, and now well known here by the name of the "Piedmontese Reel." Reasons *are* as "thick as black-berries" for this opinion. Its construction is peculiar, by which it secures several important points in raw silk. By means of its vibrating bar, it lays the threads obliquely across in such manner as to prevent adhesion by means of the still wet gum. It draws two threads at a time, and they are wound around each other, between the plate and the guide wires, on passing up to the bars of the reel, in such a manner as to compress the otherwise loose fibres of each other into a solid cylindrical thread, without twisting, which is important, as the raw-silk can then be used as floss, or twisted more or less to suit the various purposes for which it may be wanted.* Our countrymen seem, however, disposed to reject them; or rather think that a compound machine, that will reel and double and twist at the same time, is better, and hence there are various contrivances for this purpose. But I feel it incumbent upon me to urge again upon silk culturists the reasons that have actuated me in rejecting everything of the kind. There is no principle better established than that of the economy of the division of labor. So well do manufacturers understand this, that they will not even allow one machine to spin a perfect thread—they first pass it through one machine that forms it into a sort of loose rope, and then through another to spin it into the thread. As to reeling silk, the object is to produce raw silk in the simplest possible form—that any sort of goods may be made out of it afterwards. But even supposing that simple sewing silk is ultimately intended to be made, it is more economical then, to reel it first, and double and twist with other machinery afterwards. For mere family purposes, the reeling and twisting machines may do very well; but for commercial purposes, the silk must be reeled in a manner similar to that produced by the Piedmontese reel, and that, or some reel producing the same results, must ultimately be adopted by us if we ever become a silk growing people. All staple articles of commerce must have some fixed and uniform character as a standard, all deviations from which deteriorate its quality. Why does the raw silk of China sell for a less price than that of Piedmont? Simply, because it is not reeled like the latter. Its *fibre* is every way equal to that of Piedmont; but its reeling is so slovenly, that much of it is wasted in working it up.

[The pamphlet from which Mr. S. wishes us here to make an extract, has not come to hand.]

Waste Silk and Perforated Cocoons, may be worked up as follows. Put the cocoons into a bag, put it into a boiler, with rain or river water sufficient to cover the bag, and put one quart of good soft soap to every four pounds of cocoons; boil from one to four hours, depending on the age of the cocoons. If they are fresh, one hour's boiling will be enough—if a year old, four or five hours will be required. Rinse them in clear water, hang them up to drain. When well drained, they may be spun like flax on the flax wheel, by holding the cocoon in the hand, and spinning from the perforated end. The silk comes entirely off, leaving the shell of the crysalis bare, and makes a most beautiful article for stockings, mits, &c.

This concludes what I have to say on the subject, unless information be required on some particular point on which I have not been sufficiently explicit, in which case I shall, with much pleasure answer any interrogatories that may be directed to me either privately or publicly

Baltimore, July, 1842. Gideon B. Smith.

Domestic Economy.

ENGLISH AND AMERICAN CHEESE.

Messrs. Gaylord & Tucker—I am about to write on the subject of a cheese dairy. I must inform you that I have no practical knowledge in cheese making, yet I acquired much information from the best makers in the vale of Gloster, England, from those who were celebrated for making the best double and single Gloster cheese. Some of the best dairies were owned by my relatives, and as I was always inquisitive on practical subjects, I hope my information may prove beneficial to our cheese makers.

Whenever I make use of the term milk-cheese, it will be understood cheese made from milk without the addition of cream, to contradistinguish it from Stilton or Chedder, which have the cream of one milking added to the milk of the following. The cheese of these dairies sell for three times as much as the best milk cheese.

I was induced to write you on this subject, from having read in your February number, first page, some observations of your English Correspondent, T. C. Peters, Esq. He observes "that our cheese, sent to England, were too thin and flat, and that our flat cheese present too much outside for their weight." This objection may be true, yet I think your correspondent must have been misinformed, as I never heard any such objection made by any consumer, maker or seller, in England. It is a well known fact that no two counties in England make their cheese of the same thickness. The Cheshire, the most commonly used at public tables in England, are large and thick; the North Wiltshire are are small and thick; the double Gloster are thin and flat, weiging four to the 100lbs.; the single Gloster are thinner than any cheese made in this country, yet the cheese of the best dairies of this make, sell twopence per pound higher than the Cheshire, and this accounts for its being so seldom used at public tables. Besides, cheese eaters in England seldom cut off any rind; they merely scrape the rind clean and eat it with the cheese, so that in a cheese of forty pounds, it could not make half an ounce difference whether thick or thin.

Those who often dine at farm houses in England, will be sure to hear the tale of a wealthy gentleman who made choice of a wife from three beautiful farmers daughters by their eating cheese. He had resolved to marry one of the three, but as they were all equally beautiful and accomplished, he was at a loss which to choose until he was invited to dine with the family. Cheese is always the last thing eaten at dinner in England; and he observed one of the daughters to cut off a thick rind which she left on her plate, this one he considered extravagant; the second one eat the cheese rind and all without scraping; this one he concluded must be dirty; the third one scraped the rind clean and then eat it, and to this one, as being clean and economical, he was married.

I have eaten as good made cheese in this country as any of the best English make; but it is not so commonly found in our market. During the last war I bought a sage cheese, made in Narragansett, equal for flavor and richness to any milk cheese I ever eat in England. About ten years since I had a double Gloster cheese sent me as a present, and I had just then tasted a cheese weighing forty pounds, made by a Mr. Rockwell, of Goshen, Connecticut, that I thought rather superior to my English. I therefore sold the English cheese for $18\frac{3}{4}$ cents per lb., and bought one of Rockwell's for $12\frac{1}{2}$ cents. As some of my English friends knew I had received a fine double Gloster, I made cuts from the Rockwell and sent them around as presents; they all speak of that beautiful cheese to this day, and regret they cannot obtain a supply of such. We have for the last year eaten of cheese made in this state, by a Mr. Root, fully equal to any milk cheese of the best English make. There is one error in the making of this cheese, that scarcely any two in succession have the same flavor, and had I tasted of the same cheeses in England, I should consider they were made at two distinct dairies. This proves that there is a want of system in the maker; for if the same conditions were observed in the making, they would be of uniform flavor.

The first object with a dairy farmer should be to lay in a profitable stock; such as will give a good quantity of mik, and rich in quality. The quality is strictly to be attended to, as some cows which give an unusual quantity will afford very little cream. I once owned two cows in England; one of them gave more than four gallons at a milking, when in full milk, and the other less than three; yet the milk of the last made more butter than that of the first. I read in one of your Cultivators, that your correspondent had made twenty pounds of butter in a week. This would be considered in any country a first rate dairy cow. I knew a farmer in England, who boasted he had a cow that would make twenty-one pounds of butter in a week; another farmer bet him a pipe of port wine that his cow would not do so on the following week, and the latter won the bet, as she made only twenty and a half pounds. I more than once partook of the port wine at the table of the winner.

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* Has our correspondent ever used Jones' Silk Reel? It appears to us to possess all the advantages here attributed to the Piedmontese Reel.—Eds.

The next object to be attended to in the dairy farm, is to provide a proper change of pasture; for if cows remain too long in one field, they will fall off both in quantity and in the richness of milk. Any one who will attend to cows when feeding, will observe that after roaming over a field for a few days, how choice they will become, and how they will wander about to obtain a bite of fresh grass; as the farmers say, they will blow over it. Let them again be observed when they are placed in a fresh field, how eagerly they feed, how soon they fill themselves and lie down to chew the cud. A dairy farm should be so divided as to afford a fresh field of grass at least once a week, giving time for fresh grass to grow in the first fed field by the time the cows have to return to it. Some few farmers mow the grass and feed them in yards, as they consider it more economical.

The next thing for the owner to attend to is the milking of the cows. Every drop of milk should be drained from the udder at each milking, for two reasons, that the last pint taken from the cow will make more butter than the first quart, and that the cows will afterwards fail to give just as much milk as is left in the udder.

We now come to the making of the cheese. The rennet used for curdling the milk should be of uniform strength, and the same quantity uniformly used for the same quantity of milk, enough to turn the milk to a firm curd and no more; for if too much be used the flavor of the cheese will be injured. The breaking of the curd is considered an important item in cheese making. Many old dairy farmers make their dairy maids use tin slices for breaking the curd, having discovered that breaking with the hand forces out too much of the cream. To keep all the cream in the curd is a grand desideratum in making rich cheese. When the curd is placed in the vat, and covered with the cloth, the pressure given should be light at first, and screwed down as the curd hardens. If too much pressure be given at first, the cream will be forced out of the curd, and the maker have a poor cheese. The cheese whey in England is set in pans to raise a cream for making whey butter, and those who make much good whey butter will make poor cheese, proving that the cream which should be in the cheese has been forced by mismanagement into the whey. After the cream has been taken from the whey, the remainder is given to the hogs. I have said nothing relative to the temperature of the milk when the rennet is added to it, as I never knew a farmer who used a thermometer. Cheese are always made in the warm season of the year, and the only rule I ever noticed to be observed, was to strain the milk when brought in, and add the rennet immediately.

When the cheese are made, they are placed on shelves in a cheese room. The cheese are turned every day and wiped with a dry linen cloth. The room should be so secured, that no vermin can make their way into it. They have a wired window at the north end of the room to keep it cool.

Wm. Partridge.

New-York, July 16th, 1842.

RECIPES.

Washington Cake.—This cake derives its name from the fact that it was a great favorite at the table of General Washington; the last two years of his life, it always formed one of the delicacies of his breakfast table, and is considered one of the standing dishes at a Virginian dejeune.

Recipe for Making.—Take two lbs of flour, one quart of milk, with an ounce of butter heated together, put the milk and butter into the flour when it is about luke warm, add a penny's worth of yeast, 3 eggs and a tea spoonful of salt, place it in pans over night, and bake it in the morning, in a quick oven for three quarters of an hour. S.

Recipe for American Plum Pudding.—Take one quart and a pint of whortle berries, wash them and let them drain through a sieve; to this put a pint and a half of molasses, dissolve a tea spoon full of pearl ash in warm water and stir it in the molasses until it foams, then stir in flour enough till it becomes the consistence of pound cake before it is baked, add spice to your taste. Tie the batter in a bag, and let it boil 3 hours—serve it up with sauce to your liking. S.

Another—Take two-thirds teacup of butter, four cups of flour, five eggs, half table spoon of saleratus, half cup of sugar, and 3 cups of sour milk. Rub the butter and flour together; add the fruit after the other ingredients are well mixed. Bake one and a half hours. Serve with sweet sauce. The quantity of fruit from half pint to a pint.

To preserve Currants.—Gather currants when green, separate them from the stems, and put them in bottles, which cork closely, and place in a cool part of the cellar. Currants may be kept fresh and green in this manner 10 months or more, and will make excellent pies in the winter and spring. A.

Cure for the Sting of Wasps, &c.—Take a leaf or two of the broad leaved plantin, (plantago major,) and bruise it, by rubbing it on the part stung, and in ten minutes rubbing all pain will cease. A.

To restore rancid Butter to its original sweetness.—Churn the butter with fresh sweet milk, in the proportion of 3 lbs. butter to half a gallon milk; it is said that this simple process will restore rancid butter to nearly its former sweetness. A.

Veterinary Department.

FOOT ROT IN SHEEP.

Messrs. Gaylord & Tucker—In the February No. of the Cultivator, your correspondent, Mr. S. W. Jewett of Middlebury, Vt., informs us of the effect of blue vitriol in preserving timber, tested by keeping vitriol water in a trough for sheep to pass through, that were affected with the foot rot. Will he inform us whether it effected the cure, and if so, the length of time necessary to do it, and how frequently it was necessary for them to pass through the vitriol water, and in fact, all that is necessary to be done to make it effectual. And if any of our brother farmers have found out a way to cure it, so that they will stay cured, they will confer a favor on me, and probably on some others among the numerous readers of the Cultivator. It is a disease I have been dreadfully annoyed with, for a few years past.

Delphi, Feb. 5, 1842. **Richard Taylor.**

"**A Dairyman Farmer**," at Trenton, Oneida county, gives us a detailed account of several severe cases of foot rot in sheep, successfully treated by him last season. The disease had progressed so far before he was aware of its existence, that the feet were filled with insects, and the animals entirely helpless. With a pointed knife he picked out as many of the larvae as he could, and then by pouring in spirits of turpentine, soon cleared out the remainder. The holes in the feet and between the hoofs were then filled with pledgets of tow and tar, and around the whole foot was wrapped a strong tow cloth secured above the fetter lock joint. From attention to the manner in which the disease occurs, it appeared that the openings always existing between the claws for the discharge of matter, had by some means become obstructed in the first place; suppuration, and the discharge of an offensive matter that attracts the flies, follows, and the larvae by their presence increase the evil rapidly, and soon destroy the animal, if not removed.

CURE FOR THE SCRATCHES.

Take about two quarts of blood from the neck vein of the horse, wash the feet affected with strong soap suds till perfectly clean; let them dry; then, having dissolved one-fourth of an ounce of corrosive sublimate in about one pint of strong spirituous liquor, pour about one table spoonful on each affected part. Two or three applications, after once bleeding, will effect a cure. I have often tried it and have never failed. W. F. C.

Snow Creek, N. C., Dec. 1841.

CURE FOR JOINT OR SINEW WATER.

Burn a cork to a coal—pulverize it well, and put the dust into the wound. I have made use of this remedy frequently, and have never known it fail. Try it when needed. **Jabez S. Smith.**

CURIOUS EFFECT OF NITRATE OF SODA.

In a late number of Lindley's Chronicle we find a communication from a "Farmer," in which he states that about four weeks before the time of writing, he applied upon two acres of grass land, 1 cwt. of nitrate of soda to each acre, and upon one acre 20 bushels of bone dust; that he has since kept cattle in the enclosure, and has lately found that the milk from cows fed in it will not keep through the day, the cream curdling as though acid had been added to it. He inquires whether this effect can be caused by the acid in the nitrate of soda becoming decomposed after being eaten by the cattle; and if it could arise from this cause, whether in adding sulphuric acid to manure to fix ammonia, it would not be necessary to keep it out of the reach of cows. Heavy rains followed the application of the nitrate.

Professor Lindley doubts whether the nitrate had any thing to do with the milk curdling. We think if the vessels in which the milk was set, had been daily thoroughly scalded and cleansed, no such curdling would have occurred. In former times, women, not over neat, suffered from having their milk curdle, but they were in the habit of charging it upon witchcraft; a cause about as probable as the one supposed by "Farmer."

Salt and Plaster in Michigan.—The inhabitants of Grand River Valley, and indeed that state generally, have reasons for self-gratulation in the discovery of abundant supplies of both salt and gypsum in that part of the state. The salt is made from water of good quality, obtained after several months' boring, at the Grand Rapids, by direction of the Hon. L. Lyon, and the salt is of fine grain and purity of crystal. We have seen some specimens of the Michigan plaster, and judging from these samples, there can be no doubt of its value, or the great influence it is destined to exert on the agriculture of a part of our country, the soil of which in the main, is of that kind most benefited by its use. Coal, iron, salt and plaster are now numbered among the products of Michigan.

SITUATION WANTED.

A SITUATION WANTED, by a young man lately from Scotland, who has been regularly bred to agriculture in all its branches, and understands the rearing and feeding of live stock, as is practiced in one of the best cultivated counties in Scotland, and can produce unquestionable certificates as to his abilities and moral character. He would be willing to make himself generally useful upon a farm. Address J. R. office of the Cultivator, *post paid.* *July* 28, 1842.

NOTICES TO CORRESPONDENTS, &c.

Communications have been received during the month of July, from A Dairyman Farmer, G. B. Croft, N. Reed, S. Blydenburgh, H. W. S. C., Quercus, P., An Onon. Farmer, J. Laidley, R. Sinclair, Alex. Ross, John Beach, G. P., Joseph Henry, J. H , H. A Pitts, A Reader, L. A. Morrell, T. C. Peters, M. L. Colton, S Holden, J. J. Thomas, Agriculturist, E. Cornell, A Young Farmer, Wm. Partridge, Magnolia, W. H. Sotham, S. W. Jewett, T. W. Bray, Norman's Kill, L. D. Clift, A Farmer, Commentator, G. B. Smith, T. Fountain, H. A. P., Franklin Co., C. Merriwether, R. S. Hardwick, A. Staten Islander, D. Y. Mitchell, R. North, Jr., S. Hitchcock.

Received from **Wiley & Putnam**, booksellers, New-York, Parts 1 and II, of Brande's "Dictionary of Science, Literature and Art."—From the author, Philadelphia, "The Farmer's Land Measurer," by **James Pedder**, editor of the Farmer's Cabinet—also "The Yellow Shoe strings," by the same gentleman. [These works were received ten weeks after the date of the note accompanying them.]—From Prof. **Henry**, Princeton College, two Reports on the "Diseases of Wheat," and on the "Specific Identity of the Fungi producing Rust and Mildew," by the Rev. J. S. Henslow, Professor of Botany in the University of Cambridge, England.—From R. D. **Owen**, Esq. New Harmony, Ind. portrait of Berkshire sow Delilah.—From A. J. **Wynkoop**, Esq. the Constitution and By-Laws of the Chemung Co. Ag. Society. From **The Spectator**, Washington City, "Memorial of Joshua Leavitt," on the subject of the revision of the Tariff, a pamphlet of 160 pages.—From the Editors, the numbers of "The New Farmer's Journal," for June.

☞We give this month, "A. B. A.'s" reply to Dr. Martin, which must close the controversy in our columns. We shall next month publish "An Onondaga Farmer's reply to Mr. Bickett, which must also close *that* controversy.

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SILK REELS.

THE subscriber has constructed a Silk Reel, which he believes (perhaps because it is his own invention,) possesses advantages over any other reel in use. Its basis are the same principles as those of the Piedmontese reel, no doubt the best reel ever heretofore in use, (the patent inventions for reeling and twisting, to the contrary notwithstanding.) But it is not only rendered more convenient in its size and form, but several specific improvements in its essential operations, which improvements have had the sanction of a skillful Italian reeler, who has recently arrived, bringing his reels with him. Persons disposed to purchase reels, are invited to call and give the above reel a fair inspection. No. 9 Chambers st. New-York.

July, 1842. S. BLYDENBURGH

BERKSHIRE HOGS AND PIGS.

THE subscribers would give notice to persons wishing to procure pigs, or breeding sows, of the pure improved Berkshire stock, that they now own the celebrated sow, Fanny Kemble, recently purchased of Francis Rotch, Esq. together with four of her pigs, that are breeding sows; also a boar and sow from the best of Mr. Lossing's stock at Albany, as also a number of other full grown sows of unquestionable purity. Being thus stocked with breeders, we think we hazard nothing in saying that we can furnish as good pigs as can be found in this country. We have on hand now, from 75 to 100 of the above stock, at our Piggery, in Butternuts, near Louisville, Otsego co. state of New-York, which we will deliver regularly boxed at Utica, for prices suited to the times. R. R. & L. G. COLLINS.

BUFFALO NURSERY AND HORTICULTURAL GARDEN.

THE stock now on hand for sale, is much larger than at any former period, embracing the most choice and select kinds of the Apple, Pear, Plum, Cherry, Peach, Nectarine, Apricot, Quince, Grapes, Gooseberries, Raspberries, Strawberries, Currants, &c.

A fine collection of Ornamental Trees, Flowering Shrubs and Plants, embracing almost every desirable article in this department.

Also for sale, 25,000 engrafted Apple trees of one years growth from the graft and bud, from one to two feet high, comprising 120 of the most choice kinds of the apple, four-fifths of which have been cut from *bearing trees*, will be sold for cash, at the low price of $8,00 per 100. No less than from 5 to 10 of any one kind to be taken.

Also, 5000 seedlings of the true English Mazzard Cherry, at $6,00 per 100.

Trees and plants packed in superior order, and shipped at Buffalo, on board of any Steamboat, Vessel, or Canal boat, required. Catalogues gratis to every applicant.

Buffalo, N. Y., July, 1842. B. HODGE.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

CATTLE SHOW AND FAIR OF THE N. Y. STATE AGRICULTURAL SOCIETY.

Trial of Implements on Tuesday, Sept. 27.
General Exhibition on Wednesday & Thursday, Sept. 28, 29.
Public Sale of Stock, &c. on Friday, Sept. 30.

ALL persons who intend to exhibit cattle, horses, sheep or swine, should give notice to LUTHER TUCKER, Recording Secretary, Albany, previous to the 15th of September, in order that the necessary accommodations may be made for them; and all animals must be on the ground by 9 o'clock of the 28th.

All persons intending to compete for the premiums on plows, must send their plows to the Recording Secretary, Albany, previous to the 15th of September next, that the committee may have opportunity to test them thoroughly, and at such times and places as they may think best, and be prepared to report at the Fair.

All other agricultural implements must be sent as above, on or before the 26th of September, that the committee may have an opportunity to test them the day before the exhibition.

It is very desirable that all those who intend to compete for the premiums on butter and cheese, maple sugar, cocoons, silk, &c. should have their specimens in Albany, early on the morning of Sept. 27, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

☞ The Executive Committee respectfully solicit for exhibition, specimens of rare farm and garden products, seeds, roots, fruits, flowers, &c. &c., every thing indeed, which will add to the interest of the Fair. They would particularly request specimens of the different varieties of seed wheat, oats, barley, Indian corn, potatoes, turneps, beets, carrots, &c. &c.

BEFORE our next issue, the second annual Cattle Show and Fair of this Society, under its present organization, will have taken place, and we feel great pleasure in being able to assure our readers, that from present indications, the meeting will be of the most interesting kind. The Fair at Syracuse, last September, as an experiment, must be considered as a very successful one, and it is believed that the arrangements the present year, have been such as to remedy the partial failures that on some points then occurred. A reference to the list of premiums heretofore published in the Cultivator, will show that the list is very extensive, and the premiums on a liberal scale; while the committees appointed to award them, it will be seen, embrace gentlemen from various sections of the Union, of the highest respectability, insuring the avoidance of all reasonable causes of complaint in their distribution. The show of Cattle, Horses, Sheep, Swine, &c. will, it is believed, constitute a collection of animals hitherto unequaled in our country; and the admirer of beautiful stock, while he will have an opportunity of examining some of the finest in the country, will be able to make such purchases, or sales, as the case may be, as will conduce to his profit.

The ground selected for the exhibition, is very favorably situated at the northern boundary of the city on the Albany and Troy road; and the general arrangement of the grounds for the Fair, and the regulations for the exhibition, it is thought will be very satisfactory. So great are the facilities for access to this place, and so general is the interest felt in this Cattle Show and Fair, that we think our friends, farmers and others, will scarcely be disappointed in the result of the exhibition.

One of the most interesting points of this Annual Fair, is the show of agricultural and other implements, as showing the improvement made in form and design within a few years; and the great skill which our mechanics evince in their construction. Nothing perhaps will more clearly demonstrate how much agriculture owes to the mechanic arts, and how indissolubly their interests are connected, than an examination of the implements offered at our annual fairs. Farmers who have neglected to provide themselves with the improved implements so necessary to good husbandry, will here find abundant opportunities of comparison and selection.

In this notice of the Annual Fair, there is one thing to which we wish to call especial attention; and that is the necessity of having the presence, and the encouragement of the fair. Let them be present with the proofs of their industry, the labors of their own fair hands; with the flowers they have cultivated, those beautiful evidences of correct feeling and good taste; and if nothing more, with their smiles, their kind words of greeting, and the effectual encouragement which the presence of woman always renders in the prosecution of every good work. In England, ladies of the highest distinction make a point of being present at such exhibitions, where husbands, brothers, or sons, are contenders for the premiums to be awarded. Surely it cannot be unbecoming in an American woman to feel a similar solicitude, or grace by her presence a similar exhibition.

FAIR OF THE AMERICAN INSTITUTE.

THE Annual Fair of the Institute is to be held in the city of New-York, the third week in October, and the preparations and arrangements indicate that the Fair for this year will not be inferior in interest to any that have preceded it. Established for the promotion of American industry, the Institute has gone steadily onward as its means permitted, and has doubtless effected much good. Last year the sum appropriated by the state for the encouragement of agriculture, which belonged to the city of New-York, was received by this society, and thus its means of rendering agriculture more efficient aid than it had hitherto done, essentially aided; and we are glad to see that this important interest has in the arrangements for the present year, received more of the attention it deserves.

It appears that for the last seven years of the Institute, its aggregate receipts from all sources have been $51,920. Only $7,781.71 of this amount has been expended in premiums; and of this sum, that devoted to agricultural premiums, has been $1,618.96. The balance of this sum of 51,920 dollars, has been required for the expenses of the society, rent of rooms for the exhibition of manufactured articles, agricultural implements, &c. library, printing, steam engine to work the farm and other machinery exhibited, the whole it appears having been rigidly appropriated to the use of the Institute. With the exception of the small sum received from the state, this amount has been received from the contributions of individual liberality.

For the premiums on manufactured articles, implements, cattle, &c. &c. we must refer to the circular of the Institute, merely stating that the whole is on a liberal scale, and worthy of the Institute of the commercial emporium.

SALE OF STOCK.—It will be seen by an advertisement in this paper, that there is to be a public sale of pure bred Short Horns, at Philadelphia, on the 8th inst. The herd of Mr. Gowen is celebrated for its milking properties, and will doubtless draw together a goodly number of purchasers.

THRESHING MACHINES.—We invite the attention of those who are in want of Horse Powers and Threshing Machines, to the advertisement of Mr. BOSTWICK, of New-York, in this paper. From what we hear of his machine, we think it will equal the recommendations given of it, and that those who purchase of Mr. B. will not be disappointed in getting a well made and substantial machine. We are glad to hear that Mr. Bostwick will be at our State Fair with one of his machines, and that he will also have at the Fair, a new and valuable Straw Cutter, which he is about introducing to the public.

FOREIGN CORRESPONDENCE.

WE received our usual files of foreign Agricultural Journals by the last steamer at Boston. The English papers are filled with detailed accounts of the great Cattle Show of the Royal Agricultural Society, which was held at Bristol, during the week commencing July 12. It seems to have exceeded even the previous splendid shows of this truly Royal Society. The *New Farmer's Journal*, of July 18, is accompanied by a large supplement, which with a part of the paper itself, is devoted to a detailed description of this grand show, the whole of which would nearly fill a number of the Cultivator. The succeeding numbers of the same paper furnish us with beautifully engraved portraits of *Sir Thomas Fairfax*,* a Durham bull, which received the first prize of thirty sovereigns, and of *Symmetry*,† which received the second prize of twenty sovereigns. We are saved the labor of condensing these descriptions, by the following letter from P. L. SIMMONDS, Esq. for which, as well as for the papers he was so kind as to send us, he will please accept our thanks:

BRISTOL MEETING OF THE ROYAL AG. SOCIETY, &c.

(From our own Correspondent.)

LONDON, Aug. 3, 1842.

MY DEAR SIRS—Although detailed accounts of the recent meetings of the principal agricultural societies of Great Britain will doubtless have reached you ere this, yet conformably to your wishes, I send you herewith a condensed account of the proceedings, suitable to your limited space, accompanied by such passing remarks and reflections as occur to me, and which I trust will prove interesting to your readers.

The annual meeting of the Royal Ag. Society of England, was held this year, under very favorable circumstances. The splendor and magnificence of the meeting and its general arrangements, as well as the large concourse of company in attendance, mark clearly the high state of prosperity to which the society has now attained. The demonstration affords abundant evidence that the farmers of England are actuated by a laudable spirit of emulation, and that they have successfully determined to keep pace with the improving spirit of the age. The advancement of agriculture is a knowledge which has been justly considered one of primary importance even in the earliest ages of antiquity, and in our own, not only essential to existence, but the nursing mother of those arts of civilization which have flourished and filled Europe with their benefits. The prosperity of England, (and indeed of every country,) is intimately connected with the successful prosecution of agricultural pursuits; for they supply the basis of our home trade, and find employment for the greater part of our laboring population. An amazing deal has of late been done towards the improvement of agriculture; it has been reduced to some certain and uniform principles; philosophy has labored to develop its capabilities; the nature of soils and the laws of vegetation have been attentively studied and carefully explained; many useful experiments have been tried, and succeeded; and the important discoveries in chemistry and mechanical inventions of a most useful order, have eminently contributed to expedite its progress. Of this improvement we have abundant proof; the face of green fields—the broad expanse of pasture and arable lands, which stretch far and wide and form so many fair landscapes around us—the cattle, more perfect than those which occupy the canvas of Claude—the implements of rural industry—the labors of the husbandman, all testify to the modern triumphs of agricultural science, and the great benefits which such societies have wrought here and elsewhere for the country. The advantages, the absolute necessity in fact, of these improvements and discoveries, are obvious to all: as population progresses and the area of the country becomes more and more occupied, to keep pace with and provide for the growing consumption of this increase, it is necessary to employ all the means that science and experience place within our range, to render the soil more productive.

The progress of the society was well described by Mr. Handley, the President, who at the meeting, observed:—"I rejoice, however, to tell you that the society, for whose success I certainly took a very deep interest at the period of its foundation, now numbers among its members no fewer than 6,000 of the yeomanry of England, every one of whom necessarily feels an interest in the great object that we have in view, namely, to augment the means of human subsistence. If our society has done nothing more than this, it has at least made agriculture fashionable. We have in every quarter of the United Kingdom, gentlemen who are anxiously looking out to test any experiment that we may recommend, or that has been deemed worthy of our consideration. We have in every part of England, gentlemen who are earnestly testing the quality of the soil, making the best rotation of crops, determining the best description of seed-wheat for different soils; in short, applying themselves to a careful consideration of all those operations of agriculture, which practical men know to be so essential to success. But it is not in *practice* alone that we are reaping a benefit; we hoped to bring *science* to bear upon the practical agriculture of the country, and in that we have been eminently successful."

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* "Sir Thomas Fairfax," was bred by Mr. Whittaker, and is the sire of the splendid young bull "*Fairfax*," imported and owned by E. P. PRENTICE, Esq. of Mount Hope, near this city.

† "Symmetry" was bred by Mr. Thomas Forrest, of Stretton.

Although its establishment was suggested by the kindred institution in Scotland—the Highland Society—and it may, indeed, be said to be the offspring of that society, it has far eclipsed its parent in the splendor of its meetings, the numbers of its patrons and its members, and the interest it excites, not only in its annual assemblages, but in the quieter course of its useful avocations. It is not, fortunately, on the mere magnitude and splendor of its meetings, that the Royal Ag. Society rests its claim for the support of the agriculturists of Great Britain. Its claims for patronage rest upon the interest, zeal and energy which the exhibitions excite amongst the agriculturists; and which work with such a salutary effect in promoting the march of improvement in every part of the country where the meetings are held, or whence the farmers attend them; and upon the judicious system of holding weekly meetings of the Council in London, to receive reports and papers upon every point of agricultural knowledge; to stimulate its members both to communicate their own experience, and to read that of others through the medium of the Society's Quarterly Journal; and thus to set the whole agricultural body both thinking upon and working in the great employment of providing the food of the country, with redoubled activity and emulative zeal. But a truce to digression; I have already occupied too much of your valuable space with my prosaic observations, and must now proceed to detail in brief the actual business of this meeting. The arrangements of the society were dictated throughout, with much liberality and judgment. Ample and extensive notice was given many months previous, of the regulations, the premiums, &c. for the exhibition of stock and implements, and other objects of competition. The result of the labors of the general and local committees, gave much satisfaction. The meeting commenced on the 12th of July; on which day a *recherche* and elegant banquet was given to the Council, by the Mayor and Corporation of Bristol, at the Merchants' Hall. At an early period of the week the guests began to throng into the city, and accommodation could scarcely be found for the immense numbers arriving from all parts of the kingdom. The Duke of Cambridge was among the visitors; and their number included most of the leading agriculturists, titled and untitled.

On Wednesday, the Council dined together at the Victoria Rooms, Clifton, a fine new building, the use of which was specially granted to them by the proprietors. In the course of the day, a plowing match took place, for which 40 plows were entered, and a trial of newly invented machines and agricultural implements was held; there was also a very fine cattle show. Mr. Smith of Deanston, the inventor of the subsoil plow, delivered a lecture on draining, which you will find reported in the *Mark Lane Express,* of the 18th ult. which, I may remark by the way, contains a full and complete account of all the proceedings.

Thursday, the 14th of July, was the grand day when the attendance of members and visitors was most numerous. The first business of the day, was the great show of stock and implements. A lecture was then delivered at the Bristol Institution, on "the morbid anatomy of domestic animals." The grand meeting of the members of the society, took place at 4 o'clock, in a pavilion erected for the occasion; between 2 and 3,000 guests sat down to table. On Friday, the 15th, the sale of stock in the show yard commenced, and a general meeting of the members and council, for business purposes, closed the proceedings.

In connection with this meeting, I would especially call your attention to the excellent observations which fell from the American Minister, the Hon. Mr. Everett.

The Mayor, in an appropriate speech, proposed the health of the Hon. Edward Everett, the Envoy of the United States. (Cheers.)

The Hon. E. Everett, in acknowledging the toast, said he felt greatly indebted to them for the very flattering manner in which his health had been proposed, and the very kind mode in which they had received it. He felt gratified in being present on an occasion which was so deeply interesting to him, because he had observed that there was a great similitude in the mode in which such meetings were conducted here and in his own country. The fundamental principle of his country, as they all knew, was equality, and he confessed that he had erroneously thought that in the mother country this was not so; but when last week he had met his Royal Highness at Cambridge, wearing a doctor's gown at the University of Cambridge, like the rest, and mingling equally with his fellow doctors, and when now again he met his Royal Highness mixing with the farmers of England, he was proud to confess how erroneous had been his impression; and he must say that this example set by his Royal Highness, was calculated to have the most salutary influence. (Cheers.) There were many associations between the ancient city of Bristol and the United States, and he felt satisfaction, while at such a distance from his home, at being in a city which from the earliest times had been connected more or less with his own country. (Cheers.) Perhaps it was not known to many who were present, that the discoverer of America, the great Columbus himself, had been at one period of his life, a resident of Bristol, engaged in carrying on the trade of a common pilot between Bristol and Ireland. In later times associations had sprung up between Great Britain and America, which he hoped would be advantageous to both countries. Steam navigation had still closer cemented the intimacy of both countries, and he could not forget that to Bristol was the honor due of having first originated that navigation across the Atlantic; and he could assure them that the arrival of their noble Western at the shores of America, was considered as an era in the history of their country, which he hoped would prove but the harbinger of a closer union, and that the steam navies of both countries would only be used to assist each other. (Cheers.) The steam engine had arrived at a degree of perfection in this country, under Bolton and Watt, but it had not been used on the waters in this country, until his countryman, Fulton, took the engine of Bolton and Watt, and put it in locomotion on the waters; thus had this great result been brought about by the united sagacity of both countries. (Cheers.) He assured them that he felt at home in this, the home of his fathers, and in coming down from London, to-day, every name and every spot on the map, appeared familiar to him. This was to be accounted for from some of the earliest settlers in America coming from this part of England; and they in the United States, had their Bristol, their Bath, their Wells, their Exeter, their Gloucester; every name in this neighborhood seemed to remind him of the home of his heart, and to make him, a pilgrim in a strange land, feel at home. Mr. Everett then concluded, by expressing a hope that the communication between the two countries would be still more frequent, and their union more cordial than ever.

At the dinner on the 14th, the President rose to propose the healths of the foreign ministers present.

His Excellency, the American minister, rose to respond to the toast, but could not proceed for several minutes, so deafening were the cheers with which he was received. His Excellency said,—May it please your Royal Highness, Mr. President, my Lords and Gentlemen, believe me, I am deeply sensible of the kind feelings which you have been pleased to express towards myself and my country, and I assure you that that kindness has so affectme, that I want words to express my feelings. To be received as I have been, so far from my home, and by such a company, overpowers me; and no where could such kindness be more welcome to me than here, for the history of North America runs back to this very point, and its very first chapter is written in the books of the Merchant Venturers of Bristol. (Cheers.) I allude not to what I mentioned the other day, as to Columbus having resided in Bristol, but to the fact, that Sebastian Cabot, who ran down the coast of North America as far as New Florida, was a citizen of Bristol, and that his expedition was fitted out by the corporation of Merchant Venturers of Bristol, of which his Royal Highness, on my left, is now a distinguished member. (Cheers.) You all know that New England was founded by citizens of Bristol, and within the vaults of your Redcliff church lie moldering the bones of the father of William Penn, the founder of Pennsylvania; and although William Penn, himself, was not born in Bristol, his notions of America were no doubt founded on the stories the Bristol mariners told him of that distant and then almost unknown land. (Cheers.) Bristol and America should therefore be closely united, and it seems that your merchants mean to keep up the intercourse; for this morning, as I stood on the towers of your Blaize Castle, and looked upon a view—a more beautiful than which I never saw—I beheld in the distance, the tall masts of your unrivaled Great Western, resting peacefully upon the water, but which, the day after to-morrow, will be plowing the mighty deep; and as you, sir, have desired me to send the tidings of your feelings towards us, to my country, the day after to-morrow, the Great Western will carry those tidings with her, and in 14 days, or ere the deafening cheers with which you have received me have died away upon the wind, they will be re-echoed in my own country. (Great cheering.) Yes, gentlemen, in science, in literature, in language, in blood, in every thing but political regulations, we are truly one and the same people. (Cheers.) Every thing that issues from your press, every literary and scientific production of yours, is welcomed by us, and I rejoice to find that the works of our authors are received with favor here. The climate of New England, although more severe than yours, is yet similar in many respects; and I assure you that we look with great interest to your works on agriculture, and apply them to the improvement of our soil in New England; and I may say that the improvements you make here, are broadcast in my country. (Cheers.) Gentlemen, I hail this society with peculiar feelings, believing, as I do, that the system of communication which it holds out, will draw off the bitter waters of international contention, and create a soil for the diffusion of harmony and good will. (Cheers.) Believe me, sir, when I say that my most anxious wish is for the speedy and honorable adjustment of all the questions pending between the two countries. (Cheers.) And most happy am I to say, that from all the means of information within my command, I believe that such an event is likely to be speedily consummated, and these little clouds blown over, let us unite heart and hand, and then, with England and America united, they may bid defiance to a world. (Great cheering.) Sir, I have been honored by being permitted to propose a toast,—that of "Success to the Royal Agricultural Society of England;" and if, as has been said, he is a benefactor to mankind who can make two blades of grass grow where only one grew before, I think I may say, that by your improvements you have not only succeeded in making two blades, but four or six, where one only grew before. (Cheers.) And is not this the same as if you had made another England rise up from the bosom of the deep, with

"Deep waving fields and pastures green,
And gentle slopes and groves between."

Yes, if you can double the amount of food for man and beast, do you not double the extent of your territory and of your power? (Cheers.) And all this is accomplished without the expense of a single pound to the society, except that which comes back with tenfold interest in the benefits conferred upon the people. (Cheers.) Yes, and all this is done without shedding a single drop of blood. What is there in all the conquests of an Alexander or a Cæsar, to compare with these, the peaceful triumphs of your society? His excellency then proposed the toast of "Success to the Royal Agricultural Society of England." The toast was drunk with much enthusiasm.

England has always had the character of being an exceedingly proud nation, but I think she may well be proud of her successful efforts in promoting the interests of agriculture—efforts which have commanded for her the admiration of other countries—many of whom are now nobly emulating her zeal and enterprise, her energy, industry, skill and perseverance. Other countries may be blessed with more bountiful soils, more genial climates, and more luxuriant vegetation, but the British farmer has battled with all the adverse circumstances with which he is surrounded, and the fruits of his labor are evident in the garden husbandry of our land, in the rich crops and abundant harvests which he reaps. England may well then be proud of all she is, and has been, and will be. She is proud of her wealthy farmers and yeomanry, of her cottage homes, of her honest peasantry; she is proud of her fine stock, of her unrivaled breeds of cattle, of her improved implements of husbandry, of her success in introducing new fertilizers to recruit the soil exhausted by over cropping. And she may challenge the world to compete with her in any one department of agriculture—be it in the rearing and breeding of stock, the tillage of the soil, the successful growth and culture of crops, the occupations of rural life, or the application of skill and science to the various agricultural implements. Far be it from me to boast vain-gloriously of these acquirements and this success; other nations are equally capable of successfully carrying out the various branches of husbandry and rural economy, and glad shall I be to see them more zealous and indefatigable in the promotion of agricultural improvement, and competing successfully with Great Britain, following step by step in the race, and they may, perhaps, yet outstrip her at the goal.

Several important meetings have followed that of the Royal Ag. Society of England.

The Irish Ag. Improvement Society held its first annual meeting and show of stock, at Cork, on the 20th of July. The meeting was one of the most important that had ever taken place in Ireland, as many of the leading nobility, gentry, and agriculturists, from England and Scotland, were in attendance. Deputations from the Royal English Ag. Society, and from the Highland Society of Scotland, headed by the Marquis of Downshire, and the Marquis of Abercorn, were in attendance. The Council dinner was held in the Clarence Rooms of the Imperial Hotel; Lord Viscount Bernard, M. P., took the chair in the absence of the Duke of Lienster, the President. Lord Viscount Doneraile, filled the vice chair. Some excellent speeches were made on the occasion. On Thursday, the 21st, the members and visitors, about 1,000 in number, dined together in the Corn Exchange, the Marquis of Downshire in the chair. Nearly £900 was awarded in premiums, for the introduction of new and improved breeds of cattle, agricultural implements, &c. About £700 was also applied towards premiums for the local societies. These prizes were confined exclusively to small farmers, holding only 25 acres of land, and medals were given to the large proprietors. This society, has at present, an annual revenue of about £2,000, besides a large sum vested in the funds. The Duchess of Leinster gave a grand assembly, which closed the proceedings.

There was a very interesting meeting of the Northumberland Ag. Society, on the 28th, at Belford.

The Highland Society of Scotland, held its meeting on Monday, the 1st inst., when there was a dinner of the Committee, at the Waterloo Rooms, Edinburgh. The great cattle show and dinner, were to take place yesterday. His Grace the Duke of Richmond, President of the Society, in the chair; his Grace the Duke of Roxburgh, Vice President of the Society, croupier. The proceedings of the meeting and the result of the show, have not yet reached.

The Yorkshire Ag. Society, a very large and important one, is also now holding.

I have extended this letter to so great a length, that I must hasten to a conclusion, and my remarks upon the crops, &c. must necessarily be very brief.

The harvest is getting in in many parts of the country, and will soon become very general; on the whole, the weather has been very fine. On the 27th, the country was visited with a tremendous thunder storm, accompanied by a heavy and long continued fall of rain, which did partial damage in some places, by lodging the heavy eared grain. The accounts from all parts of the country seem to concur in the opinion that the entire produce will hardly amount to an usual average, throughout the kingdom; this arises chiefly from a deficiency of plant, which was early complained of and which the continued fine weather has not been able to overcome. The supplies of foreign wheat, although they have slightly decreased, are still liberal.

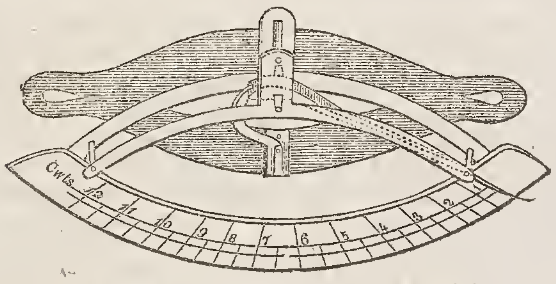
The Farmer's Magazine for August, just published, contains a very interesting memoir and portrait of Robert Bakewell, well known as the originator of the Dishley or New Leicester breed of sheep; being the first of a series of biographies of eminent British farmers.

I am yours, very truly,
P. L. SIMMONDS.

☞ A letter from our correspondent "Tweedside," at Roxburgh, Scotland, is necessarily deferred till our next.

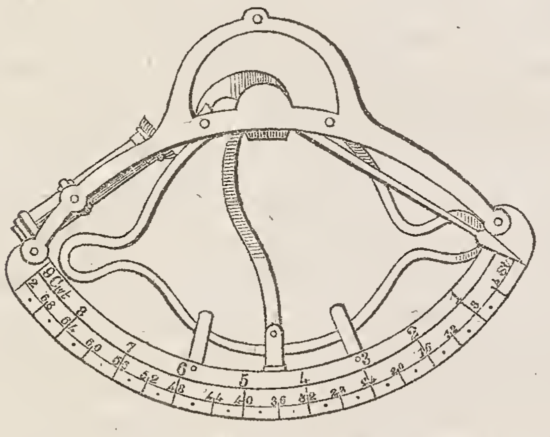
DYNAMOMETERS.

BELOW we give figures of two of the most esteemed dynamometers in use,—Regnier's and Cottam and Hallam's. The word dynamometer signifies a measure of power, and it is to this purpose it is applied. In agriculture it has proved of the greatest value in determining the force applied to move different kinds of plows in the same soil, thus fixing the question of ease of draft, a point of the greatest consequence to the farmer, but which had hitherto been too much neglected. The very great superiority of the modern plow, over the old one, may be attributed in no slight degree, to the multiplied experiments made with the dynamometer in determining that degree of inclination in the share and mold board, best combining ease of execution, with perfection of the work done.



Regnier's Dynamometer.—(*Fig.* 79)

The first of these instruments, or Regnier's, consists of two flat plates of steel of a curved form, increasing in thickness towards the ends which unite into solid cylindrical loops; the curved sides of the plates being placed opposite to each other, and the whole forming an entire eliptic spring. On applying this instrument in the line of draft as a *link*, it becomes lengthened in proportion to the force or draft exerted, the curved sides being drawn together. A cross rod attached to one plate, acting on a crank secured to the other one, moves an index or pointer; which shows on a figured scale the force exerted, down to half hundred weights. This instrument is very simple and accurate, but there is one great difficulty found in noticing the movements of the index, when attached to the plow, so rapid will be its vibrations, owing to the fluctuations in the force required at different parts of the furrow.



Cottam & Hallam's Dynamometer.—(*Fig.* 80.)

To correct this defect, and furnish a more perfect scale to the instrument, Messrs. Cottam and Hallam, agricultural implement makers of London, produced their improved dynamometer, (fig. 80.) To prevent the vibrations caused by the obstructions met by the plow in the soil, the makers have attached a small brass pump filled with oil, the piston of which has one or two small apertures. There being no outlet from the pump, and the piston rod being worked by the same crank as the index, it is evident that whatever may be the sudenness of the shock, the oil having to pass from one side of the piston to the other, the rapidity of vibration will be greatly diminished by the resistance the oil offers, and hence the average rate of force exerted can be more accurately ascertained. The scale of this dynamometer is more perfect than the other, the divisions marking quarter hundreds with precision.

We are of the opinion that dynamometers might be made on the plan of the patent spiral spring balance, which would form a perfect measure of power, and be afforded at a rate which would enable every neighborhood of farmers to possess one. Nothing more would be necessary than to use a larger steel wire for the spiral spring, and give a corresponding degree of strength to the other parts of the balance. If a single coil did not give the requisite stiffness of spring, or offer sufficient resistance to the force exerted, two might be used, or combined in a single implement. We wish that some of our machinists would turn their attention to the subject of dynamometers; for we are confident that if a good instrument of the kind was in the market, and afforded at a reasonable rate, great numbers of them would be disposed of. At least we should hope every agricultural association would possess one, indispensible as they have become to a proper decision on the merits of the various plows offered for premiums at the meetings of these associations. The figures we copy from Johnston's New Farmer's Encyclopedia.

ONONDAGA SALT.

SALT is an article of such universal consumption, and is so necessary to the health of men and animals, that every thing relating to it deserves attention. Viewing the matter in this light, it was with the greatest surprise that we read in the Journal of Commerce, an article on salt, which has been somewhat extensively copied, in which is the following sentence:

"There is no substitute for Turk's Island salt manufactured in this country, either on the shores of the Atlantic, or from the springs of the interior. None of the domestic salt will preserve provisions when exported."

It is very rare that a public journalist commits so gross a blunder, as is contained in this paragraph, and as the question is one in which the state and the country has a great interest, particularly at the present time, when the commercial regulations of England have become such as to render the exportation of our salted provisions possible, we must request our readers to examine it for themselves. It is very certain the assertion of the Journal of Commerce could not have been made by any person acquainted with the analysis of the Onondaga salt, made by the State Mineralogist, Dr. Beck, and to be found in the Geological report (not Geographical, as some of the papers have it,) made to our legislature in Feb. 1838. That examination shows beyond a peradventure, that there is no salt known, certainly not the Turk's Island, which contains so great a per cent of pure salt, (*Chloride of sodium,*) as the Onondaga coarse salt; or indeed several of the other kinds manufactured there. But as many of our readers may not have seen the report alluded to, we give the table containing the results of the analysis, entire, that the several proportions of pure salt, and foreign substances, in the several specimens, may be seen at a glance.

TABLE *showing the composition of various specimens of Onondaga and foreign Salt, in 1000 parts.**

KINDS OF SALT.	Carbonates of Lime and Magnesia.	Sulphate of Lime.	Sulphate of Soda.	Chlorides of Calcium and Magnesium.	Pure chloride of Sodium or com'n salt	Total.
1. Salt made by solar evaporation at Syracuse,	....	7·00	....	2·00	991·00	1000
2. Do. do do Geddes, by Mr. Brewster,	1·00	6·50	....	Trace	992·50	1000
3. Table salt, prepared and put up by A. Woodruff, Salina, N. Y.	0·20	6·61	....	1·46	991·73	1000
4. Salt labelled 'extra good,' made by Buel & Foot, Salina,	0·38	5·78	....	3·50	990·44	1000
5. Salt made by boiling saturated brine, at the works of Dr. Green, Salina,	....	8·92	....	1·64	989·44	1000
6. Salt made by slow evaporation, Syracuse, Mr. Byington,	....	9·00	....	2·50	988·50	1000
7. Salt made by boiling at Salina,	0·40	20·09	....	3·26	976·25	1000
8. Salt condemned at Salina,	4·32	14·88	....	6·36	974·44	1000
9. Salt do. do.	5·52	17·51	....	......	976·97	1000
10. Turk's Island salt,	2·80	13·16†	....	......	984·04	1000
11. Liverpool fine salt,	0·23	8·77	2·01	......	988·99	1000

* All the specimens previously to the analysis, were brought to a state of perfect dryness, by a heat of 400° or 500°. The loss in weight was from one half to twelve per cent. In both the specimens labeled "condemned salt," the proportion of water was very great. It was probably the imperfect manner in which the drying process was performed, rather than the amount of saline impurities they contained, that subjected them to the condemnation of the inspector.

† And Sulphate of Magnesia.

Thus it will be seen that there are no less than five kinds of salt manufactured in the town of Salina, superior to Turk's Island or Liverpool salt, in purity. It cannot be disputed, however, that the best of these for packing pork, and beef, whether for home use, or for exportation, is coarse salt, made by solar evaporation at the Syracuse vats. "This salt is in large, hard, and white crystals, which suffer little change by exposure to the air; and is the purest salt that can be manufactured." But this assertion of the Journal of Commerce, is shown in the reply made by Mr. Spencer, the superintendent, to be as unfounded in fact, so far as regards the preservation of provisions for exportation, or for voyages, as it is in theory.

But while it can be thus conclusively shown that no salt in the world is of purer quality, or better adapted for the preservation of provisions, than the Onondaga coarse salt, it is certain that much complaint has been made with regard to the preservative qualities of the fine salt made by boiling. This may be attributed to several causes, some of which may be seen in the table. Of these is the amount of foreign ingredients, principally sulphates of lime, and the water left in the salt by careless or unskilful drying. Another thing that renders this fine salt less fit for packing purposes, is that it does not keep the layers of meat sufficiently separated for the proper percolation or penetration of the brine to every part, as the coarse salt does.

It is certain, however, that unless great vigilance is exercised on the part of the inspector, and superintendent of the Salines, an imperfect article, and one unfit for packing provisions, will be occasionally produced. It is a common practice in making fine salt, to add lime to the water, to assist in separating the impurities which exist in the water in the shape of salts of lime and magnesia, as it comes from the earth, as it is supposed to render the separation more perfect, and render the conversion into salt by boiling more expeditious. In the report of Dr. Beck, to which we have alluded, the chemical changes which render the use of lime proper, are clearly detailed, as well as the consequences which must result when improperly used by the manufacturer. The following extracts from the report will show the opinion of Dr. B.:

"I should observe, however, that the advantage gained by the use of lime, depends upon its purity, and upon the time allowed for its precipitation, before the *salting* commences. When added to the salt during the boiling, it impairs its purity, and may be a fraudulent operation, unless great care is taken in again removing it by the pans with which the kettles are supplied." And again: "It seems to me, therefore, that there can be no good objection to the use of lime if it be *confined to the reservoirs,* as it causes the more speedy separation of the earthy matters, and renders the subsequent salting more rapid and perfect. But I would repeat, that in order to secure its beneficial effects, the lime should be in as caustic or pure a state, as it can conveniently be obtained. Lime which has been air slacked, or which has been previously used in a similar operation, cannot be advantageously employed; indeed it answers no better than so much sand or clay. And with regard to the addition of this substance to the brine while boiling, I can only say, that if the resulting earthy matters be carefully removed, its use may be tolerated; but it cannot be concealed, that in such cases, there is a strong temptation to hurry the process to completion, and thus mix up the earthy ingredients with the salt."

There is scarcely any subject of more importance to the state, and we may justly add to the United States, than the successful management of our salines, and the character and quality of the salt produced. There is no country in the world where salt is as cheap as it in this; a result clearly owing to competition; for although it should be proved, as asserted by some, that salt can be imported cheaper than it can be manufactured at our salines, it by no means follows that consumers would obtain it cheap, were it not for the competition of our Onondaga, or other American salt. The statement of Mr. Spencer, that "previous to the commencement of the manufacture of coarse salt at our springs, in 1820 or '21, the price of foreign salt by the cargo in New-York, was from sixty to eighty cents per bushel; and during the last war with Great Britain, was two dollars per bushel," shows conclusively what we might again be brought to, should we, by any mistaken course of national or state policy, shut up, or abandon, this great source of state and national wealth, and individual comfort and prosperity.

But while we wish to repel every unjust attack on our Onondaga Salines, particularly one so utterly incorrect as the one made by the Journal of Commerce; while we wish those who think the salt interest of the state a 'small affair,' to remember that at our salines in the year 1841, were made 3,340,769 bushels of salt, while there were imported into the city of New-York, in the same time, only 1,522,233 bushels, we must insist that any mismanagement of this property of the state shall be freely canvassed, and any imperfections, especially such as result from carelessness or fraud, promptly pointed out. It is only in this way, that the high character of the Onondaga salt can be sustained; and the objections which the interested, or the ignorant, bring against it, fully refuted and done away. In this matter there is no one so deeply interested as the farmer; if there are frauds in the manufacture, they are the men who are directly or indirectly injured; and we shall endeavor to keep them informed as to the facts in all matters relating to salt and its quality. We know that in former years very impure salt has been vended, for we have suffered from its use; we know also, that if packers of provisions, beef or pork, will use Onondaga coarse salt, it will keep as long, and as sweet, as if packed with any other salt that can be named. It must be remembered too, that most of the losses which have arisen from the use of fine salt, have been caused by measuring instead of weighing the salt used. The weight of Turks Island is nearly double that of the Onondaga fine salt per bushel, yet packers, accustomed to using the first, in using the last, adopt the same quantity by measure. Is it wonderful that provisions should not keep, thus salted? The analysis of Dr. Beck, shows that the fine salt is equal in purity to the Liverpool, or Turks Island; all that is wanting is quantity. Weigh and not measure, and all will be safe.

Notices of New Publications.

COTTAGE RESIDENCES; *or a series of Designs for Rural Cottages and Cottage-villas, and their gardens and grounds. Adapted to North America.* By A. J. DOWNING, author of a treatise on Landscape Gardening. Illustrated by numerous engravings. New-York and London: Wiley and Putnam, publishers. Price $2.50.

THIS is the title of a work, which the readers of the Cultivator will remember we had the pleasure, not long since, of announcing was in a state of preparation by the accomplished author; and the expectations we had then formed and expressed of the peculiar fitness of the writer for such an undertaking, and the value of the forthcoming work, have, we may be permitted to say, been fully realized. Mr. Downing has, in this beautiful volume, furnished a fit companion for his Landscape Gardening; and the influence of such works in correcting the taste, and forming the architectural character of a people, can scarcely be appreciated. Wealth is of but little consequence to its possessor, unless he has a disposition and taste to expend it in ways that will benefit the public as well as himself, and multiply the sources of true and rational enjoyment. The greatest of these is a perception of the beautiful and the good: the beautiful, as it exists in nature; and the good, as it belongs to the moral character of man; two things more closely allied than we are apt to suppose, and to connect which, too little effort has been hitherto made.

It is not unfrequently the case in the country, that we find professional men and farmers, incurring expenses in erecting uncouth, unsightly masses of wood or brick, disagreeable in appearance, and inconvenient in use, which would, had they been directed by a cultivated taste, have produced residences which would have combined beauty and utility in a great degree, and done much towards forming a more correct taste in others, and a happier style of building, by the example it would have afforded. The study of Mr. Downing's volumes, particularly the one now under notice, cannot fail to have a most salutary effect in correcting the great and acknowledged defects of our cottage architecture, and introducing a better style, more consonant to the wants of a prosperous people. The numerous and beautiful designs interspersed throughout the book, cannot fail to afford useful hints to those who propose building, or embellishing their grounds, even should no particular design be deemed perfectly suitable as a whole for adoption, under the circumstances of position or expenditure. We believe no one can examine the designs given by Mr. Downing, without at once feeling the superior beauty and effect of buildings and residences so constructed, and being disposed to desire their multiplication.

We cannot give a better idea of the aim of Mr. Downing, in the preparation of this volume, or the true love of nature and beauty with which it is fully imbued, than by quoting a paragraph or two from his preface:

"It is in this regard, that I wish to inspire all persons with a love of beautiful forms, and a desire to assemble them around their daily walks of life. I wish them to appreciate how superior is the charm of that home where we discover the tasteful cottage or villa, and the well designed and neatly kept garden or grounds, full of beauty and harmony, not the less beautiful and harmonious, because simple and limited; and to become aware that these superior forms, and the higher and more refined enjoyment derived from them, may be had at the same cost, and with the same labor, as a clumsy dwelling, and its uncouth and ill designed accessories.

"More than all, I desire to see these sentiments cherished for their pure moral tendency. 'All BEAUTY is an outward expression of inward good,' and so closely are the Beautiful and the True allied, that we shall find, if we become sincere lovers of the grace, the harmony, and the loveliness with which rural homes, and rural life are capable of being invested, that we are silently opening our hearts to an influence which is higher and deeper than the mere *symbol;* and that if we have worshipped in the true spirit, we shall have caught a nearer glimpse of the Great Master whose words, in all his material universe, are written in lines of Beauty."

We cannot enter into a particular analysis of this work, but we can assure our readers that it is scarcely possible for any one to examine its suggestions in connection with its beautiful designs, without perceiving the many ways in which buildings and grounds may be made to contribute to the elevated pleasures of mind, and assist in combining and developing the beauties of nature. Every architect should make himself familiar with the principles laid down in Mr. Downing's volume; and every one who is intending to build should endeavor to unite as much of beauty with utility as is possible. To be able to do this, no better guide can be found than this work on Cottage Residences, and we recommend it to all, as one doing honor to the country, the subject, and the writer.

Now that the intentions of Mr. Downing in regard to "Landscape Gardening," and "Cottage Residences," have been so happily and usefully closed, we would respectfully yet earnestly suggest the necessity and the propriety of having the subject of Farm Residences and Farm Buildings in general, taken up, and by some competent pen illustrated in as forcible a manner as has been the subjects treated by Mr. Downing; and if the avocations of that gentleman will permit, he could scarcely confer a greater favor on the agricultural public, or do more to correct, or rather banish, the barbarous and inconvenient style of constructing and arranging farm buildings, so prevalent, than by preparing a work for the use of farmers, illustrated with designs evincing the same correct taste, as those of the volumes already issued and noticed.

The Cottage Residences is an octavo volume of nearly 200 pages, and like its predecessor on Landscape Gardening, has been got up by the publishers in the very best style of book making in this country.

We are indebted to the publishers for the engravings, and for permission to copy the description of one of the beautiful Designs contained in the volume, which will be found in another part of this paper, and for which we tender them our thanks.

MEMORIAL OF JOSHUA LEAVITT, *praying that in the revision of the Tariff laws, the principle of discrimination may be inserted in favor of those countries in which American grain, flour, and salted meat, are admitted duty free.* Washington, July, 1842. Pages, 160.

It is not often that we find so many valuable statistical facts connected with the operation of the grain laws of different countries collected, or more luminously arranged, than in the memorial before us. We cannot be expected to go into a discussion of the various topics embraced in the memorial; those who wish for such an examination, will of course refer to the publication itself; but we find in it one table which we transfer to our pages, as exhibiting in a most striking manner the immense capabilities of a few of the states as compared with the others, derived from the Agricultural census of the U. States, for 1839.

THE RETURNS OF THE GRAIN CROP OF 1839,

Showing the whole product of wheat, Indian corn, and all other grains, of the six Northwestern States and Territories, with the proportion of each to each inhabitant.

States and Territories.	Wheat, bushels,	To each inhabitant, bush.	Indian Corn, bush.	To each inhabitant, bush.	All other grains, bushels.	To each inhabitant, bush.	Total bushels.	To each inhabitant, bush.
Ohio,	16,571,661	11	33,668,144	21·5	16,052,887	10·6	66,292,692	43·7
Indiana,	4,049,375	6	28,455,887	41·6	6,188,260	9	38,693,525	56·6
Ilinois,	3,335,393	7	22,634,211	46·5	5,216,250	10 7	31,185,854	64·2
Michigan,	2,157,108	10	2,277,039	10·5	2,389,681	16	6,823,828	32·2
Wisconsin,	212,116	7	379,359	12·4	430,195	14	1,021,670	33·2
Iowa,	154,693	3·5	1,406,241	32·5	227,117	5·3	1,788,051	41·4
	26,480,346	8·9	88,821,181	29·9	30,504,390	10·2	145,805,620	49
Remaining states and territories,	58,342,926	4·2	288,710,694	20·6	122,665,765	8·6	469,719,385	33·5
United States.	84,823,272	.5	377,531,875	22·2	153,170,155	9	615,525,302	36·2

ADDRESS *delivered before the Crawford Co. Agricultural Society, at Van Buren, Arkansas.* By G. W. PASCHAL.

IT is not often that we have the pleasure of perusing an address written with more ability, or displaying a more thorough acquaintance with the subjects of which it treats, than the address of Mr. Paschal, a copy of which has been kindly forwarded to us. It exhibits the sound sense, and practical discrimination of the self made man; and agriculture cannot fail to make progress when it engages the active support of such men as the writer of the address before us. We should be pleased to extract liberally, but can only give enough to show that men of the right stamp are engaged in the far Southwest, in the support of Agricultural Societies.

"Born," says the eloquent speaker, "of indigent parents, my first recollections are associated with the plow, the hoe, the axe, and the cry of hard times. To the severe toil of morning, evening, and noon, through winter, spring, summer and autumn, am I now indebted for any habits of industry and perseverance, which I may be thought to possess. To the necessity of the poor farmer, his keeping every thing in its proper place—and of preserving every thing which could be useful, and of exerting strength and energy at the proper time, am I indebted for that order and system, which alone enable me to succeed in an avocation which is thought to belong exclusively to the sons of the opulent, who have been favored with the advantages of a systematic and classical education.

"The first music which I remember to have heard, was the music of the merry lark, the beautiful red bird, the hoarse thrush, the angry jay bird, the laughing woodpecker, and that bird of universal genius and versatile accomplishments, the mocking bird, which, with provoking similarity, chimes in, imitating the same gay notes of these, and many others. These merry songsters each taught me a lesson of contentment, as well as of social feeling, and real hilarity.

"I early learned to believe that there was great sympathy in the moans of the lowing herd, rather than in the affected tones of the proud mother inquiring for some half forgotten offspring, driven by stern fashion from her presence to the nursery.

"If I have thus come to the erroneous conclusion that there is more sympathy—more fellow feeling and real kindness, among the poor and middle classes, than among the rich and purse proud, it is the fault of my early and rustic education. I have learned men and things by observation rather than by books."

And this, we wish to say to every reader of the Cultivator, is the true way to learn. It was the way that Washington, Franklin, Roger Sherman, Patrick Henry, and some of the most distinguished and honored men now living in this country, have learned. It is not that we love books less, but men and things more, that we recommend the study of the last, to the first. These are truly educated men, and we wish every young man in our country, to keep in view the broad distinction which exists between mere learning and education. Few farmers can be learned; but every one may be educated. He can observe, reflect, inquire; and when books are within his reach, let him not refuse and reject, but profit by their advantages.

Magazine of Horticulture and Botany. Edited by C. M. HOVEY, Boston: Monthly; Three dollars a year.

This valuable Magazine well sustains the high reputation it has acquired, and its possession is almost indispensable to the American Horticulturist and Gardener. The July number contains a good paper on the Study of Natural History; a paper from the pen of Dr. Harris, on a new disease of the plum, (the substance of which we shall give hereafter;) Pomological notices, or notices respecting new and superior varieties of fruits; a capital paper on Strawberries, by N. Longworth, Esq. of Cincinnati, Ohio, which we shall take an early opportunity to copy or condense for the Cultivator; with a copious list of miscellaneous articles of interest. In the No. for August, we find a very valuable paper from R. Manning, Esq. of Salem, describing forty-four varieties of Cherries, fruited at the Pomological Garden, Salem, Mass., in the season of 1842, for which we hope, ere long, to make room in the Cultivator.

ORR'S PICTORIAL GUIDE TO NIAGARA FALLS, 1842.

It is impossible to put Niagara Falls, their beauty, and their sublimity, on paper; but here is a volume which for truthfulness of design, and beauty of execution, will make it a capital guide to every one who intends visiting that interesting spot. Nor will it less pleasantly call up remembrances in those who have visited that region, and listened to the voices of the mighty waters that there rush irresistibly and unceasingly by. Repeated examinations made on the spot, have convinced us of the general fidelity of the drawings, and accuracy of the numerous illustrations which enrich the volume. We must say that we think the illustrations more creditable to Mr. Orr, as an artist, he being both their designer and engraver, than the letter press description is to his taste as a writer. It must be admitted, however, that it is almost impossible to write or speak of Niagara, without using language bordering on the superlative, and the error into which in this respect he has fallen, in common with many others, may well be pardoned for the sake of the beauty and fidelity of his illustrations. We venture to say, that hereafter, Orr's Pictorial Guide will be considered indispensable by the visitor of Niagara, and its picturesque region.

THE OLD COUNTRYMAN.

OF all the journals printed in this country, for the particular benefit of emigrants from the British empire, that constitute so considerable a portion of our citizens, we know of none better adapted to promote this end, than the "Old Countryman," published at No. 3 Barclay st., N. York. It is printed on a large sheet of 8 pages, and contains a general summary of the agricultural, manufacturing, commercial, sporting, political, and other intelligence of that country. Price in advance, $3,00.

THE DOLLAR FARMER, is the title of a new monthly Ag. paper, issued at the office of the Louisville Journal, (Ky.) 16 pages quarto. It is a large and handsomely executed sheet, compactly filled with articles of great interest to the farmer.

THE BERKSHIRE FARMER, is the title of a handsome paper just commenced at Pittsfield, Mass.; Wm. Bacon, Esq. editor; Montague & Axtell, publishers: 8 pages quarto, monthly, at 50 cents a year. Mr. Bacon's reputation as a writer, as well as the first number of the paper, give abundant assurance that the Farmer will be ably conducted, and well worthy the support of the intelligent husbandmen of Old Berkshire.

THE SOUTHERN PLANTER, Richmond, Va.—This paper is hereafter to be edited by Messrs. C. T. BOTTS and L. M. BURFOOT, the latter gentleman having become one of the proprietors of the work. It has been an excellent paper under Mr. Bott's care, and they hope to make it still more valuable, Mr. Burfoot being "a gentlemen of fine abilities, devoted to agriculture, to which he has been trained from his youth, and thoroughly versed in its principles."

THE FARMER'S CABINET, Philadelphia.—A new volume of the Cabinet commences with the August number, JAMES PEDEER and JOSIAH TATEM, editors. Being relieved from a part of his labors as editor of the Cabinet, Mr. Pedder, we are rejoiced to learn, is about to establish an *Agricultural School,* on the banks of the Delaware, in the vicinity of Philadelphia. The August No. has disappeared from our table, or we should give a more particular notice of Mr. P.'s prospectus of his school.

THE WESTERN FARMER AND GARDENER, at Cincinnati.—Mr. AFFLECK having retired from this work, it is hereafter to be conducted by Mr. CHARLES FOSTER, the publisher, assisted by our friend, M. W. PHILIPS, Esq. of Mississippi.

BOMMER'S MANURE.

We published some time since, a notice of Mr. Bommer's "new method of making vegetable manures by fermentation," which had attracted some attention, and been favorably received in some places in New-Jersey and Connecticut. Mr. Bommer, who is now in this city, has submitted a proposition to the Executive Committee of the State Ag. Society, to perform an experiment of converting vegetable matter, such as straw, cornstalks, weeds, &c. whether green or dry, into good manure, in the space of fifteen days. The materials for the manure are to be collected and deposited, under the superintendence of the Committee, on the 12th of September, and the heap is to be opened during the Fair, when the materials will be found reduced by the fermentation to an excellent manure. "The manure is then to be weighed, so as to prove that the weight of the primitive materials has been increased four-fold." The experiment will be made under the direction of a committee appointed by the Society, and in such a manner we trust, as fully to test the value of this new method of making manures. Mr. Bommer's letter on the subject was received too late for insertion, or we should have been glad to have published his proposition at length.

SOUTH DOWNS.

Beautiful as the improved Short Horn cattle certainly are, they do not exhibit a more marked superiority over the original animals of that breed, than does the improved South Down over the indigenous stock from which they originated: indeed, it may be questioned whether the difference in the latter case is not the most striking. Of all the English breeders of South Downs, there are none more celebrated than Mr. Webb, of Babraham, he having taken the most of the prizes at the meetings of the Royal Agricultural Society, offered for this breed of sheep. Mr. Allen has given an interesting account of his visit to Mr. Webb, in company with Mr. Stevenson, from which we make a few extracts:

"To give an idea of the weight of Mr. Webb's animals, the buck selected for Mr. Rotch, though only six months old, weighed 152 lbs. on the scales; Bishop Meade's, eighteen months old, 248 lbs.; and Mr. Stevenson's of the same age, 254 lbs.; while a wether exhibited at Cambridge, on Christmas day, 1840, weighed, dressed with the head on, 200 lbs., aside from yielding 28 lbs. rough tallow. The average weight of his wethers, however, at eighteen or twenty months old, is but about 30 to 35 lbs. per quarter. The bucks shear from 9 to 11 lbs., and the average shearing of the whole flock is 6 lb. 15 ounces,and of a quality of wool that we thought better than the generality of South Downs. The fleece is close and compact, and we should think, would resist rain, sleet, and snow, nearly as well as the best Merino." Mr. Allen adds respecting Mr. Webb's sheep,—"They are very hardy, and are never housed in winter, but lie in the open fields and are fed upon hay, with cut turneps, sugar beet, or mangel wurtzel. In the summer, they are taken to a poor pasture by day, at a distant part of the farm, for change and exercise, and towards night are brought near home, and folded on vetches, clover or rape. The lambs after weaning, are turned into fair pasture, and fed about a pint each per day, of beans, oil cake, or some kind of grain. Mr. Webb says he is an advocate for good feeding, and that a good animal always pays for it. This is our doctrine, and if people want South Downs to starve, they had better take up with the smallest of the old unimproved race."

Messrs. Bement and M'Intyre, in the vicinity of this city, have beautiful flocks of South Downs, and the flock of Mr. Rotch, of Butternuts in this state, is one of the best in the Union, embracing, as it does, the blood of the Duke of Richmond's, and Messrs. Ellman's and Grantham's flocks, and now that of Mr. Webb's—specimens of which we presume Mr. R. will send to the State Fair. Mr. Rotch's sheep have proved perfectly hardy, wintering finely on nothing but hay; and we have little doubt that where fine qualities of wool are not the great object in sheep growing, the South Downs will prove to be one of the best breeds for the farmer.

AGRICULTURAL WAREHOUSES.

We are pleased to learn that Agricultural Warehouses have recently been opened at Syracuse and Troy—at Syracuse, by Messrs. B. F. **Smith** & Co., and at Troy, by Mr. H. **Warren**. At these establishments most of the new and improved implements of Agriculture will be kept constantly for sale, and we trust that their enterprising proprietors will meet an adequate reward for their efforts to aid our farmers in obtaining the best implements to be had in the country. The value of such establishments to a farming community can scarcely be estimated too highly, or properly appreciated until their effects are known and experienced. Few things have more seriously retarded the great work of agricultural improvement, than the want of good implements and good seeds. Without both these, the labors of the farmer are conducted at the greatest disadvantage; with them he has a reasonable prospect of success. It is not too much too say that the Agricultural Warehouses of Boston, the most complete in their arrangements and assortment of any in the Union, add annually millions to the productive industry of Massachusetts; nor are the benefits confined to the limits of the old Bay state alone. Massachusetts plows, and other implements, are made and furnished to almost every quarter of the country, and all are reaping the benefits of her skill and ingenuity.

AGRICULTURAL SOCIETIES AND FAIRS.

UNITED STATES AGRICULTURAL SOCIETY.

James M. Garnett, Loretto, Essex co., Va. Pres't; Oliver Whittlesey, Washington City, Cor. Sec'y. Annual meeting at Washington City, on the first Wednesday in May.

STATE AGRICULTURAL SOCIETIES.

New-York—James S. Wadsworth, Geneseo, Pres't; Henry S. Randall, Cortland Village, Cor. Sec'y; Luther Tucker, Albany, Rec. Sec'y. Fair at Albany, Sept. 28 and 29, 1842.

American Institute, New-York—James Tallmadge, Pres't; T. B. Wakeman, Cor. Sec'y. General exhibition commences Oct. 10—Plowing Match at East New-York, Oct. 12—Exhibition of animals, Oct. 19, 20.

Massachusetts—Benjamin Guild, Sec'y, Boston. This Society holds no Fair the present year. Its premiums for stock are to be awarded at the annual Shows of the Plymouth and the Hampshire, Franklin and Hampden county societies. Its liberal premiums for farms, experiments, inventions, &c. are to be awarded by a committee appointed for that purpose, in Dec. next.

Rhode Island—Fair at Pawtuxet, Sept. 28.

Massachusetts Hort. Society—M. P. Wilder, Pres't; J. E. Teschemacher, Cor. Sec'y; Eben. Wight, Rec. Sec'y. Annual Exhibition in Boston, Sept. 14, 15, and 16.

Alabama—Henry W. Collier, Tuscaloosa, Pres't; M. D. J. Slade, Tuscaloosa, Cor. Sec'y.

NEW-YORK COUNTY SOCIETIES.

Albany—Teunis Van Vechten, Albany, Pres't; Luther Tucker, Albany, Cor. Sec'y.

Cayuga—J. M. Sherwood, Auburn, Pres't; W. Richardson, Auburn, Sec'y. Fair at Auburn, Oct. 12, 13.

Columbia—Wm. B. Ludlow, Claverack, Pres't; James McGiffort, Hudson, Sec'y. Fair at Hudson, Oct. 11.

Chemung—A. J. Wynkoop, Chemung, Cor. Sec'y. Fair at Fairport, Oct. 19.

Chautauque—T. B. Campbell, Westfield, Pres't. Fair at Westfield, Sept. 28, 29.

Clinton—Z. C. Platt, Plattsburgh, Pres't; Jacob H. Holt, Plattsburgh, Cor. Sec'y.

Cortland—Dan Hibbard, Cortland Village, Pres't; Amos Rice, Homer, Cor. Sec'y. Fair at Homer, Oct. 5.

Dutchess—George Kneeland, Poughkeepsie, Sec'y. Fair at Washington, Oct. 5.

Erie—L. F. Allen, Black Rock, Pres't; Warren Bryant, Buffalo, Sec'y. Fair at Buffalo, Oct. 5, 6.

Genesee—Fair at Batavia, Oct. 20, 21.

Greene—Anthony Van Bergen, Coxsackie, Pres't; A. Marks, Durham, Sec'y.

Jefferson—Adriel Ely, Watertown, Sec'y. Fair at Watertown, Sept. 15.

Livingston—James S. Wadsworth, Genesco, Pres't. Fair at Geneseo, Oct. 4, 5.

Monroe—Henry Colman, Rochester, Pres't; H. M. Ward, Rochester, Cor. Sec'y. Fair at Rochester, Oct. 13, 14.

Montgomery—Fair Oct. 11, 12.

Niagara—Wm. A. Townsend, Lockport, Pres't; Wm. Parsons, Lockport, Cor. Sec'y. Fair at Lockport, Oct. 6, 7.

Oneida—Pomeroy Jones, Westmoreland, Pres't; Elon Comstock, Stokes, Cor. Sec'y. Fair at Rome, Oct. 12, 13.

Onondaga—Wm. Fuller, Skaneateles, Pres't; Enoch Marks, Navarino, Cor. Sec'y. Fair at Syracuse, Oct. 5, 6.

Orange—Fair at Goshen, Oct. 12.

Ontario—Fair at Canandaigua, Oct. 12, 13.

Oswego—Orville Robinson, Mexico, Pres't; S. Y. Baldwin, Oswego, Cor. Sec'y. Fair at Mexico, Oct. 5.

Queens—Effingham Lawrence, Flushing, Pres't; A. G. Carll, Jericho, Cor. Sec'y.

Rensselaer—Joseph Hastings, Brunswick, Pres't; G. B. Kellogg, Troy, Sec'y. Fair at Lansingburgh, Oct 4, 5.

Saratoga—Howell Gardner, West Greenfield, Pres't; J. A. Corey, Saratoga Springs, Sec'y. Fair at Ballston, Oct. 4.

Seneca—G. V. Sackett, Seneca Falls, Pres't; Samuel Williams, Waterloo, Cor. Sec'y. Fair at Waterloo, Oct. 20, 21.

Steuben—Z. A. Leland, Bath, Cor. Sec'y.

St. Lawrence—J. S. Russel, Canton, Cor. Sec'y. Fair at Canton, Sept. 14.

Tompkins—Nichol Halsey, Ulysses, Pres't; L. A. Morrell, Lake Ridge, Cor. Sec'y. Fair at Ithaca, Oct. 6, 7.

Wayne—S. E. Hudson, Newark, Pres't; Stephen Culver, Newark, Cor. Sec'y. Fair at Palmyra, Sept. 5, 6.

Washington—John Savage, Salem, Pres't; Asa Fitch, jr. Salem, Sec'y. Fair at Salem, Oct. 11.

CONNECTICUT SOCIETIES.

Hartford—Solomon Olmsted, East Hartford, Pres't; Nathan Johnson, Hartford, Cor. Sec'y. Fair at Hartford, Oct. 4, 5, 6,—Cattle Show and Plowing Match, Oct. 7.

New Haven—Benjamin Silliman, New Haven, Pres't; Alfred Blackman, New Haven, Cor. Sec'y; Henry Whitney, Rec. Sec'y. Fair at New Haven, Sept. 28, 29.

Litchfield—Fair at Litchfield, Sept. 28, 29.

Enfield, Somers, Ellington, and East Windsor—Benj. Pinney, Ellington, Pres't; Joseph S. Bartlett, Scantic Village, Sec'y. Fair at Enfield, Oct. 12.

MASSACHUSETTS COUNTY SOCIETIES.

Berkshire—[Instituted in 1810.] R. F. Barnard, Sheffield, Pres't; Julius Rockwell, Pittsfield, Sec'y. Fair at Pittsfield, Oct. 5, 6.

Housatonic—Fair a Great Barrington, Sept. 28, 29.

Essex—Fair at Andover, Sept. 28.

MARYLAND.

Prince George's Society—Annual meetings held in Upper Marlborough, generally in the month of November. Gov. Samuel Sprigg, Pres't; Robert Bowie, Sec'y; Thomas F. Bowie, Cor. Sec'y. Their address Upper Marlborough.

MICHIGAN COUNTY SOCIETIES.

Monroe—Fair at Monroe, Sept. 28.

OHIO COUNTY SOCIETIES.

Seneca—R. G. Pennington, Tiffin, Sec'y. Fair at Tiffin in Oct.

Hamilton—J. Mahard, Cincinnati, Pres't. Fair at Carthage, Sept. 14, 15.

ILLINOIS SOCIETIES.

Farmer's Ag. Society of the Upper Mississippi—T. C. Legate, Galena, Pres't; T. Melville, Galena, Sec'y. Fair at Galena, Oct. 5, 6.

Union Society—J. T. Gifford, Elgin, Pres't; J. S. Wright, Chicago, Sec'y. Fair at Aurora, Oct. 19.

MISSOURI COUNTY SOCIETIES.

St. Louis—Wm. C. Carr, St. Louis, Pres't; P. Gould, St. Louis, Sec'y. Fair at St. Louis, Oct. 18.

CANADA SOCIETIES.

Wellington—John Howitt, Guelph, Pres't; John Harland, Guelph, Sec'y. Fairs at Fergus, Oct. 4, at Berba, Oct. 7, and general exhibition at Guelph, Oct. 11.

Gore—Fair at Dundas, Oct. 13.

Northumberland—Fair at Grafton, Oct. 12.

Durham—Fair at Bowmanville, Oct. 18.

Home—E. W. Thompson, Toronto, Pres't; G. B. Wells, Toronto, Sec'y. Fair at Toronto, Oct. 12.

Large Fleeces.—Claudius Allen, Esq. of Cheshire, Ct., last year sheared from one sheep, one year old, 14 lbs., and from three sheep of the same age, 33½ lbs of wool. This year, from 11 ewes and 1 buck, he cut 88 lbs.

NEW-YORK STATE AG. SOCIETY.

We hope the suggestions contained in the following letter, will receive the serious consideration of all who desire the prosperity of the N. Y. S. Ag. Society—who wish to see its influence and usefulness extended to every section of the state. Instead of the few names now enrolled on its list, its members ought to be numbered by thousands; and we know of no way so well calculated to excite an interest in its behalf, as the one proposed by our correspondent. Who will second his proposition?

Messrs. Editors—I read your paper with deep interest, and let me add, I am never disappointed of a treat I have this month, been well pleased with the "Comments upon the June No." Allow me to offer a thought or two, upon the following remark from the series: "As to the National Agricultural Society, I apprehend that 'the enthusiasm, the esprit du corps,' so essential to its beneficial existence, are spirits yet to be evoked from the vasty deep, and I know none of its friends sufficiently trumpet-tongued to call them forth."

Now, from all this in reference to the National Society, let me call your attention to the State Agricultural Society; and let me ask if there be not need of a strong and immediate call throughout our state, upon every class of agriculturists, to incite, animate, inform, and give unity and efficiency to our powers and means as a society. It strikes me, that the Society should endeavor to have *its members* in every county, city, town, and village of the State. This can only be effected by a persevering agency. I greatly desire to see every district of the state visited by an intelligent agent, who shall advocate the views of the State Society, procure members, obtain statistics, collect valuable materials for publication, and scatter, by lectures and social intercourse, information which can in no other way be disseminated.

Now all this should be done at once. It will and must be done, before the state is brought under the best possible amount of improvement. I want to see some "trumpet tongue" going through every section of New-York. The expense would never be felt by the Society, because the agency would be vastly productive in funds to the treasury. And if the idea of employing an agent from the funds, be not feasible, are there not a few men who will cheerfully contribute 50 or 100 dollars, to such an important object? I will cheerfully be one of the number, and if such a movement be entered into at *the Fair*, for the coming winter, I will enter my name as a contributor for two or three years, and I cannot but believe a suitable man may be found.

Cannot this occupy the thought of the friends of agriculture, previous to the meeting in September?

Yours, &c. **Dutchess County.**

QUANTITY OF SEED PER ACRE.

Much of the success of the farmer is clearly depending on the quantity and quality of the seeds he selects and uses. Good sound plump seed, thoroughly ripened, and carefully kept in positions where it has not been exposed to the danger of heating, will be found the best in every respect. Indian corn is very easily damaged in this way; and we once lost a crop by using seed selected at the time of husking, and thrown, with the husks stripped down, into a large tub, where it lay for a considerable time, before time was found to remove and trace it up. The heating process had so far advanced that the germinating power was lost. Wheat sometimes fails from the same cause. Constant selection of the best kinds grown in his field, and the use of none but such, will in a great measure obviate the necessity for changing seed frequently, which without this precaution, is advisable. There is scarcely any point in which a greater difference between our agriculture and that of England exists, than in the quantity of seed used per acre. The excellent farming of Mr. Coke, (Earl of Leicester,) who used a greater quantity of seed than almost any other English farmer, had a great effect in increasing the quantity of seed sown generally; and the impression in that country is, that the proper quantity per acre, is now oftener exceeded than fallen short of in seeding. Mr. Johnston says, "as in most cases it is usual to have on the land, many more seedling plants, than the soil can properly mature, thinner sowing has the effect of producing stronger, healthier, and more prolific heads; and I am still inclined to this opinion of thinner sowing." The following is a table, given by Mr. Johnston, of the quantities in common use in that country, which it will be seen at a glance greatly exceed the quantity of seeds used here. Whether the quantity used here might not be advantageously increased, is for the farmer to determine by experiment. We are inclined to think it might; though not to the extent practiced by British agriculturists.

		Time of Sowing.	Broadcast.
Wheat,		Sept. to Dec.	2½ to 3½ bush.
Oats,		Feb. to April,	4 to 6
Barley,		Feb. to May,	3 to 4
Rye,		Aug. and Sept.	2½ to 3½
Beans,		Nov. to March,	3 to 4
Peas,		Jan. to March,	3½ to 4½
Tares,		Aug. to March,	2½ to 3
Buckwheat,		May,	2 to 2½
Clover, Red,		March and April,	12 to 16 lb.
———, White,	Mixed seeds,	Ditto,	3 to 4
Trefoil,		Ditto,	2
Red Clover,		Ditto,	2
Rye Grass,		Ditto,	1 peck.
Turneps,		May to Aug.	2 to 3 lb.

Large Lamb.—Mr. J. L. Dean, Union Springs, N. Y. has a Leicester lamb, which at 8 weeks old, weighed 75 lbs., and at 12 weeks, 93 lbs.

Answers to Inquiries, &c.

CASTOR OIL BEAN—CELERY.

A correspondent in Green Co., Arkansas, "requests some information as to the raising of the castor oil bean, and the preparation of the oil for use; also some instruction as to raising and preparing celery for the table.

The castor oil plant, (*Ricinus palma christi,*) is grown from seeds planted in rows in a fertile soil, and kept free from weeds while growing. The distance of planting must be determined by the height to which the plant grows, which in a cool or temperate climate will not be more than four or five feet, while in the hot regions of the East and West Indies, it will be 15 or 16 feet in height.

There are two ways of preparing the oil from the seeds. The plan adopted in France, and which is considered the best, is as follows:—The fresh ripened seeds are bruised, and then put into a cold press, and pressed with a force sufficient to extract the oil. The oil is allowed to stand for some time, to deposit the mucilage, albumen, &c. and is then filtered. This is the best *cold pressed* oil; and is a clear fine article. The most common mode of preparing the oil, however, is to strip the seeds of their husk or pods, and grind, or bruise them in large mortars, bruising being preferred to grinding. They are then tied in linen bags, and boiled in water until the oil they contain rises to the surface. This is skimmed off, strained, and purified, by standing, filtering, &c., but will never be quite equal to the cold pressed. The method in the East Indies is more complicated, but does not appear to be preferable in any respect, to those above.

In the cultivation of celery, the seed may be sown broadcast or in drills, but the best way is in drills, as the plants can be hoed, and will have a better growth. They should be sown early, say March or April. When the plants are two or three inches long, they may be put out in a nursery bed, from which in about a month, they may be transferred to the trenches. The trenches must be made in a rich soil, about a spade deep, and three feet apart; the earth dug out to be laid equally on each side the trench. Some thoroughly rotten manure must then be put in the bottom of the ditch, say three inches, and then earth pared from the sides of the trench must be fully mixed and incorporated with the manure. Into this, the plants, trimmed of their loose or long leaves, and the end of their roots cut off, may be dibbled or planted, in rows along the middle of the trench, the plants six inches apart. They must be well watered at planting, and will do better if shaded till they begin to grow. As the plants grow, the leaves are drawn together, and earthed up, by drawing the earth from the bank into the trench; a process necessary to bleach the stems and fit them for the table. This earthing up must be done in about every two weeks, care being taken not to cover the crown of the plant. The earthing should not be done in wet weather, as it is apt to make the plants rust or decay in spots, rendering them unsuitable for the table. For more full directions, we must refer our correspondent to works on gardening, of which "Bridgman's Gardener's Assistant," is one of the best known.

MEADOWS—GRASS, &c.

Messrs. Editors—Permit me to make a few inquiries; and in the first place as to Meadow. I desire to know the soil best adapted; the most favorable location; whether an occasional overflow is desirable or pernicious; the best mode of preparing the land; whether if it be creek land it should be drained; the best time to sow the seed, and the kind and quantity of seed per acre?

2d. In relation to clover. Will high rolling land answer for clover; and if so, what preparation is necessary; and when best time to sow the seed, and the quantity of seed per acre?

3d. What gives the name to the "Orchard grass." Is it because of its adaptation to ground on which fruit or other trees are growing? Will it grow as well among shade trees, as an orchard? What quantity of seed should be sown to an acre?

I trust I shall not be deemed officious in making these inquiries, as I am new in the business of farming, and am desirous of the best information. W. H. W.

Rocky Hill, Halifax co. N. C.

The soil best adapted for meadows, is that which is neither too wet or too dry. Very light sandy soils are not suitable for meadow, unless made more retentive by the application of clay, or clay marl. No land is fit for meadow, unless in the first place made very rich. The most favorable location will of course be near the farm buildings, where strong reasons do not forbid; unless it is intended by a rotation, to have all parts of the farm alternately mowed and cropped. Overflows are not injurious, unless they bring on dirt and gravel after the grass is grown, which will injure the mowing. Irrigation is always beneficial to meadows in dry weather. Spring floods improve, but summer floods destroy meadows. Wet land should always be drained for meadows; none of the fine grasses for hay, will grow on land subject to stagnant waters. For meadows on soils that can be cropped, the best way is to sow the seeds with winter or spring grain; where this cannot be done, any method that will cover the seeds, such as thorough harrowing, may be adopted. Clover is one of the best grasses for meadows, combined with others that will give a close thick covering to the ground; but it must be remembered that the seeding for permanent meadows must be different from those in a course of cropping. If in rotation, clover must be the grass relied on; if permanent, the clover must be less, and the other grasses in a greater proportion. With clover may be mixed, Timothy, (*Phleum pratense,*) Orchard grass, (*Dactylis glomerata,*) Red top, (*Agrostis vulgaris,*) and some have strongly recommended the Rye grass, (*Lolium perenne,*) or the Oat grass, (*Avena elatior.*) Where the dependence is on clover, from eight to ten pounds of seed per acre, may be used; it being remembered that the more plants can be made to grow, the finer and better will be the hay or pasture. The other grasses we have named may be mixed at pleasure; say two pounds of timothy, five or six lbs. of Orchard grass, and five of clover. Where plaster can be used, there is no herbage plant equal to clover, and on this the good farmer will mostly rely.

In answer to the 2d query, we say that light rolling lands will grow good clover, but not *poor* lands of any kind. There must be sufficient depth for the long tap root, and if the soil is dry and not exhausted, clover will flourish. On clover grown on dry sandy soils, plaster produces a magical effect. On such soil ten pounds of seed per acre, will not be too much.

Orchard grass has received its name, from its adaptation to orchards and groves, where it thrives in the shade well, making excellent pasture, alone or mixed with other grasses. The seed of this grass is very light, and if sown alone, two bushels to the acre, will not be too much. Orchard grass and clover go well together; one bushel of Orchard grass, and six lbs. of clover seed; although some use a less quantity. To ensure the germination and success of grass seeds, it is an excellent plan to follow the sowing of them with the roller.

WATER LIME—CISTERNS.

Charles Merriwether, of Graysville, Ky., requests some "information as to burning water or hydraulic lime, the best sand to mix with it, and the mode of making cisterns."

Hydraulic lime is burned in the usual manner, but as it will not slake like common lime, it is ground to fit it for use. Hydraulic lime varies so much in quality, that no general rule can be given as to the quantity of sand it will bear in making cement. When good, three bushels of sand to one of lime, will be the proper quantity, although some use more sand. The sand should be sharp, and *clean*. There should be no loam or clay among it; since if these are present, the cement will not have the requisite hardness, or set quickly. The best method of making cisterns, is to dig the excavation of the proper size and depth; then make over the bottom a firm floor of stone, or brick laid in cement, (a single flat stone like those used for paving, that will make an entire bottom, is the best,) and on this foundation, build the wall of stone or brick for the reservoir. Whatever may be the material of the wall, it should receive one or two coats of cement on the inside, to insure its being water tight. Some, in making cisterns, place the cement on the earth of the pit, using neither stone or bricks. Where the ground is very dry, and the sides can be made smooth, this method, where two or more coverings of cement are used, may answer; but in general, the best way is to construct a wall as above directed The cistern when made, must be covered so as to be secure against frost. In making the cement, it must not be wet up, or prepared, faster than it is wanted for use, as lying for any considerable time spoils it.

CORN CHANGED BY CLIMATE.

Our correspondent, R. S. Hardwick, of Sparta, Georgia, has given us an account of the effect which a change of climate has produced on some Chinese Tree Corn, which he purchased in New-York, and first planted in 1838. That year it grew about six feet high, had abundance of suckers, and bore from four to six small ears. In the succeeding years, it was planted and matured as before, there being a decrease in the number of ears, but the stalks and the ears increasing somewhat in size. "This year I planted it in my garden in April, in rows 3 feet apart, and the grains sixteen inches apart in the rows. The growth was most luxuriant, and I promised myself an early supply of roasting ears, but to my surprise, it put out no suckers, and continued its growth until it attained a size greater than my field corn, (the gourdseed,) most of the stalks being ten feet high, and five and a half inches in circumference, between the first and second joints. Most of the stalks have two ears, smaller than the gourdseed, but the grains, though preserving the form and the peculiar white flinty appearance of the Chinese corn, are much larger than the original seeds. In this patch in my garden, there are eight stalks, about the size of the original ones, but having no suckers, and only two ears to the stalk, these being one size smaller than those on the large stalks. I can hardly think these changes have taken place in consequence of mixture with other varieties, as great care has been taken to guard against such a result, by not planting it near any other kind. The things I have deemed most worthy of notice, are, the change that has taken place the present year in the size, and the few stalks that have retained their original size under the same circumstances with the large ones. Will you give me some of the *whys and wherefores,* of these changes?"

Perhaps we can best answer our correspondent, by relating *our* experience in the Chinese Corn. We obtained some the same year as Mr. H., and planted it in our garden. The growth was enormous, almost rivaling the stories told of western corn, in height and largeness of stalk. The suckers thrown out, made the patch thick as a cane swamp. From three to five ears were on a stalk. Since that time, it has decreased in size, until it is now no larger than the Dutton, or other common northern corn, has no suckers, and oftener only one ear to a stalk, than more than two. To us, this result proved that this corn was a native of a warmer latitude, and the diminishing in size the result of acclimazation. Such too, we consider the change taken place in the corn of our correspondent. It may, too, have been in some degree influenced by a cross with other varieties of southern corn, although under the circumstances, it is not probable. Planting in Georgia, has gradually restored it to the state in which it existed in its most favorable condition.

SWARMING OF BEES.

"Messrs. Editors—Can you tell me any thing respecting the best method of managing bees when swarming? It is the practice with some who have bees, when they are swarming, to commence beating on tin pans, or kettles, to ring bells, &c. &c. I should like to know whether it is of any use, or whether it is best to let them take their own way? Agriculturist."

Brandywine, Del.

Let them take their own way, while swarming, by all means. Such noises are as useless, as the making of them is ridiculous. When the swarm is out, and lit, be ready with a good clean sweet hive for their habitation, put them into it at once, and no further care will be necessary. If bees are disposed to go off, as they sometimes will, our experience shows that we can do little or nothing to prevent it. We can only hope for "better luck next time."

VARIETIES—SUGGESTION.

A correspondent at Buffalo, "G. P." has drawn the following portrait of what he calls an enemy of book farming, a class of men once very numerous, but now fortunately quite limited. After noticing the many benefits he has derived from agricultural reading, he says: "The individual I allude to, despised books and papers, saying book farming was fit only for fools; other people could get along well enough without it. His wood yard was in front of his house; the gate was broken down; the windows broken and filled with rags; around his barn roamed numbers of half starved cattle and pigs, the strongest rushing over the weakest, and twice as many of all kinds as he could keep with profit. And such pigs! They were the true landpike breed; legs and snouts as long as the rest of their body; and might be seen standing at a rail fence, digging up the third row of potatoes on the other side. Improvement of stock, he scorned as he did books; mortgages accumulated, and his farm went under the hammer of the auctioneer."

"I have seen a communication in the Cultivator, in which the writer says he always takes away the nest eggs, and that he has never known a nest deserted in consequence. His experience differs from mine; as I have kept some 20 or 30 hens for several years, and they almost always leave their nest when the nest eggs are removed. My hens are of the breed called Poland hens, excellent layers, and rarely setting until the third year."

"There are many farmers who complain of being too poor to purchase and pay for an agricultural paper. As I have not seen the thing mentioned, I would suggest the propriety of forming farmer's associations or clubs, to purchase books and papers, relating to agriculture; and having meetings at suitable places to take out books and papers, to relate their experience in farming, and discuss topics relating to agriculture. In this way by the payment of a very small sum individually, a large circle of farmers might be provided for; and I have no doubt with the most beneficial results."

CAPT. BARCLAY'S TOUR.

We have received from a Staten Island corresponden a well written and caustic reply to the remarks made by Capt. Barclay, respecting the agriculture and implements of that Island. He unquestionably has the tourist fairly on the hip; but a formal reply to opinions as hastily conceived and carelessly expressed, as many of Capt. Barclay's evidently were, can scarcely be necessary. Allowance in all such cases, must be made for prejudices, and reverence for ancient forms; and the errors such prejudices create, may safely be left to correct themselves. Capt. B. tells many truths, mixed up with some singular mistakes or blunders, and we read his book on the whole, with interest, although compelled at times to dissent from his positions or conclusions. Our correspondent will therefore pardon us if we confine ourselves to an extract or two from his paper, believing as we do, that the strictures of the veteran Captain, will have about the same effect in lessening the reputation of Staten Island agriculture, that the disappointment he felt at the want of system in Niagara, will have in lowering the reputation of the Falls:

"It is very much to be regretted, that any person should be guilty of publishing to the world, so gross a misrepresentation of the character and habits of the inhabitants of a whole county, as this person has done, and thereby destroy his own standing in the community, as a man of honor and veracity; for I do assure you, that it would hereafter be a difficult matter to induce any person acquainted with the agriculturists of this place, and the agricultural implements in use here, to credit any statement he has made, or may hereafter make: and in this conclusion they are justified on the well known rule, that where an individual is grossly wrong in one particular, he is to be doubted on all others.

"Capt. Barclay's statements and his prejudices, have brought to my mind a circumstance that occurred here some four years ago. A son of the Emerald Isle, who owned a small farm near mine, on taking possession, was constantly railing against our implements, and especially the plow. 'Ah,' said he to me, 'you should see the wrought iron plow we have in use in old Ireland: that is the plow that will do the work;' and so strong was his partiality in their favor, that without condescending to give ours a trial, he sent home and ordered one for his own use. It came, costing twenty-five dollars, besides the expense of transportation; a long rakish looking affair, some ten or twelve feet from the end of the beam to the end of the handles, the mold board shaped entirely different from our improved plows, and a load of itself for a team. I had just procured a new Peacock plow from New Jersey, and invited him, after I had smoothed it by use, to bring over his oxen, and assist me to plow a piece of very tough sward. I gave him the plow, while I drove the team. After turning several furrows, he stopped, looked at the work, and examined the plow closely in every part. 'Here,' said he, 'is a plow that cost nine dollars, strong, light, and easy to handle, and doing as good work as any plow I ever held; while mine cost twenty-five dollars, is a load for the team, and is awkward and unhandy.' If Capt. B. would submit some of his favorite plows to the same test, there is little doubt it would be attended with the same result."

TIMBER.

"A Subscriber" at Kinston, N. C., asks "whether there is any sale for the kinds of timber mentioned in his letter, and the use made of each."

The first is the "Sycamore." This is used extensively by many cabinet makers, it being found to work very well; and by some is considered next in value for such purposes to cherry.

Next is "White and Black Ash." Large quantities of White Ash are used by wagon and carriage makers, fanning mill makers, &c., it being considered next in strength and durability to white oak. It should be sawed into plank when intended for sale. Black Ash is not used to any extent that we are aware, except for fencing purposes.

"Birch," is another of the woods mentioned. Black, or yellow birch, if sound, is a valuable timber, used for making tools, for the hubs of carriages, and for many kinds of furniture.

"Maple" is in demand principally by the cabinet makers. If curled, it should be sawed into boards, and commands a good price; if not curled, it should be cut differently.

"Poplar," sawed into half inch stuff, is in much demand by carriage and cabinet makers; it working very smooth, and being tougher than basswood or whitewood, which are substitutes. It must, however, be sound, of good width, and free from season checks.

"Beech," is little used, except when of rapid growth, and mostly or entirely sap wood, when it is wanted by the makers of joiner's tools, plane stocks, &c.

If "A Subscriber" has these woods for sale, he will find it for his interest to visit the cities for himself, and ascertain the prices, manner of sawing preferred, &c. &c. and will undoubtedly find his account in so doing. There is a vast deal of valuable timber wasted in the clearing of new lands, which might be profitably saved, and we hope our friend will make a successful experiment in the matter.

GROUND MOLES.

A correspondent, "A." of Waterbury, Conn., asks "for a description, with a drawing if convenient, of one of the many good mole traps that are in use in various parts of the country;" he having suffered much from their depredations, without finding any method of destroying them.

The true mole, which is so injurious abroad, is rarely found numerous enough to do much mischief here. What is called the ground mole here, is not such, but a species of *Arvicola*, or field mouse, and does much mischief by gnawing the roots of grasses, plants and trees. When they have become troublesome to us, we have found the most efficient trap to be a flat stone or board, set with a figure 4, or what is called by boys a squat trap. Some use a trap made of a board, balanced on the middle, and baited at one end, in such a manner that the mole slides from the sinking board into a vessel of water, placed in the ground below. Poison may be resorted to, but this will frequently prove more destructive to other animals than for the ones intended. If any of our friends will furnish a description of a good trap, and a drawing, we shall be glad to receive them.

"A." adds in a P. S.:—"Last fall I made a new bed containing about 100 strawberry plants, Methven Castle variety. In coming into blossom this season, I found only one staminate plant, or perfect flower, as some say; yield from this plant, over a pint. I may send you the result of some experiments with the strawberry plant next year, if they should be of interest to you."

[Send them; the history of well conducted experiments can hardly be without value.—Eds.]

Condition and circumstances should not control us. We should mold them to suit our wills.

RUST OR MILDEW ON WHEAT.

From almost every quarter of our country, in the reports of the crops which reach us, we find complaints of the damage which has been inflicted on wheat the present season by rust. Some districts it is true have entirely escaped, but it is certain that the difficulty has been widely and most injuriously felt. There is scarcely a disease incident to our cultivated crops, the origin of which is involved in greater obscurity, than is that of mildew. Some have attributed it to honey dew on the plants; some to the influence of particular plants, as the barberry bush; some to irregular atmospheric agencies; and some to the attacks of a species of minute fungi or parasitic plant. In the investigation of any subject, it is well to ascertain what is actually known respecting it, as the course may facilitate further researches.

Thus we know that a particular state of the atmosphere invariably precedes an attack of rust on wheat. While the weather remains of a low and equable temperature, dry, or free from excess of moisture, rust never appears; and even a high temperature does not produce it, if the weather be dry. So far as the atmosphere is concerned, two things appear necessary to produce rust; excess of moisture, and a high temperature; things that produce a rapid, and in ordinary cases, unhealthy vegetation.

The presence of a minute fungi, or parasite, on wheat that is mildewed, is also certain; the only doubt seems to be, whether this fungi is the cause of the disease, or only consequent on its presence. This fungi, (Puccinia graminis of the books,) seems to form beneath the cuticle of the stem, and in its progress to maturity, bursts forth in longitudinal clusters like grapes, of a dark color. These are filled with sporules or the seeds of the fungi, of a bright brick red color, and when they open, give to the stalks, or to whole fields, that red sombre hue, so characteristic of rust. A very good figure of this fungi, may be seen at page 120, of the Cultivator for 1840.

The state of the atmosphere in those districts where the disease has been the most extensively developed, has been so far as we have been able to learn, hot and wet, at least it has been so, immediately preceding the attack. Thus the wheat of the central counties of New-York, appeared unusually fine, and the promise of a great crop never better, until the first week in July, or from the 5th to the 10th of the month. At that period, heavy showers alternating with hot close weather, gave the farmer well grounded fears for the safety of the wheat crop; and the speedy appearance of the rust, showed that his fears were justifiable. By the 16th, many fields of wheat exhibited that peculiar dark hue, which at a distance shows the existence of the evil, and by the 18th or 20th, the fungi were fully developed, and the sporules or red dust thrown off in immense quantities. The fœtid odor that marks the attack and progress of this mildew, in these cases was most marked and offensive. This year, as in all others when rust prevails, its attacks are most irregular, and seemingly unaccountable. Some fields will escape, while others at a little distance are almost or quite ruined. So some towns, or districts, are scarcely touched, while those adjoining suffer severely. This difference in districts may be attributed to the range of showers varying the quantity of moisture, &c., but some other cause must be sought for the variation where farms are adjoining, or perhaps in different fields on the same farm. We have seen one part of a field scarcely touched, and the grain filling and ripening well, while on another part, it was not worth harvesting.

We have found no little evidence the present season to confirm our former impressions that the disease is to be traced in the first place to the softening of the cuticle of the plants by excess of moisture, accompanied by great heat. All plants in this state, become for the time, feeble and debilitated. The softening of their surfaces, causes them to break or fall down more easily, and this danger is increased by the greatly increased flow of sap which prevails under such circumstances. This is attested by the rapid growth of all plants, which have not had their progress arrested by approaching maturity. It is at this time, that the mildew first shows itself in the longitudinal striæ or grooves of the leaves and stems of the wheat. The cuticle is ruptured, and minute bodies resembling at their first appearance, gum, or some clear substance, are seen exuding or protruding from the ruptured points. The cuticle is forced outwards, dries, and forms those white points that give the stem of mildewed wheat such a ragged appearance. This clear substance soon assumes a darker hue; the seed vessels of the fungi become visible, and but a comparatively few hours elapse before these vessels are mature, burst, and the red sporules or fungi seeds cover the grain. In the meantime, the roots of the fungi have penetrated the interior of the stalk, deranged the internal pores, obstructed the flow of the juices, or so changed their character as to render them unable or unfit to complete the maturing of the plant, or the grain in the ear; the first remains stationary, green and immature; the latter not receiving the supplies of gluten and starch necessary to its perfection, shrinks and is worthless. With a Raspail microscope of 250 magnifying power, we have had frequent opportunities of tracing the progress of mildew; and as we think, verifying the details here given of its action.

In our examinations of mildewed wheat, we have been led to ask whether the sporules of the fungi, falling on the softened surface of the wheat, were absorbed, or readily rooted in the pores of the plant; or whether the accumulated and perhaps changed juices, did not rupture the coat, and exuding from it, become the nidus in which the floating sporules fixed themselves to multiply and spread ad infinitum. We are not able to answer this question satisfactorily to ourselves; other observers may have been more fortunate, or more skilful.

In the present state of our knowledge respecting mildew, it will be impossible to speak very decidedly on the best means of preventing it. As we see, however, that wheat on lands abounding in vegetable matter, or which have been manured largely with fresh manure, suffers more than on lands not so situated or treated, it is right to infer that a too rapid growth of the wheat plant exposes it to attacks from mildew. Wheat, too, which is so thick as to preclude the circulation of air, by retaining the moisture on the plants for a longer period, is in a condition to facilitate the softening of the coat of the plant, and thus invite attack. Any cause that should give more firmness and solidity to the covering of the wheat plant, would undoubtedly, so far, act as a preventive to rust. In many cases there seems to be a want of silicious matter to give firmness to the cuticle, a difficulty owing perhaps to the character of the soil, its native constituents, or the manner in which it has been cropped or manured. In these cases, would not ashes, from the potash they contain, produce the soluble silicates necessary for the use of the plant? Or would not powdered glass, furnished as it can be for two dollars a barrel, prove an effective aid on soils deficient in the silicates? We invite the attention of farmers to this subject. It has been found in England, that wheat sown in drills is much less liable to mildew, than that sown broadcast. The reason assigned, is, the greater facilities given for the circulation of air, and the more rapid drying of the plants when wet with dew or rain. There is, we think, some foundation for this opinion, from the effect we have observed on grain sown on the furrow, and harrowed in such a way as partially to produce the effect of drill sowing, the wheat plants mostly standing where the seed fell or rolled, in the furrows.

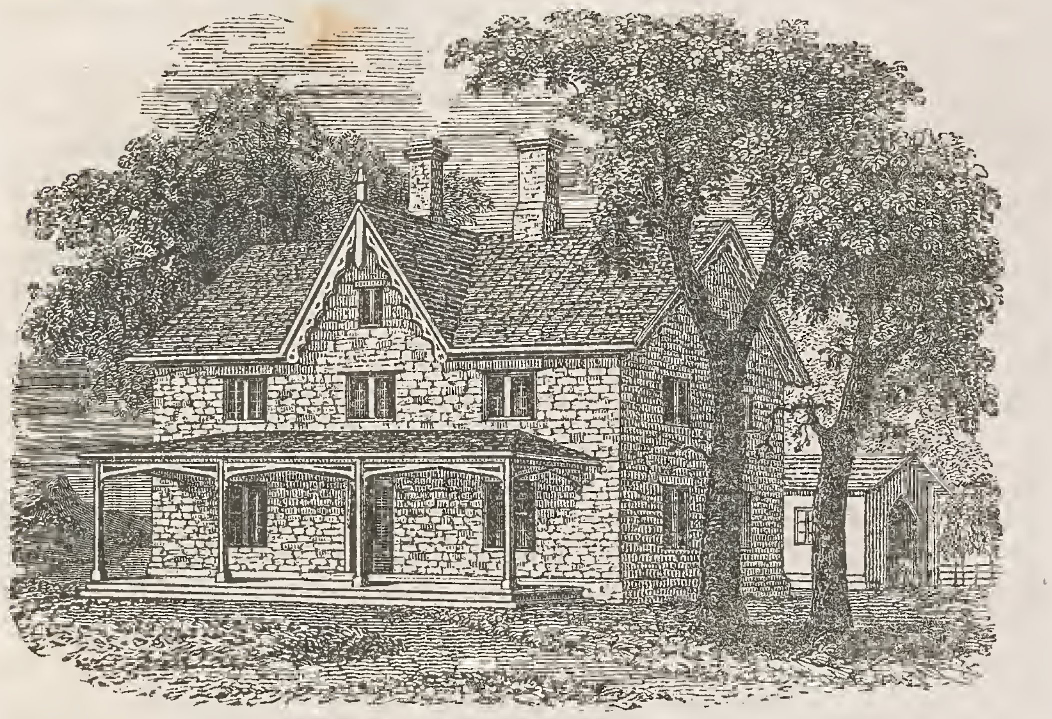
MODEL FARMS.

The agricultural establishment under the patronage of the French Government at Grignon, is probably one of the most perfectly managed in the world. Smaller model farms, generally under the care of pupils from the Grignon school, are established in many of the departments, subject to the supervision of the government. Of these, the one at Rennes, is thus described by Mr. Doyle, in the Cyclopedia of Practical Husbandry:

"The Farm consists of 72 acres of arable land, held by a 15 years lease from a wealthy proprietor, by M. Bodin, who was assisted by the principal authorities of the department, to take the direction of it. M. Bodin had been a pupil at Grignon, and subsequently managed a small farm in a similar capacity, before he obtained the present one, which was in 1837. The rent of the farm is 3,500 francs, of which the department pays 2,000; and the director the remainder, with taxes and repairs, which amount to 500 francs more. He also supplies all capital for improvements, and all out-goings, clears all losses, and of course has all the profits. There are in this school 20 pupils, paying 250 francs a year each. The department in which the school is situated pay for six, and the government for the remaining fourteen, who are nominated by the prefects of three other departments in Brittany. They are generally the sons of well conducted farmers, and at the expiration of two years, go to the aid of their parents, or as hired stewards. The pupils are taught by M. Bodin, or an assistant, the ordinary subjects suited to their employment, and have no charge except for books, which they must supply for themselves. M. Bodin has a factory for implements, and disposes of many of them to farmers, even in very distant localities; he is altogether well qualified for his important office, and has obtained a prize for a treatise on agriculture, which is about to be enlarged to a second edition. *And when practical men, like M. Bodin, can be induced with moderate assistance, to take the responsibilities of a model farm upon themselves, and to receive pupils for three or more years, at a reasonable rate of payment, they are the most eligible instructors.*"

We would call the attention of our readers, and particularly those who are anxious to see schools of this nature established in our country, to that part of the above extract, which we have italicised. Practical men in our opinion, are the ones to manage such an establishment. We could name farmers, who, if they would take the "responsibilities of a model farm upon themselves," would do more to impart really useful knowledge to their pupils, than an institution which should cost as much in founding as Girard's College, managed as such institutions frequently are. Men, who like M. Bodin, are able to illustrate the theory of agriculture by the practice, are the ones to whom farmers would be glad to entrust the education of their sons, confident that in the course pursued, the useful would never be compelled to give place to the purely fanciful in agriculture.

Means of Renewing Poor Lands.—A North Carolina paper says it "is a well established fact, that any lot of poor land may be enriched to almost any extent by planting it from year to year with sweet potatoes, and turning in the whole crop of vines every autumn. Let our planters try the experiment and satisfy themselves. Select a piece of your old fields and be willing to incur the trivial expense of seed and planting. How soon can you reclaim all our old pine fields which now make such an unsightly appearance among your best plantations."

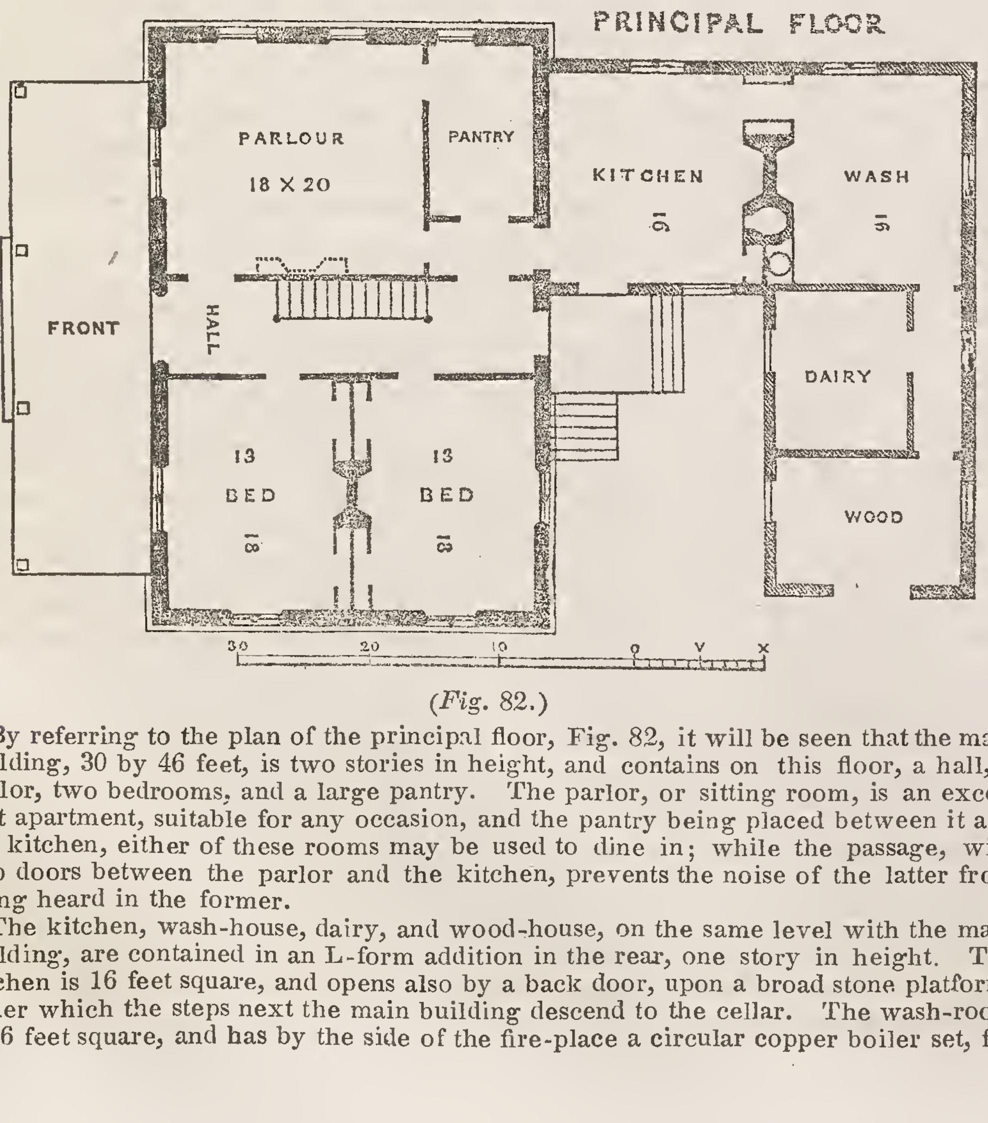


AN ORNAMENTAL FARM HOUSE.—(Fig. 81.)

Copied by permission, from Mr. Downing's new work on "Cottage Residences."]

In designing this farm house, we have had two objects in view; first, to offer to the large class of intelligent farmers, a plan of a house of moderate size, somewhat adapted in internal accommodation to their peculiar wants: and secondly, to give to the exterior, at little additional cost, some architectural beauty. The first object, it is evident, must ever be the principal one in a farmer's dwelling, and therefore every thing should yield to such an interior arrangement, as will give the greatest amount of comfort, and the maximum of convenience, in performing in-door labor. But beyond this, there is no reason why the dwelling houses of our respectable farmers should not display some evidences of taste, as well as those of professional men, or persons in more affluent circumstances. The farmers are really the most independent men in our community, as their wealth is less liable to fluctuation than that of any other class; and if the amount which they wish to expend upon a dwelling, be less than that within the means of others, they are generally able, on the other hand, by having abundance of stone or timber on their own premises, to build at a greatly reduced cost. By bestowing some degree of ornament on farm houses, we shall hope to increase the interest and attachment, which the farmer and his family have for their home, and thereby to improve his social and domestic state. A man who is content to live in a clumsy, badly contrived, and uncouth habitation, will generally be found to care little for his home, or to have in his heart but a scanty flow of genial domestic sympathies. This love of home, and with it all the tender affections bound up in that endearing word, will be sure to grow with every step we take to add to its comforts, or increase its beauty; and if we feel a species of affection for the goodly trees we have planted, which, growing along with us, seem like old and familiar friends, we must acknowledge a still greater attachment to a dwelling that we have built, and which becomes our own home, whether it be a cottage or a mansion, if there is an air of taste lurking about it, and breathing out from vine covered porch or open window easement.

We are especially anxious that the farmer should cultivate a taste for improving his home, including under this term his dwelling, and his garden or grounds, as we are confident that in so doing he will unconsciously open to himself and his family new sources of enjoyment, beyond such as are *directly* derived from their beauty and convenience. It is unquestionably true, that we learn to appreciate the beauty of nature, in proportion as we become familiar with the beauty of art. Now, although we do not expect farmers to possess a gallery of pictures or statuary, yet they have a scarcely less instructive field open to them while tastefully disposing their gardens and grounds, in studying the various developments of beauty that occur, and become familiar to the mind in these, and all other employments, unfolding the order and harmony of a well regulated home. And we will venture to assert, that no person, however small his original knowledge, has followed these occupations thoughtfully for half a dozen years, without having his appreciation of the beauty of all nature, and especially the beauty of trees, forests, hills, and rivers, a thousand fold increased.



(*Fig.* 82.)

By referring to the plan of the principal floor, Fig. 82, it will be seen that the main building, 30 by 46 feet, is two stories in height, and contains on this floor, a hall, a parlor, two bedrooms, and a large pantry. The parlor, or sitting room, is an excellent apartment, suitable for any occasion, and the pantry being placed between it and the kitchen, either of these rooms may be used to dine in; while the passage, with two doors between the parlor and the kitchen, prevents the noise of the latter from being heard in the former.

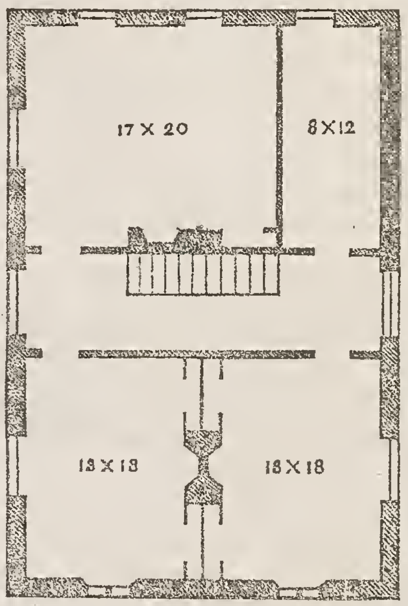
The kitchen, wash-house, dairy, and wood-house, on the same level with the main building, are contained in an L-form addition in the rear, one story in height. The kitchen is 16 feet square, and opens also by a back door, upon a broad stone platform, under which the steps next the main building descend to the cellar. The wash-room is 16 feet square, and has by the side of the fire-place a circular copper boiler set, for boiling the clothes. There is a passage from the wash-room, communicating directly with the wood-house. The dairy may, if it is thought advisable, be sunk three feet below the level of the wash-house, and paved with flag stones, in order to keep it cool; and there may be a raised shelf of stone all around it, on which to place pans of milk. In this case, it would be entered by descending four or five steps. The wood-house has a large door, to facilitate unloading from the wood wagons.

The plan of the second story, Fig. 83, affords three good bedrooms, closets, &c., and a small bedroom; and above this story, is an ample garret for drying various seeds and vegetables.

The cellar is large, being of the same size as the main building, and on the side next the carriage road, should be placed a *slide,* wide enough to receive a cart load of roots, which will save much labor and time usually occupied in carrying them in baskets.

This dwelling is supposed to be constructed of rough stone, or stone partially smooth on the face, but not laid in regular courses. Such stone is abundant throughout a great portion of the United States and make excellent walls.

We have given the preference to the *Rural Gothic* style in composing the exterior of this dwelling, partly on account of the large lofts or garrets, so useful to the farmer, afforded by the steep gables and roofs, and partly on account of its intrinsic beauty and picturesque effect when built of stone even in this simple manner. We have introduced a *veranda* in the same style in front, because such a feature is as necessary to the comfort of a farm-house as a villa, in this country.



(*Fig.* 83.)

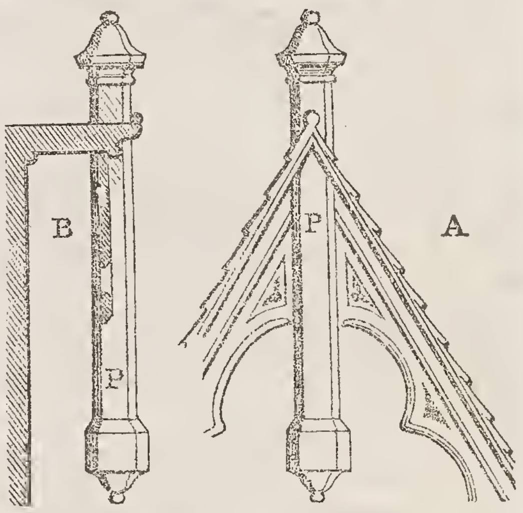
Where all the out-buildings are to be erected at the same time with the dwelling house, something of the same style should be evinced in their construction. It is not necessary to attain this, that ornamental verge boards, or windows, or other minor details, should be introduced in barns or the like structures, but it will be sufficient if attention be paid to repeating the same general forms in the *outlines* of the buildings, and of these the form of the roof or gables is most essential.

In some districts, wood is the only material which comes within reach of the farmer. When this is the case, it would be better to adopt another style for the exterior, of a lighter character. We would recommend the simple projecting roof, and the general style of Design I., omitting some of the ornamental details. The arrangement of the rooms would require no material alteration, whatever style of architecture may be adopted for the exterior; and a farm house built in the plainest manner, preserving the arrangement exactly, would still have all the merit of this part of the design, of whatever value it may be considered.

It is evident that to some families another parlor, or a common eating room, but little superior to the kitchen, might be thought desirable. This would be easily obtained by converting the *rear bedroom* into a *dining room*, and keeping the *parlor*, (which is now intended to serve the purpose of dining room also,) as a show apartment, or *best room.* Such a plan might suit the fancy of those who take pleasure in keeping the best and most comfortable room in their house shut, except when they see strangers, but we cannot recommend it as consonant with good taste and that unaffected, genuine hospitality, which ought to characterize "plain country folks."

Details of construction.—The construction of this building will be easily understood by merely inspecting the elevation, as it is extremely simple. In Fig. 84, the verge board and cornice are shown more in detail, to the scale of ½ inch to a foot. In this, A, is the front view of the top of the gable, and B, the profile or section of the same. P, is the pendant which perforates the ridge of the roof, and terminates the gable by what is termed a hip knob, or finial. The roof, in this design, projects about a foot beyond the walls of the house. The veranda is supported by octagonal posts or pillars, the openings between which, are ornamented at the top by single arches cut from two inch plank. All the exterior wood-work of this building, (except sashes and doors,) should be painted three coats of the same color as the stone, or a few shades lighter, and sanded.

Estimate.—The cost of this building, supposing the stone to be found on the farm, and all the materials to be drawn by the farmer, will not exceed $1700.



(*Fig.* 84.)

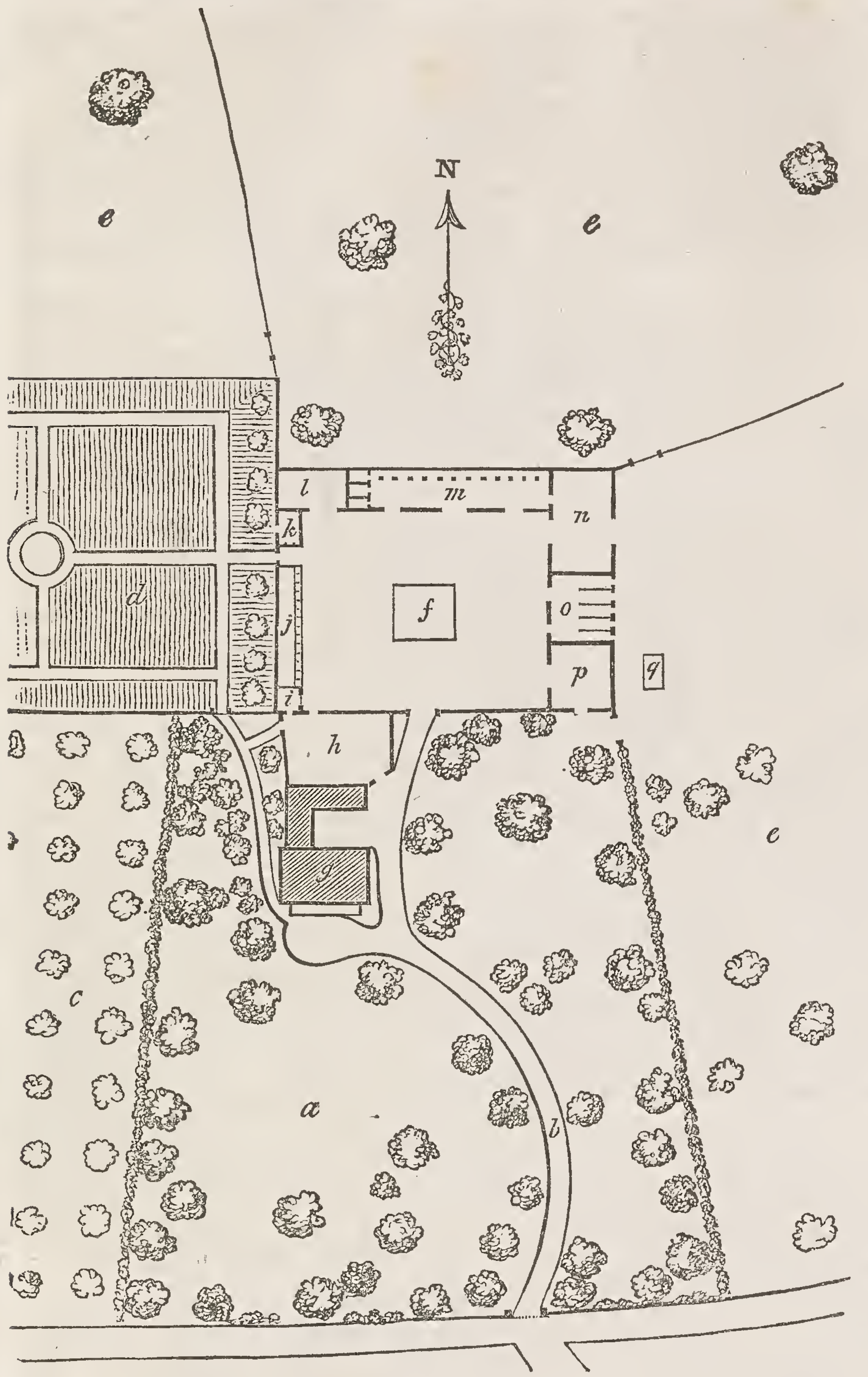
The Ferme Ornée, or ornamental portion of the farm.

The *ferme ornée* is a term generally applied to a farm, the whole or greater part of which is rendered in some degree ornamental, by intersecting it with drives, and private lanes and walks, bordered by trees and shrubs, and by the neater arrangement and culture of the fields. But it may also be applied to a farm with a tasteful farm house, and so much of the ground about it rendered ornamental, as would naturally meet the eye of a stranger, in approaching it the first time.

It is evident that the farm proper, in the present case, may consist of 50 or 500 acres. We have only shown in the annexed engraving, Fig. 85, a plan of a few acres immediately surrounding the house, and consisting of the entrance lawn *a*, about one and a quarter acres, bordering the entrance road or approach *b;* the orchard *c*, the kitchen garden *d*, adjoining fields, in grass or under the plow *e*, and the yard for the out-buildings *f*.

At g, is shown the house, and in the rear of the kitchen, wash-house, &c. is the kitchen yard *h*. The out-buildings, or farmery, are arranged around three sides of a square, open to the south, and consist of the piggery *j*, the tool-house communicating with the garden *k*, open shed for carts, plows, &c., *l*, cow-house with three calf-pens attached at the end *m*, barn *n*, stable for horses *o*, wagon house *p*, and corn crib *q*. The surface of the yard descends slightly on all sides to the centre *f*, where the manure heap is kept. This collection of out-buildings is much more complete and extensive, than will be found connected with most farms in this country, but we have given it, with the view of exhibiting what ought to be aimed at as a desideratum in accommodation, on every extensive farm, and it will be found easy to diminish the amount of buildings and sheds, to as many as would occupy only one side of the yard, if the farm be small, or to such a number as can be afforded.

This plan will require but little description, as the ornamental grounds have no intricacy of detail. The effect of the view from the house across the entrance lawn *a*, would be pleasing, and its expression would be that of simply natural, or pastoral beauty. The trees might be of the finest native species, selected from the woods on the farm, as nothing is more beautiful than our fine drooping Elms, Tulip trees, Oaks,



(*Fig.* 84.)

and Ashes. Or some additional interest may be given to the place, by introducing a few Horse Chestnuts or European Lindens, around the house, and along the approach. The trees we would plant in natural groups, as indicated on the plan, as this would not only evince a more cultivated taste in a farmer, than straight lines, but it would also add to the apparent extent of the whole area, devoted to ornamental trees by giving it an irregular and varied boundary of foliage.

This acre and a quarter devoted to ornament, may be rendered profitable also: 1st, by mowing the grass over the whole surface; or 2d, by keeping it short, by pasturing it with favorite animals. In the case of mowing, when no animals are admitted, a few flowering shrubs and plants may be cultivated directly around the house. But if it is preferred to pasture the area, it would be necessary to confine them to a certain portion of the kitchen garden devoted to this purpose.

There are some farmers who would be willing to devote an acre around their house to some kind of lawn, or purpose, superior to a common field, who are yet not sufficiently alive to the beauty and dignity of fine forest trees, to be willing to plant the latter. Such may substitute fruit for forest trees, and even arrange them in the same manner; planting those most symmetrical and pleasing in their forms, as the cherry and pear, near the house and the approach, and those which are unsightly in growth, nearest the boundary.

The beauty of a *ferme ornée* will be greatly enhanced by introducing verdant hedges, in the place of stone or wooden fences, at least in all situations near the house. The best plant to be had in the nurseries, for this purpose, is the Newcastle thorn, a native sort, much hardier and better than the English, for our climate. But almost any of our native thorns in the woods, make admirable hedges, and the farmer may gather the seeds, and raise them himself. Good hedges may also be made of the crab, or the buckthorn, or even the mulberry, though the latter will not turn cattle, from its want of thorns.

If the ground is previously well prepared by repeated plowings and manuring, and proper care is taken to head back the young plants the first year or two, to make a thick bottom, and to trim them twice a year afterwards, an excellent hedge may be obtained in five years. No person, we hope, who has once seen a handsome deep green hedge, forming a dense close surface, enlivened with blossoms in the spring, and berries in the autumn, will grudge the little annual care necessary to substitute this for at least a small part of his unsightly wall, or "post and rail."

Wooden and stone fences near the house, may be rendered ornamental, by planting the Virginia creeper, (Ampelopsis,) or five-leaved ivy, at short distances along the fence. This vine is common over a large portion of the Union, and will quickly form a beautiful mantle of verdure, concealing the wall in summer, with its rich and luxuriant green, and in autumn, with its bright scarlet foliage.

When the eye commands from the house a view beyond the ornamental lawn, the latter may be pleasingly connected by planting or preserving, here and there, in the adjoining fields, a few of the same forest trees that are growing on the lawn, thus avoiding too strongly marked a contrast between the latter area and the farm lands, and showing something of a unity of design or purpose.

The orchard near the house is an apple orchard, and we give a selection of one hundred trees, for the purpose of planting it with the most valuable sorts, including a number of sweet apples, for feeding stock.

	Ripens in
2 Early Bough,	August.
2 Yellow Harvest,	July.
6 Esopus Spitzenberg,	Nov. Feb.
4 Roxbury Russet,	May.
6 Fall Pippin,	Sept. Dec.
8 Jersey Sweet,	Aug. Nov.
6 Jonathan,	Dec. Feb.
6 Baldwin,	Nov. May.
2 Lady Apple,	Nov. March.
4 Large Golden Pippin,	Nov. March.
6 Ladies' Sweeting,	Nov. March.
8 Newtown Pippin,	Dec. May.
5 Wells' Sweet,	Sep,. Dec.
8 Rhode Island Greening,	Nov. March
2 Summer Paradise,	Aug. Sept
4 Swaar,	Dec. March
8 Yellow Bellflower,	Oct. Dec.
4 Pearmain,	Nov. March
4 Michael Henry Pippin,	Nov. March
4 Dominie.	Nov. March.

Original Papers from Contributors.

AGRICULTURAL PREMIUMS.

*Remarks on the general subject—with friendly commentaries on the list offered by the Prince George's (Md.) Agricultural Society.** By J. S. Skinner.

In framing a list of premiums, more care should be taken, and more study should be bestowed on the subject, than is usually done—I do not say than was done in this case. We may better judge of that in the sequel, for as yet the list has not been strictly examined. There will be much more pleasure in approving, than in finding fault; at any rate, the writer has no fear that his motives will be misinterpreted, by those whom he supposes to have had the principal agency in arranging the list.

In adjusting a scale of premiums, a comprehensive view should be taken of the condition and circumstances of those whose welfare is to be promoted, by this union of means and of energies, pecuniary and intellectual, to improve the agricultural practices and to advance the interests of the region within which the society is to operate. Regard should be had to the amount of resources at the command of the Society, and the question in every case should be put, as to the character and usefulness of the emulation to be excited, and the *sort and degree of merit,* which will be elicited by the stimulus offered, and proved by the prize, when gained. To these general propositions, no one, it is presumed, will object. They are even so plain as that it may be thought superfluous to lay them down! Very well! let us by this standard test the list in question. We begin with

Horses.—There appears to have been at the command of the Society, (my figuring is apt to be a little inaccurate,) the sum of $335—and of this sum, except for cattle, the largest amount is offered to promote, what is supposed to constitute excellence, in *the most expensive animal power to which man can have recourse for Agricultural purposes!* But suppose it to be wise to stimulate the natural fondness of our countrymen, for this favorite, but short lived and expensive machine; requiring as it does, so much oiling and greasing, and constant attention! then the question is, as to the *kind of horse* we should encourage the farmers to adopt and rear.

For the best *thorough-bred Stallion,* $10. There ought to be a condition attached, and perhaps there may be in the by-laws of the Society, to wit: that the stallion taking the premium, should be one of uncommon merit in himself, and that he should *remain at least twelve months in the county, for the propagation of his stock.* The second premium is but $5—only half the first, and yet it is for a horse, which, according to the description, must combine all that can be desired in a stallion to get horses for general use, to wit: capacity to get the best saddle and harness horses. These two should be put on an equality, and except with a redundant treasury, I would give nothing but certificates of merit for any other sort of horse on the list. Why offer a *premium* for a horse of *slow draft*—all horses are slow enough. What is wanting for the wagon or the plow, is *strength and bottom—or lastingness* combined with action—and these have much less relation to *size* than to *conformation* and *blood.* Blood should ever be kept in view, and when the day arrives that no attention is paid to pedigree, there will follow a general and lamentable deterioration in the stock of our horses. It is the only guarantee for keeping them up to the mark of excellence. Let the society *secure the use* of the *best stallions,* and the improvement they wish to promote and keep up, is sure to follow. What merit, warranting the bestowment of the slender funds of the society, in a gentleman's happening to own the best mare, that he may sell away out of the county the next day? Besides, how is the merit of a *brood* mare to be decided, except by her being a *sure* breeder, and that of a *succession* of the *best* colts, and being a good suckler besides? As for the "best brood mare, *adapted to slow draught,*" it is not easy to divine what class of people would be benefited by the establishment of slow draught breed of horses, unless it be sleepy drivers; and as for giving premiums for colts, its expediency may be doubted; for besides that these premiums are too apt to be awarded to the biggest and the fattest, it is not a subject to which public attention can be attracted with a hope of augmenting the Agricultural wealth of the county, although it would be very well as a means of swelling the *show,* in the estimation of boys and people who can be tickled with straws. Would it not be attended with more useful results, were a portion of the money offered for mares and colts, to be given in the shape of a piece of plate, for a *prize memorial* to the Legislature, to be circulated in every county in the State, on the policy of *licensing stallions,* and forbidding the public use of any, which a committee of the best judges in each county, to be appointed by the Levy Court, should say were mere garrans, or overgrown beasts, unworthy to propagate the race, and therefore to be *condemned by the loss of their commissions?* And then as to the best saddle horse or mare—what merit does it evince, that a gentlemen should happen to own the best saddle horse in the county, unless you require that he should have bred and raised him? In this latter case, the premium may be supposed to have generated a spirit of emulation among farmers generally, which would be followed by a general improvement of their stock of horses for the saddle. That would be a very desirable thing, and would be best secured by securing the best stallions, and by compelling those who own worthless beasts to pay a premium for using them, so heavy as to *lead to prohibition.*

The mere ownership of the best saddle horse or mare, implies no other merit and requires no other skill, than that of placing the longest purse in the hands of the smartest jockey, to pick you up the best saddle horse to be had in the Baltimore or Philadelphia market.

Out of this sum of $76, appropriated to premiums for slow stallions and slow mares, and best colts, would it not conduce to economy and the increase of Agricultural wealth, had a premium been offered to him whose capital invested in horses should

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* The following premiums will be offered by the Prince George's County Agricultural Society, at its Second Annual Fair, to be held in Upper Marlboro', on Wednesday, and Thursday, the 2d and 3d of November, 1842:

For the best thorough bred Stud Horse,	$10
" Next best do. (certificate of merit,)	
" Best Stud Horse adapted to the road and quick draught,	5
" Do. do. do. slow draught,	5
" Best thorough bred Brood Mare,	10
" Next best, do. (certificate,)	
" Best brood Mare adapted to quick draught and the road,	5
" Do. do. do. slow draught,	5
" Best thorough bred Horse Colt, between 2 and 3 years,	5
" Next best, (certificate,)	
For the Best thorough bred Horse Colt, between 1 and 2 years,	5
" Next best, (certificate,)	
" Best thorough bred Filly, between 2 and 3 years,	5
" Second best, (certificate,)	
" Best do. do. 1 and 2 years,	5
" Second best, (certificate,)	
" Best Colt or Filly of any other breed between 2 and 3 years,	3
" Best brood Mare with Colt or Filly at foot,	5
" Best Gelding or Mare for quick draught or saddle,	3
" Best Saddle Horse or Mare,	5
" *Best Jack,*	5
" *Best Jinny,*	5
" *Best pair of Mules,*	5

bear the *smallest proportion*, to the amount of sales from his plantation! For what, after all, is the true *desideratum?* Is it not to achieve the greatest results, by means the least expensive, to the end that the nett profit should be increased in proportion? So much for the premiums offered for *horses*. These remarks which have been very hastily sketched, in a spirit of warm approbation of the objects of the society, and admiration of the patriotic zeal of its founders, will be more fully illustrated, perhaps more justly and kindly appreciated, when I come to speak of Mules and Cattle. *Washington City, July* 23.

HORSES AND MULES.

On the Comparative Value and Economy of Horses and Mules, being a review of the Premiums offered by the Agricultural Society of Prince George's County, Md.—By I. S. Skinner.

The prejudice against the Mule, seems to be as inveterate as that which impels the the "heel" of every son of Adam to "bruise the serpent's head;" alike whether it be the head of the innocent water, or the harmless black snake, or the viper or copper head, bloated with poison. Does this aversion to breeding Mules, owe *its* origin too, to a divine command—"thou shalt not let thy cattle gender with a diverse kind?" But the same prohibitory command addressed to the Jews, forbade also the "mixture of seed," yet who deems it therefore unchristian to mingle the seed of clover and timothy?

Instead of this invidious distinction by the Committee, in favor of the Horse, offering the highest premiums for that very expensive animal, in all his ages, forms and sexes—young and old, quick and slow, male and female; it were better, we should think, to have held up the highest premium to him whose *Mule power* should bear the greatest, and *Horse power* the least proportion, the one to the other, in use on his plantation! As for rewarding the mere exhibition of the "best pair of Mules," what length of merit can be discerned in that, unless it be that it implies length of purse to give the highest price? If driven to the ground in the owner's own carriage, in lieu of a pair of $500 Vermont horses, that would be quite a different matter. The mode of taking the last *census* was very defective in many respects: for example, it only gives us the number of "Horses *and* Mules" in the aggregate; while here, at once, is an agricultural problem which requires for its investigation, that we should have accurately and separately stated, the number of *each*.

Twenty years ago it was estimated that the horses in England consumed the product of twenty millions of highly cultivated acres; and Sir John Sinclair calculated the keep of one horse to be equal to the product of five acres. Let us suppose constant work to be provided, as it should be, for every horse that is kept on a plantation; does not true economy, as well as humanity and justice, demand that each so worked, should be well fed; and if so, may not each horse be estimated to consume, at 2½ gallons a day, $56 of corn. Add to this, $14 for other provender, and shoeing and physicking; and you have an outlay of not less than $75 a year, for every work horse, to say nothing of idle brood mares, colts, carriage horses, and other *non-producers;* a sum for each horse equal to the purchase of a first rate mule, while the average life of the former will not more than half equal that of the latter.

Among planters in the South, whose position and circumstances are so identical with those of Maryland, the economy and advantages of the mule over the horse, are universally admitted. The report of an Agricultural Society of South Carolina, in relation to this subject, may here be quoted where it asserts: "The mule is more easily raised than the horse, more able to bear heavy burdens, equally strong for the draft, more patient, equally docile, will live twice or thrice as long, capable of enduring much more labor, will do as much work in the same time, and will not be more than one-half the expense, as they will not eat more than one-half the grain, will make use of long forage which the delicacy of the horse will reject, and will bear the heat full as well, perhaps better."

Should not these considerations induce planters to ponder and reflect how far it is expedient to aggravate, by their highest honors and rewards, that natural and costly predilection of our countrymen for horses, which may be said already to amount to a passion—one which had its origin in deeds and days long past of

> "——— Christian service and true chivalry;"

but no more congenial with this utilitarian, money-saving age of ours, than would be the vagaries of the Knight of La Mancha himself.

The last census gives for Prince George's county, Md. 4,648 horses and mules. This we believe to be much short of the real number. The aggregate of both for the State, is returned at 92,220.

It is not extravagant to assume that 60,000 horses in Maryland, might be well superseded by mules, and taking only ten dollars as the clear saving for each, here would be a reduction of annual expenditure—in other words, an increase of income amounting to 600,000 dollars, equal to the interest on the State's debt.

In all steady continued draft, as in threshing, grinding, and other machinery, now so much in vogue, the excellence of the mule is most remarkable, and especially in his less liability to *gald*—an evil to which the horse is peculiarly subject, where his locomotion in harness is *circular*. On their value in service that consists of constant, steady hauling, an extract may here be made from some editorial remarks in an old volume of the American Farmer, then conducted by Mr. Skinner, now of Washington. Speaking of the decided preference given by the late General Ridgely, of Hampton, to mules, in the heavy hauling connected with his iron works, it is observed:—"For some time the General indulged an old servant in keeping a single team of horses, but it was found that the mule teams performed their day's journey, hauling equal weight, sooner than the horses by one hour; and the greater value of the mules has been so well established, in the course of his ample experience, that they have superseded horses, with entire conviction of the great saving accomplished by the change. This information, first derived from his manager, Mr. Green, was fully confirmed by the General himself."

Why then, let it be repeated, in reference to these two animals, make fish of one and flesh of the other!—offering $76 in premiums for the Horse, and $15 only, for "Jack, Jenny and Mules?" And that too under the authority and sanction of gentlemen, who cannot be too much admired for their public spirit and honorable intentions; nor too closely imitated in their individual practice and general management?

As to the more general use of the mule in light harness for the road, the common impression is, that he can't be made to *travel fast enough*. No body likes rapid motion more than the writer of these crude but well meant and respectful strictures; and he would take leave to inquire, who has given to this neglected hybrid, a patient and fair trial, to see how much his speed may be improved? Let it be considered how long it takes to bring a crack trotter, such as Ripton or Confidence, to his best! Hiram Woodruff or Bill Wheelan, the American Chifneys among trotting jockies, never think of taking a horse in hand, to train him for this pace, until after he reaches his sixth or seventh year; and they can hardly be said to get to their best work, until they fall into their teens. Old Topgallant performed his *chef d'œuvres* after he was twenty! When the mule has been in like manner taken up, and systematically trained for the trot, and it is found that he cannot be driven at the rate of eight miles an hour, it will be time enough to pronounce him impracticable in that pace; but the writer knows him to be master of that rate, for he has ridden with two others besides General James Shelby, who drives nothing else in his private carriage, from Lexington out to his magnificent blue grass farm, eight miles from Lexington, behind two mules of about 15 hands, within the hour, and without a touch of the whip; and learned from the General that he had driven a pair to the Blue-lick, a distance of forty miles, in six hours, stopping one hour on the way.

In lieu then of some of the premiums bestowed on breeding stock to give animals of slow draft, and on sucking colts, would it not be more politic to lend the countenance of the society to the rearing and more general adoption, for the road as well as for the field, of a more economical and enduring animal power? Might not a premium be well offered in the shape of a set of *knitting needles* in a silver case, or a butter cooler of ground glass with a cow reposing on its silver lid, to the wife of the planter, who shall accompany him to the cattle show, in a plain light carriage drawn by the pair of *best broke Mules?* To the *wife*, because it is doubtful whether, without her ladyship's consent, this great desideratum in rural economy ever can, or perhaps, we should add, ever *ought to be achieved!* Were it to be imagined that the fact would have any weight with our republican house wives, it might be added that the medals struck in honor of Agrippina, a heroine whose life was adorned with the most noble virtues, bear on them the image of a mule; and a gentlemen at my elbow reminds me, that he has seen Charles X., setting out for his Royal Palace at Fontainebleau, 13 leagues from Paris, driving six splendid black Spanish Mules, of Andalusian blood! But it would be a libel, of which I should never be guilty, to suppose that an American matron could be influenced by any motive so strong as her ambition to promote the independence of her husband; and to set to her friends and neighbors an example of economy and good sense.

"Whoso findeth [such] a wife, findeth a good thing."

SHEEP HUSBANDRY, &c.

Messrs. Gaylord & Tucker—I see by Mr. Morrel's and Mr. Grove's communications, that they strongly urge a "discussion" on crossing sheep. I must first ask them whether the Merino and Saxony are distinct breeds? Secondly, I appeal to Mr. Grove, for the derivation of "Saxony Merino." I have always considered the Merino to be a coarser wool than the Saxony, varying as much as the Cotswold and Leicester, and my strict observation would pronounce them quite different. The fleece is the "*best*" criterion to judge of a sheep's constitution; the coarser, the more hardy, both in fine and long wool; and as I now understand Mr. Grove, his flock is a cross between the two. I only surmise this from the "*name he has given them.*" The information I glean from Mr. Jewett, the "Paular Merino" differs from either. Thirdly, I ask Mr. M. and Mr. G., whether they mean that the public have been "humbugged already," by the high prices the Merinoes brought, or whether it is considered "quackery" in adopting a *judicious cross*?

Now, gentlemen, let us start *fair*, without "*humbug,*" and with "*facts*" for our standard.

The Merino, Saxony, Paular Merino, and South Down, all come under the denomination of fine wool sheep, and there seems a plausibleness in my mind, that they can materially assist each other. I believe it is generally admitted that neither the Merino or Saxony are mutton sheep, and that the community must look for food before a *fine broadcloth.* This granted, I say the carcass should be the first consideration; and if Mr. G. will "*hark back to a fault,*" I think he will find it so. A good fat wether in a farmer's larder, is a very *useful and substantial* support, when he possesses a number of *faithful industrious laborers*, who cannot work as *well* as they *ought*, without some indulgence in their diet. I ask Mr. G. whether mutton is worth more than twenty-five cents per pound in Germany, (for which the Bostonians are paying, by the steamers, exported from England;) and is it not worse to be "dependent on Europe" for food, than fine clothing? If the "*dandy*" is determined to wear a fancy coat, let him pay for it.

I saw a cross between the South Down and Merino, bred by Mr. Haines, of Hallowel, Maine, that appeared like a very *useful* and *serviceable* sheep, and in my opinion, better adapted for a farmer that shears and wears his own fleece, than the latter. Mr. H. said it was fine enough for any purpose he wanted; he could sell his lambs and wethers to the butcher more readily, and at higher prices than his neighbors, and that it was his decided intention to continue the cross; but more of this hereafter.

I give my *positive protest* against crossing the long wool with the fine, but *I have seen* wonderful improvements made in crossing the different breeds of the former, and I see no "proof" to the contrary, why the same principle will not apply to the latter. I have seen it tried very successfully, and will give my ideas on the subject, when Mr. M. and Mr. G. have answered my questions.

Mr. Groves, in speaking of the long wool sheep, says, "That they possess good qualities, is undeniable, but these can clearly be traced to *high keeping.*" Probably Mr. G. will meet with more difficulty in *proving this assertion*, than he did in making it. I think I can "*clearly*" *prove* to the contrary. I will produce four Cotswold ewes at the Fair, that crossed the ocean last winter, through a long and severe passage, remained shut up in a close stable in New-York, a fornight after landing, came to Albany on the 15th of March, and lived on nothing but hay until they were turned out to grass; and in the month of May they fared *harder* than any sheep in the country; (this is not my practice, but I was determined to show how hard they would live, to *prove the unjust remarks* made by their opponents.) On the 21st of June, I weaned their lambs, turned them into good pasture, and when they appear for exhibition, they will speak for themselves. If Mr. G. calls this "*forcing, or high keeping,*" I should like him to give you a statement how he feeds his sheep. I will also produce the four fleeces with them, against four of Mr. G.'s "*best*" ewe's fleeces, the whole shall be sent to an *impartial market* for their different purposes, to see which will produce the greatest return. The eight ewes shall be kept a month, or the whole winter, *by an impartial practical farmer;* the amount of food weighed to them, of equal quality, to "*prove*" which require the "*highest keeping;*" then "*facts*" will *tell*, and all dispute is ended.

It has been the custom in England, for many years, to turn lambs into turneps, to pick out the weeds and grass, after hoeing; I have practiced this ever since I was shepherd for my father, at the age of sixteen, and have derived much benefit both to the lambs and turneps. I have fifty lambs now in eight acres, and it seems to wonder the passers by; some of whom are considered thorough practical farmers. As it does not appear to be generally known, I tell you, that a lamb will not touch a turnep until it is forced to it; as long as there are any weeds, and grass, they will not injure them, but as soon as they take to them will eat them with avidity; if the ewes are fed upon them in the spring, the lambs are more liable to do injury when first turned in, which will soon be perceived.

You may enter my name with the "Norman's Kill" plowman. Also, with the Connecticut gentleman for a two years old Bull, even if he has an "*ugly customer.*" I leave the rest until more propositions are made. I say again with Mr. Groves, "*don't be afraid,*" a faint heart never won. Mr. Commentator should "*touch the tender spots;*" "that is the only place where the mischief lies," as the Irishman said when he hit his restive horse over the *head*. As long as he tells the "*truth,*" he needs no apology for the "*offence.*" It is the plow that pulverises the soil, and without that it will never grow the crop it is capable; therefore, a thorough good plowman is a very valuable man, and possesses one of the most important secrets of good farming. It is my opinion that every farmer should understand the practical part in all its branches, or he is incapable of directing his men; the best test of agricultural ability, is to exhibit your *own skill;* the plow is the first object, and *no man* need *be ashamed to follow it*. Farmers, come up to the *mark*, and try the Norman's Kill plowman; *endorse* his spirit, and let the plowed surface show that your superior workmanship is a good example; then let us try some other useful branches of our profession—it is the only true way of coming to the point—it is easy to *write*, but not so "*easily*" practiced. W. H. Sotham.

A FREAK OF NATURE.

Editors of the Cultivator—For the amusement of your wonder-loving readers, let me tell you that I knew a farmer some years ago, by the name of William Mickle, residing in Surry co. N. C., who owned a cow that had four bull calves at one litter. I am not quite sure, but I believe that he raised them all, and made two yoke of oxen of them. This is telling about a great many calves at once, but the fact can be proven.

South Bend, Ia. July 13, 1842. T. W. Bray.

WINTERING SHEEP, &c.

Messrs. Editors—Having heard some of my neighbors observe that they must sell off their sheep, so that they could plow more, it has occurred to me that by pursuing my method of wintering sheep, they might avoid the necessity of throwing their sheep in market at this time, when they would have to sell at a great sacrifice, owing to the depression in the wool market, brought about by the want of adequate protecting duties.

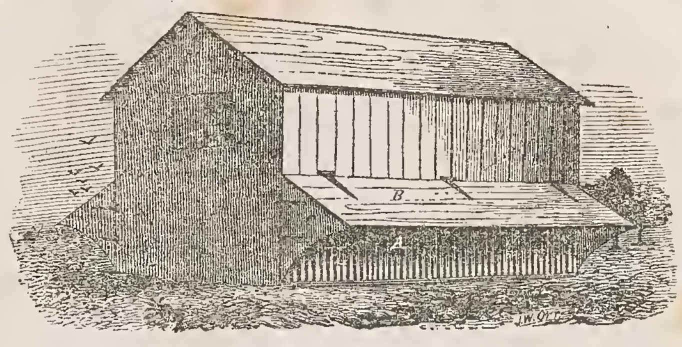
My method is as follows:—About the middle of November, last year, I got up my sheep from the fields, and put 100 together; they consisted of Saxony ewes, and half blood South Down lambs. I shut them up in a yard that was provided with a warm shed, (which I deem very essential,) and fed them on oats in the straw, for about four weeks, until it was gone; (a more economical way would be to thrash the oats and feed each separate.) I then commenced feeding them on shorts and wheat straw; I gave the one hundred sheep one bushel of shorts in the morning, and one bushel in the evening, and foddered them with wheat straw three times a day, in the morning and evening, before feeding the shorts. The shorts cost me 15 cents per bush. and weighed from 20 to 22 lb. per bush. The cost per day, was 30 cts. for 100 sheep; the straw, I count nothing, as the manure was worth more than the straw and labor of foddering. The shorts was fed dry to the sheep, in troughs made for the purpose; they were salted twice a week, and occasionally had sulphur with their salt. The sheep were healthy and in fine order in the spring; in fact, I never had an unhealthy sheep. The sheep had access to water, which they helped themselves to. I find that sheep will drink four or five times in a day, when they can get it without too much trouble.

Farmers who find it necessary to reduce their flocks, should be very particular in selecting those that they keep, and let none but the poorest go from their farms; in that way the quality of wool will be improving, and there is none but a good quality that will pay the expense of raising at present prices.

I see by your July No. that Mr. Durand, Derby, Conn. refers to the Scotch drink, as recommended by Judge Buel, in the 2d vol. of the Cultivator. In his description of the method of making it, he, as well as Judge Buel, omits one essential particular; that is, that the oats should be kiln dried or parched before being ground; if the oat meal is stirred in the water in its raw state, it will be liable to do more hurt than good to those who drink it, but if the oats are properly prepared before being ground, or the meal parched a little after being ground, the drink will be all that it is cracked up to be, that is, one of the best drinks that is carried to the field in hot weather. *Ithaca, July* 13, 1842. E. Cornell.

QUEEN BEES.

Messrs. Editors—In your July No. I observed an article on Queen Bees, that somewhat surprised me; for I had supposed that the fact of their existence was settled beyond doubt or cavil, to a demonstration, if any fact could be so settled. It appears the first to broach the idea as a fact, as I read, was Hodiernia of Totria. Mr. Robert Huish, of London, a modern writer, is positive on the subject, and calls her the queen mother of the swarm. As his description perfectly agrees with my own observation, I give it in his own words:—"Her teeth and her wings are unfit for labor, being much shorter than the common bees and the drones; the body of the queen is much longer and slimmer than the other bees; her belly and legs yellow, and her back and wings of a brighter hue. The queen possesses in health, an astonishing fecundity, unequaled by any thing in nature, except the fish." I have been in the habit of doubling small swarms, and sometimes I have put three together, and therewith made one swarm; consequently, on their casting out the supernumerary queens, I have had frequent opportunities for close examination of them. Their attachment to the swarm is great; they manifest a harmless disposition; I have frequently taken them by a wing or leg, and I never knew one attempt to sting on being handled; I have put them with a drone or two, or more, away from the swarm, also with the common bees in like manner, of different swarms from those to which they belonged, and they manifested no disposition to make war; but place them where they can come in contact with each other, and there is instantly fighting until one gets her death wound by the dirk of the other. I have often dissected them, and observed their prolific character, especially when in health, to agree with Mr. Huish's description, particularly in July; the cell in which the queen is reared, is circular and perpendicular, and fifty times the quantity of wax is used in making one, that there is in making one of the hexagonal and horizontal cells in which the common bees and drones are reared. Some seasons, especially wet ones, the queens are many of them feeble, and consequently the swarms alight low; for the swarm never alights and stays right for hiving, except the queen be with them. I have often known a swarm commence alighting, then leave and commence in another place, then leave there, begin again, and on my examining near the swarm from which they came, I have found the queen of the young swarm, taken and held her up in my hand for a few seconds, where the bees were the thickest, and never failed to have the swarm gather around her, and be ready to hive in about two minutes. The specimens you request, of the different bees found in a hive, shall be forthcoming this fall, for the benefit of Mr. Palmer. J. H.



SELF-FODDERING BARN.—(Fig. 86.)

Editors of the Cultivator—Mill's *India*, and Dr. Robertson's *America*, has substantiated the seeming paradox that a man can write a history of what he has seen nothing of. Relying on the success of so eminent men, I offer herewith some suggestions and plans relating to foddering from barns, which, without being based on much practical experience *in se*, yet seem to me worthy of trial *per se*. It is well established, that foddering upon grass lands is an efficient means of sustaining their value, and on many farms, particularly leased lands, the only effectual method. It is moreover pretty well settled, that the best economy with ordinary farm stock, is to suffer them to eat their fill; and hence, if there be *no liability to abuse*, to keep hay constantly before them; it is farther agreed upon, at least in this neighborhood, that the labor and hardship of traversing some miles of snow, of a winter's morning, to fodder a few head of cattle, is considerable. With these points in view, I have proposed to myself the model of a barn, which, while it reaches every aim presented, is at the same time, cheap and easy of construction, easily moved, an ample protection to hay, offering shelter for a considerable herd, and withall a sightly object.

The barn may be capable of containing 15 or 20 tons, as circumstances may direct; it should be in proportion of length to breadth, as 20 to 12. The two longitudinal sills I would have permanently fixed to two substantial runners; four feet above the sills on either side, a beam should be inserted, from which rack stocks or slats (A,) may run to the sill. This exposed portion I would protect by a slight roof, (B,) hung upon rude-string hinges, 3 feet above the upper insertion of the rack; this roof to project at an angle sufficient to shed the rain, some 7 or 8 feet from the barn, the roof to be upheld by two end pieces, (C,) compactly made of thin boards, hung also by hinges upon the corner posts. Fig. 86 is a perspective view of the whole.

Now then for the use of the hinges; it is simply this: that the ends may be folded in, and the roof be swung down upon them, thus forming in a moment a compact barn, subject little as any to depredation. This, the late pasturage of mowing lands might render necessary. On the approach of winter, the roof may be elevated, the ends swung under, and the pressure of the superincumbent hay will keep fodder before stock until it is entirely gone. D. Y. Mitchell.

Elmgrove, Ct. July 21, 1842.

MR. BICKETT AND AN ONONDAGA FARMER.

Messrs. Editors—I have seen at page 110, of the present volume, a communication from Mr. A. Bickett, in relation to some previous remarks of mine on the importation of animals, and the improvement of our stock. With your leave, I have a few words to say in answer to Mr. B. To the general tone of his paper, however, and his insinuations, I have no reply. Such a tone and temper cannot subserve the cause of truth; and will not be indulged in a civilized country, by one who has not made up his mind to forfeit all claim to the character of a gentleman.

Mr. Bickett errs in supposing that An Onondaga Farmer and Mr. Allen, are one and the same individual. So far from it, O. F. has never had the happiness of meeting Mr. Allen; and is wholly unacquainted with him except through the medium of the public press. He knows, however, that Mr. A. is a gentleman to whom the country is much indebted for his efforts and his success in the improvement of our stock, and whose opinions are entitled to great weight. He may, sometimes, have expressed himself incautiously, as he doubtless did in regard to the Ayrshires; or used language capable of misconstruction, (and who does not?) yet no liberal minded man will make such mistakes the basis of vindictive personal remarks.

Mr. Bickett asserts that the remarks of an "Onondaga Farmer," must have arisen from selfish motives, and a desire in him, Mr. A., and the present breeders of improved stock, to monopolize the home market. To show Mr. B. how wide he is of the mark, an O. F. would state that he is not now the owner of, and has not at this time on his farm, a single animal of the improved breeds; and he has yet to learn, were it otherwise, how their possession, or sale, could be construed into a crime.

Mr. Bickett objects to the anonymous signature of an "Onondaga Farmer." O. F. has a name, of which he knows no reason why he should be ashamed, or be led to suppose it would lessen the value of any communication he may see fit to make; still he chooses not to use it in this place; and were other reasons wanting, Mr. Bickett's letter would furnish them in abundance. That paper shows that writers for the public are most unfortunately apt to lose sight of the subject, in the individual, when his name and position are known to them; and the matters treated, are weighed more with reference to what is known of the writer, than their intrinsic merit or demerit.

An Onondaga Farmer does not feel himself called upon to defend any of the positions taken by Mr. Allen. With that gentleman he has nothing to do, and Mr. A. is fully competent to defend himself; or should he be betrayed into careless statements, he is not the man to persist in language calculated to convey erroneous impressions. His statement already published in the Cultivator, proves this.

But why should the apprehensions of an Onondaga Farmer with regard to the importation of diseased animals, be deemed without foundation? The epizootic, so prevalent for a few years past in Great Britain, and so extensively fatal, was imported into that Island, and from thence into Ireland, from which it has again passed into England, with similar destructive effects. We should remember too, that some of the diseases most fatal in this country to our domestic animals, have certainly been imported with them; and there can be no good reason given why the present *plague* which has passed over the continent, and is now ravaging the British Islands, should be confined to that side of the Atlantic.

An O. F. has no doubt if Mr. B. will re-peruse the paper which has given him so much offence, he will see cause to modify the opinion he seems to have formed of its heterodox and dangerous nature.

July, 1842. An Onondaga Farmer.

COMMENTS ON THE CULTIVATOR FOR JULY.

Messrs. Gaylord & Tucker—Your article entitled "*Wool and its Manufacture*," contains a number of statistical facts which are highly interesting—not only to wool growers, but to our whole community; for it involves the still unsettled question whether the government has any right to compel consumers to pay to producers a higher price for what they want, than they would have to pay but for this legislative interference. On this all-important question, it is not my present purpose to offer more than a passing hint; and I hope your readers will deem it worth their while to take it into their serious consideration. The grasping spirit of selfishness characterises governments quite as much as it does individuals; and it tempts them constantly to play at that game of commercial restrictions, which cannot be better described than by Mr. Jefferson's definition of war—"*the unprofitable contest of trying which can do each other the most harm.*" Well then will it be for the people of the United States to ponder this matter deeply before they finally determine how far they mean to venture in playing this most precarious, and always more or less injurious game.

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Under the head "*True Doctrine*," you have given us a short extract from an address by A. C. Baine, Esq. which well deserves all the praise you have bestowed on it, and much more. It is *indeed*—the *true doctrine*, and should be preached from one extremity of the Union to the other, wherever any hearers can be found to listen to it. To adopt it generally, is the only thing that can elevate the people of the United States to the rank they ought to hold among the nations of the earth.

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Your anti-queen bee correspondent, Mr. H. Palmer, reminds me of the old saying, that "it takes all sorts of people to make a world;" and some truly queer sorts we occasionally find among them. I have never met with but one person to match him for incredulity; and he was an old revolutionary officer, (long since dead,) who always declared that a cardinal article in his creed, was, "*to believe nothing that he heard, and but one-half of what he saw.*" Should Mr. Palmer persist in this matter, he will have to prove a negative, in which—if he succeeds—he shall have, at least, my vote as Professor of Logic, in the new University that they are about to build in Washington, with the Smithsonian legacy.

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I am truly sorry that I did not see Mr. Eli Westfall's communication to you relative to the marvellous virtues of a black cat's blood in curing the shingles, before I classed the belief in them among "absurd and ridiculous superstitions," as I might then have avoided wounding the feelings of so sensitive a gentleman as himself. Permit me to assure him that I have nothing to "*forgive*" in his remarks, which he had a perfect right to make; but I owe it to myself to show that he has somewhat misrepresented me, although, I am sure, without intending it. I did not apply the term "*absurd and ridiculous superstition*" to the blood of cats of *any* color—nor to the fleshy side of their skins just taken off,—nor even to the blood of a black's body, as a sovereign remedy for the shingles; but to the blood of *his* or *her* tail, as the grand panacea for this troublesome disease. From Mr. Westfall's statement, it would seem that neither the color of the cat, nor the part of the body from which the blood is taken, is of the least importance, and against this I have nothing to say, but "credat Judæus."

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A word or two now on the article under the head—"An Onondaga Farmer and Mr. Allen." Having offered a few comments on Mr. Bickett's former remarks about the latter gentleman, in which I might have done him some injustice, Mr. Bickett's present attack upon him, seems to afford a fit occasion to ask what are *Mr. B.'s claims* to exemption from the influence of that self-interest of which he so strongly accuses Mr. Allen? May not Mr. B. be as deeply interested in the breeding and selling of Ayrshire cattle, as Mr. A. is in breeding and selling of Durhams? Possibly too—he may be a Scotchman, and if he is, he would be under the additional influence of that natural partiality which all his countrymen feel for every thing that comes from Scotland. Should this be so, Mr. B. will labor under two disqualifications for deciding fairly on the comparative merits of the two breeds of cattle, and of course, has even less right than he is willing to allow Mr. Allen, to determine between them. I myself, Mr. Editor, have no interest whatever in this matter, being neither a breeder nor vender either of Durhams or Ayrshires; but having formerly made some comments on one side of this controversy between two of your correspondents, who are both personally unknown to me, I deemed it nothing but right to offer a few remarks on the other side. Both have appealed to your readers, and as one of them, I have thought that I had a right to express an opinion.

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Of your correspondent, Mr. F. Burt, I shall say nothing at present, as the remarks upon myself, which you have lately received from him, do not appear in your paper. Perhaps I ought to rejoice at this, for he might have "kilt" me, as the Irishman says, but still I should have been willing to incur the risk, so strong and reckless is my curiosity. Upon *his* scheme to promote agricultural knowledge, I shall leave it to others to decide, being myself content with *that* scheme which at present prevails, I believe, in every civilized country on the face of the earth.

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I presume your correspondent, D. G. Weems, who has given us an article on tobacco, must be a doctor, for he has used more hard words in the short compass of 21 lines, than I have met with in 21 months reading,—at least on agricultural subjects. Beg him, therefore, my good sirs, when he writes again for us farmers and planters, to use somewhat plainer language; since, "to tell the truth and shame the devil," I must say that very few of us are "high larnt" enough to understand him, when he talks of the *use and abuse*" of tobacco. Its "*use*" with us, I know very well, has been to destroy thousands upon thousands of acres of our very best lands; but as to its "*abuse*," I should like to see the man who could abuse it half as much as it deserves. If temperance societies could succeed against the use of that, as they have done against intoxicating liquors, they would merit immortal honor.

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"A. of the North," I hope will accept my very best thanks for the compliment which he has been pleased to pay "Commentator," and gladly would I tell you and your readers, how highly I think of him and his communications, if I were not afraid that you would all think I was trying to tempt him to a game of "*scratch me, and I'll tickle you.*" It is a very pleasant game they say, where two can play at it without being detected; but there is the difficulty,—there is the rub!

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Your correspondent, "Economist," has given us an excellent and very amusing article, under the head—"Making joints with the axe and jack-knife." He has sketched to the life, our "penny-wise and pound-foolish" brethren, and has flagellated them with so much good humored ridicule, that I wish he would lash them again. It is the only process, I believe, by which they can be made sensible of their folly.

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Mr. J. Horsfield's method of fixing gate posts appears to be a very good one; but I believe that such careless cartmen as I have been accustomed to see, would jostle even his out of place, unless they were guarded both before and behind, (as I have often seen practiced,) by strong posts about 4 feet high, strongly planted in the ground, at the distance of 4 or 5 feet from each post. They may be so neatly finished as to be rather ornamental than unsightly.

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Agricola, I think, is right in what he says of the little attention, comparatively speaking, which has been paid to horses by yourselves and correspondents. Among all our domestic animals, the horse is certainly much the most valuable, and therefore should receive, at least, an equal share of our regard. There is quite as much difference between the various breeds of our horses, as there is between the various breeds of our other stocks; and it is more important to the farmer to know in what this difference consists, than to gain all the knowledge which books can give him, (valuable as I admit it to be,) of cattle, hogs, and sheep, although we see scores upon scores of communications from your correspondents relative to *them*, for one that we get in regard to the horse.

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Mr. Lewis C. Beck's plan of describing from time to time, "the weeds of agriculture," is a very laudable one, and may be made highly useful, if he will give us, in regard to every weed he describes, the best mode of extirpation. Among the weeds mentioned in his first communication, he speaks of the yellow melilot, but says nothing of the white, which is the only kind, I believe, that is known in the middle States. It is a great pest, although it might easily be extirpated, as it is only an annual plant. The height is at least six or seven feet, the root nearly or quite as long, the flowers white and offensive to the smell, as are also the bruised leaves of the plant; take it altogether, I should say it is utterly worthless. In Mrs. Lincoln's Botany there is a description of this kind of melilot, but not of the yellow. The white is also described in Mr. Eaton's Manual of Botany, and strange to say, he says it is "sweet scented;" but with due deference to his nose, I should call its scent by any other name. Mr. Beck will pardon me, I hope, for suggesting that it will hardly be of any use to farmers and planters of the United States, to describe any foreign weeds of agriculture, unless they either have become common among us, or are likely to become so. My reason for making this suggestion, is, that I have never seen a plant which would answer his description of the "Avena fatua;" and since it is not mentioned either by Elliott, Barton, Torrey, or Muhlenburg, as I have been informed, it is probably neither a native weed nor a foreign interloper.

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Mr. C. N. Bement's letter recommending the Worcester plow, reminds me of a plan which I have often thought would be as highly useful as it is practicable. It is to have an annual trial, at Washington, during the sitting of Congress, and at the public expense, of plows, wheat machines, cutting boxes, and corn shellers. Let it be made by scientific and practical men, who should be required to publish the result of their trials. The great advantage to the agricultural community would be, that all would then soon know which machines were best; and none would be under any necessity to incur the risk of purchasing such as were of very little, or no value. As the matter now stands, thousands of dollars are annually thrown away in buying worthless machines or implements, merely for the want of some such public and comprehensive mode of testing their comparative merits. Our Congressional committee of Agriculture, might then render some real service to American husbandry, by acting as judges of these trials, instead of being a merely nominal thing, as it has been from its creation to the present day.

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I once more hail with pleasure, the name of our friend, "Solon Robinson," and hope that we shall very soon see again some more of his "notions" about matters and things in general. He has been much missed by all your readers of my acquaintance, for a long time past.

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The "cure for worms in children," which you quote from the Farmer's Register, is an old acquaintance of mine, and I can assure you will do what is there promised for it. A friend, long since dead, who owned a number of negroes, used to give it the children every summer, as soon as the seed of the Jerusalem Oak was well formed. I have often seen the children eat it with much apparent pleasure, and my friend informed me it always had the effect intended. The leaves of the plant, or the seed boiled in milk, were also very commonly given to children in my younger days, and the dose, (say a large tea cup full taken fasting in the morning,) was deemed an excellent vermifuge. By the way, I cannot help thinking that if our modern doctors would make more use than they do, of the medicinal plants of our own country, it would be much better, not only for their patients but themselves. Can their neglect to do so, be attributable to their being too lazy to make the study of medical botany a necessary part of their college course? Say, gentlemen, aye or no, since it is a question that cannot be answered by COMMENTATOR.

A QUERY.

Editors of the Cultivator—A few days since, I was informed that there was an instance in this neighborhood, of a bunch of *Nimble-Will* growing contiguous to a wheat field, and from the pollen of the wheat this grass had been impregnated, and was now in bloom, with perfect heads of wheat!

Yesterday, I visited the place. I found in the angle of a fence a patch of about 4 by 10 yards of grass, a sample of which I enclose you. This I found in a rich alluvial soil, in a southern exposure, growing under the shade of a locust tree; in the field, a crop of wheat had been cut some 6 or 8 days; across one of the fences which formed an angle of 45 degrees, there is growing a crop of corn, and within the corn field, there were a few spears of this grass which had escaped the plow. Underneath the locust, this grass grew as thick as timothy usually does, about 3 feet high, and was then in bloom; from an examination, as well as the assurances of the gentleman who owns the farm, I am satisfied this land has not been disturbed by the plow for several years; the situation of the fence forbids it, and the growth of the locust would otherwise protect it. As you will see, it has a small, solid, hard stem, with joints and blades resembling the nimblewill, which is very common here; as in grass or grain, there was an undergrowth of the same character which had not formed any heads, and this bore a stronger resemblance to this grass.

I have never seen anything of the character before, nor have I been successful in finding any person that can say what it is. The patch will be protected until the grain matures, and if it should turn out to be worth attending to, I will have some of the seed preserved. You, who never suffer anything of the kind to pass unnoticed, which is either useful or curious, will use it as you think proper; but if you can inform us what it is, and why it should be found there, the information will be acceptable. Yours, J. LAIDLY.

Guyandotte, Va. June 30, 1842.

Note by Eds.—We have received the plant described by our correspondent, but at this stage of its growth are unable to determine its character; and are inclined to consider it one with which we are not acquainted. When mature, however, it may be different. The specimen sent much resembles ears of spring wheat, gathered immediately after they have left the sheath, except that the beards or awns are not so long. Like that plant too, it has five florets on each spikelet, but the rachis or central part of the ear, though jointed as in that grain, is not, as is that, curved between each spikelet. It more resembles rye grass, *Lolium perenne*, than any other, but is very different from that. At present we think it a grass, but cannot determine the precise kind. There are two objections to considering it a hybrid, as proposed by our correspondent: 1st, such a cross fertilization would be inconsistent with those recognised laws which govern plants; and 2d, if such a cross had been effected, it could not affect the form of the ear the present season, as its influence would be felt in the seeds only, and become visible next year in the ear.

The circumstances attending the appearance of this plant, as well as the plant itself, are, however, curious, and we hope will receive the attention from our correspondent, they seem to deserve. When matured there may be no doubt about the character of the plant. The seeds in the specimen sent were so shrunk as not to be distinct without a glass; when ripened, their kind and qualities may be known at once. We shall be pleased to learn the result.

GREEN MANURES, &c.

Messrs. Gaylord & Tucker—I have now been a reader of the Genesee Farmer and the Cultivator for six years, the perusal of which has afforded me both information and amusement, far beyond the value of my subscription. I have often felt disposed to endeavor to make up for the balance thus against me by contributing to your columns, what may be information to others. Walter Scott said "he never met with a man he could not gain some information from." I believe most have found this true in their own experience. Now if every man who is sensible he is possessed of information that is not generally known, would make it his business to communicate it to the world, all professions, particularly agriculture, would rapidly improve. But too many, like myself, remain satisfied with reading the information procured by the industry of editors, until they get roused, as I have, by reading the different articles lately on "Green manures." The one, page 92, has stirred up the *furor scribendi*, and to ease my conscience, I find I must tell you what I know on the subject.

The remark, "it is evident that green manuring can only be used profitably in a warm climate, or during the warmest part of our seasons," recalled to my recollection the many trials I formerly witnessed in the West Indies, where, from the exhausting nature of the sugar cane, great exertions are required to keep up the fertility of the soil. To give your readers an idea, 50 and 60 cart loads of manure to the acre, is considered a medium quantity by a *good planter*, when he plants a field with canes. The difficulty of procuring this large quantity is so great, that many green crops have been tried with various degrees of success; turf with a good growth of grass; the bonaris, a small white bean well known in the states, and the palma christi, (castor oil plant;) but nothing has equalled the Angola or pigeon pea, which is a large bushy shrub, 5 or 6 feet high, full of small branches, the fibre of which is equal in *toughness* to the *branches* of most of the soft woods, although it comes to perfection and full size in six or seven months. I am particular in stating this, because it is directly opposed to your statement, "it is evident that to produce the best effect as an enricher of the soil, the plant used as manure should have a rapid growth, as in that way, more of its bulk is drawn from the atmosphere than the earth."* *A soft, half matured* plant, it is well known, does not afford near the nourishment to a beast, that hard ripe food does; and considering that "dry leaves are nature's choice morsels," the soil would be benefitted in about the same proportion by soft quickly grown buckwheat and a tough fibrous vegetable.

The following I know to be a fact:—A person brought up as a farmer in Scotland, was sent to an estate in one of the Windward Islands, to improve the system of tillage. Not being able to manure a field of six acres that had been much exhausted by frequent cropping, he resolved to give the pigeon a fair trial; he accordingly sowed them so thick that in a few months the ground was effectually covered to the height of six feet; he then cut down this mass of vegetation, and immediately buried the whole under the large banks that are raised in digging cane holes. Conceive land thrown into furrows 18 inches to two feet deep, and measuring 5 to 6 feet from ridge to ridge, and you have the appearance of a cane field, when holed ready for planting. These large banks thus gave great facility for burying such a quantity of bushes. His first crop gave him but six hogsheads of sugar; instead of allowing the canes to shoot up again, as they will, he planted the pigeon pea, and proceeded as before; this second crop yielded 12 hhds. of sugar, as the benefit of the first decayed bushes was then felt. He tried the peas a third time, and his crop was 18 hhds. Finding the improvement was so wonderful, he resolved on a fourth trial, and the 6 acres yielded 24 hhds., which is considered a *first rate crop,* equal to 100 bush. of corn in this country. Unfortunately he was then removed to another estate, and his successor thinking a larger quantity to the acre could not be obtained, did not continue the experiment.

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* We thank our correspondent for his valuable paper, but must be permitted to say that we do not consider his statement respecting the Angola pea, to be "directly opposed" to our remark respecting the proper plants, and their mode of growth for manures. It appears evident to us that a vegetable which shoots up to the height of six or seven feet in a few months, must at that time more resemble a vigorous annual in its substance, than a hardy perennial; and though the pea resembles a shrub, it is hardly considered or treated as such by the natives. Roxburg, in his Flora of India, says "the natives consider them as an annual, because they do not bear well the second year, and after collecting the first crop, pull up the plants, dry, and use them for firewood." It is clear, therefore, that the Angola pea comes within the class of plants we have designated most suitable for green manuring. Its growth is rapid, as that of all such plants should be, and it appears that in the cases named by Quercus, it was put under the earth before the fibres had time to harden, while it was the fullest of juices, and therefore in that condition in which it would decay most rapidly. Altogether it is a beautiful illustration of the value of green manures.

Residing on new land, I have not had to trouble myself much about enriching my own, but which would be the best plant for these latitudes has frequently occupied my attention; and if I had poor light land, immediately after harvest I would plow the stubble under, and broadcast a crop of *burs,* (the kind that is at this moment about 2½ to 3 feet high, and bears a dark red flower;) perhaps drilled at 18 inches would be better, so that the cultivator might be run through them once or twice, to clean the ground, as well as increase the growth of the burr; when the plant is in flower, from the 15th to the 20th of June, plow them under, and sow buckwheat to be again plowed under for fall wheat. The two would give an immense quantity of vegetable matter to the soil. Perhaps the idea will occur to many of your readers, that some of their neighbors would have but little difficulty in procuring abundance of seed with little trouble, as scraping down their cow's head and necks, for a morning or two, would easily fill a bushel. I do not know but the mullein would be better still, as the stalk is very hard, and the leaves thick and tough; perhaps a thickly planted crop, allowed to stand until the flowers began to fall, then cut down, and when dry enough for fire to run, burnt, and the ashes plowed in lightly, would be better still, as the ashes would manure the land, and the fire destroy all weeds. This plan, according to Mr. Lyttleton Physick, would be attending to nature's first law, "keeping the earth covered with vegetable production, which is necessary for the continuance of vegetable growth." I agree with nearly every thing that gentleman has said, (and hope he will continue his "suggestions,") particularly in not working hoed crops too late. I have long entertained the idea that potatoes, beans, peas, and corn, should be weeded the moment the weeds *show* themselves, which is usually 2 to 3 weeks after the harrow; about the same period, the second appearance of those pests is the signal for a repetition of the use of the hoe or cultivator; after that, the lateral roots are throwing out, and weeds will be too much sheltered to do any serious damage. Weeds attacked in that early stage, are easily destroyed; every farmer who has handled a hoe, knows the difference between *scraping* up weeds or *cutting* them up; four acres may be scraped while one is being cut; a lesson that carelessness for two years in succession, thoroughly taught me. "Nip sin in the bud," and "destroy weeds when young," are two proverbs which should go together; the neglect of either produce very similar results. I differ from Mr. P. in thinking our fence corners being "sheltered from the sun," is the reason that those places become rich, while the cultivated field deteriorates. If so, a summer fallow ought to impoverish, whereas the contrary is known to be the result. A practice formerly existed in some parts of Britain, called "fogging," which was to allow a poor meadow to remain untouched a whole year; the following summer the crop of grass greatly increased; this treatment was precisely the same that fence corners in grain fields receive; all the grass remained and rotted down through the winter, for cattle will rarely eat the old grass in fence corners, when allowed to range over the stubbles after harvest, and consequently the decayed vegetable matter, the growth of the previous summer, becomes the nutriment (whatever Liebig and others may think,) "necessary for the continuance of vegetable growth." Allowing roots to run the right depth, is according to Mr. P., a most important though overlooked matter. I have an experiment in progress this year, having that point particularly in view, the result of which, if such as I anticipate, I will communicate for the benefit of your readers.

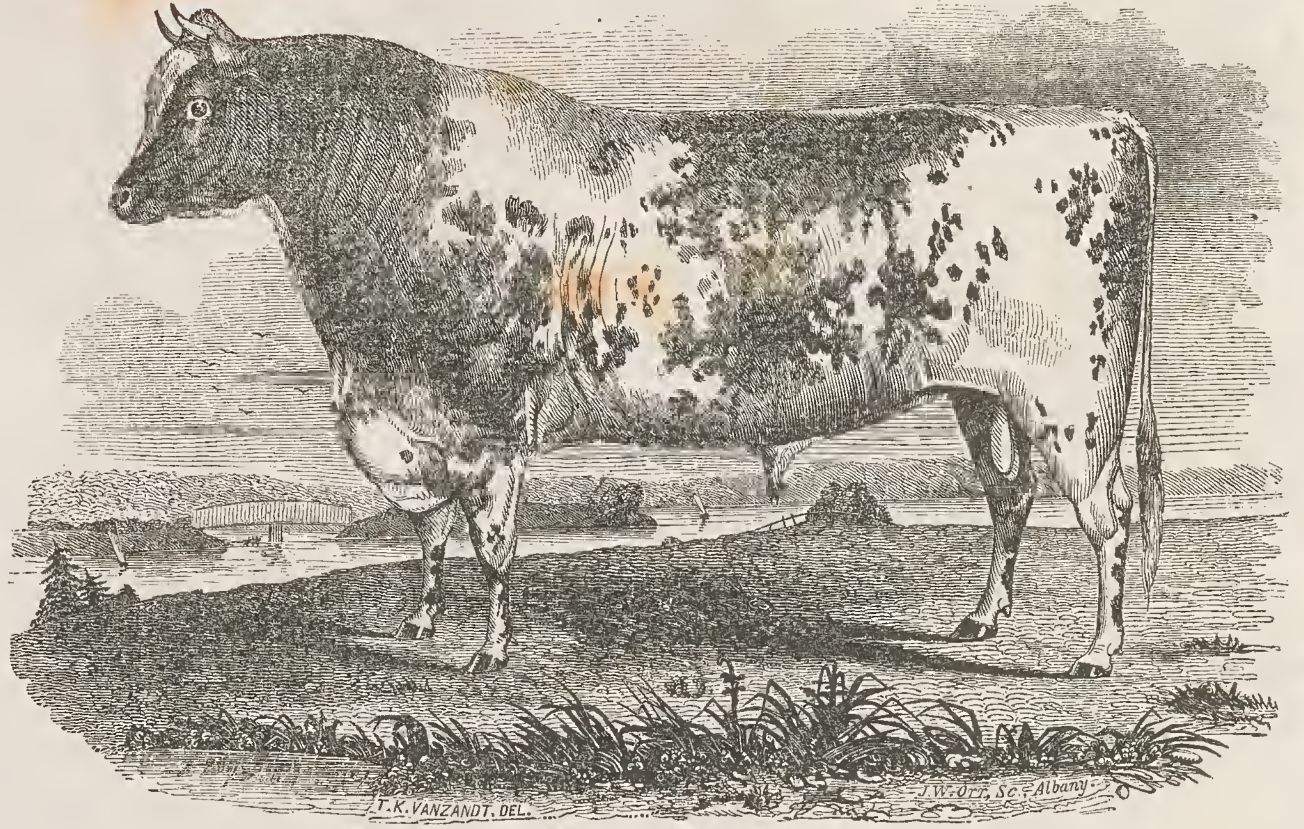
I am, gentlemen, your well wisher,

Goderich, U. C. June 25, 1842. QUERCUS.

NEW DEPREDATOR.

MESSRS. EDITORS—In examining my corn field a few days since, just as the tassels or tops began to show themselves, I observed that one vigorous shoot had the upper leaves perforated with a multitude of holes; and examining farther, I saw that the leaves forming the sheath of the top, were bored in the same manner. Taking out my knife, I cut off the stem, and commenced carefully stripping off the leaves to discover the insect. I soon found him, snugly esconsced in his leafy envelope, and busy in devouring the base of the partially unfolded top. He was a worm, rather more than an inch in length, not as thick as the common cut worm, quite active when first taken from his cell, and of a palish straw color. The head or snout was more like that of the silk worm, than that of the common caterpillar, and from the progress he had made, it is evident the stalk of corn would have been destroyed. I have called this corn worm a new enemy, because I have never seen one like it before. I have occasionally noticed one in green ears of corn, but I think they were different from this. Perhaps it is what I have heard called the "spindle worm" in the eastern states; or it may be the same of which so much complaint has been made in the western states, as feeding on the green ears. If any of your readers have noticed such a worm, or if it belongs to the kinds I have named, they will by noticing it in the Cultivator, oblige a

YOUNG FARMER.


T.K. VANZANDT, DEL.
J. W. ORR, Sc. Albany.

DUKE OF WELLINGTON.—(Fig. 87.)
Imported and owned by GEORGE VAIL, ESQ. *of Troy, New-York.*

MESSRS. GAYLORD & TUCKER—Herewith I send you a portrait of the "Duke of Wellington," an improved Short Horn Durham Bull, which I imported from England in the summer of 1840. He is from the celebrated herd of Thomas Bates, Esq. of Kirkleavington, by whom he was bred. His dam, Oxford, was in calf with him, at the time she was exhibited at the Oxford meeting of the Royal Ag. Society, in 1839, when she took the first premium of 30 sovereigns, for the best Short Horn Cow. (For his pedigree, see Cult. vol. VII, page 141.) The portrait will convey a sufficiently accurate idea of his form, though it is impossible to do justice to any animal of his breadth, by a mere side view. His coat and handling qualities sustain the high reputation of Mr. Bates' herd in this respect. He will be three years old on the 24th of October next.

Permit me to add that my heifer Dutchess, imported at the same time, also from Mr. Bates' herd, and sired by his celebrated bull Duke of Northumberland, which took the highest premium for the best Short Horn Bull, at the same meeting of the Royal Ag. Society, has brought two bull calves, by Wellington, one dropt July 25, 1841, and the other July 30, 1842. These two calves will be exhibited at the State Fair, when one of them will be offered for sale. I shall also exhibit a yearling heifer, and several spring calves, by Wellington, some of which will be for sale.

We were obliged to milk the heifer Dutchess, the year round, till she brought her last calf, though the latter part of the time she was milked at intervals of a few days, to prevent injury to her udder; and I cannot doubt from my own observation, but that Mr. Bates' stock richly deserves the reputation it has gained for its superior milking properties. Respectfully yours,

GEORGE VAIL.

Troy, Aug. 20, 1842.

CULTURE OF WHEAT.

MESSRS. EDITORS—With your leave, I wish to give you for insertion in the Cultivator, some opinions, experiments, and results, of mine in the culture of wheat. In doing this, I shall take up the subject under the several divisions of

1. TIME OF SOWING AND PREPARATION OF SEED.—Experience has convinced me, that in our latitude the best time to sow wheat, is from the first to the middle of September. I have sown in August; but have found that the hot dry weather usually prevailing in that month, is unfavorable to a vigorous and healthy germination of the seed, while a later sowing secures a better growth, and at the same time gives the plant a sufficient root to withstand our winters, one of the most serious difficulties with which farmers have to contend. Too late sowing does not do this, and such wheat, except in the most favored soils and localities, will rarely escape badly freezing out. I have tried various methods of preparing wheat for sowing, but the most satisfactory and least expensive results, have been obtained from soaking in strong brine, and drying in quick lime. The lime should be good or caustic, or the desired effect will not be produced. I have used lime which had been slaked for so long a time as to be quite mild, and it proved no better in preventing smut, than would as much common mold. I have used plaster for drying brined wheat, but judging from the results, the effect, so far as smut was concerned, was decidedly injurious. A part of the same field limed, was wholly exempt from smut; the seed sown without any preparation was slightly smutted; that dried in plaster, was almost destroyed by the smut.

2. PREPARATION OF THE SOIL, AND MANNER OF SOWING.—A thorough summer fallowing is the best preparation of the soil that can be given for a wheat crop; one that leaves no weed to interfere with the future crop, and at the same time subjects every part of the soil to the benefits of atmospheric action. I do not approve of the direct application of manures to the wheat crop. Two evils result from this course; one is, that the stalk of the plant is stimulated at the expense of the berry, being apt to lodge and shrink; and the other is, that barn yard manure is apt to contain so many foul seeds, as to render it certain that when applied to the wheat crop, a vigorous and injurious growth of these interlopers may be expected. When soils are rich and clean, summer fallowing may be dispensed with in most cases, one or two plowings being sufficient for the getting in the seed well; but it must be remembered there are very few farms that have been so manured, plowed, and thoroughly cultivated, as to render this course admissible.

As to the manner of sowing wheat, I prefer that which approaches the nearest to drilling; finding that method preferable for several reasons. I find that wheat sown in that way is less liable to freeze out, (and that is the most serious difficulty I have to meet,) than when distributed equally over the ground. It is almost uniformly the single plants that freeze out; those that grow in clusters escaping, and drill sowing, or any manner that resembles it, places the seed in a way that unites the strength of the plants. Consequently, I prefer furrowing my fields at such distances as I wish the wheat to grow, (from seven to ten inches,) and sowing my seed on the land so furrowed. Every farmer knows that in this case, the greater part of the seed will fall or roll to the deepest part of the furrow, and be thus deposited with nearly as great regularity as if the drill was used. In covering the seed, I first harrow the same way as the furrow, and then crosswise, which disturbs the position of the seed but little, and gives it about the requisite depth. If the furrow made by the plow, on which the seed is sown, is six or seven inches in depth, the covering of the seed will not be far from two and a half or three inches, which I think is the proper depth for the perfect germination of the seed and the security of the plant. I have tried many experiments in the sowing of wheat; such as sowing, harrowing smooth, and then furrowing as for potatoes; sowing, and plowing into ridges; sowing and plowing in the seed, without harrowing; sowing and harrowing alone; and the way I have above described, which has been more successful with me than any other. When wheat is sown in drills, or so as to produce the same effect in the distribution of the plants, there is more room for the air to circulate, and for the influence of the sun, and I have found that such wheat is less liable to mildew than when sown in the usual manner. This result I have witnessed the present year; that sown in the ordinary way being more rusted than that which was in drills. I saw not long since in the Cultivator, vol. IX, page 105, an account of an experiment made in England, to prevent the freezing out of wheat, which was eminently successful. In this case the wheat was put in with a plow drill, the seed dropped in the furrow, and covered by the next passage of the plow, and not harrowed at all. That such a method would succeed, I cannot doubt, it being only a more perfect execution of the system I have followed or preferred.

With regard to the depth at which wheat should be planted or rather covered, I will mention an experiment I once instituted to aid me in determining that point. In a bed of rich garden mold, I sowed, or rather dibbled five rows of wheat, the respective depths of which were one, two, three, four, and six inches. The season was most favorable for germination, moist and warm, and the seed was carefully selected from a quantity of fine white flint, of the previous year's growth. That put to the depth of one inch, came up on the sixth day; and the rows of two and three inches, about two days later. The row at four inches was still more tardy, and at the end of sixteen days, only one of the seeds planted at six inches, showed itself above ground. The others never came up at all.

The rows planted at two and three inches, gave the best plants, that at one inch the most; although from some unexplained cause, about one-sixth of the seed in all the rows, failed of germinating. Other experiments with nearly the same results, and close observation of the different modes of sowing, has convinced me that covering wheat too deeply, is to cause a loss of a large portion of the seed, and seriously impair the germinating powers of the remainder. On the contrary, when the seed wheat is covered too shallow, it is more liable to destruction from insects, and from drouth, and is not so well prepared to endure the frosts of our winters, as when planted deeper. I apprehend too, that where wheat is put into barns, packed in large mows, and perhaps but imperfectly cured, the mass, in undergoing the sweating process, through which it is certain to pass, accumulates so much heat as to change in some degree the vital properties of the grain, and partially destroy its germinating power. This may be the case without altering in any degree the external appearance of the grain.

(To be continued.)

A Wheat Grower of Western New-York.

FARMING IN PENNSYLVANIA.

Messrs. Gaylord & Tucker—In looking over the columns of your paper, as I am accustomed to do, to see what is being done in the distant sections of the country, as well as the manner in which the varied operations of agriculture, &c. are performed, the amusement or instruction consists chiefly in witnessing something new to me. In communications to such a work as the Cultivator, truth and brevity are characteristics that render them tolerable to many of its readers, while puffing and bickering must become stale, and give place to discussion that may elicit truth, and facts established by investigation and experiment. Fertile land, high manuring, and good cultivation, will often give good crops, the amount of which being given, may stimulate those who were sleeping over improvement, with the idea that they had carried it to the utmost extent. Those whose knowledge is obtained from observation limited to one section of country, may startle at the production per acre of other districts of more congenial climate and soil, and be led to remedy the defects in their own. It is not amiss also to know what is the average production, with the ordinary or usual cultivation in the various crops in different parts of the country. Some might be saved the cost and disappointment of emigration, by such information. And by way of suggestion, I will give you an example of what I would wish to see from other parts of the country. To describe a farm in these parts, of moderate size and quality, without river alluvion, say 150 acres, worth at recent prices, 60 to 100 dollars per acre, 25 acres of wood land, ten enclosures 12 acres each, the remainder occupied by buildings, orchards, roads, &c. The usual mode of farming some 40 years past, one field in corn first year; 2d year, oats or barley; 3d year, wheat with manure, and sown with grass seed, mostly clover and timothy, which is mown 2 or 3 years, producing 1 to 2 tons per acre; then grazed till its turn for plowing again; consequently there are 36 acres in grain, and 24 acres kept for mowing; the balance, 60 acres, in pasture, on which 12 to 20 head of cattle are fattened annually, besides pasturing 2 to 4 horses, 1 or 2 pair of oxen, and 2 to 4 milch cows, for the use of the farm and family. Under this rather severe system of cropping, we may put the product per acre of corn, at 30 to 60 bushels, shelled, without manure; oats, 30 to 50 bushels; wheat, 10 to 20 bushels, manured about 20 cart loads per acre. Corn is planted 4 to 4½ feet each way, 3 to 4 stalks in a hill; when sufficiently ripe, the stalks of four hills are drawn together and tied by their tops, forming a stand around which, six to eight hills square, are set up as they are cut, forming a shock, which is tied round the top. The knife used, is made of an old scythe, cut in two, a start drawn where cut, and a handle put on; making a cutter about 2½ feet long, easily used in one hand, with which a hand will cut much faster than with a hoe. The stalks are cut about a foot from the ground, and again when the ground is frozen, a hoe will speedily cut the stubs level with the surface.

For grazing cattle, red clover is considered little worth; and being a biennial, is soon replaced by the green and blue grass, and white clover, which spring up spontaneously, and produce a rich pasture. I will here say, that in several experiments with dry corn, or corn meal ground in the ear, given to cattle, swelled, hoven, or bloated by eating cold or wet grass, the cure has been speedy and complete.

Lime and gypsum are used generally, and supposed to be fertilizing to most of the land in this district. Hydrate of lime, applied to growing plants, is perhaps mostly injurious, unless it changes some property of the soil, more baneful than itself. That condition of the soil in which plants of an acid character flourish, and those affording starch or sugar dwindle, on high and dry land too, indicates acidity or a prejudicial influence on many of the plants we cultivate, which are exotics; though it may be favorable to the growth of many that are indigenous. This state of acidity prevails more, perhaps, in southern than northern climates, and in silicious soils in which carbonate of lime is not a component part; and also on ferruginous soil, lime is generally found to be useful; it is mostly spread on grass land, a year or two before plowing.

In taking hold of the pen instead of the plow, with which I am more conversant, the object, in part, at least, was to inquire whether any attempt had been made, if any, with what success, to cultivate the olive tree within the U. States, (southern, of course,) that thereby oil might be furnished for grease eaters, &c. and that execrable appendage to farm stock, the hog, might be dispensed with, and in company with the bear, allowed to roam his native wilds, the forests of Central Europe. Neither Talmud, nor Koran, or any creed other than sanatory and utilitarian, has led to this conclusion. And if profit or health was consulted, it is doubtful whether either would be advanced by the production and use of pork. Now if you decide that the Langstaffian character of this paper, entitles it to the honor of lighting your pipe, it is as much at your disposal, as the neck of a Musselman with the bow string around it, is to his superior. B.

Chester co. Pa. July 18, 1842.

FARMING IN ILLINOIS.

Messrs. Gaylord & Tucker—Our wheat harvest is about finished; the crop has been considerably injured by the rust; some have lost most of their crop, others only part, and some very little if any injured. Out of 75, I lost 25 acres: but on the whole, it is an average crop this year; the quantity is as three to two acres compared with last year. We anticipate low prices for this crop.

We must adopt a different course in the preparation of our ground for wheat; sow earlier, prepare the seed different, or apply some preventive, else our wheat crop will be an uncertain one, as it has been for the four years past. With the exception of rust, as yet, we have had very few drawbacks upon wheat growing in this section. Can any of the numerous readers of the Cultivator, inform their brother farmers in this western region, what will prevent it? Is there any one kind of wheat, more than another, that is free from rust?

Our corn crop looks unpromising enough; just tasseling out. This and yesterday morning, we had slight frosts in some places; not to do any injury however. The low price obtained for the last crop, makes us rather indifferent about this; there is enough on hand of old corn, to fatten our pork this year.

Will some one, having the knowledge, give the *modus operandi* of kiln-drying corn; also the description of the apparatus, the cost, &c. I would like to make the inquiry, if corn kiln-dried, is used in any way except for meal. Corn shelled, in the bulk, cannot for any length of time, be kept with safety, at that season of the year we can ship it to market. It is of vast importance to this section, that corn should be put into such condition, that it can be sent with safety to a market at considerable distance, for we cannot consume what we produce of that article. It appears from the last census, that the amount of corn produced in this state in 1840, was 22,523,635 bushels, valued at 20 cts. per bushel, (rather over rated in *price*,) making between 49 and 50 bushels to each inhabitant in the state, which according to the estimated price, gives about $10 to each inhabitant; and the amount given will increase from year to year, in a much greater ratio than the inhabitants. Our extensive and fertile prairies, as yet are but sparsely settled in many parts; we are yet but in our infancy in agriculture, in this state; much of our corn is put into pork, but all of it cannot be, profitably. Eastern farmers (except for their own use,) must make up their minds to give up pork and corn growing, for the west and south will produce it at so small cost, that eastern farmers cannot produce it with any profit. Our oat crop is always good, from 40 to 70 bushels per acre is realized. But for the high rates of transportation through the Erie Canal, we could supply the eastern market at very low prices; as it is, we have shipped considerable quantities to New-York the present season. There is no agricultural product produced in the same latitude with us, that cannot be produced in this western region at less expense than at the east. I am respectfully yours,

Lewis Ellsworth.

Naperville, Du Page co. Ill. Aug. 2, 1842.

"SPARE THE BIRDS."

Messrs. Editors—I observe in the last number of the Cultivator, that your interesting correspondent L. A. Morrell, has taken up the cause of the birds, and objects "in all cases whatsoever," to their destruction. In controverting, however, the recommendation of the writer of the essay to which he alludes, I should have been better pleased had he given the *reasons* with that recommendation. Can he object to the writer's logic, where he says, "'Denizens of the air' have no more right to our property than denizens of the earth. Plunderers on two legs are not more respectable than plunderers on four legs; and cedar-birds are entitled to no more regard than rats, unless personal beauty can atone for moral deformity." If birds, who destroy whole crops of fine cherries, are to be protected; then I wish, with all respect to your correspondent, to ask him, if the *dogs* that destroy his sheep, are not also to be protected? I ask him to permit me to copy one part of his communication, only altering the word "bird," to that of *dog*:

"Now, I am not distinguished for 'womanish' feelings, but I declare I have not the heart to kill a dog of any sort; when seeing them gnawing at the sheep and lambs, often have I said to myself, there is *mutton enough* for us both; and with Uncle Toby, when he let go the fly, there is also, *room* in the world for us both."

I should hardly think, that even your correspondent would approve of carrying the theory and practice of protection so far as this; but I really for the life of me, cannot see why they are not as applicable in one case as in the other. Our abitrary notions of beauty may tell us that the birds are the handsomest; but is a handsome robber to be rescued from the state prison on account of the shape of his face? And are dogs, who equally fulfil their animal instinct in destroying sheep, with birds in destroying fruit, to be shot down with the rifle, while the birds are to be spared? The cultivator of a fine orchard, has in general, expended labor and money, no less than the owner of a flock of sheep, and values no less the fruit of his exertions; and why is it then, that when the toil of years is about to be crowned with its reward, he must see the whole snatched from before his eyes, without being permitted to lift a finger, while the sheep man, even if one solitary individual of his flock is in danger, can call out all his forces and punish with instant death, the destroyer of his own property? If I do not argue soundly, I am sorry, and ask to be corrected.

Wayne co. N. Y. 1842. A Fruit-Man.

CORN CUTTERS.

I have noticed "Commentator" in reply to "A Farmer," with respect to the best corn cutter. I have given a full and fair trial to such as "Commentator" most approves; they are far inferior both as to "economy and efficiency" to the one recommended by "A Farmer." There is a pre-requisite (in using the small hoe—the one he most approves,) that renders its use in stony land, wholly inefficient. He says it "must be kept sharp;" it will remain so, I grant, in light sandy soils, and will do well; though even when sharp, it is inferior to the one recommended and fully tested by "A Farmer." This latter will "keep sharp:" for its edge does not come in contact with stones, and the corn is cut within 3 inches of the surface of the ground. As to "economy," I would engage to supply my kind of cutters at one shilling each, by the dozen, or hundred, and then make a *living* profit.

A Farmer.

A TWO-HEADED CALF.

Editors of the Cultivator—Supposing you to be interested in every thing wonderful in the animal as well as vegetable kingdom, I state to you the following facts: J. Elliott, Esq. of this place, has the skin of a two faced calf, stuffed, and standing large as life, on all fours. The cow not being able to give it birth, it was taken from her, and killed in the operation. The faces are of full size and perfect; not in the same place, but meeting in front and inclining back. Each is provided with a mouth and two eyes. They have an ear apiece on the outside, and share one in common on top of the head. The two forward eyes are on a line with the foremost point of the head, and are four inches apart. The other two are situated on the outside of the faces, where the head begins to diminish towards the neck; so that this singular creature could have beheld objects in every direction at the same moment. A Subscriber.

Mount Vernon, O., July 28, 1842.

QUEEN BEES.

Messrs. Gaylord & Tucker—Agreeably to your request in Cultivator No. 7, page 110, vol. IX, I send you for the examination of Mr. H. Palmer, or any other person concerned, a drone or male bee, a neuter or working bee, together with the thing that never was. They were saved from a swarm taken up last winter. If Mr. P. will watch a swarm of bees after they have settled or attached themselves to the limb, he can see the thing very often; for she is continually crawling about among the bees, and is frequently in sight. I believe Mr. Weeks' manual to be a correct work on bees, and also a very useful one. *Alfred, N. Y. July* 12, 1842. David Rose.

Silk Culture in the United States.

DIRECTIONS FOR REELING SILK.

A small portable furnace, with some burning charcoal, is very useful for keeping the water hot, and should always be used. On this, place a copper or tin vessel, broad and flat, say six inches deep, 18 inches long, and 12 inches wide. Fill the vessel with hot water, not quite boiling, and put into the water two or three dozen cocoons, from which all the loose tow has been taken. With a small wisp of broom-straw, stir the cocoons about, occasionally raising the wisp to see if the end of a fibre has attached itself to it, and if such is the case, take the fibre in the left hand, and proceed again, as before, stirring the cocoons with the wisp, and securing the fibres in the left hand, until you have got fifteen or twenty; then attach them to the bar of the reel, and let an attendant turn the reel rapidly. Watch the cocoons carefully, so that you may observe if they *run* or unwind well. If you observe any of them drawn up out of the water, the water is not hot enough; if the fibres come off the cocoons in burs or clusters, the water is too hot. In the former case you must increase the heat of the water by pouring into the pan some boiling water; in the the latter case you must cool it, by putting in cold water. The great difficulty in reeling, consists in ascertaining the proper degree of heat of the water, required for different parcels of cocoons. Some cocoons require the water to be only of blood heat; and others of all degrees from blood heat to near the boiling point. But a little experience will teach the degree of heat required, so that the reeler will know in a moment whether the water is of a proper temperature.

When you have got as many fibres running on the reel as you require, you must still sit at the pan with the wisp, catching other fibres; for if the reel is turned with the proper rapidity, it will require you to be constantly attaching new fibres to supply the place of those that have broken, or exhausted cocoons. The fibres are readily attached to the thread as it is running, by merely throwing the ends of them on the running thread, which immediately adhere by means of the gum.

The number of fibres in the thread depends upon the purpose for which the silk is intended. For sewing silk of ordinary quality, about fifty fibres may be reeled together; and then the threads will require to be doubled, so that from one hundred and fifty to two hundred fibres are contained in an ordinary thread of sewing silk. For coarse broad goods, the same number may be reeled; but for the finer goods, gauzes, &c. five to ten fibres only, or for the finest, only two fibres are reeled together.

If the learner has followed the above instructions, he has probably been able to get quite a skein or hank of raw silk on his reel. I am sorry to disappoint him, but must tell him, it is good for nothing. I was desirous of enabling him to get the *knack* of catching the fibres; attaching them to the running thread; of learning the proper temperature of the water; and giving him a little experience in merely *winding off* a parcel of cocoons, that he might become acquainted with the outlines of the art, and get the *use of his tools*. As said before, the silk reeled *merely* as above, will generally be worthless—it requires more care.

If the Piedmontese reel be used, two threads, of ten to twenty or thirty fibres each, are attached to the reel at the same time, and kept constantly of the same number of fibres. The proper number of fibres is obtained as before directed; brought together, drawn through the hand to clear them of motes and filth, and then drawn out to see that they run well; then pass them through the eye of the plate, pass the two threads three or four times round each other, separate them and pass them through the eyes on the vibrating bar, thence to the bar of the reel; as soon as they are attached to the latter, let the attendant turn the reel rapidly, and the reeler return to the pan to provide fibres for those cocoons that become detached or exhausted.

It will keep the reeler pretty busily employed in catching fibres, and dexterously throwing the ends upon the thread as it passes up, to keep the proper number of cocoons running in both threads. Keep a basket of cocoons by your side, and put in fresh ones to supply the place of those already in the basin, from time to time, as they are exhausted. Take care that there be not too many in the basin at the same time, nor too few; as in the former case, some of them will become too loose, and in the latter the reel must stop till the fresh ones are soaked enough to run freely. Observe the following rules strictly:—Whatever be the number of fibres you begin with, keep that number steadily in the thread, that it may be uniform and even; change the water as often as it becomes foul, and always use perfectly clear rain or river water, letting it stand for a time before use, that the sand, if any be in it, may settle before putting it into the pan. Well or spring water is generally too hard for the purpose. Avoid all carelessness and slovenliness —and remember that *care is money*, in reeling silk. Let it be borne in mind, that the value of silk is increased or diminished by the manner in which it is reeled, very materially. One reeler will make his day's work in reeling worth five or six dollars, while another will only be worth two or three dollars, both reeling the same quantity of cocoons. Hence the value of care and attention. Attention to *small matters*, too, is here of the utmost importance. Indeed, the whole process is but a series of small, *very* small matters, no one of which can be neglected but at the expense of a material reduction in the quality of the silk. For example, if the water be too hot, the thread will be knotty, from the kinks or burs of the fibre that run up; if it be foul, from allowing the shells of the chrysalids to remain in it, the silk will be covered with motes; and if the number of fibres be not constantly kept the same, the thread will be uneven; all which deteriorate the quality of the silk, and therefore reduce materially the profit of the day's labor; but all which can be obviated without difficulty, by strict attention. I need not harp upon this subject longer, I am sure. Those who will take the above advice will profit by it; those who will not, will be forced to adopt it by experience.

After an ordinary sized skein is wound upon the bars of the reel, it is to be taken off, hung up, and another skein commenced in the same manner. The reel generally has two or more aspels, and when a skein is full, the aspel or running part of the reel is taken off the frame and set aside to dry the silk, after which it is taken from the bars, placed upon a *swift*, and wound on to bobbins; when any number of the bobbins may be combined, called doubling, and twisted together on a common spinning wheel, to make sewing silk.

If it be intended for sale in the state of raw silk, the skeins are to be carefully twisted and doubled, and thus brought into a compact form, tied with a string, and thus packed up for market.

For sewing silk, a sufficient number of bobbins are to be combined to make one thread of sewing silk, twisted on a common wheel, reeled off into hanks, the latter twisted partially, and folded by taking two or three turns, as in preparing common yarn for dying, put into some perfectly clear rain or river water, in which a quarter of a pound of good country soap to the gallon of water has been dissolved, and *simmered* over the fire three or four hours, or until the silk is perfectly freed of its gum, and becomes white. It must then be taken out, rinsed in hot rain or river water, and then in cold water. In this operation, great care must be observed to dip it gently, drawing it to and fro in the water, so as not to get the silk tangled, or in a snarl. It is then to be hung up to dry; after which it may be doubled and twisted into sewing silk. It should never be put up into large skeins, as it is apt to get tangled. One hundred threads is a good sized skein. If the whole work has been properly done, the silk will be beautifully white, with a rich gloss.

G. B. Smith.

Domestic Economy.

CHEESE COLORING.

It takes a wise man in these days to determine what he eats and drinks. According to Ackum and Donovan, there is scarcely an article of food that is not adulterated, counterfeited, and imitated; some inferior article, less costly and valuable, being substituted for the original one. "Bread is the staff of life," but the baker well understands making beautiful loaves out of other materials than pure wheat flour. Potatoes, Plaster of Paris, Soap, Alum, &c. &c. are used, some of them to add to the weight of the loaf, and some of them to give the requisite whiteness and flavor to inferior or damaged flour. Yankee corn meal is transported to the West Indies, and is soon returned as first rate ginger, a sprinkling of that material being added to justify the advance in price. The sweepings of the floors of pepper and spice houses, mixed with a little of the powdered material, 'to swear by,' is nicely packed in papers, or bottles, and sold to benefit the stomachs of consumers. Who shall unfold the abominations that are ushered into the stomach, where *ready prepared* chocolate, paper packed coffee, and similar matters, are incautiously ventured upon. A man sits down at the table of one of our principal hotels, runs over the catalogue of French *made* dishes placed before him, and selects to his liking. Let him not dream, while he wipes his mouth and blesses his stars that he was so lucky in his choice, that he has been gormandizing on the flesh, the pastry, or the dessert, that invited and tempted his appetite. He has been eating, alas, he knows not what. There is no part of an animal, that the magical powers of an Ude cannot convert into whatever dish he pleases; and from the last joint of the tail to the jelly of the nose, all is precious in his eyes. A skinned rat makes a capital squirrel; worse things than a cat, have been eaten for hares or rabbits; and Gen. Gaines declares that horse flesh, if not too old, makes first rate roast beef.

And our drinks too? Who is safe that ventures beyond water? Beer, it has been demonstrated in courts of law, is not that immaculate fluid it was once considered. Quassia, cocculus indicus, &c. &c. have usurped the place of hops and malt; and water, not always as pure as the springs of Helicon, is used for their decoction. The wine bibber quaffs his champagne, and thinks of the vine covered hills of France. Poor fool, a year has not elapsed since the fluid he is imbibing was coursing through a green gooseberry, or, as is more likely, a Norfolk globe turnep. The guzzler of port defies the world to deceive him. His eye and his taste are infallible. The cobwebs, the crust, the cork, cannot be imitated; and he pronounces on the position of the vineyard, the bank of the Douro, and the year of vintage, as he holds the glass alternately to the light and the lip, with an air of infallibility. Alas for human certainty! A New Jersey Harrison crab furnished the liquor for its base; and in a wine cellar not perhaps a hundred rods from the domicile of the wise man, the logwood, and sugar, and brandy, were added, and the processes of clarification and bottling completed. The truth is, the man is cheated.

Milk, the only substance God has created for food and for nothing else, how does this fare in the rage for adulteration? We regret to say there is scarcely any thing used as food, that is treated more scurvily. The citizen of the country whose cows revel in clover, and whose fragrant pails of pure milk are deposited in bright and cool pans; who eats strawberries gathered by his own rose lipped and bright eyed daughters, in cream from his own dairy, has never dreamed of the thousand impurities and additions made to the milk used by the residents of cities; additions so adulterating its quality, that a respectable farmer's hog would turn away from it as an imposition. Milk can be made to order as well as a blanket, and the process is as well understood. Chalk, and starch, and a little gum, and a few similar matters, carefully stirred with pump water, makes very respectable milk; at least about as good as that drawn from the swill guzzling and diseased animals, fed from the distilleries and breweries. We have not yet heard that any one has been successful in making cheese out of this manufactured milk, but this is no proof that it will not be done, as in *making* articles that simulate food, metamorphoses more strange than that almost daily occur. Confident we are, that if any method of making such a mass adhere could be devised, means would speedily be found to give it any desired flavor or color, from Parmesan to Cheshire, and not excepting the inoculating process with the epicurean varieties of the green mold.

We have been led to these observations, by the perusal of a paper of considerable research and pretension, in the London Farmer's Magazine, from the pen of George Whitley, on cheese coloring. To all the processes for coloring cheese, Mr. Whitley, and we think with reason, is a declared enemy. So long as dairymen confined themselves to annatto, there was at least assurance that if the coloring did no good, it could do but little harm; and the cheese eater felt no apprehensions that he was swallowing poison, a point on which he is not now quite so clear as is desirable for healthy digestion. According to Mr. W. the preparation of cheese coloring has become a regular and extensive branch of manufacture; and singular as it may seem, the compounds vended, while they derive the most of their value from the little annatto they contain, are sold at a cost far exceeding the common price of that article. Not less than 50,000 dollars are annually paid in the two English counties of Cheshire and Gloucester, for cheese coloring, money which is worse than thrown away by the farmers of those cheese making districts. Mr. W. has been successful in obtaining the recipes for a number of the most celebrated of these cheese coloring preparations, which are given in the essay before us. The first, and probably the first invented, is as follows:—"Old bricks finely powdered; starch; turmeric powder; Spanish annatto; train oil. Mix to form a mass." Powdering bricks, was doubtless too much like work for the color venders, and hence in the later recipes, the brick powder is omitted altogether. We give two of these later ones, Nos. 2, and 5, as specimens of the whole. "Turmeric powder; potash; Spanish annatto; soft soap. Mix to form a mass." "Quick lime; potash; Spanish annatto; chalk, or in lieu of it, pipe clay; train oil. Mix to form a mass."

From the chemical nature of these ingredients, and from the experiments made upon them, it appears reasonable to infer that their action upon cheese must be very decided. Rennet is a peculiar acid, and when these alkaline ingredients, such as lime and potash, are added to the milk in coloring it, their effect in preventing the full action of the rennet, must be more or less felt. There will also be more or less of a combination between them, and the butter of the cheese, which will result in the formation of soap, or a saponaceous matter, materially affecting the quality of the manufactured article. This could not be the case where annatto alone was used. One thing is certain, the alkaline addition is fatal to the formation of the "true, rich, green mold," so much prized by cheese amateurs, and so essential in determining the quality of the article.

We have said above that we disapprove the whole system of artificial coloring. Cheese when well made, will acquire speedily all the color that can be desired, and the best cheeses we have ever tasted, have been those made without any coloring preparation. It is true, with the aid of these mixtures, the fraudulent dairyman can use the skimmer freely, knowing his ability to imbue the purest and palest "white oaks" with the richest hue; and provide saponaceous material enough to make the mass soft and adhesive, one of the best indications of a rich old cheese.

The Garden and the Orchard.

TRANSPLANTING FRUIT GARDENS.

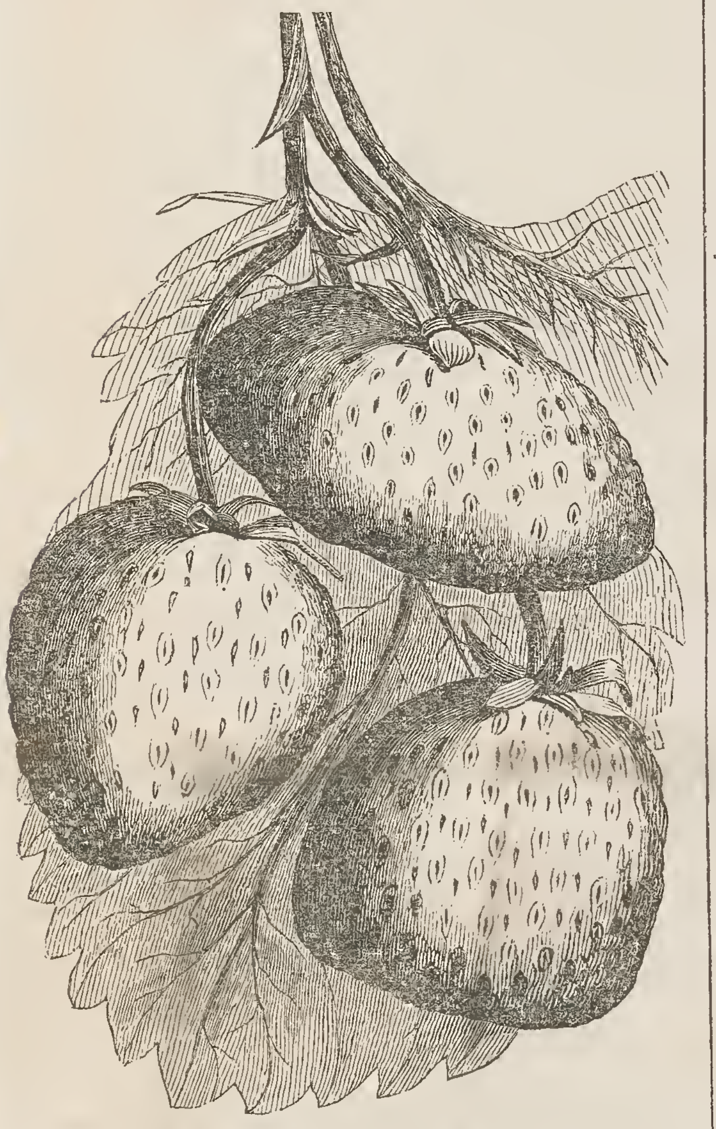
Among the strange things of the present day, is the inconsistency between the want which nearly all feel for delicious fruit, and the absence of a correspondent exertion for a supply. Indeed, a large portion of our population seem perfectly rabid for the productions of our orchards, and to gratify their appetites, do not hesitate to resort to the wretched and mean expedient of stealing. And the sober and honest portion, who will please excuse me for naming them in the same paragraph, show the esteem with which they regard it, by the peculiar and strong expression of pleasure on their faces, when fine fruit is presented to them. Who would not be more gratified by receiving from his friend a peck of fine early peaches, or of excellent and delicious apricots, than a present of a peck of corn, or of a basket of potatoes? Is it not then most passing strange, that of all the occupants of the soil, the fruit trees stand the worst chance? The farmer is willing to enclose effectually, to plant yearly, and cultivate thoroughly, his field for potatoes and corn; and woe to the intruder, two-legged, or four-legged, feathered or unfeathered, who visits it for plunder! But fruit trees, though to be planted but once, are done so with reluctance; to hoe or spade them but once a year is regarded as a burdensome labor; and all kinds of intruders, from cattle to browse the tops, and mice to gnaw the roots, are suffered almost as a matter of course. Who can explain this paradox?

To the many intelligent cultivators who are exceptions to these remarks, it is hardly necessary to say that it is inconceivably better for fruit trees to stand in constantly cultivated soil, which is occupied by such crops as beans, turneps or potatoes; or where it is absolutely needful that they stand in a grass field, the grass should always be kept as short as possible, and the trees spaded round every month through the season, to a distance of at least three feet on each side. It is also well known that very large holes for setting the trees in when they are transplanted, by affording to the roots a broad deep bed of loose and fertile earth, is of the greatest importance. But the digging of holes six or eight feet in diameter, and a foot and a half deep, and the constant subsequent culture of the trees by hand labor, may seem too formidable to farmers in moderate circumstances.

To obviate these objections, the following course may be pursued, and the labor of the common mode of thorough transplanting, and after culture, in a great measure avoided. The land to be allotted to the fruit garden, having been properly enclosed, the rows may be laid off at a distance of a rod and a half to two rods apart; and a strip of land from eight to ten feet wide, in the center of which the row is to stand, is then by repeated and deep plowings, to be fitted for the reception of the trees. In order that the plowing may be deep enough, the plow should run several times successively in the same furrow; and if rotted manure is thoroughly intermixed at the same time by this operation, the trees will grow more luxuriantly. Chip manure will be found a valuable addition, especially on heavy soils. If this work is commenced immediately, or a month or two before the trees are set out, it would be all the better for it. The trees are then placed at a distance of about eight feet in the row, and the holes, which are very easily dug in this bed of mellow earth, need be no larger than the length of the roots require.

There is another very important advantage in this mode. On very heavy retentive soils, it often happens that the holes which are dug, form water tight basins, and retain so much water round the trees, especially if the transplanting is done in autumn, that during the severe weather of winter the trees perish. But this loss is prevented, if the land is slightly inclined, and the rows run from the higher to the lower part of the enclosure. The danger is still more effectually prevented, if the center furrow be partly filled with chips, straw, or corn stalks, as has been elsewhere recommended, and the water thus drained off.
J. J. Thomas.

Macedon, N. Y. 8 *mo.* 1842.



ROSS' PHENIX STRAWBERRY.—(Fig. 88.)

While on a visit to the Horticultural Garden, of Mr. James Wilson, of this city, in July last, our attention was attracted to a partiular bed of strawberries, by their vigorous growth and extraordinary fruitfulness, particulars in which they far exceeded all other varieties in the garden. On inquiry, we learnt that the plants were from a seedling raised by our friend, Alex. Ross, of Hudson. From a single stem, on which were more than a dozen berries, we selected three, from a drawing of which, the above engraving was made. In answer to our application to Mr. Ross, for a history of this valuable seedling, we have received the annexed letter:

Messrs. Gaylord & Tucker—At your request, I send you an account of my seedling strawberry, which promises to be a great accession to the lovers of this delicious fruit. In June, 1836, I was in Mr. Beekman's garden in this town, and he gave me a strawberry from the variety called Keen's seedling, which I carried home as a present to my wife. The seeds of this strawberry I seperated carefully from the pulp, by rubbing them in dry beach sand, and then sowed them in a 7 by 9 glass box, filled with good earth, which was placed behind the coal house of E. Gifford, Esq. The seeds came up well, but had no care taken of them. Next spring I happened to notice the box, and found all my plants had been destroyed by the frost, with a single exception. The box, with this plant, was removed to my house, when finding it had a singular round leaf, different from the original strawberry, I took better care of it. In the spring of 1838, having no good place of my own, I removed it to the garden of Mr. Brooksbank, but owing to the vicinity of some flower beds, the plant suffered much. In 1839, I found that one of the runners had set for fruit, and I removed it to my garden, where it yielded some fine fruit. Next year, I had some berries that measured 5½, and one that measured 6¼ inches in circumference. The fruit was so much admired by our best Horticulturists who saw the plant and fruit, that I determined to send specimens to your city and New-York, in 1840, but was prevented by some trespasser, who carried off the whole. I let Mr. Wilson, Horticulturist of your city, and Mr. J. T. Perkins, of Hudson, have a few plants, both of which have produced fine fruit; and Mr. Perkins' gave some single berries that filled a wine glass. The fruit is of fine appearance and excellent flavor.

I measured some of the leaves out of curiosity, which were 5¾ inches in diameter. When on a good soil the plants grow very strong, and require room, as one plant will cover a space of 3 square feet in one year; but if deprived of their runners in summer, these will make large plants in spring. I think this strawberry will produce the largest strawberries, and yield the greatest number, of any variety I have seen, or that is cultivated in this neighborhood. The name above given, was conferred by friend Wilson, from the circumstance of the seedling having twice narrowly escaped destruction.

Yours with much respect,

Hudson, July, 1842. Alex. Ross.

The *Agave Americana,* of which we promised a cut in this number, is not yet in full bloom.

Five Thousand-fold Increase.—A bunch of rye from a single kernel, on the farm of Mr. J. H. Hidley, of Greenbush, this season produced 78 stalks, averaging 6 feet in length, the produce of which was estimated at 5000 kernels.

Dorking Fowls.—"A Subscriber" wishes to know where he can procure 20 to 30 of this breed of hens. Who can inform him?

A New England Silk Convention, is to be held at Northampton, on the 28th of this month, to collect and embody *facts;* to consider what further legislative action may be required on the part of Congress, and the several New England States; and to discuss whatever questions connected with the silk business that may come before the meeting.

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NOTICES TO CORRESPONDENTS, &c.

Communications have been received since our last from A Subscriber, Simon Anti-puff, David Rose, Tweedside, W. H. Wills, W. H. Sotham, A., A Subscriber, T. Baynes, L. Durand, B., J. S. Skinner, L Ellsworth, L. Kennedy, jr., A Fruit Man, J. J. Thomas, Wm. Partridge, J. Dennis, S. E. Todd, Dutchess County, Geo. Woodfin, A Wheat Grower of Western New-York, An Onondaga Farmer, J. B. P., N. Warrington, Ph. St. Geo. Ambler, L. Smith, Geo. Vail, P. L. Simmonds, John King, E. M., Alex. Ross, Joseph Trevor, Commentator, R. A. Avery, J. M' D. McIntyre, Many Subscribers, B. F. Long, L. Bissel, R. North, jr., Senex, Thos. Hancock, G. B. S.

Received from *David Rose,* Esq. Alfred, a vial containing a queen bee, drone or male bee, and a neuter or working bee.—From *Wiley & Putnam,* booksellers, New-York, "Cottage Residences; or a series of designs for Rural Cottages and Cottage-Villas, and their Gardens and Grounds, adapted to North America. By *A. J. Downing,* author of a Treatise on Landscape Gardening."—From Hon. *D. D. Barnard,* M. C., a Report from the Com. of Ways and Means, showing the rates of Duties imposed by the Tariff acts of 1816, 1824, 1828, and 1832, &c. and the Tariff Laws from 1789 to 1833. Also, Mr. *Barnard's* speech on the policy of a Protective Tariff, in the H. of R. July 6.—From Hon. *J. R. Giddings,* M. C., Mr. Leavitt's Memorial on the subject of the revision of the Tariff.—From Hon. *H. L. Ellsworth,* Washington, a parcel of Mediterranean Wheat, which is considered "*proof* against the *fly,* and *almost* proof against the *rust.*" This wheat can be had of M. S. Powell, Philadelphia, at $1,75 per bushel.—From *E. P. Prentice,* Esq. Mount Hope, a basket of Plums, and a basket of Pears, of several different varieties. From *Alex. Ross,* Hudson, three varieties of Seedling Plums, raised by Mr. Lawrence of Hudson, which we consider valuable accessions to our catalogue of this fruit.

The re-publication alluded to by a subscriber at Wooster, O., was accidental. We were first apprised of the fact, by the reception of his note.

J. King, Esq. Dubuque, will find an answer to his inquiries in relation to the Alpaca, at p. 178, vol. 8, of the Cult., where a cut and history of it are given.

The publication of "Simon Anti-puff," from "Windy Cove Farm," though a pleasant *jeu d'esprit,* would provoke an unpleasant controversy, and is therefore declined.

We shall, ere long, make a good use of Mr. Todd's "Nine Reasons," for which he has our thanks.

WOBURN PIGS.

THE subscriber is now ready to receive orders for pigs of the Duke of Bedford's Woburn breed, which will be old enough to send away in a few weeks. The price is reduced to $25 per pair, delivered in New-York.

Also, for the pigs of two litters, from Berkshire sows of Mr. Lossing's breeding, by the prize boar, a cut of which appeared in the Cultivator of last October. These pigs are of uncommon beauty and promise. Price $15 per pair.

For some remarks on this stock, see the Am. Agriculturist of Sept 1842. CHARLES STARR, Jr.

Mendham, Morris co. N. J., Sept. 1842.

Important Sale to Agriculturists.

IMPROVED SHORT HORN DURHAM CATTLE.

ON THURSDAY MORNNING, 8th of September, at 10 o'clock, will be sold at public sale, at the exhibition ground of the Philadelphia Agricultural Society, Rising Sun, on the Germantown road, 3 miles from the city,

A choice selection of splendid Durham Dairy Stock, from the herd of James Gowen, Esq. of Mount Airy, consisting of imported Cows, young Bulls and Calves, from Dairy Maid, Pocahontas, Victoria, &c. and by the celebrated Bulls, Colostra, Prince of Wales, and Leander.

This sale will afford to breeders an opportunity of adding to their stock, *thorough bred* animals of high character and pure blood; and their diffusion into proper hands is a primary object in this sale, together with the necessity of a separation of the herd, to prevent over close breeding.

Catalogues will be ready in due time, and the cattle may be examined at the Exhibition Ground, two days previous to sale.

WOLBERT & HERKNESS, *Auctioneers.*

Philadelphia, July 25, 1842.

FRUIT TREES.

THE subscribers have for sale at their Nursery, (near Macedonville, on the Erie canal,) 10,000 Peach trees, 1,000 Cherry trees, 1,000 Apple trees, and many hundreds of Apricot, Nectarine, Pear and Quince trees; all of which have been propagated from *bearing trees,* whose genuineness or excellence has been fully tested. None other are ever offered by them for sale. The Peaches consist chiefly of the following varieties:

Early Tillotson—ripens early part and middle of 8 mo. (Aug.) fruit medium size, excellent, a good bearer. Large red Rareripe—ripens ten days later than the preceding, fruit large, excellent. Early York—ripens latter part of 8 mo., large, sweet and rich; a fruit of the highest character. White Imperial—ripens a little later than Early York, large, white with a red cheek, sweet, juicy, and melting, very excellent. Yellow Alberge—ripens early in 9 mo. (Sept.) fruit rather large, one of the finest yellow peaches. Seabolt's—ripens a few days later than the last, fruit red, large, of first rate excellence. Red Cheek Malocoton—ripens with the last, fruit rather large, beautiful, of excellent flavor; ranks as first rate among yellow peaches. Hill's Chili—ripens a week or two later than the preceding, a very large, fine yellow peach.

Also, in smaller quantities, Early Ann, Nutmeg Sweetwater, Old Newington Cling, Late York, and Heath Cling. All the peaches have been at least once transplanted, and the roots thus greatly improved for again removing. Price 25 cents each, $20 per hundred, $150 per thousand, or $160 well packed and delivered for transportation.

Orders directed "Thomas & Smith, Macedon, Wayne co. N. Y." accompanied with remittances, will be faithfully and promptly attended to, and the trees sent by the Erie Canal, or by the Auburn and Rochester Railroad. J. J. THOMAS,
Macedon, 9 mo., 1842. W. R. SMITH.

WARREN'S IMPROVED PATENT

HORSE POWER AND THRESHING MACHINE.

THE undersigned having witnessed, on the 26th instant, an exhibition of the practical utility of "Warren's Patent Improved Horse Power and Threshing Machine," cheerfully recommend them to the attention of agriculturists, as the most perfect inventions of the character, that have ever fallen under their observation. The simplicity of their construction is truly admirable, while their excellence over all others consists in the astonishing rapidity with which they effectually separate the grain, leaving the straw unbroken,—a desideratum hitherto unattained.

The horse power is remarkable for its compactness and simplicity; its dimensions being only 4 feet long, 2¼ wide, 18 inches in height, and weighing but 4 or 500 pounds. Besides being applicaple to the Threshing Machine, (the purpose of its original invention,) it can be applied with equal advantage to Cotton Gins, Circular Saws, Turning Lathes, Cider and Sugar mills.

With but one horse power, by the Threshing Machine, forty bushels of oats may be threshed in one hour, and wheat and other small grain in proportion. Warren's Patent Straw Cutter was exhibited at the same time, and should be generally adopted, being decidedly superior to any in use. Three bushels of straw per minute are cut with the greatest facility.

TUNIS VAN PELT, 54 Water st.
WM. A. WARNER, 54 Water st.
A. B. BIGELOW.
JOHN L. LEFFERTS, United States Hotel.
GEORGE COLEMAN, 213 Bleecker st.
ALEX. WILEY, 57 Washington st.
STEPHEN T. CLARK, 112 Broadway.
B. B. KIRTLAND, 112 Broadway.
ROBERT B. COLMAN, Astor House, N. Y.
EDWIN R. YALE, U. States Hotel, N. Y.
EGBERT BENSON, 56 Warren st., or New Utrecht, L. I.
JAMES B. PHILLIPS, 53 Wooster st., N. Y.
CHARLES WEBB, 19 City Hall and Twenty-seventh st., near 9th Avenue.

July 7, 1842.

Mr. E. Warren:—Dear Sir,—In reply to your asking my opinion of the machine I purchased of Mr. L. Bostwick, 58 Water st. N. Y., I have to say, that after a fair trial with Barley and Wheat, with two horses, I can thresh in a clean and thorough manner, at lest 30 bushels of the former, in one hour, with comparative ease to the horses, and this day, without driving them at all hard, in sixty minutes, 200 sheaves of wheat of a large size, were threshed out in a clean and excellent manner, which is about 15 bushels. The straw, after threshing, is easily bundled, and as it comes out whole and unbroken, I consider your machines on that account important; and as only three hands are required to do the work well, I think the great saving of labor such an item, as to make them what is much needed by many of our farmers in this section of country. Yours, &c.

Rahway, N. J. Aug. 8, 1842. SAMUEL MOORE.

LEONARD BOSTWICK, No. 58 Water st., N. York, is the exclusive Agent for the sale of the above machines, to whom all applications for the purchase of the right to manufacture and vend may be addressed, (post paid,) and who will receive all orders for the same.

To avoid the delay and expence of correspondence in relation to terms, the advertiser here states, that cash in this city, will be required when the machines are shipped, which will render it necessary to forward orders through some person in N. York.

One Horse Power and Threshing Machine, $60
Two do. do. do. 75

Exclusive of band, which will be furnished, if desired, at from $3 to $4.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

Cult. Vol. IX.—No. 10. ALBANY, N. Y. OCTOBER, 1842. Cult. & Far. Vol. III.—No. 10.

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LUTHER TUCKER, PROPRIETOR.

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(PAYABLE ALWAYS IN ADVANCE.)

20 per cent commission on 25 or more subscribers, and 25 per cent commission on 100 or more.

Subscriptions to commence with a volume; and the money to be sent free of postage.

THE BACK VOLUMES OF THE CULTIVATOR,
Handsomely stitched in printed covers,
Can be furnished to new subscribers—Vols. I. II. III. IV. at 50 cents each, and Vols. V. VI. VII. VIII. at $1. each.

They can also be procured of Dayton & Newman, booksellers, 199 Broadway; Israel Post, bookseller, 88 Bowery, and at G. C. Thorburn's Seed store, 11 John-st., *New-York*—of D. Landreth & Co., Seedsmen, and Judah Dobson, bookseller, *Philadelphia*—of Hovey & Co., Seedsmen, *Boston*—of A. H. Stilwell, bookseller, *Providence*—of R. Hill, Jr., & Co., *Richmond*—of F. Taylor, Bookseller, and J. F. Callan, Seedsman, *Washington City.*

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

We issue this number earlier than usual, to give us time to attend to our duties connected with the State Society's Fair.

ACKNOWLEDGMENTS.

The Editors of the Cultivator tender their grateful acknowledgments to the several Societies in this and the neighboring states, who have invited them to attend their several annual exhibitions. It would afford them great pleasure to be present at all these exhibitions, to witness the evidences which will there be seen, of the rapid progress which is making in the improvement of the several branches of American Husbandry; but this would be impossible. It is however their intention to attend as many of them as circumstances will admit, and especially do they hope that one of them will be able to be present at Pittsfield and Worcester.

The Editors return their thanks

To P. L. Simmonds, Esq. London, for a "List of the Members of the Royal Ag. Society," and for several London papers.

To W. Withers, Esq. Holt, England, for a beautiful octavo vol. of over 400 pages, entitled "The Acacia Tree,—its growth, qualities, and uses, with observations on Planting, Manuring and Pruning. By W. Withers, author of a Memoir on the planting and rearing of Forest Trees, &c."

To G. C. Thorburn, Esq. New-York, for the last No. of the "British Farmer's Magazine,"—also for the "London Morning Chronicle," containing an obituary notice of the late Earl of Leicester.

To some unknown friend at Hartford, Ct. for a No. of the "Bristol Journal," containing a Report of Mr. Smith's Lecture on Draining, at the late meeting of the Royal Ag. Society.

To James Herbert, Esq. Herbertsville, N. J., for a box of native Grapes, of which he asks the name. They are one of the best kinds of Fox grapes; but are by no means equal to the Isabella, or several other varieties of the native grape.

To Dr. Lewis Feuchtwanger, New-York, for samples of the several articles advertised by him in this paper, all of which shall have a trial.

To Mr. Wm. A. Crowell, Lime Rock, Ct., for one of his patent *Thermometer Churns*, a figure of which is given in another part of this paper.

To L. Kennedy, Jr. Hartford, Ct., for one of Collins & Stone's patent *Cheese Presses*, for a description of which see p. 167.

To Dr. N. B. Cloud, Planter's Retreat, Alabama, for some of the seeds of the "South American Evergreen Pasture Grass," with a specimen of the plant. We shall divide the seeds with our friend "*Commentator*," whom we expect to see at our State Fair, that they may be tried in his state as well as in this. We shall be greatly obliged to Dr. C. for his promised article on the culture of Cotton. See his communication, p. 164.

To Thos. Affleck, late editor of the Western Farmer at Cincinnati, but now of Washington, Mississippi, for the "Transactions of the Agricultural, Horticultural and Botanical Society of Jefferson College, Miss.," including a very interesting Report on the Horticulture of that vicinity, from the pen of Mr. Affleck.

To Mr. J. M. Lawrence, Hudson, for a dozen of his seedling plum, called the "Columbia Gage," a fine large fruit, well worthy of general introduction.

Communications have been received, since our last, from Will. C. Carr, A Friend to Agriculture, G. E. H., J. Park, (forwarded to Mr. Geo. Page, Baltimore,) Wm. A. Crowell, Henry Palmer, Wm. Partridge, H. Mooers, L. B. Armstrong, U. C., T. Hudson, An Inquirer, P. L. Simmonds, M. Battel, H. A. P., J. K. L., N. N. D., J. Herbert, S., Dr. N. B. Cloud, E. M., J. N. Keeler, J. J. Thomas, Dr. R. T. Underhill, John J. Crocheron, A. E. Ernest, Friend Hasty.

EXTRACTS OF LETTERS.

Mississippi.—Extract of a letter from W. B. Wilborne, Esq. dated Oakachikama, Yallabusha county, July 9, 1842:—"The spirit of agricultural improvements is just beginning to attract the attention of the people here, and we may hope the time is not distant, when this state, and in fact, the whole southwest, will be waked up to the importance of the subject. We had a meeting at Grenada, in this county, on the 4th inst., and formed our first agricultural society—adopted a constitution, elected officers, &c., by which an impulse has been given to the cause, and we hope, from this time forward, the march af agricultural improvement will be onward, and still onward, until we shall not be behind any one of our sister states. We have been favored in this region by plenty of rain, and the crops of corn, cotton, and every thing cultivated, were never (in the memory of the white population,) more forward, or more full of the promise of an abundant yield. The early corn was in the roasting ear by the middle of June. Cotton is fully a month in advance of the last year, and in full bloom, and with many full grown balls."

Illinois.—Extract of a letter from E. W. Brewster, Esq. P. M., Little Woods, Kane co. Illinois, dated July 28:—"We are now in the midst of our wheat harvest, which is generally very good. Some late sown fields injured by the rust; as a whole however, the quality of our wheat will be good, and the quantity greatly increased. Corn is very backward. Barley, oats, potatoes, abundant. Grass is nothing thought of with us; immense tracts of the finest pasturage and hay, capable of sustaining millions of sheep, summer and winter, are annually given to the flames. Keen sighted self-interest will however soon correct this error. Sheep are rapidly accumulating on our prairies, and wool must soon be an important item in the exports of Northern Illinois."

Missouri.—Extract of a letter from a subscriber at St. Louis, dated Aug. 20:—"I regret to say that agriculture has been much neglected heretofore, not only in this county, but throughout the state; but a better spirit appears awakening on this important subject, and we hope for the most beneficial results. The two great staples, Tobacco and Hemp, are annually increasing in amount and importance, and our soil is admirably adapted to their culture. Blooded stock is beginning to receive that consideration, which should have been bestowed upon so important a subject long since."

Iowa.—Extract of a letter from J. King, Esq. Dubuque:—"Crops of wheat, rye, oats, and potatoes, are good in Iowa. Corn is not so promising as usual, owing to the coolness of the spring. It is very healthy this season. Peace and plenty abound. There is no *real* cause for "hard times." If Congress would let "President making" alone, and legislate for the whole republic—the people eat and drink moderately—dress comfortably—*all* go to work, our country would ere long regain its accustomed prosperity."

ANOTHER HUMBUG EXPLODED.

From the English agricultural journals we perceive that much attention has been excited in the agricultural community of that country, by the introduction of a new clover called the Bokhara clover, famous for its rapid growth, and the great amount of green food a small quantity of land sown with the seeds would produce. Quite a handsome speculation was going on in the seeds, when some specimens fell under the notice of the naturalist, Dr. Smith, who pronounced the plant to be the *Melilot alba*, or white Siberian melilot, commonly known as Buffalo or *sweet clover*, but in reality no clover at all. This plant had long been cultivated in gardens, and to some extent had been introduced into field culture on the continent; but the benefits expected from its use have not been realized. In a memoir read before the French Ag. Society, in 1788, by M. Thouin, it was strongly recommended, but on a large scale was not found to equal representations made from garden culture. It was found in France to bear four cuttings in a year; but if not cut while young, the stems became woody and of little value.

This Bokhara clover, or melilot, was introduced into Pennsylvania, some two years since, and the fortunate possessors of the plant were driving a lucrative business in selling the seeds at the rate of one dollar a hundred, when its identity with *sweet clover* was detected by a lady, and the bubble of course has burst in this country as well as in Europe. A letter from Mr. Hepburn, in the August Agriculturist, details the process of identification.

We have frequently cautioned our farmers against indulging in extravagant or costly speculations in new things, or things that are called so The caution to "prove all things and hold fast that which is good," is as applicable in agriculture, as in theology. The melilot is a valuable plant for some purposes, but it will not equal the representations made of it as a forage plant. It is not a clover, and the plant is not a new one; and if any, with a knowledge of these facts, have disposed of the seeds as such, they have practiced a gross deception or imposition. Melilot is the plant used to give the peculiar flavor and appearance to the celebrated Schabzieger cheese of Switzerland, and the Guyere cheese of France. The green plant is ground in a mill and mixed with the curd into a kind of paste, which is put into conical molds to be dried and cured. Some farmers in Europe, are in the habit of mixing it in small quantities with their hay. Its powerful aromatic smell imparts to the hay an agreeable flavor, which is evidently agreeable to animals. But as most of our readers have cultivated it in their gardens as sweet clover, there is no necessity of enlarging on its properties.

TRUE STANDARD OF VALUE.

The importance of agriculture to any country cannot be more strongly or correctly stated than in the following extract from Adam Smith's Wealth of Nations, premising merely that all English writers, by the word "corn," mean wheat alone:

"Corn regulates the money price of all the other parts of the rude produce of the land, which in every period of improvement must bear a certain proportion to that of corn. Woolen or linen cloths are not the regulating commodities, by which the real value of all other commodities must be finally measured and determined; corn is. The money price of labor, and of everything that is the produce of land, or of labor, must necessarily rise or fall in proportion to the money price of corn."

The commercial and financial history of England, and of the world generally for the last five years, has furnished evidence more conclusive than any with which Adam Smith could have been acquainted, that in all civilized countries wheat alone, and not gold and silver, constitutes the true standard of value. Gold is the representative of the value, which wheat possesses in itself. Food is the great central point round which all minor considerations revolve; and of all the various substances used, bread, or wheat from which it is made, is vastly the most important. If there was not an ounce of gold or silver on the globe, wheat would be worth for bread as much as it now is; the little value there is in gold without bread, was demonstrated by the rapidity with which gold left England in 1837–38 to procure wheat. That country, therefore, in which agriculture is in the most advanced state; that in which the greatest quantity of wheat or bread corn can be grown, is actually the richest. No country can retain its gold and silver that does not grow its own bread; and the precious metals, in spite of every precaution, of every vexatious regulation of the most watchful government, will flow from the country that lacks bread, to the one that is able to supply it. The United States can alone hope to retain the precious metals they now have, or make additions to the quantity, except by the extensive production of wheat. The experience of the world shows that the balance of trade is always in favor of that country that produces the greatest quantity of wheat; a conclusive proof that wheat is strictly speaking the real standard of value, and that however we may confound or misapply the terms, the precious metals are only the representatives of value. The country then that would be rich and prosperous must abound in bread; and a wheat growing country, under equitable laws and a good government, must always be a rich one.

"Let no man be ashamed of a hard fist."

STATISTICS OF WHEAT, &c.

At the the present time, when the statistics of agriculture, in connexion with tariffs and corn laws, are receiving so much attention, we think the following table of the prices of wheat in different places, in the same year, prepared for the N. Y. Express, by E. Williams, Esq. will not be without interest. The several tables of Mr. W., which we have eompressed into one, will certainly furnish matter for reflection; for the price of bread stuffs must always have a controlling influence on the general prosperity of any country. Mr. Leavitt's Memorial, from which these tables were derived, abounds in similar facts of the greatest value to the political economist, and to the farmer.

Average prices of wheat per bushel of 60 lbs. in the several places, and years named:

Year.	Ohio.	Phila.	France.	England.	Flour in Phila.
1820	20 cts.	92	1,44	2,03	4,72
1821	31	93	1,10	1,68	4,78
1822	38	1,33	1,07	1,34	6,58
1823	38	1,37	1,08	1,60	6,82
1824	42	1,11	99	1,92	5,62
1825	38	1,00	1,05	2,05	5,10
1826	38	92	1,07	1,76	4,65
1827	50	1,00	1,31	1,75	5,23
1828	50	1,10	1,49	1,81	5,60
1829	78	1,28	1,48	1,99	6,33
1830	50	96	1,60	1,93	4,83
1831	50	1,12	1,57	1,99	5,67
1832	65	1,12	1,28	1,76	5,72
1833	59	1,12	1,06	1,50	5,63
1834	59	1,02	1,00	1,39	5,17
1835	83	1,21	96	1,18	5,88
1836	1,12	1,60	1,17	1,45	7,99
1837	1,15	1,78	....	1,69	9,37
1838	1,05	1,60	....	1,94	7,79
1839	84	1,37	1,43	2,12	6,72
1840	50	1,00	1,47	1,99	5,07
1841	60	1,14	....	1,93	5,40

The following table shows the per centage rate of duty charged in Great Britain, on the staple agricultural products of the United States. It will be seen that the average rates on the enumerated articles is *two hundred and sixty-four per cent.* It is a striking commentary on the principles which govern the trade, the agriculture, and the commerce of that country. At the present moment,according to the late great speech of Lord Brougham on the state of the nation, one million five hundred thousand of the population of G. B. receive aid as paupers, or in other other words, one person in every thirteen, is only prevented from starvation by public aid. How much better off a very large portion of the remainder are, the details of that speech, and the reports from all parts of that kingdom, too painfully show; and yet while our country is overflowing with provisions, which we should be glad to furnish those starving millions, a barrier strong as Gibraltar, is drawn between this country and that, by these duties. When will nations learn that the great object of all good government is the happiness of the people?

	Staple Agricultural Products of the U. States.	Average cost of Agricultural products in N. York, March, 1842.	Duty on the same in Great Britain, calculated as per centage on the cost of the articles in N. York.	
	Louisiana Sugar,	5 cts. per lb.	270	per cent.
	do. Molasses,	21 cts. per gallon.	400	do.
	S. Carolina Rice,	2¾ cts. per lb.	118	do.
	Southern Tobacco,	6 cts. per lb.	1200	do.
	do. Cotton,	8 cts. per lb.	8	do.
	Spirits from Grain,	20 cts. per gallon,	2700	do.
	Cider,	15 cts. per gallon,	273	do.
Farm Produce.	Wheat,	$1,25 per bushel,	60	per cent rates duty, Feb. 1842.*
	Barley,	75 cts. per do.	74	
	Oats,	50 cts. per do.	100	
	Potatoes,	30 cts. per do.	84	
	Flour,	$6 per barrel.	60	
	Hay,	75 cts. per 100 lbs.	37	per cent.
Animal Produce	Salted Beef,	$6,50 per barrel,	80	do.
	do. Pork,	$7,50 per do.	68	do.
	Bacon,	7 cts. per lb.	85	do.
	Hams,	7 cts. per lb.	85	do.
	Lard,	5 cts. per lb.	34	do.
	Butter,	15 cts. per lb.	28	do.
	Cheese,	7 cts. per lb.	32	do.
	Linseed Oil,	95 cts. per gallon,	80	do.
	Forests—Timber,	14 cts. per cub. ft.	96	do.
	Staves,	$50 per 1000.	110	do.

* Generally they are prohibited.

HORSE SHOES.

Many of the readers of the Cultivator are aware that some two or three years since, a patent was taken out by Mr. Burden of Troy, for machinery intended to manufacture horse shoes. Circumstances prevented Mr. Burden from perfecting his plans at the time, and it has not been until lately, that he has found leisure to return to the subject. He has done it, however, and the result is that with his machinery he is able to produce a more perfect shoe than can be in any other way, and with a rapidity which may well astonish those accustomed only to the former slow and laborious methods. The regulating the size of the shoe, punching the nail holes, turning the heel corks, forming and welding on the steel toe corks, are all performed by the machinery, and with a perfection and accuracy the eye and hand are unable to attain. Five different sized shoes are turned out by the machinery, thus securing a proper fit to feet of different sized horses, without heating, or other trouble. Mr. Burden uses none but the very best Swedes iron, of consequence the quality of his shoes will be first rate.

There are probably very few who have properly considered the importance of the horse shoe manufacture to the country, or the quantity of iron consumed in that product. The census gave the number of horses at about four millions three hundred thousand. For the whole, it will not be too much to allow two sets of shoes annually, which at the ordinary weight of horse shoes, would use at least twenty-five thousand tons of iron and steel. It is very probable the shoes of Mr. Burden will soon be found occupying the market extensively, if not exclusively, and the estimate has been made that by their adoption, the cost of shoeing horses can be reduced one-half. Any saving of this kind will be extensively and beneficially felt, and by none more so than by the farmer.

WESTERN FARMING—WHEAT AND WOOL.

The West is truly a great country. No where else are things done on so great a scale, or when done, is so little said or thought about them. We do not wonder the dwellers on the banks of the father of rivers, and its tributaries, are proud of their country; for there is not another on the face of the globe, that can support such a population from the products of the soil, as that. There is a vast deal of the true yankee ingenuity too in the west, that is rapidly overcoming some of the natural difficulties of position; and by the more complete adaptation of their immense resources, rendering themselves more truly independent, and by the applications of science to objects comparatively of little value, securing some of the necessaries as well as luxuries of life. Thus superior wax candles are made from fields of the castor oil bean; and the western herds of swine have not only driven whales out of the great valley, but are fast following them over the Alleganies. Clothed in silk, feeding on short horns and the finest of wheat, and lighted with elaine, truly the prospect of the west is enviable.

There are some farmers at the west, and the number is increasing, who have farms, and who cultivate them too, in a style worthy of the country in which they live. Go to the farm of the Messrs. Sullivants, near Columbus, and see on the beautiful river flats from twelve to fifteen hundred acres of corn, while their fine flocks are covering a thousand hills; or visit the Illinois prairie farms, such as is the one described below, and you can form some conception of western farming.

Eighteen miles above Peoria, Mr. Jas. Underhill has a farm of twenty-three hundred acres, part of which only is under crops at the present time, but will soon be reclaimed and cultivated. It lies on the Illinois river, on the La Salle prairie, and a short description must be interesting. The first field of this farm you reach in ascending the river from Peoria, is one of five hundred acres; three hundred acres of which are in wheat, and two hundred in corn and oats. The wheat is estimated to yield as an average, only 20 bushels per acre, the land having been reclaimed and plowed for the first time last year; the mass of vegetable matter not being sufficiently decomposed in that time to give a full crop. This field is fenced with a rail worm fence, eight rails high. This fence cost about $1,200. The second field, which is separated by a road from the first, contains two hundred acres, enclosed with a good substantial board fence, costing $1,265. This field contained wheat, rye, oats, and corn, all excellent. The wheat was most beautiful, and was estimated at thirty-five bushels per acre. The third field, which lies to the north of the second, and which is now being reclaimed, part of it being broken up and in corn, will contain sixteen hundred acres, all within one fence. Mr. Underhill is intending to put eight hundred acres to wheat this fall; and as much of it will be ground a second time cropped, should the season be favorable, a great crop may reasonably be anticipated; probably not less than 20,000 bushels. The breaking up of the prairie, costs Mr. U. $2,50 per acre, by contract; and the wheat the past season, has sold at Peoria, for 75 cents per bushel. The prices of the new crop must be lower. Mr. Underhill has built this season, two large barns on the bank of the river, each 30 by 50 feet, from which his grain can be transferred at once to steamboats without handling. In the breaking up, and fencing his farm, for the comfort of the laborers engaged, Mr. Underhill had a house 14 by 20 feet constructed, and mounted on strong wheels, which is drawn from place to place on the prairie, by the oxen of the establishment, as the convenience of the party of laborers may dictate. This house affords good lodging room, a dining hall, place of deposit for implements, &c. It has undoubtedly contributed much to the health of the laborers. Mr. Underhill's farm has a straight line of fence on one side of three miles in length. The foregoing facts, gathered from the Peoria Press, show what an opening the west affords for men of capital and enterprise, disposed to engage in the culture of the soil.

We find it stated in the Buffalo Com. Advertiser, that a gentleman in that vicinity, having a prairie farm of some 500 acres, purchased 2000 sheep, which he placed upon it, under the care of two faithful men as shepherds. They have succeeded admirably. The sheep have kept in the best of health, have been in excellent condition at all times, and the proprietor, as the first fruits of the undertaking, has just received 6,000 lbs of wool of good quality, and which in the Buffalo market was worth 30 cents per lb. This, with the natural increase of the flock, must be a handsome profit on the capital invested, and obtained with very little trouble or risk. The transportation of the wool from Ill. to Buffalo, was about one cent per lb. The great difficulty which has existed in the west to the keeping of sheep, has been the wolves, the prairie wolves in particular; but the settlement and improvement of the country will remove this obstacle, which now, indeed, is easily overcome by a shepherd and his dogs. There are many men in this and the eastern states, owners of western lands, which are now lying a dead weight on their hands, who we think might take a useful hint from the above. Sheep may be purchased at a price merely nominal at the present time, and driven the whole distance, experience shows, with little loss. Once on the prairies, daily attendance and supervision is all that is necessary, and the cost of this can be well afforded, where the flock is large.

SORREL.

We have had little acquaintance with sorrel, it is true; it does not seem to take on the limestone soils of New-York, but what little we have known of it, has not prejudiced us in its favor, and we have always treated it as a weed of the most worthless kind. Yet here comes the Maine Cultivator, with an article by its worthy editor, teaching us how to cut and cure it for hay, and extolling its good qualities as food for the sheep and horse. Some farmers, he says, let their sorrel stand till ripe, when they cut it for the seed, which, when ground, they think worth as much per bushel for animals, as Indian corn. It is added—"As a proof of the value of sorrel when cured in this way, [cut early, while green, and so as to save the seed on the sorrel hay,] it may not be improper to state, that we have now a flock of fifteen sheep, which were kept the past winter exclusively upon it, and without tasting a particle either of roots or grain. These sheep are now in prime order, and have brought up fifteen lambs, the average weight of which was eight pounds per quarter, besides shearing on an average four pounds of wool per sheep. We lost no lambs during the winter; notwithstanding some of them were lambed in December, and at a time when the weather was unusually severe and cold."

For ourselves, we must say, that we imagine that sheep or horses would eat well cured clover hay, as freely as sorrel hay, and would infinitely prefer it for pasture. Besides, according to our experience, sorrel is not equal to clover as a renovator of the soil, or as a preparative for a wheat or corn crop, and we would therefore advise our friends every where, to substitute clover for sorrel, in their courses of cultivation and cropping.

STEAM PLOW.

We find the following in the "Planter's Banner," a paper printed at Franklin, La. We cannot doubt that eventually, the obstacles that have yet prevented the success of the steam plow, will be overcome, and the cultivation of our rich and vast prairies effected mainly by its use. The grand difficulty so far, has been, not to create the power, but to make power effective. When required to drag a great weight, it is found that the wheels of the engine will frequently slide on their circumference; this is sometimes seen on railroads. If Mr. Larkin has devised a way to *make the wheel stick*, the plows will follow as a matter of course. The failures in England and Scotland, have arisen from this source; and it has occurred to us while reading accounts of their experiments, that strong spikes of proper lengths on the outer surface of the engine wheels, by penetrating the earth, would secure their advance, when in motion.

"We had the pleasure," says the editor of the Banner, "at the recent election in this parish, of seeing Mr. Larkin's model of a steam plow, in operation. There are two engines which are attached to a square frame, with a boiler between them. Each engine is attached to the draining wheels, which are set in motion something after the manner in which the paddle wheels of a steamboat are caused to turn. In front there are two guiding wheels, which are easily turned by means of a draw wheel. The plows are attached to the rear of the machine. This locomotive was set in motion by Mr. Larkin, in the presence of a large number of persons, and various opinions were expressed as to its probable success. We heard several intelligent planters say they were confident Mr. Larkin's invention would answer all his expectations. In the experiments that have hitherto been made in plowing by steam, the great difficulty has been to find a fulcrum on which the power of the machine might act. The resistance of the plows in the earth, has been found so great, that although the power was in the machine, still it had not a sufficient *prop* or *fulcrum* to act upon. Mr. Larkin has taken this difficulty into consideration, and he says he can overcome it. We sincerely trust he may."

BARLEY AFTER POTATOES.

We find the opinion is prevalent to some extent, that barley will not succeed well after potatoes; and a late number of the Maine Farmer, gives some instances of a field sown with barley after potatoes and corn, in which the barley was good after the corn, but a failure after the potatoes. Our experience has been different from this; having raised as good barley after potatoes, as after any other crop. Last year, wishing to seed down a field on which potatoes and corn had been cultivated the year preceding, it was sown to barley, with herds grass and clover. It was one of the finest crops of barley we have ever raised, and that on the potatoe ground was at least equal to that from the corn land. We should have no more fears of a failure of barley after potatoes, than of spring wheat or oats; but should consider our prospect of a good crop of either, a faint one, unless the root crop had been well manured and cultivated. Barley is a very good crop to sow grass seeds with, but whether this or other spring grains are used, if we would insure success, the roller should be used.

Answers to Inquiries, &c.

OUR friend *J. Trevor*, M. D., of Allegany city, Pa. who makes some inquiries of us respecting Hamilton, Madison co., is informed that the purposes he aims at in the education of his children, and their instruction in the practice of agriculture, at the same time, can doubtless be secured at that place; and perhaps as advantageously as at any other. He will find that vicinity healthy; the soil generally good and suitable to the cultivation of most crops; labor to be had at the rate of from ten to twelve dollars per month; and farms doubtless to be purchased or leased, as he may desire. Under his circumstances, as detailed in his letter to us, we think leasing for a year or two, to give some little time for examination of farms and localities, would be preferable to purchase. Fifty or sixty acres will keep his sons, and one hired man, with abundance of employment, as he has suggested; small farms and high cultivation, is the true course for the farmer, and when this latter condition is reached, more land can be added at pleasure. We highly approve of Dr. Trevor's intention to make his sons educated farmers; and if more of the dwellers in cities, or professional men, would follow his example, and thus furnish their children the means of honest employment, we should doubtless be spared many of those instances of worthlessness and profligacy, which now too frequently accompany the possession of wealth and leisure.

PLOW FOR CLOVER, &c.

A correspondent at Selim's Grove, Pa. says—"The practice of turning over heavy growths of clover is gaining very rapidly in Middle Pa., and its advantages to the farmer are very apparent wherever the system is pursued. The task, however, of plowing in heavy clover, is a difficult and tedious one, owing to the fact of our having here no plow which will run under such circumstances without choking or clogging so much as to render it necessary every few rods to clear the plow of the tangled clover, or have a boy with a fork to keep it clear. Even with all this precaution and expense, the clover will not be completely covered, and the furrow slices will be broken and irregular. The object of this communication is to ask whether you are acquainted with any plow by the use of which, the above difficulties can be overcome. We want a plow which will run in heavy tangled clover without clogging—which shall turn a neat unbroken furrow slice, and by laying it flat, completely cover up the clover.

"One more inquiry. Are you acquainted with any plow which possessing the above properties unites with them the quality of turning the furrow slices all one way, being a right and left hand plow. We conceive the matter of having the whole field turned in one direction as of great importance. It would have no open or dead furrows; it would save the time consumed in walking the horses across the ends of the lands in order to commence the next furrow; and in harrowing it would also be of advantage, for being thus plowed, you may without any trouble, keep every spire of grass out of sight, and leave the land in the finest condition possible."

The best plow we have seen or used, for turning a a perfectly flat furrow, is the Worcester plow, (Ruggles & Mason's) although Prouty and Mears' for flat furrows, is not much inferior. But we know of no plow which will pass through heavy lodged or tangled clover, without clogging, unless some preparatory steps are adopted. If the clover stand erect, passing a heavy roller over it, in the direction the plow is to run, will lay it smooth and obviate many of the above difficulties. If the clover is badly lodged or tangled, it has been found a good plan to give it a thorough harrowing in the same direction, as this will straighten the clover as well as lay it down. If either of these methods, however, are adopted, the necessity of plowing in lands is obvious.

As a right and left hand, or side hill plow, there is nothing equal to Mooer's Ithaca plow, for ease of draft and perfection of work; and unlike the common side hill plows, it works exceeding well on level or plain land. In the use which we have seen made of this plow, it did not lay the furrows as flat as the Worcester plow, which in plowing in clover would be an objection, while on some soils, it would be a decided recommendation.

Our experience, and that of many farmers in the wheat growing districts of New-York, would lead us to feeding off the clover, after it had attained a heavy growth, by sheep, or rather breaking it and trampling it down, previous to the use of the plow. We prefer sheep to any other animal for this purpose, as the clover will be fed or trampled more equally, and all the manure will be left on the field. But however the clover may be used, we can assure our Pennsylvania friends, that by its liberal use, they are in the sure way of enriching their farms and themselves.

CHESS.

MR. T. HUDSON, of Ohio, a gentleman who our readers are already aware, is a firm believer in the transmutation of grain, writes to us that he has commenced a series of experiments with *wheat, rye* and *oats*, for the purpose of satisfying the community that chess may be produced from other grains; and he adds—"With regard to my experiments, I intend they shall be accompanied with such proof as will satisfy the most sceptical; and the result, with such proof, may hereafter be forwarded for publication in the Cultivator." We perfectly agree with our friend Mr. H., that it is very desirable this vexed question should be settled, (we indeed consider it to be so most conclusively,) and shall expect to hear, if his experiments are so conducted as to preclude the possibility of mistake, that he has wholly failed in the production of chess.

OIL FROM HEMP SEED.

WE regret that we are unable to inform our subscriber at Canton, Fulton, Ill. of the quantity of oil a bushel of hemp seed will produce. Others have made the same inquiry; and if any of our subscribers have practical knowledge on the subject, and will communicate it for the Cultivator, we shall consider them as conferring a favor. The great increase of the hemp crop at the west, the present year, renders this information very desirable.

SOWING CLOVER SEED IN THE FALL.

G. T. THOMPSON, of Addison co. Vt., asks—"Is it a favorable season to sow clover seed in the month of September, with rye, after the first harrowing and before the last, so as to be covered with the said last harrowing? The doubt felt is, whether it will not come up before winter sets in, and being too tender to endure the severe frosts of our climate, be lost." The instances in which we have known clover sown in the fall at the north, have not spoken much in favor of the practice; the frost usually destroying the young plants, and invariably so on ground liable to heave. The drouth will sometimes destroy clover sown in the spring, but we have rarely known it to fail, when a dressing of plaster was given the field after the young clover plants were up. Our practice is to sow all grass seeds in the spring, either on winter wheat or with spring grains.

CHINESE PROPAGATION OF FRUIT.

AN article has been going the rounds of the newspapers of the country, stating in substance that the Chinese propagate fruit by selecting such limbs as can best be spared from choice fruit trees, and by means of strips of cloth, binding around them two or three quarts of moist earth. This is not allowed to become dry, and in a few months it becomes filled with small roots and fibres thrown out from the branch. The branch is then separated below the earth and planted, thus forming a young tree. J. KING, Esq. of Dubuque, Iowa, has called our attention to this statement, and asks "whether we have ever known this method practiced in the U. States, and if so, with what success?" Personally, we have never seen this operation performed; but we have noticed several accounts of its successful performance. Indeed there can be no doubt of this, as it is only the mode of propagation by layering, with this difference, that instead of the branch being brought to the earth, the earth is brought to the branch. The shooting of the roots may take place without ringing, but to ensure success, a narrow strip of the bark should be removed from the branch before the earth is applied. This operation will succeed but when the leaves are well developed, as their presence is necessary to elaborate the sap for the formation of the roots at the place of separation.

POULTRY INQUIRIES.

AN "Inquirer" has submitted to us a variety of queries in relation to Poultry; the nature of which will be sufficiently indicated by the replies, without occupying a column by their insertion.

1. As to buildings, it matters not how cheap and simple the poultry house may be, if it is made to combine the qualities of security from vermin, ventilation in summer, and indeed at all times; and warmth in winter. We would not advise any farmer who does not intend to make the rearing of poultry an important part of his farm business, to make any expensive structures for their use.

2. Hens should not lay near those that are setting, or with them, as trouble will most assuredly ensue. If two hens wish to set together, shut one of them up for a few days, and there will be no difficulty.

3. Boxes for hens to lay, or set in, are best when placed around the lower part or floor of the building, rather than in tiers above each other, as they will be less likely to interfere with each other. The front part of the boxes should be partially closed, as fowls on their nests dislike notice.

4. Hens might escape small vermin by having their nests on the ground, but eggs will rarely hatch well in that position. Straw or hay should form the nest.

5. The best preventive of vermin we have ever known, is a box of sand and ashes for them to dust themselves in at all seasons. We have never known fowls injured by vermin, that had access to such boxes; and if provided with these, and limestone gravel, they will be rarely troubled with the gapes. We have kept poultry for thirty years, and have never, to our knowledge, lost a fowl from this disease. We have little doubt, that where the premises occupied by poultry are once infested with vermin, removal will be useful; or a thorough cleansing and whitewashing may be adopted.

6. We know of no way of preventing hens from laying where they please, unless by confining them to their houses or yards. An egg placed in a nest will frequently attract them to that spot, but not always. Fowls will, however, always do better with the same feeding, to run at large at all seasons, the coldest weather excepted, than if confined to houses or yards.

7. The Malay and the Molucca are the same, or with very slight variations. The Dorking originated in Surry, England, is pure white, and is distinguished from all other varieties by having five toes on each foot. The Game breed of fowls is slender in form, and their eggs small, but their flesh is superior to all other kinds in richness and delicacy. Their pugnacious disposition is the great objection to this breed.

8. Breeding in and in, affects fowls as it does other animals, very injuriously; and a change of cocks occasionally, or as often as every second year, is necessary.

9. With the breeds of fowls commonly reared in Virginia, we are unacquainted, and know not whether the Dorking or Poland breeds exist there in purity or otherwise.

10. Eggs may be kept for a long time in salt; but eggs intended for setting, should always be as new as possible; keeping them in any method injures them for this purpose. Neither corn meal, bran, or sand, will preserve eggs as well as salt. Salt prevents that increase or variation of temperature that all these allow. Protection from atmospheric change, and a low temperature, are requisite for the keeping of eggs; and where salt is used, a few inches of this material is all the covering necessary.

11. Sulphur is one of the best substances for freeing all animals from vermin, by feeding it to them occasionally. Although we have never known the slightest injury result from its use, excessive quantities might possibly prove hurtful, and they are certainly useless.

12. The common duck or mallard is the only variety that can be profitably reared, as all others appear less hardy, require more care, and being wilder, are more disposed to make their escape. We are not aware that the wild turkey has ever been crossed with the domestic one, or that a successful attempt has been made to domesticate them. Such attempts appear to be scorned equally by the wild Turkey and the Partridge.

FEEDING CATTLE.

OUR correspondent "E. M." referring to our statement of Dr. Mease's method of fattening cattle, given at page 126 of the Aug. Cultivator, asks,—"Does Dr. M. mean in the above, that each animal will consume 30 quarts of provender a day, and from that up to a bushel and a half; or does he mean that he should be fed with 10 to 16 quarts a day? And is the half peck of boiled potatoes with a handful of Indian meal strewed over them, to constitute the animal's daily allowance at the expiration of the first ten days, or is it to be added to the meal? Will the Editors please explain?"

The 10 or 16 quarts to each animal, is the quantity for each day, to be divided into three feeds. The peck of boiled potatoes with the handful of meal, three times a day, is a substitute for the meal fed before, and constitutes part of that change of food which the Dr. considers essential to success in feeding. This is the case with the chopped pumpkins, the sugar beet, or turneps; but if "E. M." will refer to the August number, he will see that whatever may be the nature of the principal food given, the corn meal, or corn and oat meal, must be its unfailing accompaniment.

If "E. M." can have access to Mr. Colman's 4th report on the agriculture of Mass., he will find some statements on the feeding of cattle, which will materially aid him in understanding the nature of the best process to be adopted. In some of the examples there given of stall feeding, four quarts of meal, and half a bushel of potatoes, with hay, is the daily allowance; in others, eight or nine quarts of meal, with hay, is the food given; in another, eight quarts with hay, is the daily allowance, and ten quarts is considered enough for any animal. In all cases, excessive feeding is considered injurious; and we have little doubt, should "E. M." feed his animals three times per day, with the daily allowance recommended by Dr. M., he would soon have no animals to feed. Experience proves, that we have for stall feeding animals, nothing equal to Indian meal, or a provender made of one-third oats and two-thirds corn; and as cloying is the principal difficulty to be apprehended, occasional changes of food, or the usual food in lighter quantities, may be adopted with the best success. Perhaps in no part of the world is stall feeding cattle, better understood or more successfully practiced, than among the farmers of the fertile valley of the Connecticut in Massachusetts; and from them lessons of the greatest value on this topic may be received.

QUEEN BEE—AGAIN.

OUR unbelieving friend, Mr. Palmer, has sent us another note on the subject of the Queen Bee, in which he asks us whether our opinions on the matter at issue, have been formed from experience, or from information obtained from others. We answer, from both. We have kept bees for years; and we have also availed ourselves of the information in the best works on the subject, and we must say that on the subject of the three kinds of bees, neuter, drone, and queen, the knowledge derived from both sources has perfectly corresponded.

We wish to correct a trifling error into which Mr. P. in his note, appears to have fallen. He maintains that the existence of a queen bee for the purpose of depositing the eggs, is an anomaly in nature, nothing like it being found elsewhere, from the highest to the lowest of animal existence. Not to mention many other instances of this same law of nature, it is enough to refer Mr. P. to the *Termes fatale*, or white ant of the tropics, in which the female that deposits the eggs becomes a perfect monster in size while in the gravid state, and Smeathman, Edwards, and other writers, estimate the number of eggs she deposits by millions. The laborer or neuter, male, and gravid female, of the Termes, may be seen on the 230th plate of Wilson's Entomology. We are gratified in being able to inform Mr. P. that we have a specimen of each of the bees named above, which we shall be happy to show him, should he visit Albany.

ARTIFICIAL MANURES.

The preparation and use of manures constitutes one of the points in which the advance of modern agriculture is most apparent. For this advance, we are indebted to the application of chemical science to an investigation of the substances most commonly used to promote the growth of plants. An imitation of the operations of nature has thus been effected, in which there has been a decided improvement on the original, as the change necessary to convert organic matter into the fertilizing material is effected in a very short time; the bulk diminished while the efficiency is increased; and the disgusting, offensive character belonging to some of the original compounds entirely done away. Substances, too, once wasted, or rather considered of no value, are now in the course of a few weeks converted into manures of the first quality. Every discovery of this kind is of importance to the agriculturist; for although some of them it is probable will not be made useful on a large scale, and some of the preparations cannot become common in this country; still there are many which we are confident will be extensively used everywhere; and the better they are known, the more highly appreciated by the farmer or gardener.

Poudrette, or prepared night soil, is one of the most valuable of these prepared manures, concentrating in a great degree the elements of fertility; and as prepared, being easily portable, used with facility, perfectly inoffensive, and very powerful in its action. The two most extensive manufactories of this article are the New-York Poudrette Company—D. K. Minor, agent New-York city; and the Lodi Poudrette Company at Hackensack, New-Jersey—A. Dey, New-York city agent. We are pleased to learn that the demand for the products of these manufactories is constantly increasing, and the proofs of the value of the manure so made rapidly accumulating. The value of poudrette, compared with good stable or barn yard manure, is estimated as one of the former to from 12 to 15 of the latter; and some have even estimated the difference as still greater. When we remember that this manufacture is designed to convert what has always been a nuisance and source of multiplied diseases in our cities into a means of fertility and wealth, its importance will be duly estimated.

Another preparation, which is receiving some favor, is that produced by Bommer's patent, in which all ligneous or woody plants, such as straw, cornstalks, weeds, roots, sea grass, and in fact all vegetable matters, are converted into manure in a much shorter period than by the usual course of decomposition. It is pronounced as efficient as stable manure, more lasting, and costing but little. The process of preparing this manure has nothing difficult about it, and is said to be easily and expeditiously performed. It is probable the patent will for a time, even were its value unquestioned, prevent the extensive use which this mode of preparing vegetable matter might otherwise have obtained. Of the peculiar forms of the process we know nothing; but the testimony in its favor from those who have tried it, appears ample. Patent manures, patent implements, and patent medicines, are very apt, however, by practical farmers to be placed in the same category.

The English agricultural journals have within the past year frequently alluded to the qualities of a new fertilizing preparation called Daniel's patent manure. The specifications of the patent have been received in this country; and though evidently intended to mistify, rather than disclose the real process of making the manure, it is easy to see that a powerful manure must be the result of the combination. According to the specification, the materials of the manure are divided into three classes. First: ligneous matters, peat, straw, weeds, &c. Second: bituminous matters; such as mineral coal (bituminous doubtless) asphaltum, pitch made from coal tar, or other pitch, mineral rosen, and also tar. Third: animal matter; such as butcher's offal, graves, flesh of dead animals, also fish.

The ligneous matters are reduced to powder by grinding, or by the action of caustic lime. The bituminous matters are also ground into powder; if sticky like pitch, a small quantity of dry quick lime is added to prevent adhesion to the machine; if liquid, they are converted into vapor by dry distillation, in which vapor the ligneous materials are saturated; or if preferred, the soft bituminous matters are dissolved in water, to which caustic alkali has been added, and in this the ligneous matters are steeped. The animal matters are mixed with the ligneous and bituminous ones, and then the whole reduced to a powder.

Such a preparation cannot fail to be a fertilizer of the most powerful kind, though it is evident the process needs much simplification before it can be adapted to the use of farmers generally.

Guano is probably the most powerful natural manure known; and the artificial one that shall most nearly resemble that, will doubtless be the most valuable. Voelckel's analysis, the latest and best of this substance, as given by Dr. Dana in his Muck Manual, shows that it contains in the various salts of ammonia 32 parts in 100, sulphates of potash and soda 9 parts, phosphate of lime 14 parts, soluble geine or humus 12 parts, and insoluble undetermined organic matter 20 parts. The artificial manures are valuable in proportion as they furnish the materials for the ammonia, phosphates, and sulphates, which abound in guano. It is likely, indeed certain, that the immense masses of guano existing on the islands of the Pacific, are in a very different chemical condition from what they were when first deposited by the sea fowl that frequent those coasts and islands; consequently, in no fresh manures in any country can we expect to find the same combination of fertilizing substances as in guano. In no other country could such masses have remained without the wasting or dissipation of their most valuable parts, or their entire substance; the nearly total absence of rain in the guano region preventing such a result. The guano is therefore not only the result of the accumulation, but the chemical combinations of ages, and what agriculture requires of science, is the discovery of the means of effecting in a short time what nature has been centuries in performing.

In all preparation of artificial manures two conditions are requisite; first, value as a fertilizer; and second, facility and simplicity of preparation. Without the first, the labor of manufacture is lost; without the second, few farmers will be able to avail themselves of the benefits such manures offer. Thus far, we are inclined to the belief that of all the artificial manures, poudrette best fulfils these two conditions; but it by no means follows that other combinations may not be discovered, equally simple, and more powerful. Of one thing we may be assured; all such preparations, when brought within his reach and his means, will be hailed by the farmer with pleasure.

CANNOT.

We very much question whether there is a word in the English language productive of as much mischief as the one placed at the head of this article. Indeed, it has no business where it is so frequently found; for it is an intruder on our forms of speech, and deemed unworthy of notice by the lexicographer; yet there are some men who are always using it, and find it ever at their tongue's end. The man who admits this word into his vocabulary is regularly done up; henceforth he is good for nothing, because he will perform nothing. We like a man, aye and woman too, who at proper times can utter a plain plump No; for that little word may be their salvation; but if they meet you with a canting cannot, depend upon it, they will—"for a consideration."

Ask your friend why he runs in debt for things for which he has no possible earthly use; and he will tell you he *cannot* avoid purchasing things when offered at a bargain, even if he has no present use for them. The time, however, will come when there will be a cannot of another nature to arrest him; and that will be when his foolish purchases have so exhausted his finances, and reduced his credit, that no one will trust him.

Ask that farmer why he allows that bottle of spirit to be carried into his harvest field; and as the ill-cut and scattered grain attests, to his manifest loss, and he replies that he has been so long in the habit of doing it, that he *cannot* do without it when working hard. All nonsense. Thousands, if not millions, have demonstrated the contrary before his face the present year. The truth is, the farmer loves the "good creature," and his cannot is the partial opiate he forces upon his conscience to disguise the fact.

Ask that farmer why he allows his fields to be overrun with thistles, johnswort, daisies; his crops choked with stein krout, chess, and cockle; his corn overtopped by pigweeds; and his garden by chickweed, purslane, &c.; and he answers he *cannot* attend to them all, he has so much work to do, that some must be neglected. Such an answer only makes a bad matter worse. It proves that he is a bad calculator, as well as bad worker. The farmer has no business to plan so much work, as to be unable to perform every part well; and the cannot in the case can deceive no one.

"Neighbor, the bars to your cornfield are very defective, and the gate to your wheat field is so insecure, that I wonder at your leaving them in such a condition, when there are so many unruly cattle running at large." Ah, he answers, I know it well enough. I intended this week to have made some new bars, and had a new gate hung; but have lost so much time in attending that lawsuit, that I *cannot* do it now, and must put it off till next week. The next sunshiny morning, he finds a whole herd of unruly animals in his fields, his crops half destroyed, and a beautiful foundation for another lawsuit laid.

See that poor man, once rich and talented, reeling through the street! He is a sacrifice to this accursed cannot. A beautiful wife has wept tears of entreaty; friends have uttered words of remonstrance; reformed inebriates have taken him by the hand, and pointed out the way by which he may be again a man; but to all the reply, a reply fatal to hope, has been, I cannot. It is a lie. He can. He can forsake his cups; he can again bring joy and gladness to his family; he can again rejoice his friends; but he must first renounce and repudiate this soul and body destroying cannot.

Young man, whatever may be your profession or pursuit, if you would hope for success, never use the word cannot. You may as well attempt to swim with a Scotia grindstone at your neck, and a Paixhan shot at your heels, as to expect to accomplish anything worthy of a man while this word is in your vocabulary. When the gallant Miller, at the battle of Niagara, was asked by Scott if he could carry the enemy's batteries; suppose, instead of the determined "I'll try," he had whined out—"I cannot," where would have been his fame, and what the result of that day? Cannot, accomplishes nothing but the ruin of him who uses it.

Farmer, keep shy of cannots. Use not the word yourself, and be careful how you employ those that do. Napoleon never allowed the use of the word, impossible; and in the management of a farm there should be no place for cannot. You can do all that is necessary to be done, if you set about it in the right way, and at the right time. If you do not, your labor will be like that of Sysiphus; ever beginning, never ending. Neglect nothing; keep a watchful eye over everything; see that every part moves in harmony, and together; and you will have no use for cannot.

TRIAL OF PLOWS.

We have received an interesting report of a committee appointed to superintend a trial of plows, near Baltimore, in May last. The committee were George Beltshoover, Ed. P. Roberts, and Gideon B. Smith; names which are a sufficient guarantee of the skill and fairness of the trial. The ground selected "was a clay mold, which from having lain in grass, in a common, for many years, had become indurated, and presented great resistance to the plows." We are unable to present the whole report, and have presented in a table, the results of the trial with the several plows submitted to the committee.

Plow.	Depth of furrow.	Width of furrow.	Force.
1. Barnaby & Mooer's, ...	5 2-0 in.	12 in.	350 lbs.
2. Mott's Wiley Plow, ...	6 6-9	13 1-6	562
3. Prouty & Mear's center draft Plow, Boston, ...	5 1-9	12 1-6	500
4. Howard Plow, Boston, ...	5 7-9	14	550
5. The Davis Plow. This plow worked well, but was withdrawn before trial with the Dynamometer.			

The committee remark, "the task to the committee, of deciding, where such excellence was to be found in each of the implements contending, was one of difficulty, and would have been more so, but for the various purposes to which the Barnaby and Mooer's plow is adapted, it being in fact a plow of all work, and from the fact of its executing its work with so *much less draft* than either of the others."

In commenting on the qualities of the several plows submitted to trial, the committee say of Barnaby & Mooer's side hill plow, the one used:—"There is a peculiarity about this plow which is worthy of note. On the bottom of the furrow, and on the land side, it cuts out fully 12½ inches of the earth, so as to reduce resistance to the turning of the succeeding furrow, thereby facilitating, not only that operation, but ensuring the exactitude with which it is performed, leaving a clean and broad furrow behind, in which the furrow horse can walk, and preventing the treading of the ground in turning."

. Nos. 2, and 3, it is said, were new plows, and unscoured, a fact which should be remembered when the difference of draft between these and No. 1, is looked at; although it cannot account for but a small part of that disparity. The force was ascertained by the Dynamometer, and the result stated, was the average of a number of observations. We are glad to record such experiments, and hope such trials will become numerous. The plow is the grand implement of agriculture, and every effort at improvement should be encouraged and rewarded.

AGRICULTURAL SOCIETIES AND FAIRS.

NEW-YORK.

Tioga.—Thos. Farrington, Pres't; C. F. Johnson, Owego, Sec. Fair at Owego, Oct 5, 6.

Farmer's Society, Butternuts.—Francis Rotch, Butternuts, Pres't; Thomas Hollis, Gilbertsville, Cor. Sec. The Fair was held at Louisville, Sept. 22. The Plowing Match is to be held at Garrattsville, Oct. 15.

Otsego.—Elisha Doubleday, Cooperstown, Pres't: Chas. McLean, Cherry-Valley, Sec. Fair at Cooperstown, Oct. 5, 6.

MASSACHUSETTS.

The Hampshire, Franklin and Hampden Society will hold their *Twenty-Fifth* Cattle Show at Northampton, Oct. 12, 13. Edward Dickinson, Pres't; Harvey Kirkland, Northampton, Sec'y.

Worcester.—Levi Lincoln, Worcester, Pres't; Wm. Lincoln, Worcester, Cor. Sec'y. Fair at Worcester, Oct. 12.

Plymouth.—Fair at Bridgewater, Oct. 12.

Bristol.—Fair at Taunton, Oct. 12

Middlesex.—Fair at Concord, Oct. 5.

MAINE.

Kennebec.—Fair at Readfield, Oct. 12, 13.

Cumberland.—Fair at Gray's Corners, Oct. 19, 20.

Oxford.—Fair at Norway, Oct. 19.

CONNECTICUT.

Union Society, embracing the towns of Bristol, Farmington, Berlin, Southington and Burlington.—Tracy Peck, Bristol, Pres't; Eii Moore, Kensington, Sec. Fair at Plainsville, Oct. 12.

DELAWARE.

New-Castle.—James W. Thompson, Pres't; J. A. Lockwood, Cor. Sec'y; P. O. of both, Wilmington. Their Fair was held at Wimington, on the 14th and 15th of Sept.

PENNSYLVANIA.

Philadelphia.—Fair at the Rising Sun, Germantown Road, Oct. 12, 13.

INDIANA.

Putnam.—Wm. D. Allen, Green Castle, Pres't; A. C. Stevenson, M. D., do., Rec. Sec'y; A. H. Nichols, Spring Valley Farm, Cor. Sec'y. Fair, Oct. 5. Among the Premiums to be awarded are twenty volumes of the Cultivator.

Large Melons.—The editor of the Springfield Post, boasts of a water melon weighing 37 lbs. We can beat that. We recently assisted our friend Walsh, of Lansingburgh, and some other friends, to despatch a water melon from the garden of a gentleman near this city, which weighed forty-three pounds. It was decidedly the best, as well as the largest we have ever seen.

Foreign Correspondence.

AG. SOCIETIES OF GREAT BRITAIN, &c.

(*From our own Correspondent.*)

London, Aug. 19, 1842.

THE Yorkshire Agricultural Society held their fifth annual meeting at York, last week. The sum of £650 was expended in premiums. The Council dinner was held in the Guildhall on Tuesday, Earl Spencer presiding, in the unavoidable absence of the President, Lord Wharncliffe. The great dinner and meeting of the members was held on Thursday, when about 800 persons were present. The show and meeting altogether, was much superior in every way, to that of last year. Some excellent and appropriate speeches were made on the occasion, by the noble Chairman, the Earl of Zetland, Lord Feversham, Lord Wenlock, Sir John Johnstone, Bart. M. P., Mr. Milnes, M. P., Mr. Stanfield, M. P., and others. Richmond, Thirsk, and Doncaster, were the competing places for the next show; each offering £150 donation, their town hall for the meeting, and a field for the show. Doncaster was selected.

At the 6th annual meeting of the East Riding Ag. Association, recently held at Beverly, a hog pig of the Lord Wenlock race, bred by Mr. R. Moore, of Brandesburton, was exhibited. This surprising animal, although not two years old, measured 82 inches from poll to rump; in girth, 80 inches; stands 44 inches, and weighs nearly two hundred stones. A portable saw mill, exhibited at this meeting by Mr. Crosskill, agricultural implement maker, of Beverley, attracted many curious inquiries.

The annual agricultural meeting and general show of live stock, implements of husbandry, roots, seeds, &c. of the Highland and Ag. Society of Scotland, commenced at Edinburgh, on Monday, the 1st inst., and lasted the entire week. The exhibition was of unexampled extent, being larger than the famed show at Berwick, last year, which was the greatest the Society had held up to that time. The amount of stock, &c. entered, was greater than upon any former occasion, comprising upwards of 1100 animals, besides a great variety of implements, &c. The Edinburgh papers which we have received, all contain full and excellent reports of the proceedings. The public show took place on Tuesday, and at one period it is stated, there could not have been less than 20,000 individuals in the yard. The money collected for admission to the show on this day only, amounted, I understand, to upwards of £1300, the largest sum ever drawn on any similar occasion. The nearest approach to it, was at Glasgow, where upwards of £800 was collected. A peculiar feature in the exhibition, was a gallery erected for the ladies; having in front a raised platform, along which the prize animals were passed, to gratify the fair visiters. About 2000 persons were present at the grand dinner of the Society, which took place under the presidency of the Duke of Richmond. The principal speakers on the occasion, were the Earl of Mansfield, the Duke of Roxburgh, the Earl of Roseberry, &c. A large deputation attended from the Irish Ag. Improvement Society. The Chairman urged upon the Society the advantage of distributing gratuitous copies of the Transactions and Journal, among the members, after the manner of the English Ag. Society. A lecture was delivered on Monday, before the members, by Dr. H. R. Madden, "on the condition of the soil at seed time, as influencing the future prospects of the crop;" and another lecture on Wednesday, 3d, by Mr. Hyett, of Painswick, Gloucester, "on the practice of administering artificial solutions to the sap vessels in growing trees, in order to improve their color, durability, flexibility, strength, fragrance," &c.

In the list of patents sealed last month, is a singular one, viz: to "Lady Ann Vavasour of Melbourne Hall, Yorkshire, for improvements in machinery for draining land. Sealed 7th July. Six months for enrolment." Success attend the scientific efforts of the ladies of England, say we.

The Royal Ag. Improvement Society of Ireland, hold their second anniversary meeting next year, at Belfast.

Messrs. Blackwood announce for publication early next month, a work on "The Grasses of Scotland, containing a scientific description, and illustrations of about 130 distinct specimens. By Dr. R. Parnell, F. R. S. of Edinburgh." Price 20s.

A public meeting was held in the city of Cork, the other day, for the purpose of forming an Agricultural Museum in that county; the idea is an excellent one, and ought to be adopted and extensively acted upon, in every county, city and town of England. There are several central ones connected with the chief agricultural societies situate at London, Edinburgh, and Dublin.

A public monument to the memory of the late Thomas Wm. Coke, Earl of Leicester, one of the greatest friends and patrons of agriculture, the world has hitherto seen, is shortly to be erected. About £3000 has already been subscribed towards this laudable object.

The leading farmers and agriculturists of the kingdom, have also recently subscribed about £400, for a service of plate to W. Shaw, Esq. editor of the *Mark Lane Express and Farmer's Magazine*, and one of the projectors of the Royal Eng. Ag. Society, for his zealous and indefatigable exertions in the cause of agriculture.

EXTRAORDINARY RAILWAY TRAIN.—A train from Paddington to Taunton, carried the immense and unprecedented number of 2,115 passengers! the great attraction being the agricultural meeting at Bristol.

LETTER FROM SCOTLAND.

County of Roxburgh, Scotland, July 6, 1842.

The Editors of the Albany Cultivator:

SIRS—In the Cultivator of May last, you have done me the honor of inserting my communication of Feb. 28, 1842, to which you have appended a flattering note of thanks with a request of continued correspondence.

I should have much pleasure in contributing my mite to your excellent miscellany, could I fix upon farming topics within the scope of my information and experience, likely to interest your readers, and there rests my difficulty, as the husbandry practices in which I pretend to be, in some degree, versant, are not generally applicable to the climate and localities of the States on the other side of the Atlantic, or within the principal circulation of your journal. And I am not competent to write upon the rotation of crops and application of manures where Maize, or Indian Corn, Pumpkins, and other tender vegetables are cultivated as field crops, as in the United States. I may however venture some remarks upon one vegetable cultivated extensively in America, and in most other civilized countries. That is

POTATOES—In the pages of the Cultivator, I have observed frequent mention made of potatoes, but more said upon the excellence of the Rohans and other varieties, than of the most approved methods of culture; and I have not seen any remarks upon diseases of the plant, with methods of cure or prevention. As potatoe crops are subject to disease in this country, I will make a few observations upon that subject, and as an introduction, give a short detail of our usual method of culture.

When potatoes are here planted as a field crop, they are set in drills 30 inches apart. The drill is opened by the plow. The manure is spread along the bottom of the drill. The sets are placed upon the manure at from 9 to 12 inches distance, one row of sets in a drill, and they are covered by the plow. When the plants rise above ground, they are hand-hoed *in the row*, and horse-hoed between the drills. When the tops are sufficiently high, they are earthed up by the plow. Such weeds as rise after earthing up, are pulled out by hand. That operation finishes the processes of culture.

The diseases to which our potatoe crops are subject, are *curl* in the stem and leaf, and *rot*, also called *taint* and *dry rot*, in the sets. Sixty years ago, when potatoes were but partially grown as field crops, we had no complaint of either of those diseases. *Curl* became prevalent about the commencement of the present century. And in the last ten years, *rot* has made great havoc, and caused much loss to the growers and comparative high prices to the consumers. *Curl* is not attended by total loss of crop, but tubers growing from curled leaf and stem, are small, cankered, and bad tasted, probably deleterious. The result of *rot*, is an entire failure of crop, the sets, whether whole potatoes or cuts, although apparently fresh when planted, become effete and appear to have lost the vegetative power, the eyes make no effort to push out shoots. We have no cure for those inveterate diseases, but we use preventives with good success, which will be explained by the following remarks:

Sets for planting, when taken form *fully ripened* dry mealy potatoes, are more liable to rot and curl, than when taken from *unripe* watery roots. Hence, potatoes grown upon gravely or sandy soils in warm sheltered situations, are more liable to disease on replanting, than those grown upon cold moory soils in elevated situations. Indeed, the latter, if taken up before they are injured by frost, and well secured in winter, seldom, or never, fail of producing healthy good crops, when used for sets in the following year. We therefore endeavor to procure potatoes for planting, from cold high late land. In some places, the desired sets cannot be readily procured; in that case, we provide substitutes by planting roots *late in the season*, and taking up the produce before they are thoroughly ripe; but it is the safest method to procure sets grown upon cold moory or peaty soils.

Tubers raised from potatoe apple seeds and planted as sets for a crop, are not so liable to disease when replanted in several succeeding years, as are the sets from varieties which have been many years in cultivation.

Early sorts of potatoes usually grown in gardens, are not so liable to disease as the later sorts grown in the fields, even if the earlys are repeatedly replanted in the same garden. I assign two reasons for this apparent phenomenon. *First*. Early varieties grown in gardens, are generally of *younger lineage* than the late sorts grown in fields. Gardeners are more minute observers of the productions of nature, and more attentive to the *renovation* of plants they cultivate, than farmers are. They raise new varieties of tubers from potatoe seed, which farmers seldom attempt. *Second*. Potatoes are planted much earlier in gardens than in fields, while moisture remains in the ground and before the spring drouth sets in; and yard dung used by gardeners, is more reduced to a state of active manure, than when applied to field culture.

Farm land when intended for potatoe crops, should be cleaned, at least in part, in the preceding autumn. *Foul land*, that is, infested with couch grass and other running rooted weeds, intended for potatoe crops, and the cleaning processes deferred till spring, the drouth frequently sets in before the cleaning is fully accomplished, the moisture evaporates from the cleaning operations, and the land becomes as dry as dust. A good crop of potatoes cannot be expected when the sets are planted in land in such a dry state, especially where long dung is used, and copious rains do not fall soon after planting.

Potatoes planted *whole* are not so liable to *rot or daint*, as when cut *into sets*. In the latter case, it is a good precaution to dust the sets with powdered lime, which acts as a stiptic and prevents the sap exuding from the wounds, and the coat of cement repels the attacks of insects.

Some varieties of *kidney potatoes* should either be planted *whole*, or, *if cut*, the sets should be taken from the top ends of the tubers. The bottom eyes do not vegetate.

Potatoes intended for planting, should be carefully preserved in winter. They should not be heaped together in large quantities, as they are apt to heat and deteriorate in vegetative power.

There are other practices in use for the prevention of disease in potatoe culture, but I believe if credit is given, and proper attention paid to the remarks here made, there will be few failures in potatoe crops. It is probable those remarks are not new to some of your readers, who will consider my prescriptions fortuitous; or, it may be, the states are fortunately exempt from the diseases I have described. But I hope some of your many intelligent correspondents will think the subject worthy of notice, and will favor us with essays on potatoe culture, stating whether their crops are subject to disease, of what nature, and what cures or preventives they use?

And now, Messrs. Editors, I bid you farewell for the present, and again subscribe myself, TWEEDSIDE.

ROYAL AGRICULTURAL SOCIETY.

A correspondent of the *Mark Lane Express* furnishes that paper with an estimate of the receipts, at the late Bristol meeting, which, in round numbers, are stated to be as follows:

Wednesday.—Show of implements—800 at 5*s*. each	£200
Thursday, up to one o'clock.—Cattle show—16,000 at 2*s*. 6*d*.	2,00
After one o'clock to 6 P. M., 12,000 at 1*s*. each	600
Friday.—5,000 at 1*s*. each	250
Council dinner tickets, exclusive of invitations	450
Pavilion ditto	1,2000
Ladies' Gallery ditto	150
	£4,850

besides about £1,200 arrears of subscriptions which were received on the occasion. Notwithstanding the magnitude of these receipts, the society does not, neither does it desire to, pocket much by the exhibition. Its contracts for the dinners have been most liberal. The expenses of the pavilion and show yard, too, are very great, amounting to nearly £2,000. They distributed also upwards of £1,300 in prizes, and have besides to pay the expenses of the printing, &c., which amount to a considerable sum; so that the exhibition does little more than clear itself, leaving the ordinary income of the association free to meet its ordinary expenditure.

The following was the bill of fare provided for the grand dinner at the Pavilion, on Thursday:

500 roast fowls; 200 joints of lamb; 50 lamb pies; 50 pigeon pies; 100 hams; 100 tongues; 125 joints of boiled beef; 125 joints roast beef; 110 fruit pies; 110 open tarts; 500 dishes of vegetables; 100 salads; 200 dishes of butter; 200 dishes cheese; 600 bottles of sherry; 600 bottles of port; and 100 gallons of beer.

EXPERIMENTS WITH MANURES.

THE following details of experiments made on the lands of Knock, near Largs, in the spring and summer of 1841, by Mr. Wilson, were furnished to the Philosophical Society of Glasgow. A piece of three year old pasture, of uniform quality, of about 200 falls, old Scotch measure, was divided into ten equal lots, which, treated as follows, produced the undermentioned quanties of well made hay:

Lot.	Produce per lot, lbs.	Rate per acre, lbs.	Increase per acre, lbs.
1. Left untouched,	420	3360	....
2. 2½ bbls. of Irish quick lime added,	602	4816	1456
3. 20 cwt. lime from gas works,	651	5208	1848
4. 4½ cwt. wood charcoal powder	665	5320	1960
5. 2 bushels of bone dust,	693	5544	2184
6. 18 lbs. of nitrate of potash,	742	5936	2576
7. 20 lbs. of nitrate of soda,	784	6272	2912
8. 2½ bolls of soot,	819	6552	3192
9. 28 lbs. of sul. of ammonia,	874	6776	3416
10. 100 gallons of ammoniacal liquor, from gas works, at 5 degrees of Tweddel's hydrometer,	945	7560	4200

The value of the aplications was 5s. for each lot, or at the rate of £2 per acre. All the articles were applied on the 15th of April, 1841, and the grass cut and made into hay in the following month of July.

THE ACACIA.

BY the kindness of our London friends we have been put in possession of an early copy of Mr. WITHER'S volume on the Acacia or Locust, being a history of its growth, culture, qualities and uses, with liberal selections from the writers of other countries, both French and American, on the subject of this tree. As a whole it forms a very valuable compilation, and cannot be otherwise than useful to those who wish to engage in the culture of this valuable tree. In an examination of the work, however, we have not noticed any account of the borer, the insect that is making such ravages among the locusts of this country; hence we infer that it is unknown in Europe. It may not be out of place to remark here, that in a conversation with the celebrated chemist, Feuchtwanger, of New-York, a short time since, he gave it as his opinion, that washing the trees with his preparation of whale oil soap would effectually prevent the attacks of the borer, not only on the locust, but also such fruit trees as are exposed to destruction from this source. We hope this suggestion will be acted upon by our farmers; as it is certain the washing of the trees with this preparation could not injure them, and in all probability would, when applied about their roots, be an effectual stimulus to their growth.

But the most valuable part of Mr. Wither's volume, is an original essay on the planting and culture of trees in general, from the pen of Mr. Simmonds, the well known writer on agriculture, the associate of Mr. Johnston in the preparation of the Farmer's Encyclopedia lately published, and the writer of the notice of the meeting of the Royal English Ag. Soc. which appeared in the Sept. No. of the Cultivator. The essay embraces the following topics:—1, the situation of a nursery; 2, the soils best adapted for that purpose; 3, on lopping, pruning, and general management of nurseries; 4, culture and management of hardy trees and shrubs; 5, on the diseases and casualties of trees; 6, on the produce and profits of such plantations; and 7, the law in regard to timber. The directions for the planting of seeds of the various trees and shrubs, are very plain, and as this matter appears to be little understood in this country, we shall at an early day return to this subject. In the meantime, we can recommend to our readers the perusal of the present volume; or which is perhaps still better, Mr. Downing's excellent work on Landscape Gardening.

FARMER'S MAGAZINE FOR AUGUST, 1842.

THIS number of the Magazine contains a fine portrait of the justly celebrated Robert Bakewell, a man who was the pride of the agriculturists of the last century, and who perhaps, more than any other man, by showing what could be done in the improvement of animals, has led the way to the production of the beautiful and valuable stock of various kinds, now the glory of the English farmer, and of which so many fine specimens have been introduced into this country, Mr. Bakewell was born at Dishley, in Leicestershire, in 1726, and died at the same place in 1795. The New Leicester sheep remains the proudest monument of Mr. Bakewell's skill in breeding; and it is much to be regretted, that his peculiar policy in that department, should have led him to keep the steps by which he was so successful, a profound secret, and thus lose to the world the great advantages which his successors in cattle and sheep breeding, must have otherwise derived. The memoir which accompanies the portrait is well written and instructive.

The following extract from the monthly article on the Corn Trade, we make for the sake of calling attention to the part we have italicised, as this is the first intimation we have had of the existence of such a practice, a practice which must be limited, as it can only be followed where white corn of a peculiar quality is grown.

“Large quantities of wheat, the produce of the United States, will be sent across the border, will be converted into Canadian flour, and entered for consumption in the United Kingdom, on payment of colonial duty. Our shipping interest, however, will have the advantage of the carrying trade of this American Canadian flour, for it cannot be imported here, unless under the British flag. Our home wheat growers may also confidently calculate on their property being met in our markets during the ensuing corn season, by unusually large supplies of wheat and flour, direct from various quarters of the United States themselves, independently of the quantity that will be smuggled into this country in the character of Canadian produce. Shipments to a considerable extent continued to be made to Europe, *but the American millers must cease to mix Indian corn with wheat, before confidence can be placed in the good baking qualities of American flour.*”

This number contains a most valuable report of Mr. Smith's lecture on Drainage, before the Royal Ag. Soc. showing the method and its advantages, most conclusively.

SUBSOIL PLOWING AND DRAINING.

IN another part of the Cultivator we have alluded to Mr. Smith's excellent lecture on draining and subsoil plowing. The following extracts we think are worthy the notice of those who have hitherto been doubtful on this subject; and some facts which have lately come to our knowledge respecting the use of the subsoil plow in this country, have convinced us that its general introduction would be of most essential service to our farmers. In the course of his lecture Mr. Smith said:

“A notion has prevailed with some people that it is possible to drain land too much. I do not think so, from the very fact that the mold becomes an excellent magazine for the retention of moisture. A circumstance took place in regard to this in my district, in 1826, a very dry season. In that year there was such a long period of dry weather, that the pond was dried up, and there was a great deficiency of crops. I had a field which had been treated in the way I have described, [drained and subsoil plowed,] and I had a crop of hay upon it. The hay in the country round was very poor indeed, producing not above half a crop. On this field which I had deepened to 16 inches, I had a very splendid crop. A proprietor of land in the neighborhood, one of the old school, resisted to the utmost of his conviction with regard to the result of thorough draining and subsoil plowing. A person occasionally employed by me, was also engaged in doing work for him. He had asked about this hay, and the old gentleman was rather puzzled at the state of the crop, and exclaimed that he really thought I had drained my land so much that I should have no crop at all. He was immediately after this completely wedded to the system, and from that day has been vigorously engaged in introducing thorough draining and subsoiling all over his estate; and he is now having a great deal of poor soil, on a very rich and productive estate, treated in the same way. Taking the average of that gentleman's estate, I should say that he now produces double the quantity of corn that he used to obtain. He now grows potatoes where he could not grow them before, and on the old clay he produces regular and large crops of turneps.”

In the course of the lecture the question was asked by a gentleman—“What effect thorough draining and subsoil plowing would have on the habit of throwing out the wheat plant by frost?” To this Mr. Smith answered, “There is no difficulty in answering this; because it is well known to be owing to the moisture, that the wheat plant is thrown out; and whatever removes the moisture will have the favorable tendency required. I have known many places where almost every winter the greater part of the plants were thrown out. Now the result of thorough draining and subsoil plowing is, that these places retain the plant perfectly well, and have very abundant crops.”

MR. COKE OF HOLKHAM, EARL OF LEICESTER.

WE find in our late foreign journals, biographical notices of this distinguished agriculturist, one of the most able men of the age, and than whom, few have deserved so well of their country and mankind. His strict honor and probity, his exemplary moral conduct and his political integrity, made him respected by the first men in Great Britain; and the revolution which his example and influence effected in the agriculture of no inconsiderable portion of that country, gave him a right to the title of the Great Farmer, as well deserved as was the celebrated Pitt's, of the Great Commoner.

The Earl of Leicester, was 91 at the time of his death, and for 70 years, he has as a farmer, occupied a most conspicuous station. Born to the possession of a princely estate, when he came to take charge of it, he found a large portion of it leased to a Mr. Butt, and the lease within two years of its expiration. The former lease had been 1s. 6d. per acre; the current lease was 3s. per acre; and Mr. Coke offered to renew it at 5s. per acre, which Mr. Butt declined, and the proprietor at once assumed the management of his immense estate. Ignorant of the practical details of agriculture as Mr. Coke found himself, he was not ashamed to learn, and he soon collected some practical men around him, and almost from the first, instituted annual meetings of the neighboring farmers, where agricultural topics were freely discussed, and which gaining greater celebrity as they became more widely known, and more extensively useful, were the foundation of the Holkham sheep shearing meetings, so long justly celebrated for their practical utility.

“West Norfolk, at that time, was a rye growing district; his lordship made it a wheat growing one. The system of cropping was detestable. Three white crops were grown in succession, and when the land would produce no more, broadcast turneps followed. No manure was purchased, and very little produced on the farm. Mr. Coke began with two white crops in succession, and kept the land in pasture two years in every course. But still he could not grow wheat. The land was naturally weak, and could be made to produce little food for cattle, so as to increase the live stock. The first thing to be done was the purchase of manure, and he was induced to try rape cake as a top dressing. But the most effective source of improvement, was a stratum of rich marl, at various depths, underneath the surface soil of the district, which is a very light sand. Pits were opened, the marl dug out, and laid upon the surface. This gave to the soil the solidity essential for wheat, which was first raised in 1787. Clover and other artificial grasses followed, and the power of keeping more live stock thus obtained.”

After a variety of experiments to ascertain the animals best adapted to his system of farming and his soils, he fixed on the Devons for cattle, the South Downs for sheep, and a cross of the Neapolitan and Suffolk for pigs.

Mr. Coke was the first to introduce covenants, prescribing the particular course of cultivation to be followed, into leases, and in the opinion of Earl Spencer, who has given a most interesting memoir of the Earl of Leicester in the Journal of the Royal Agricultural Society for 1842, it was the combination of judicious covenants and long leases, which enabled him to effect such great improvements, not only on his own estate, but by his example and influence in the whole district. Such men as the Earl of Leicester are benefactors of mankind; and when the Marlboroughs and Wellingtons of his own country are weighed against him, they will be found wanting.

“THE HERD BOOK.”

WE learn by a letter from J. WHITAKER, Esq. England, to E. P. PRENTICE, Esq. of this city, that so many entries have been made for the forthcoming addition to the Herd Book, that it has become necessary to make two vols. of it, instead of one, as originally proposed. This has also caused the delay which has taken place in its publication. Mr. Coates now wishes to include all the animals entitled to a place in it, up to the time of its going to press. Gentlemen in this country who have not forwarded their lists of animals, may yet have them inserted, by immediately communicating the necessary registers to Mr. Coates. The vols. now to be issued, will be devoted, one to males, (about 2800,) and the other to females, of which about 3000 have been entered. Price, one guinea per vol.

AN AGRICULTURAL SCHOOL.

MR. PEDDER, has announced in the August number of the Farmer's Cabinet, of which he is the associate editor, that he has connected himself with JOSEPH COWPERTHWAIT, Esq. for the purpose of opening a Farm Institute on the farm of the latter, which lies on the banks of the Delaware, 12 miles above Philadelphia. On this farm, which is adapted in every respect to the purpose, Mr. Pedder proposes to receive and instruct a limited number of young men in the principles and practice of Agriculture and Horticulture. The course will embrace the cultivation of crops—the rearing of the choicest live stock—the system of draining—and the formation and application of composts, &c. Much attention will be given to the plow and its management, the subsoil one particularly, the best implements and best stock having already been selected. The students will have the advantage of studying horticulture in its various branches; there being a green house, flower garden, &c. &c. under a professed gardener, with an enclosed garden of more than two acres.

That our friend Mr. Pedder will perform all that he promises no one can doubt: and we are gratified that he has so far advanced in opening the first Agricultural School in the United States. We have often urged upon some of our wealthy and public spirited farmers, the propriety of farm schools of this kind. Under competent managers and practical instructors, they could scarcely fail of success; and when once the “ice is broken,” when it is seen by the success of but one school, that individual enterprise is sufficient for their establishment, we may hope to see them rising in every state of the Union. Mr. Pedder has not given the terms of instruction in his Institute; we presume they can be learned by application; and confident that the author of “Frank,” will make an excellent agricultural teacher, we close by wishing him and his Institute every success.

EDEN-HILL FARM INSTITUTE,

On the river Delaware, twelve miles above Philadelphia, eight miles from Bristol.

The Editor of the Farmer's Cabinet, takes the opportunity of stating to its numerous readers and his personal friends, that being relieved in a considerable degree from the details of the office, by an arrangement with its present proprietor, he is enabled to realize his long cherished desire, to practice the art of agriculture in this, “the land of his adoption.” To this end, he has connected himself with Joseph Cowperthwait, Esq., upon whose farm, in every respect adapted to the purpose, he proposes to establish an Institution, for the reception and instruction of young men in the principles and practice of Agriculture and Horticulture. He will occupy the elegant mansion, now in the tenure of P. L. Laguerrenme, Esq., which, for healthfulness and beauty of situation, cannot be surpassed; and it will be the study of himself and family to tender to their young friends the conveniences and comforts of a home.

The exercises of the institution will embrace the practice of Agriculture in all its various branches and details—the cultivation of the best crops, and the rearing of the choicest live stock—the best animals having been selected, and the most approved implements obtained. The management of the plow will form a leading feature in the course of instruction—sub-soiling will be adopted on a regular scale, as well as a system of draining, the formation and application of composts, &c. Horticulture will occupy a large share of attention, the students having the advantage of studying and practising this branch—the care of the flower garden, green house, and culture of the vine, under a professed gardener, having the charge of a range of houses, with an enclosed garden, of more than two acres in extent.

The estate is bounded on the west by the Bristol turnpike; on which, and within its borders, is situated the Episcopal church of “All Saints,” with several other places of worship in the vicinity. The Trenton and New-York railroad passes through the centre of the farm; while the river Delaware, its easternmost boundary, affords repeated daily access by steamboats—a boat in regular attendance at Risdon's ferry, landing passengers within a few yards of the line.

A limited number of students only can be accommodated; and as it is the wish of the subscriber to commence operations early in the autumn—the commencement of the agricultural year—he would be happy to receive early applications from those parents and guardians who may honor him with their confidence.

JAMES PEDDER, *Office Farmer's Cabinet,*

ARTIFICIAL WATERING PLACES.

SEVERAL inquiries have been made as to the artificial watering places described in a former volume of the Cultivator, by a subscriber, as constructed by Mr. Robertson, of Fishkill Landing. The method consisted in merely digging a hole in the earth, placing a barrel in the hole, which was to be filled with small stones, and then whether any indications of water had previously existed or not, water would soon accumulate and fill the reservoir. Considering the plan as unphilosophical at the time, we could not vouch for the success of the system; and we have since learned nothing respecting it, that has induced us to change our first impressions. In the only trial made of the plan that has fallen under our notice, it was a complete failure, although made under as favorable circumstances as can generally be expected. For ourselves, we should have no faith in the plan, and if any have succeeded, we have not heard of such instances.

Original Papers from Contributors.

AGRICULTURAL EDUCATION—ANALYSIS OF PLANTS, &c.

Messrs. Gaylord & Tucker—I wrote an article some ten years ago, for the New-York Farmer and Gardener, strongly urging on our state government, the advantages of establishing a college for the instruction of the sons of our farmers. I stated that farming on scientific principles would benefit the country infinitely more than the cost of instruction; that our farmers would then take that stand in society which their intrinsic worth demanded, and instead of sending their most talented sons to cities, to the total ruin of nineteen-twentieths of them, they would consider their own calling as far superior to all others. I believe an application was made to our legislature soon after my essay made its appearance, which I think was unsuccessful. It is not much to our credit that numerous agricultural colleges are being rapidly established in Europe, while so little has been done in our own country. It appears that such colleges have been introduced in Germany and France, and are being established in other European countries. The following extract from the Bath and Cheltenham Gazette, will show what is doing in England:

"The success of the Kent agricultural college, has led to the formation of a similar institute at Shepscombe, near Painswick, in this county, (Glostershire.) The design is, for a moderate annual payment, to bring up youth from 14 years of age to 18, giving them, besides a good education, instruction in the theory and practice of agriculture, on the best and most scientific principles. On the continent, agriculture is taught as a science. In this country, it has been allowed to depend on isolated instruction, while all other arts and sciences have had the advantage of collegiate courses of education. The farms attached to the agricultural college at Shepscombe, include various descriptions of arable, pasture, and woodlands, in the immediate vicinity, and extend over 900 acres."

I am well acquainted with the locality; and the land, exclusive of the buildings, is worth two hundred and fifty thousand dollars. We must recollect that this has been done by a single county in England; and yet the *great state of New-York*, extending over a fine agricultural country of fifty times its area, has done little or nothing to aid her farming interest, on which her whole prosperity mainly depends.

A farmer should be well instructed in chemistry generally, more particularly as applied to agriculture; he should be well versed in mineralogy, geology, botany, and in the physiology of seeds, plants, trees, and animals, including the species bimana; he should learn geometry, mensuration, &c.; he should study political economy so far as to have a clear conception of the sources of wealth and prosperity. In our republican government, he should be instructed in his constitutional rights, and taught to vindicate them by aterse and condensed elocution. It will be a happy event for our country, when farmers so educated, shall have the ascendancy in our halls of legislation, and thereby put astop to the fallacious special pleadings of demagogues, who have already reduced our country, possessing all the means of prosperity in a pre-eminent degree, to a most pitiable condition, by their miserable legislation.

I had like to have forgotten the main object I had in view, when I commenced this article. As we cannot have colleges established, I would recommend that a fund be raised for the purpose of having all grain, corn, seeds, potatoes, roots of every kind, fruits, straw, and every variety of grass, analyzed. When this has been done by a competent chemist, let us have tables of contents published. We must be careful that none but a competent analyzer be employed, for there is quite as much empiricism in chemistry as there is in physic. Let wheat and wheat straw, barley and its straw, rye and its straw, oats and its straw, and so on through the whole series, be separately analyzed. If a fund can be raised in this country sufficient for the object, let applications be made to Germany, France and England, to go through the same operations, and give us their results. Both the elementary and earthy portions of each must be given. With tables made from the analysis of four different nations, any chemist could instantly and accurately determine what ingredients were necessary to make a soil of the most fertilizing properties for each and every description of agricultural product. It is but a short time since chemistry has been applied practically to agriculture, yet every day developes something new. I think it will ere long, be found, that instead of a succession of crops, the raising of one product on the same land, in perpetuo, will be found far more beneficial. To do this, it will be only necessary to apply to the soil, those materials which every plant requires for its constituent principles, and these may be developed by a correct analyzer. If agricultural colleges should ever be established in our country, such tables would be of infinite advantage to them, and would in fact, be their text book for all practical operations. To assist in obtaining so valuable a result, I will be one of a hundred, to contribute some twenty or thirty dollars each. A fund of from two to three thousand dollars would thus be raised; a sum I should consider fully equal to pay the most skilful operator for his services.

Daniels' Patent Manure.—Since I sent you the article on the use of silicate of potash, Mr. Daniels, the inventor of the new compost for wheat, or some one for him, has given a statement of the ingredients used, but not the proportions of each. They are wood saw dust, fine charcoal, lime, and bitumen. I understand that patents have been secured in England, France, Germany, and in this country, and that extensive applications are being made by the leading agriculturists of England. Should these experiments prove equal to what has been predicted, it would be wise in our government to purchase and give it for the free use of our farmers. I would recommend the silicate of potash to be added to the above compost. I have been acquainted with the standing of Mr. Daniels, for nearly twenty years. He was engaged many years in the woolen manufactory of Messrs. Wilkins & Co. of Tiverton, near Bath, and has invented very many improvements in the fabrication of woolen cloth. The permanent gloss given to woolens by steaming, so generally adopted by our manufacturers, was one of his inventions. The concern failed some two years since, principally occasioned by losses sustained in this country. It appears that his master mind has been employed for the last four or five years, in agricultural improvements.

New-York, Aug. 8, 1842. Wm. Partridge.

COST OF WINTERING SHEEP.

Messrs. Gaylord & Tucker—Allow me to occupy a short space in your columns, by the following statement of the manner in which a small flock of Cotswold and South Down sheep were fed upon my farm through the last winter. My chief object in giving it, is to correct an error in a letter of Mr. Grove, published in the Transactions of the N. Y. S. A. Society, for 1841, in which he draws the comparison of the profits of the Saxony, (a flock of which he possesses,) and the longer wooled and large mutton sheep; among which latter, the Cotswold and South Down stand the most prominent. Mr. Grove makes the latter exorbitant feeders, that being their chiefest characteristic. Therein is the error I speak of. He feeds his own flock (Saxony,) from 150 to 200 lbs. of hay, and 4 bushels of potatoes, daily, to the one hundred sheep, and opposes that to a statement found in Youatt, making the same number of Bakewells to consume 500 lbs. hay, and about 40 bush. turneps, daily. This is indeed extravagant, and well calculated to fix the choice upon the smaller and more easily satisfied Saxony.

My flock consists of sixty-four, 25 of which are bucks and wethers, 27 ewes, and 12 lambs. They were yarded about the middle of Nov., and fed through the winter upon clover hay and turneps alone. Their food was accurately weighed, and I fed 110 lbs. clover, and 5 bush. turneps, daily, to the sixty-four. Thus they were fed till leaving the yards, about the 15th April, when they ran upon rye sown purposely for early feed, excepting that the ewes after lambing had a few oats given them, which most refused when upon the rye.

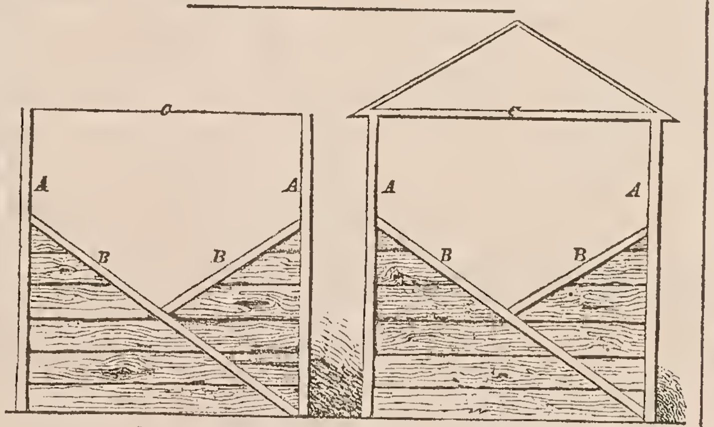
The difference, it would seem, is very little, if any, between Mr. Grove's feeding and my own, so that any difference in the profits of the two kinds, must be sought for elsewhere.

My Cotswold fleeces averaged $7\frac{3}{4}$ lbs. clean wool; the South Down 4 7-8 lbs. Many of my flock had lost much of their wool. The long continued warm weather, coupled with carelessness in not sufficiently often cleaning their yards, was probably the cause of their loss.

I have never fattened any, so that from my own experienee I can give no statement of the weights they may be brought to, or the expense of feeding. I shall, however, the next winter, fat several wethers of both kinds.

I have now 33 lambs from 27 ewes, two ewes being barren, and one sold in lamb last April; making 24 ewes, therefore, produce the 33 lambs.

Albany, Aug. 19, 1842. J. M'D. M'Intyre.



FODDERING PENS.—(Fig. 89.)

Messrs. Editors—Knowing that you wish to make your paper valuable to the farmer, I send you a description of a foddering pen which I use for my cattle. I have never seen any thing of the kind described. The size may be according to the fancy of the builder, but about 5 feet square I find to be the best size; the height should be proportioned to the cattle to be fed. It is not designed that the posts should be set in the ground, but it may be moved from place to place, to suit the convenience of foddering, and in the summer to a corner of the yard. Description—A, A, A, A, corner posts, 3 by 4 inches square, 6 feet high.—B, B, B, B, joists 3 by 4, placed as in the drawing, over which the cattle must come at the hay.—C, C, plates which support the roof, and confine the top of the posts. The whole should be boarded up as high as the braces B. A pen of the above description, will allow four cattle to eat at the same pen, and prevent fighting, as every creature will have one side to himself, and will wholly prevent a waste of hay by stepping on it, which I consider the most consequence. In windy weather with my pens, I can fodder as saving as at any other time. Franklin Co.

PROFITS OF FARMING.

Messrs. Editors—It is believed by many, that capital and labor bestowed upon agriculture, is less productive, than the same amount of capital and labor applied to most other branches of business. I think it exceedingly important to ascertain whether this be true or not; and also the per centum of clear profit that is realized by farmers on the estimated value of their farms. I propose this as an inquiry, and hope it may receive such attention and call forth such answers, as to fix and settle some general principle. The inquiry is, not what a single field or a part of a farm near a good market may yield occasionally; but what is the profit of the whole farm, including woodland, from year to year, after deducting all the expenses of labor, tools, taxes, fencing, the interest of the capital, &c.? Does any farm as a whole, do farms generally, yield, independent of all expenses, an income of 7 per cent on the capital invested, including land and buildings, stock, and farming utensils? If they fall short of this, then one of two inferences must be true, either that money vested in farms is less productive than when loaned on interest; or that the price of land is generally held much too high; for I believe it is a correct principle that a farm is in reality, worth no more money, than it will pay the interest of, after all annual expenses are deducted.

Will you, Messrs. Editors, and your correspondents, give us the result of your experience and observation on this subject?

I do not propose the above inquiries on the principle that a man should always engage in that kind of business which promises the greatest immediate profit. Far otherwise. Other considerations should have equal or greater weight in determining his choice. And I most fully believe that the business of agriculture is subject to less temptations to vice and crime; less cares, anxieties, and excitements; less fluctuations and losses; and is more calculated to produce virtuous habits, good health, peace, contentment, and ultimate prosperity, *than any other business*. "A man's life consisteth not in the abundance of the things which he possesseth;" and if happiness be the aim, agriculture is the most certain and pleasant path to her abode. H. A. P.

It is very difficult to give a definite answer to the inquiries of our correspondent. For a few years past, the prices of our agricultural produce have fluctuated so much, that the same amount of crops which in one year would have given a profit of 10 per cent, in another would not yield six per cent, on the capital, expenses, &c. of a farm. We firmly believe, however, that any well conditioned, and *well managed* farm, will, at a fair average price for the products of it, yield the owner 7 per cent on the capital invested; and we can point to many that do far more than this. It must be admitted, however, that a great majority of farmers do not receive from their farms a profit equal to 7 per cent, owing to the imperfect manner in which their business is conducted, and the condition of the soils they cultivate. Different views of this matter too, will depend on the manner in which the profit is reckoned; some considering only as clear profit, the cash or products left, after all the expenses for labor, taxes, &c. and those of the family, are deducted. This is not the correct way. A farmer whose capital in land, stock, labor, &c. is ten thousand dollars, may expend in taxes, for objects not connected with the farm, and for the support of his family, the entire product of his farm; so that not a dollar shall be left; and yet, if these expenditures equal in the aggregate 700 dollars, it is clear he has received 7 per cent on the capital invested. So at least it appears to us; but we are willing to give place to such of our correspondents as may choose to be heard in the matters referred to by our correspondent.

CULTURE OF POTATOES, &c.

Messrs. Gaylord & Tucker—I wish to state my experience in raising a potatoe crop the past season, upon a piece of land which had been worn out by a process of skin flint farming, for more than twenty years. It was plowed the first season on the 10th of May; again on the 1st of July; then buckwheat was sown, and it was seeded heavy with clover. As soon as the buckwheat and clover began to appear, the piece was sown with about two bushels of plaster to the acre. The clover grew finely, wintered well, and was pastured until the 20th of June following, when it was again plowed and sowed with buckwheat, which proved an entire failure. I now feel qualified to advise all those who wish to raise a good crop of buckwheat, not to sow upon freshly plowed green sward. In order to have the soil in the best condition possible, it should be plowed early in the spring, and again immediately before sowing. But to my subject. The next spring I carted on twenty loads of manure to the acre, which had been well housed, and which I concluded was worth 25 loads of commonly well drenched manure. This was spread upon the surface and immediately plowed in, which I believe to be the best way, every thing considered, of applying it to our kind of soil; it being a heavy loam, and in some places bordering upon clay. The ground was then furrowed, three feet apart each way, and planted with several kinds of potatoes considered the best, in all imaginable ways, large and small, cut and uncut. As soon as they were up sufficiently, they were plowed both ways; in about two weeks were plowed again, and slightly hilled. When gathered in the fall, there was no material difference in the lot, and the yield was at the rate of 309 bush. to the acre. *Tivoli, June* 7, 1842. H. Cook.

APPLICATION OF MANURES, &c.

Messrs. Editors—Among all the correspondents of the Cultivator, whose communications render its pages so pleasing and instructive, none rank higher for usefulness to the practical farmer in my estimation than Commentator. It does one good to see the various communications pass in review before him, and stripped of their useless lumber, weighed at their true value in his judicious balance. I am emboldened to send you this by observing that Commentator has ever confined his criticisms to the matter and not to the manner of the several articles; and no one who has exhibited any degree of common sense, has been lashed for lack of scholarship. This is as it should be; for but few of us practical farmers have ever been bred to Latin, and are highly gratified if we can make ourselves understood in homely English. Having been a constant reader of the Cultivator from its commencement, there are many articles in the back numbers that stand out in bold relief on the memory, and, like the prominent objects of a landscape, arrest the attention whereon the various subjects recur to my mind, that have been discussed pro and con by the numerous correspondents of this most valuable paper. Such an article is one signed by James M. Garnet, of Virginia, on the application of manures, published in the August number for 1839. Now anything from the pen of that distinguished gentleman and friend of agriculture, prompted as he evidently is by an ardent desire for the improvement of his brother farmers, and supported by his long experience, has almost the force of law with me; yet the article above alluded to does so clash with all my former opinions and observations on the application of manures, that I am confounded and perplexed, and have often regretted that Commentator did not commence his office sooner.

One at least will be gratified, and perhaps others may, if he will even now review the experiments of Mr. Garnet in this instance, and see if the conclusion which he has drawn from them is correct—"that it is always best to apply manure on the surface of land." We at the North hardly think those experiments conclusive proof of the above position; but it may be so in the latitude of Mr. Garnet, and perhaps of Commentator. Mr. G. says—"I began by penning my cattle late in the spring, and continued it until frost; in pens of the same size, moved at regular intervals of time, and containing the same number of cattle during the whole period. These pens were alternately plowed and left unplowed until the following spring, when all were planted in corn, immediately followed by wheat. The superiority of both crops on all the pens which had remained unplowed for so many months after the cattle had manured them, was just as distinctly marked as if the dividing fences had continued standing." That it is best to leave yards in which cattle are penned, and on which they let fall small quantities of manure on each succeeding night, which is left exposed to all the atmospheric influences, under the almost vertical sun of Virginia, (for we know not how many days) until all is evaporated which constituted the chief reason for burying it in the soil, unplowed until the following spring, is undoubtedly proved by this experiment; and also one other point is clearly proved, that is the vast superiority of spring plowing over summer fallowing; for the plowed pens were virtually put under a summer fallow, and the soil too, perhaps, a loose sand. But how does it prove that it is always best to spread all green or unfermented manures on the surface of land? This is the point on which we should be glad to have the opinion of Commentator.

One other experiment in the aforesaid communication, in which Mr. Garnet attempts to prove that if anything should evaporate from surface spread manure, it will all be absorbed by the tops of plants, and I have done. He says—"all the bark was taken off from around the body of certain young trees in a ring about three inches wide;" and he manifests surprise that the part above the decortication increased in size faster than below. Think you, Mr. Commentator, the next time Mr. Garnet holds out his arm to his surgeon to be bled, and sees the vein swelling between the ligature and his extremities, he will come at once to the conclusion that he takes in food at his finger's tip? I have observed these phenomena frequently, but have always thought them proof only of obstructed circulation in both cases. "It does not appear as plain as the nose on a man's face," that Mr. Garnet is right in either of the above conclusions; but I am young, and I *reckon* that I may change my opinion yet on many things if I shall live to be old, and shall wait with some anxiety for Commentator's opinion. If anything in this communication should appear disrespectful to Mr. Garnet, I hope he will not think it designed; for he may be assured there is no agricultural writer of the day whose opinions, in *general*, are more highly valued. Yours, &c.

Kingsbury, Wash. co., N. Y. L. B. Armstrong.

TOAD FLAX.

Messrs. Gaylord & Tucker—Agreeable to your request, I will give you my views and experience in regard to the best method of destroying the toad flax, more commonly known among us Dutchess county farmers, by the name of snap dragon. Two spots of some size were discovered on my farm a few years back. My attention was immediately turned to their destruction. I made frequent inquiries of my neighbors and others as to the best mode of destroying them without success. In the mean time, I was determined that they should not bear any seed to spread from that source. I commenced in the early part of the summer, not far from the first of June, to tear or rather pull them off by hand. This done, I waited until the second growth came, and then repeated the pulling; and I think in the latter part of the summer, the third was repeated. I found at each successive pulling they grew less in number, and were more feeble in their appearance. The following summer but very few made their appearance. I pursued the same course of pulling some two or three times, which made a complete finish of them. I have not seen anything of the kind on my farm since that time, which is about six years. This method is much easier than to destroy them by tilling, where spots occupied by them are not too extensive. The proper time to destroy these noxious weeds is when they first make their appearance; and not wait until acres together are covered with them, which is the case in many places in this county. In this case, I would recommend my brother farmers to try the plan which you have recommended—by frequent tilling; which plan I think would succeed if thoroughly done. P. R. S

La Grange, Dutchess county, June 17, 1842.

BOOK KEEPING FOR FARMERS.

Messrs. Editors—Agricultural book keeping naturally divides itself under several distinct heads,—as you may wish to ascertain the net profits of the farm; the profits of a single field or crop; the relative value of different crops of grain or grass; or the net profit or loss of your whole business, including family expenses and all others, and every item of income, whether from the farm or any other source.

The profit and loss of your whole business, is readily ascertained, by entering daily, in a journal or day book, each item of receipts and expenses. The source of the income and the object of the expense must be stated, that in footing up, it may be carried into the right column. At the end of the year these are carried into two chief columns, and the difference is your profit or loss. A long running account with your hired men, might be kept on separate sheets of Dr. and Cr., and the sum be transferred at the regular times of settlement.

The income and expenses of the farm, comes under another head, with which your miscellaneous receipts and family expenses have nothing to do. To have this correct, you will in going over your journal at the close of the year, (the last of March,) carry each item of your farm account into a column by itself.

These are the chief items:

Receipts,	*Expenses.*
Rent, if any, to tenant.	Labor.
Grain sold or used in family.	Stock purchased.
Pork do. do. do.	Seed purchased.
Beef do. do. do.	Plaster.
Wool, sheep, &c.	Decreased value of stock.*
Butter and milk sold or used.	Wear and Tear.
Hay. pasture, &c. sold.	Board of workmen.
Increased value of stock.*	Taxes on the land.

The balance of these two columns is your profit or loss on the farm, and aids in estimating the value of land, labor, &c. The net proceeds, above a moderate interest, shows the value of your labor and skill.

A third head refers to the relative value of different crops, &c. and, although it cannot be carried out with such accuracy, yet it helps guess. To this end, let there be entered in a journal, the number of acres of each particular crop, with its products and value; seed sown, and labor expended, as far as can be estimated; the number of acres in meadow and in pasture; the amount of stock kept, and various other items which might be mentioned. These all should be exact, where it is possible, and where it is impossible, there should be an honest estimate, as no one wishes to deceive himself. There should be no guess work, for it is not every man can guess nearer than he can measure.

From this last journal, kept for a series of years, you learn the annual average produce of your different crops, and their value; the relative importance of grain and grass, of cattle and sheep; the value of different soils, and the value of any particular plan of farming.

N. B. These accounts for a single year are of very little value; it is the *average annual* result that informs the judgment. It is not only very gratifying to know these results, but it is of the highest importance, especially to the young farmer, and he will constantly refer to the back pages of his book, as a guide to his future operations; and let me add that the time and labor of keeping these accounts is very small. I speak from ten years experience. Newton Reed.

Amenia, Dutchess co. June, 1842.

LAMP FOR BURNING LARD.

Messrs. Editors—Mr. Ellis S. Archer, of No. 32 North Second st., Philadelphia, has invented a lamp for burning "hog's lard." The lard is warmed sufficiently to run, and then put into the lamp, which is all the preparation required. The lamp when lighted, burns with a most beautiful brilliant and clear light, and throws off none of that offensive smoke that is frequently produced by lamps burning sperm oil. This invention, will, I have no doubt, enhance the price of lard, and thereby make the growing of swine much more profitable to the farmer. Mr. Archer, I presume will attend the Cattle Show and Fair to be held at Albany, the last of Sept., so that the farmers of your state will have an opportunity to examine his lamp for themselves.

Thos. Hancock.

WINTERING SHEEP.

Messrs. Editors—Upon page 97, of Cult. vol. VIII, is given an experiment and statistical account of wintering sheep, by C. M. of Ludlowville. I admit C. M.'s experiment may be a *good* one; but shall we be satisfied with *good,* if *better* be as easily obtained, and even with greater certainty? I trow not. C. M.'s economy, is *Oat Straw and Oats;* mine is, *Pea Straw only.* Pea straw, say you? What, pea straw, and nothing else? Though this interrogative seems perfectly natural, from the appearance of the pea vine. and though many, very many, have been astounded by its nutritive qualities when being informed of them, yet have I not been *less* surprised in seeing all these qualities wasted, which might otherwise be the support of animal life. Yes, gentlemen, pea straw alone, of itself, is first best to winter sheep upon. It sustains life, and answers that end more effectually, than the best of hay can do. This position is based upon fact; it is not conjecture. By those who have tested them, and to whom credence may be given, peas are said to be superior to corn, or any other grain for fattening swine. I think them excellent, when pulverised, as feed for cattle designed to be slaughtered. Though the horse does not at once eat the pea when ground, (it being too hard in its natural state for mastication, without being soaked or softened in water,) yet when a taste or fondness is acquired by him, it seems as *magical,* as that of *persons* forming a liking for *tomatoes, alcohol,* or *tobacco.* Peas are easy and profitable to raise. They will yield from 20 to 30 bush. per acre, varying in price from 4s. 6d. to 6s., averaging 65½ cents; besides, peas, so far as I have been able to observe, impart, or add (instead of detracting, impoverishing, and making sterile, the lands off from which they are taken,) properties which give vivacity and fertility to the soil, favorable to wheat. Generally wheat looks best this spring, where sown earliest in the fall, (lands being equally fruitful, and rotation of crops alike pursued, and tillage the same,) but though my *fallow* ground promises a *full* harvest, my *pea* ground, only separated from it by a road, bears the appearance of the more productiveness. Lest I weary you by my digressions, or over particularity, I will add only a single remark. To fill the mouths of from 3 to 500 sheep, I have found to be by sad experience, a great tax by feeding them upon hay: yes, gentlemen, take warning. To feed such voracious jaws with hay, is too expensive. Well, I'll try them a day or two on pea straw. What was my expectation? Why, that my sheep would all look thin and meagre, and gaunted up, but the reverse was my astonishment. The past winter I have fed my sheep on pea straw entire, and *never* was my flock *more hardy,* hearty, or in *better* condition, than they now are. I've lost none, nor has there been a sick one in my whole flock. If farmers will keep their sheep in unbroken numbers, and in a healthy and growing condition, a cheaper, or more safe guarantee to such a result than the culture of peas, is not to be found. A ton of pea straw, *well secured,* will feed as many sheep as a ton of hay.

Old Castle, Ont. co. N. Y., Ap. 16, 1842. H. C. G.

ODDS AND ENDS.

Scrap Book.—If young men, I have a good mind to say young women too, who lack wherewithal to amuse themselves during the long evenings of winter, would procure a few quires of paper, (that called "post office paper," is suitable,) and stitch them neatly together, and commence saving *scraps* from the newspapers, and pasting them in, they would in the course of a few years gather a large bundle of Odds and Ends, more interesting perhaps than mine, although my first lot have proved interesting enough to cause them to be copied into many other papers. What a gratification to think I have been able to interest and amuse my fellow creatures, and lighten the toil of the laborer—to enable them to improve the mind, as well as the soil.

Storing small Grain.—You in the east, who have large barns and graneries, and convenient saw mills and lumber yards, cannot conceive the difficulty that you might encounter when settled on a new farm in the west, forty miles from a saw mill. How would you store a few hundred, or a few thousand bushels of thrashed grain? Easy enough, if you only knew how—so could Careless have sealed his letter, if he had only known *how.* I will tell you how, and when you emigrate to the west, don't forget. Take fence rails and lay down a floor, a little from the ground, and build up the sides by notching straight rails so they will be steady, and then take fine straw or hay, and tramp a layer smooth upon the floor, and caulk the cracks between the rails, and pour in the grain, and stack some straw over the top to keep out the rain, and your grain will keep better than in a close granery, and not waste a bushel in a hundred.

Buckwheat may be thrashed upon just such a rail pen, covered over with rails, much better than upon the ground; the grain falling through the rails into the pen below.

A love of Reading, is one of the passions, which like all other passions not so good, grows by what it feeds on; and that parent who can, and does not furnish the means of whetting an appetite so salutary, when well directed, is guilty of the grossest injustice to his children. Newspapers are the mustard of food suitable for such appetites. Reader, do you take one?

Solon Robinson.

Lake C. H. Ia., 1842.

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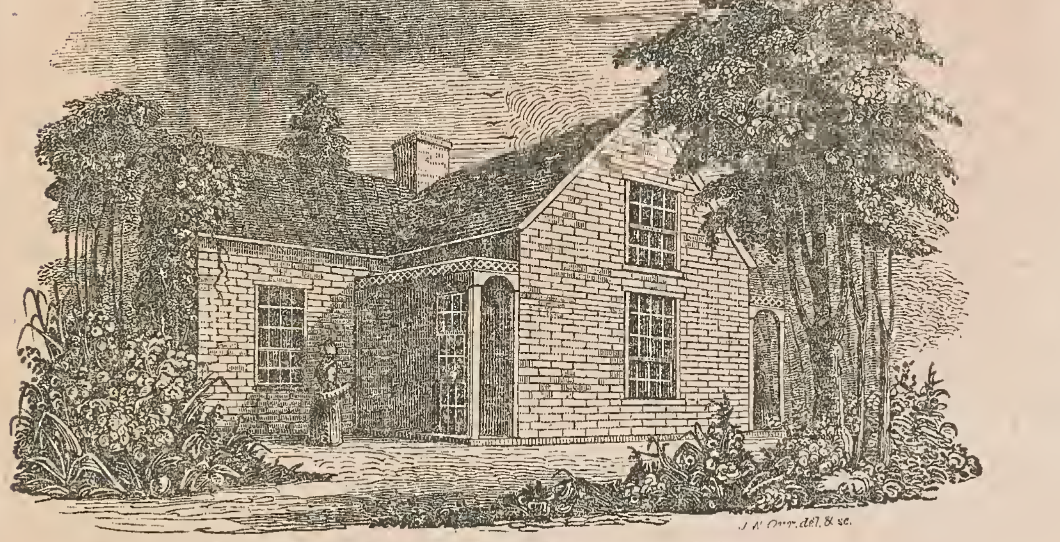
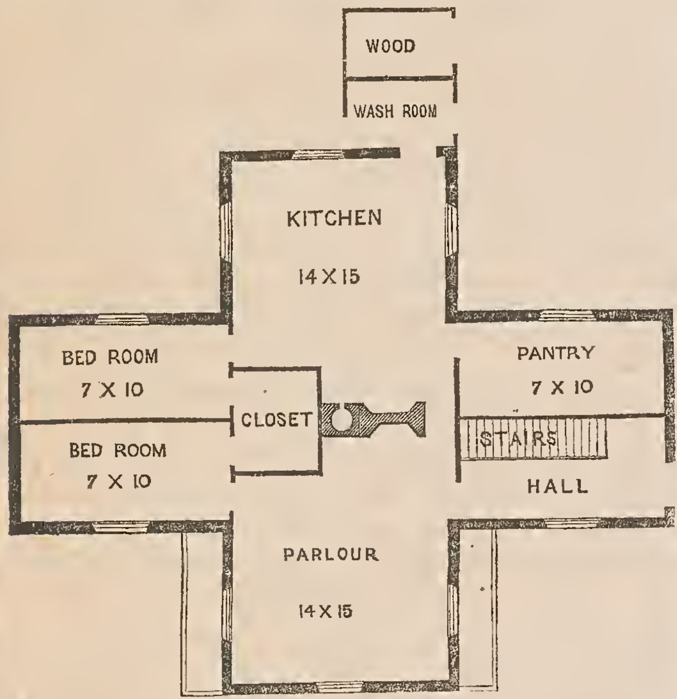
* These items in regard to stock, will not of course be found in both columns, but as the annual inventory of stock shall inpicate.


J. W. Orr, del. & sc.

THE WORKING MAN'S COTTAGE.—(Fig. 90.)

Messrs. Gaylord & Tucker—By the editorial remarks appended to those of your correspondent D. Tomlinson, on the 66th page of the current volume of the Cultivator, "On the deficiencies in the design and adaptation of country dwellings," I have been induced to send you a design that I have been sketching: which I propose denominating the Working Man's Establishment. The designs of the building are entirely original. Whether they exhibit the deficiences above complained of, in the design and adaptation of the buildings to the ground, or the wants of the working man, yourselves and readers must be the judges.

It cannot be claimed for the Cottage that it is the cheapest that can be built: for every one knows that a perfect square presents more room with a given amount of covering, than any other possible form: yet it is thought to have a fitness for the purposes designed; combining comfort and convenience in its internal arrangements, with an expression of purpose to its exterior.



Ground Plan.—(Fig. 91.)

The parlor it will be seen from fig. 91, has three windows, and is so situated as to have a direct view of the grounds in three points of the compass. Suppose the buildings are facing the north. Then the entire portion of grounds lying north, with those on the east and west, as far back as the dotted lines marked *a*, and *b*, (fig. 92,) could be readily seen. If the windows on the east and west sides of this room, are made to extend to the floor, so as to open out into the verandahs, this would be most delightful. The kitchen is of the same size and as delightfully situated as the drawing room, having the same number of lights, and almost as extensive a view. The closet may be so divided as to accommodate both bedrooms; or others might prefer to have the bedrooms united, making one room 10 by 14 feet. The entrance hall is 7 by 10 feet, in which are the stairs leading to the chambers above. Beneath these stairs, I would place those leading to the cellar, having their entrance from the kitchen. The pantry may be so divided as to form a store room. In the wash room there should be a well and cistern. In giving dimensions for the rooms, I have made no allowance for the thickness of the walls and partitions.

It may be observed that the dining room, library, and other appendages generally found attached to establishments of greater pretension, are here omitted. They are purposely so, as being entirely needless. The kitchen is the working man's substitute. It is there, that his wife, of necessity, spends most of her time. That is her nursery, that their dining room.

Should any think the above plan too small and contracted, it can easily be enlarged without any material change in the general plan. Let the building from front to rear, and from side to side, be 40 feet. This would enlarge the drawing room and kitchen to 16 by 18 feet, and side rooms to 8 by 12 feet. By an extension of the back part of the building, the wash room may be used for a kitchen, and the former for a dining room.

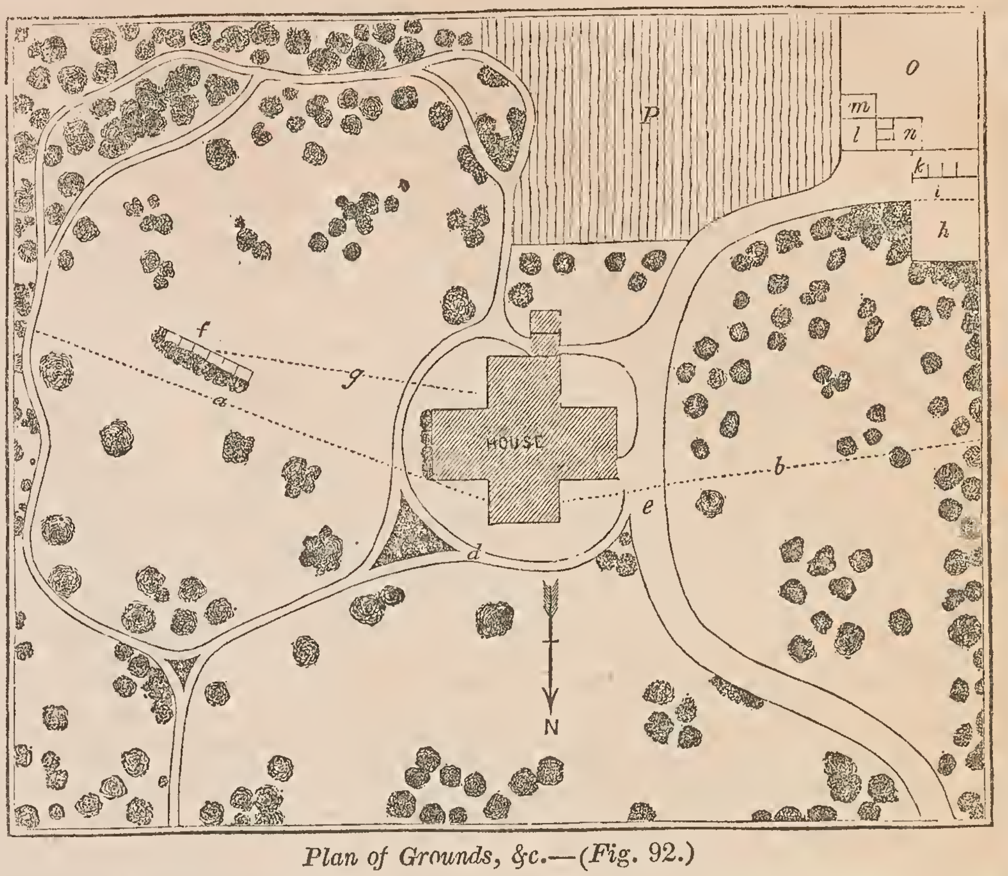
In laying out the grounds, (fig. 92,) I have endeavored to follow the teachings of nature; imitating her in that which is beautiful or picturesque. The gentle curves that are made in the walks *d*, or carriage way *e*, should not appear arbitrary, but necessary, by the planting of trees or shrubs. Those parts of the grounds lying north of the walks and carriage way, should be planted with the finest of our hardy forest and ornamental trees; while those lying back of this should be devoted to the finest of our summer and winter fruits. That there may be *unity* as well as *variety* in the landscape, the transition from ornamental to fruit trees should be gradual, and not sudden; the one blending with the other.

No establishment can be said to be complete, that is destitute of a bee house. I have therefore introduced it, *f*, in the above sketch. My object in giving it the above location, was, that during the swarming season every hive might be seen from the kitchen, a matter of no small consequence. This is done in the line of g.

The arrangement of the barn, and other out buildings, are thought to be both convenient and economical. The bay of the barn is designated by the letter *h*, the floor by the letter *i*. Beneath this floor should be a cellar for roots, &c. The stabling, *k*, is a leanto built on for that purpose. A building for a wagon house, corn house, &c. is marked *l*. On the south side of this, I would attach a hen house, *m*, and on the west, a hog house *n*, with a pen so arranged as to receive the litter from the horse stable. The yard *o*, should be so tight as to keep hens when desired.

The letter *P*, designates the kitchen garden.

I have made no estimate of the probable cost of such a building as the Cottage. The cost will materially differ in different sections of the country; varying according to the price of materials—the materials chosen, whether of wood, brick, or stone—and the style in which it is constructed and finished. This information can be best got by consulting an experienced architect and builder. The cottage would appear best built of stone, one story, and in the rural gothic style. That the chambers may not be too warm during midsummer, they should be constructed with a vacuity between them and the roof, of several inches, and ventilated at the top.



Plan of Grounds, &c.—(Fig. 92.)

Berlin, Conn., July 20, 1842. R. North, Jr.

ST. MOOR FARM, &c.

Messrs. Gaylord & Tucker—The introduction, by "Subscriber," through the medium of your periodical, to the agriculturists of the United States, of my farm, my manager, and myself, renders it incumbent upon me to make a brief commentary.

The property alluded to, is less than a tithe of that bequeathed by my father, the late Col. John Ambler, of the city of Richmond, Va. to his children. During the early period of his life, he resided at Jamestown, and on giving that well known estate to my eldest brother, removed to Richmond, where he continued the residue of his life. He was therefore an absentee proprietor, and in no way responsible for the condition of the farm when it came into my possession.

Your correspondent in referring to the improvement of the stock on my farm, omits all mention of the horse. My success as a *breeder* of the blood horse, has been so decided, that I may venture to say by brood mare "*Countess Plater*," has done as much to identify my name with the turf recollections of the "*country*," as has the extraordinary skill of Mr. Satterwhite, in the management of the farm, to connect it with the agricultural history of the "*county*."

I bear willing testimony to the justice of the encomium passed upon Mr. Satterwhite, by your correspondent. He has set an example worthy of all imitation, because he introduced a system, which from the *commencement*, made the farm produce not only the wherewithal to purchase the materials essential to increase its fertility, but also very considerable "nett profits." A most satisfactory demonstration, how groundless is the prevailing notion of the farmers around him, that they cannot *afford* to improve. It is well worthy of remark, that Mr. Satterwhite has effected all his improvements, without abandoning the tobacco crop; a conclusive answer to those who object to farming, because the wheat crop is subject to so many disasters that they cannot rely upon it, and too easily persuade themselves that if one hopes to improve, one must cease to cultivate tobacco.

Mr. Satterwhite has made one very valuable addition to the beauty, fertility, and convenience of the farm, which deserves especial notice. All our farm houses are situated upon a high, dry ridge, which rendered the labor of conveying to them the necessary quantity of water, incalculable. His active mind originated a plan, which a few hours labor carried into successful operation. My land runs along the base of the Tobacco Row mountains, which abound in springs. He selected a bold, a beautiful and never failing stream, which issued from one of these fountains, and with no other instruments than a level and a three horse plow, he conducted it by Farm Pen barn, Manager's house, garden and stables, to the manifest advantage of the land on either side, and the unspeakable wonder of his neighbors. By the use of pipes, this water could be conveyed to the third story of my own mansion—pipes would be necessary, because a valley intervenes between Mr. Satterwhite's house and my own. This stream would also enable me to have a beautiful cascade between the two houses, and a pretty "*jet d'eau*" in my front yard.

The brick dwelling house referred to by your correspondent, was erected, *not as a residence*, but to perpetuate the memory, of the perfect success which crowned the first sustained effort, to improve the agriculture of this immediate vicinity, and I consider it a very appropriate and quite a handsome monument of the prosperity of the farm.

Should either the notice of "Subscriber," or the present communication, create sufficient interest to make further information desirable, in relation to the system adopted on my farm, or the future results—I will undertake during some one of the frequent visits which my deep and abiding desire to advance the cause of agriculture, will lead me to pay St. Moor, to furnish such particulars as may be asked for.

Respectfully, Philip St. Geo. Ambler.

St. Moor, Amherst Co. Va., Aug. 13, 1842.

CHEMICAL MANURES AGAIN.

I have been prevented, Messrs. Editors, by a combination of circumstances not necessary to detail, from earlier noticing some strictures of your talented correspondent, Wm. Partridge.

In the April No., current volume of the Cultivator, p. 61, you published a communication of mine upon Chemical Manures, in which I referred to some statements made by Mr. Partridge, at p. 181, of the 8th vol. of your paper, under the belief that he had penned that article without due reflection.

In noticing my strictures however, at p. 97, of the present vol. of your paper, he reaffirms what he had previously written in regard to the use of quick lime in the manufacture of Sul. of Ammonia from putrid urine.

Hear him:—"If caustic lime be a necessary ingredient in making vegetative powder, its use can only be necessary to liberate pure volatile ammonia from the salts with which it is combined when in the state of urine." "Plaster of Paris is a sul. of lime, having little affinity for carbonates or sub-carbonates of ammonia; but when caustic ammonia is presented to it, a portion of the sul. acid of the sul. of lime will combine with the ammonia and leave the lime, forming a sul. of ammonia and a subcarbonate of lime." "Hence the use of lime in the composition of vegetative powder." "It is a well known law in chemical action, that when a combination of an acid and an alkali has to be decomposed by another alkali, having a greater affinity for the acid than that already in combination, a given portion will readily combine with the new alkali offered."

Let us try the case upon the principle here laid down by my friend Partridge. Plaster of Paris, quick lime, and putrid urine, must all be brought into contact; the quick lime will decompose the alkali of the ammonia; the carbonic acid, thus found in combination with the ammonia, will enter into the lime, and pure volatile ammonia will be liberated. I presume it is a fact which Mr. P. will not call in question, that pure volatile ammonia will combine but slowly with plaster of Paris; if so, after pure volatile ammonia has been liberated by the use of quick lime, before chemical action can possibly take place with the sulphuric acid of the plaster, the *ammonia would be driven off and lost.* Under this impression, I must beg leave to decline the use of quick lime in the manufacture of sulphate of ammonia.

Hear Mr. Partridge again:—" Mr. G. W. speaks of obtaining sulphate of ammonia, by mixing urine with plaster of Paris or sul. of lime." "In this our opinions differ in toto." Being myself but a tyro in agricultural chemistry, it is perhaps the very height of presumption in me, to question any of the positions of your learned correspondent, who I should judge to be an adept in the science.

I must therefore turn him over to one equally learned, I mean Prof. Liebig; he remarks, "carbonate of ammonia, and sul. of lime, (Gypsum,) cannot be brought together at common temperatures, without mutual decomposition. The ammonia enters into combination with the sul. acid, and the carbonic acid with the lime, forming compounds which are not volatile, and consequently destitute of all smell."

The "compound" above alluded to, is the sulphate of ammonia and carb. of lime. He remarks further, "If a field be strewed with gypsum, and then with putrid urine, or the drainings of dunghills, all the carb. of ammonia will be converted into the sulphate, which will remain in the soil." "If we strew the floors of our stables, from time to time, with common gypsum, they will lose all their offensive smell, and none of the ammonia which forms can be lost." From the above quotations it will be seen that Prof. Liebig, "differs in toto," from my friend Mr. Partridge.

Hear Mr. P. again:—" Other salts, beneficial to vegetation, will be *liberated* by using quick lime in making the vegetative powder." "Urine contains sul. potash, sul. soda, phosphate of soda, &c. amounting in the aggregate to fifteen per cent; and nearly all these valuable products will be made available by caustic lime."

I am at some loss, Messrs. Editors, to comprehend the meaning of your learned correspondent, in the above quotation. Does he mean to say that the salts there enumerated, when "liberated," or set free, "will be made available" by combining with the sulphuric acid of the plaster? Or does he mean to say that until they are "liberated" by the use of "quick lime," they are neither "valuable" or "available?" I have been accustomed to regard them as having no volatility, and being already in a condition serviceable for crops. If I am right in this opinion, it would seem rather hazardous to "liberate" them, by the use of "quick lime," which would endanger their escape and consequent loss. Mr. P. has fallen into error, as to the value of these salts; he has put them down at "fifteen per cent." "The celebrated swedish chemist Berzelius," in his analysis, has put the aggregate at less than seven per cent; deduct from them for urea, a small portion over three per cent, and the sulphates, phosphates, &c. will be less than four per cent. The urea is that portion which becomes volatile in putrefaction and is in danger of being lost, and constitutes nearly one-half of all the fertilizing salts found in human urine.

I have not written the foregoing, Messrs. Editors, in the spirit of controversy. I am an inquirer after truth, and believing as I do, that the agricultural community have a great interest involved upon the subject manures, I feel disposed, however unsuccessful, to oppose whatever I believe to be wrong, and at the same time I wish to elicit a free and full discussion of the subject of manures in general. Yours truly.

GEORGE WOODFIN.

PAULAR MERINO SHEEP.

MESSRS. EDITORS—I have been much interested of late in the remarks upon sheep and sheep husbandry, which have appeared in your truly excellent paper, especially in two communications from S. W. Jewett, of Weybridge, Vt. I am confident Mr. J. has *not* said *too* much in reference to this variety of sheep—am certain also, that in the Cultivator for the present month, we have a very *perfect* likeness of a Paular buck.

This buck is one which Mr. Jewett purchased of my brother-in-law, Alfred Hull, of Wallingford, Vt., some three years since. He purchased of Mr. Hull, one Paular ewe, also, at the same time; whose first lamb after Mr. J. bought her, is, I presume, the buck whose likeness you gave us in the March No. of the Cultivator.

My brother-in-law's flock (now about 500,) originated from the pure Paulars of the Hon. Wm. Jarvis; and they have probably been kept *as* pure, as any flock in Vt. Mr. Hull keeps pure Paular bucks, constantly for sale; has sold *hundreds* within the last 12 years, from $8 to $10 per head; which speaks volumes in their favor.

I have, formerly, kept a few hundred sheep—have tried several varieties of fine wooled sheep, among which was the pure Saxony; and I verily believe, the pure Paulars to be the *best* adapted to our northern climate, and on the whole, the most profitable to the wool grower, of any fine wooled sheep with which I have ever been acquainted. They are no "humbug."

In proof of what has been said of their excellence, permit me to state, that I have a small flock (90,) which I have raised from stock selected from the flock of my brother Hull, have kept them unmixed, have raised this year, one lamb to each ewe, two years old and upwards, have rarely lost a lamb in four years. My breeding ewes, and yearling bucks and ewes, (I have no wethers,) have given me, on an average, at each clip, for the last two years, $5\frac{1}{4}$ lbs. of washed wool. I have sheared in one instance, nine lbs. five oz., from a buck 13 months old. My stock buck, now three years old, gave this season, twelve lbs. and eleven oz. wool. (The figure of Mr. Jewett's buck, in last Cultivator, is almost his perfect likeness, in full fleece.) Several of my "full mouthed" ewes, with each a lamb by her side, have given per head, from $6\frac{1}{2}$ to $6\frac{3}{4}$ lbs. I have sold all the bucks I could raise, at $10 per head, to my neighbors at one year old; except a few yearlings now on hand, which will all be taken before Dec. next. Have sold several this season, already. R. A. AVERY.

Galway, Saratoga, Co. N. Y. Aug. 17, 1842.

COMMENTS ON THE AUGUST CULTIVATOR.

THE first thing which arrested my attention in this number, was the various Sweepstakes proposed therein; and I am sorry to say, that I cannot consider them as at all favorable to our cause. They will certainly produce more competition than your premiums alone. But to me they appear to proceed from the same gambling spirit—so hostile to farming—which produces horse racing; although I am willing to believe that the proposers ascribe them to very different motives.* The project, I sincerely hope, may not seriously injure any of the parties concerned in them; but it has brought to my recollection the following epigram on a distinguished and luckless member of the turf:

> "Tom ran so long and ran so fast,
> His bottom could not always last;
> His cash grew short,—and then—to pay,
> He distanced all, and ran away."

That I may not appear presumptuous in expressing this opinion, permit me briefly to assign a few of the reasons which have produced it. In the first place, it is perfectly demonstrable, that all but the winners engaged in these sweepstakes, must lose the whole amount of their subscriptions, without the smallest compensation. And in the next place, they will give a disproportionate encouragement to the raising of stock, at the same time that they withdraw from the improvement and culture of the soil—which is much the most important branch of husbandry—a portion of that attention which every land owner must give it to insure success. Again, it is equally demonstrable, that in all these sweepstakes, the risk of loss incurred by each individual who adventures in such a lottery, is increased exactly in proportion as the number of subscribers may increase; whereas, if they would content themselves to compete only for the premiums offered by the Societies of which they are members, they could lose nothing but the cost of bringing their stock to the place of exhibition. Now let us suppose that the amount of their subscriptions to the sweepstakes had been laid out in the purchase of some of the most fertilizing manures now in use, and in grass seeds, instead of subjecting it to a certain loss by all but the winners of the purse; is it not perfectly manifest that such an investment would not only benefit all who made it, in a manner both certain and direct; but would, indirectly, be highly advantageous to others, by the good example which it would offer for their imitation?

In the plowing sweepstake, I perceive the proposer makes *quickness of execution*, the second condition. Now although I have always noticed that it is one of the requirements in all plowing matches, I must take the liberty to say, that in my humble opinion, far too much importance is constantly attached to it. Every farmer knows that the speed usually exerted on such occasions, cannot possibly be continued but for a very short time. They also know that many a team which would prove quicker than others for a few minutes, or even an hour's work, could not do near as much in a day, as some other teams which would prove slower during a short exertion. Why then, should *speed* in plowing matches be always considered so important as generally to be ranked first among the requisites to good plowing? I should not be for excluding it altogether, but surely it is usually estimated much beyond its value, unless indeed it were to be tested by at least half, if not a whole day's work, instead of that of a few minutes. It is in plowing as in racing, where we often see quarter nags, (as they are called,) which can beat, for a distance of four or five hundred yards, other horses that could doubly and trebly distance them in a four mile heat. Plowing matches should be made solely to encourage good plowmen and well broke teams. But to determine the comparative merit of plows themselves, *all* should be tried by the *same team*, and by the *same plowman*, who should have no interest whatever in any particular plow exhibited for trial. Then the best plow would always gain the premium, whereas I have sometimes seen it gained by an inferior one, entirely owing to the greater skill and dexterity of the man who managed it.

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THE shipment of 400 tons of bones from Philadelphia, which you mention in this number, seems to have been caused by the same species of reckless, uncalculating folly, recorded of the man who killed his hen that laid the golden eggs. Surely, if English farmers could afford to send 3,000 miles for them, and buy at 12 and 13 dollars a ton, Pennsylvania farmers could much better afford to give that price for them, at their own doors. I know not how many bushels of bone dust the 400 tons would make; but I presume it is by no means an extravagant calculation to say, that if they had been applied to the lands of Pennsylvania, instead of being sent to fertilize the soils of England, at a pitiful profit to the sellers of only 4 or 5 thousand dollars, they would have produced to the Pennsylvania farmers double or quadruple that sum, by the additional improvement imparted to *their* lands.

—

UNDER the head "An Agricultural School," you have given us an extract from an English work, which promises to be very useful. If it would have the effect of establishing such schools in the United States, I should hail it as a real blessing; for I believe that nothing else, in connection with experimental farms, is now wanting to make American Agriculture soon equal to that of any country in the world. Yet strange to say, the agricultural spirit which now seems to pervade our whole Union, has not yet manifested any desire to establish them, notwithstanding the numerous and most zealous efforts which have been made by their friends, to give it that direction. It is true that Mr. Peddar, the able co-editor of the "Farmer's Cabinet," has lately proposed to open an Agricultural School connected with an experimental farm, on the banks of the Delaware, 12 miles above Philadelphia. This, however, is the solitary instance of the kind, so far as I know, in any part of the United States; and it remains to be seen whether he will meet with sufficient encouragement to keep it up. Most heartily do I wish he may succeed to the full extent of his wishes; for so highly do I think of the importance of such schools to the best interest of our country, that I would willingly attempt to open one myself, after engaging competent assistants, if Congress would lend me, for a long term of years, rent free, a hundred or two acres of the public lands, in the city of Washington, now and ever since the establishment of the District of Columbia, lying entirely useless, except as a grazing common for every body who chooses to turn their stock on it. But being no party man—no beggar of favors either from great or little men, I would just as soon request them to recommend me as President of the United States, as I would ask them for such a loan.

—

YOUR preachment on "the necessity of economy," although excellent and undeniable both in argument and facts, will prove, I fear, of little more use to our agricultural brethren in general, than would be an attempt to persuade a confirmed sot to abstain from intoxicating liquors. Indeed, all classes of our community appear to be so thoroughly infected with habits of extravagance, that nothing will cure them but utter inability to obtain the means of indulgence; and that inability increases with such alarming rapidity, that he whose downward course is not arrested by it, must be deemed to be past all hope of reclamation.

—

"*Encouragement to Farmers.*" This is the title of a short article which gives Gen. Dearborn of Massachusetts, as authority for declaring that "97 out of every 100, who obtained their livelihood by *selling*, failed or died insolvent." To say nothing of the incredibility of such a statement, I would merely ask what sort of farmers must *they* be, who would feel encouraged by any such wholesale ruin among their own fellow citizens?

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UNDER the head "Dictionary of Terms, &c." there are some remarks upon "Hybrids," and "Indian Corn," on which I beg leave to offer a few observations. It is said that "Hybrids among animals, do not have the power of re-production." I believe this is true in general. But there is a perfectly well authenticated case stated in Ruffin's Farmer's Register, of a mule that produced a colt; I myself have conversed with two gentlemen of unimpeachable veracity, who testified to the fact as having happened within their own knowledge.

In speaking of Indian Corn, the author says, "northern yellow corn is considered the most nutritive," and can be preserved longer in a perfect state than any other." But I would respectfully ask *why* and *by whom* is it so considered? Has any comparative analysis ever been made between the yellow and the white; or any other rational mode for ascertaining which is most nutritive, ever been resorted to? If not, ought we to take for granted, a matter so important to all the consumers of corn? It is true, that there are more northern varieties of yellow corn which are very hard and heavy, than of the southern white varieties thus characterized. But there are two or three of them as hard, flinty, and heavy, as any of the northern yellow kinds which I have ever seen, and consequently should be deemed fully as nutritious, and quite as capable of being long preserved in a perfect condition, until satisfactory proof can be given of the contrary.

—

IT is a good adage at the bottom of one of your columns, which tells us, that "to accomplish much, a man must live as if he were immortal." But I quere whether *he* would not accomplish more, who lived under the constant and thorough conviction that he would be eternally punished in the next world, for all the time which he wasted in the present.

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* While we give place to the strictures of our correspondent, we must enter our dissent from his conclusions, especially in this particular instance. Certain it is, that the gentlemen who proposed the sweepstakes, were actuated by no "gambling spirit," nor by any desire of gain, the only object being to make up a purse for premiums on such animals as are excluded from competition for the Society's regular premiums.

—

I beg leave to return my best thanks to Mr. H. D. Grove for his complimentary notice of Commentator, and to assure him that my remarks will certainly be continued—without "fear or favor" too,—at least so long as they occasionally meet with such encouragement as he has been pleased to give them. As for my "touching tender spots," I can truly say that should I commit any errors in this way, they will proceed from the *head*, and not the *heart;* for my sole object being to throw in my mite towards the promotion of American Husbandry, I write under the constant belief that it must be seasoned a little to make it acceptable. I myself cannot relish meat without salt, and of course conclude that others have a similar taste.

—

UPON Mr. E. H. Northrup's gate, I would merely remark, that if the wagoners and cartmen in his part of our country, require one "13 *feet in width*," to miss running against the posts, they must still need much practice in driving, for the common width, wherever I have traveled during a long life, has been 10 feet—some few inches under or over.

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SINCE Mr. Wm. H. Sotham calls Mr. Morrell "a one sided writer on cattle," I should be gratified to learn how many sided a writer he calls himself. He must be at least five or six sided, (pentagonal or hexagonal,) if he claims to be an impartial judge of all the varieties of imported cattle, for I believe there are not less than five or six kinds now in the United States.

He says, and so say I, "it is very important that writers for your paper, should confine themselves to *well founded facts*, and not make assertions that have no foundation." But unless I am greatly mistaken in the public taste, if the Cultivator contained only facts unaccompanied by any remarks whatever, it would be as little read as the long genealogies in the Bible.

Mr. Sotham himself, however, does not appear altogether well disposed to practice what he preaches. Witness the following assertion in speaking of some communication by Mr. Randall, in regard to the common cattle of this country:—"He may select," says Mr. Sotham, "the best, if he chooses, and breed them until he is the age of man, and my word for it, he will never breed a beast that a good judge would condescend to put his hand upon." Well done, friend Sotham! for if this be not one of those assertions which you yourself have condemned, I know not what can justly be so called: unless, indeed, you can produce some person in our own country who is "*of the age of man*," and who has actually been making the experiment all the time he was attaining that age, but without success. Mr. Bakewell made a similar experiment in England, and it is presumable with no better cattle to begin with, than Mr. Randall might probably find of what is called the native breed in New-York. Yet Mr. Bakewell succeeded perfectly, and long before he was "*of the age of man*," if Mr. S. means three score and ten, by that expression. Why then, could not Mr. Randall succeed in his State, by pursuing the same method?

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THE receipt "to restore rancid butter to its original sweetness," has been tried long ago, by at least two of my female acquaintance, and like hundreds of other "it-is saids," (if I may coin a term,) has proved utterly worthless. I doubt much whether there is any cure for it. The best would probably be to compel the makers of it, if practicable, to swallow a good large dose of it, every morning, on an empty stomach, until they ceased to make any more. COMMENTATOR.

POTATOE OATS—CALIFORNIA WHEAT.

MESSRS. GAYLORD & TUCKER—I have read the several articles in the Cultivator, on the subject of the Potatoe Oats, elicited by my communication some months since, cautioning farmers against cultivating them. I had intended from the first not to make any reply, as my original object was only to call attention to the facts stated by me, as that alone would correct the evil if it proved to be one, or the error if the conclusion I had arrived at was erroneous. I stated the fact of the indigestibility of the potatoe oats, by authority of the most extensive livery stable keepers in Baltimore, the Quartermaster of the U. S. Army, stationed here, (who supplies large quantities of oats to the mounted troops here and in the Southern army,) W. Kendall, proprietor of the race course here, and several other horse keepers; all of whom have used potatoe oats, and did not discover their error till they had done their stock considerable injury, and not one of whom can now be induced to purchase potatoe oats at any price. I did not state those facts as of my own knowledge, nor until repeatedly solicited to do so by several of the gentlemen above alluded to. It will be observed that not one of the gentlemen referred to as my authority for the statement, can be influenced by any motive of interest or sinister design; on the contrary, if the article was a good one, it would be clearly to their interest to promote its cultivation to the greatest possible extent. I would therefore respectfully call "Commentator's" attention to the circumstance, that "facts are stubborn things," and not to be set aside by mere *reasoning*. Suppose other kinds of oats and grain do "partially pass undigested," is that fact sufficient to prove that *more* potatoe oats do not pass undigested than of other kinds? And suppose potatoe oats are heavier than other kinds, does that fact prove that they contain more nutritive matter? It is a fact that the potatoe oats are covered with a *double* and very thick tough and closely fitted husk, and I have little doubt its increased bulk and weight, as well as its indigestibility, are attributable to this. But my object is not controversy, especially with the respected author of "Commentator;" I merely desire that the subject may be carefully examined by those interested, horse owners and farmers; and if they find I have been led into error, you may be assured, Messrs. Editors, that you have not a reader that will be before me, in willingness or readiness most gladly to communicate the fact to you.

CALIFORNIA WHEAT.—I have been applied to repeatedly for this *newly discovered* wheat, for information on the subject, and for seed. I believe this is the same article with a new name, that I have been instrumental in killing several times in the course of my life. It is the old *Egyptian Wheat, Triticum compositum.* It has been cultivated in Europe in a small way, for forty years; in America, for thirty years; it will do tolerably well where our good common kinds cannot succeed, but no where else. I observe this *humbug* has just laid another egg in Europe; a remarkably fine specimen of the *mummy* wheat having been raised the present season by the "Bath Royal United Horticultural and Botanical Society." So our countrymen may look for a whole brood of this insect spreading over this country next year. Many years since I obtained a few seeds of mummy wheat from Paris, taken from the body of a mummy then recently imported from Egypt; but I soon found what it was—it was the well known Egyptian wheat. So is the California wheat, and the Mummy wheat now in the Bath Society's grounds, all the same thing, and all good for nothing where good wheat succeeds. Let us watch the advent of the new humbug from England, it will soon be upon us, and let us all be prepared for it, not with a five dollar bill for each head of wheat, which the originators of the California humbug had the face to ask, but with the knowledge which will enable us to escape imposition. G. B. S.

CULTURE OF WHEAT.

(Continued from p. 150.)

3. HARVESTING OF WHEAT.—I believe that our farmers err in allowing their wheat to stand too long before cutting, much more frequently than by cutting too early. Indeed, I do not know that I have ever seen a sample of wheat from a crop injured by being cut too soon. But I have frequently seen great losses sustained by allowing wheat to stand until it was what is called dead ripe, when it will shell freely in cutting and gathering. Some varieties are much worse in this respect than others, but all, if allowed to stand too long, will subject the farmer to heavy losses in harvesting. The least attention to vegetable physiology, would teach us, that after the joints or stem below the ears have become yellow and solid, no more nourishment can be received, as the sap has ceased to circulate, by which alone it can be conveyed. I have found that when the wheat was cut in this state, (and at this time the berry will not be soft, nor very hard, but so the nail will indent it readily,) the grain would be of a fine color and quality, and the loss from shelling in the field, or in harvesting, a mere nothing. It is objected that when wheat is cut early, it is threshed with difficulty. This is true in part; but since the introduction of machines, this is of little consequence, as a properly constructed machine will thresh all kinds clean, and with sufficient celerity. The experiments made in this matter by Mr. Hannam, the substance of which have been given in the Cultivator, are I think deserving the attention of farmers. For seed wheat, however, I prefer that which has fully ripened and matured in the field. The process of nature, which is to ripen seeds until they fall to the earth of their own accord, may be advantageously imitated in saving seed wheat. Independent of the wheat being fully matured for seed, the straw in this case is so thoroughly dried that no fermentation can ensue, and the germinating qualities of the berry are unimpaired.

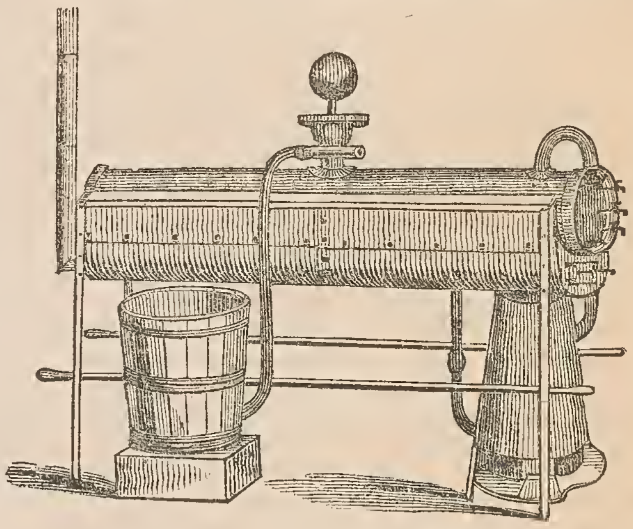
4. SOME EXPERIMENTS.—Always a disbeliever in the transmutation of the cereal plants, as much as in the transmutation of metals, I have still felt some curiosity in the discussion which has been carried on in this country in regard to the changing, under certain circumstances, of wheat to chess. Although contrary to every known law of vegetable physiology, and without a single analogy in the whole range of organized existence, the transmutation of wheat into chess has found believers and supporters among many of our respectable farmers, and perhaps it would not be a subject of so much regret, did not the belief of the theory lead to a practice directly calculated to perpetuate the evil. The man who believes that chess will not grow, or that wheat will change to that plant, will not be likely to take much pains to clean his seed, or weed his wheat from the growing plants. During the controversy which was carried on in the early volumes of the Genesee Farmer, on the subject of chess, it was maintained by some that chess would not vegetate; that shrunk defective wheat would produce chess; that freezing out the roots of the plants, or mutilating them would do the same, and that the ears of wheat that are left on the ground at harvest to shrink and swell until the "best properties" of the grain were lost, would assuredly change to chess when grown.

To test some of these theories, I marked out a piece of ground in my summer fallow, when ready to sow my wheat, which was the 2d of September, and used it for the following experiment:—First, I made two furrows across the plat of ground, in which I sowed pure chess, carefully picked by hand, from wheat of the same year's growth. Second, in two more furrows, I sowed shrunk and defective wheat, picked by hand as before, and the worst I could select. Third, two furrows were planted by ears of wheat gathered from a field cut in July, and the ears had lain on the ground till I gathered them for planting. They were laid on the ground in the furrows, without being covered with earth, and so remained exposed until they germinated; indeed they were never covered at all. Fourth, two more furrows were sown with pure wheat picked by hand, and of course free from chess. All vegetated, the ears of wheat, the latest of all, a result that was to be expected; and the chess the thickest of all. In the spring, the plants in all the rows stood very well: but the chess plants had evidently suffered the least from the winter, and commenced their growth the earliest, proving that they were the hardiest. The chess rows tillered or spread rapidly, and were of a most luxuriant growth; so much so, that at harvest there were probably five times the number of chess heads that there was of wheat, in the same number of rows. In the rows grown from the defective seed, from the gathered and injured ears, and the pure wheat, there was no material difference in the product, except that the plants grown from the pure seed were the most vigorous, and gave the largest, handsomest ears. In the berry there was little difference. But in none of them did any chess, or any thing like it appear; from the shrunk wheat, the damaged ears, and the pure wheat, pure wheat, was grown and wheat only. In one of the chess rows, was a root, producing three or four ears of wheat; but as no one, I presume, contends that chess will turn to wheat, a solution will be found in the probability that with the selected chess, was taken a kernel of shrunken wheat, mistaken for chess.

On my soils, which are inclining to be heavy, I have not found the benefit from rolling winter wheat, that I have from the use of that implement on spring grain. Last year I sowed three acres after peas, the ground fine and in good condition. One-half the piece, and that the part I thought best, I rolled well, and furrowed out, to drain off surplus water, as usual. The other part was sown and harrowed in the usual manner. This spring when the snow went off, I found to my surprise, that the rolled ground had suffered the most, on a very considerable part of it not a root being left, exhibiting any sign of life. On that which was only plowed and harrowed, the plants stood very well, and gave a handsome product. Finding that nothing would grow on the rolled ground, I plowed it up and sowed it to oats. In this case, I attributed the loss of the wheat plants to the smoothness of the ground, which allowed all the snow to blow off, leaving it bare, and consequently liable to freeze harder than that, where the inequalities detained the snow, and kept the ground longer covered.

One thing more, and I will close this already, perhaps, too protracted paper. There was some mildew or rust on the whole field, and that experimented upon, did not escape; but while the wheat suffered, the rows of chess were as bright and clean as the grass in the corners of the fence, near by. Not a particle of rust was to be seen upon it; thus proving that its character was so totally different from the wheat, as to render it unfit for a nidus to the mildew fungus peculiar to grain.

A WHEAT GROWER OF WESTERN NEW-YORK.



PORTABLE STEAM GENERATOR.—(Fig. 93.)

MESSRS. GAYLORD & TUCKER—I flatter myself that I have now completed at my Steam Engine and Machine shop, No. 12 Quay st. Albany, the best article for generating steam now in use. It is a combination of the vertical salamander with the horizontal boiler, or reservoir; the salamander furnace being inclosed in a casing of iron and surrounded by water; two pipes, connecting the salamander with the reservoir, one for water and the other for steam, at top and bottom, form an alteranate circulation of water round the head salamander. This generator is peculiarly adapted to domestic purposes, namely, cooking, washing, steaming vegetables, boiling coffee and tea, clarifying sugar, heating water for bathing, heating green houses, or generating steam for any other purposes; and are considered, by those who have them in operation, to be superior to any article now in use for the same purposes, being simple and easy to be kept in order, and a greater saving of expense than is afforded by any other boiler. They are made of four different sizes, at prices from $40 to $80, to accommodate different families and establishments. In boarding houses and public houses, they will be found of great service.

It has great advantages over any apparatus now in use, for applying the steam to all or any part of the above purposes at the same time, or as may be wanted. This generator may be placed in the kitchen or out house, and a pipe taken into an upper or adjoining room for bathing or washing, or conveyed to an outer building for steaming food for stock. A pipe may also be taken to the green house or any other room to keep that warm; and all the different apparatus to be charged by turning a cock. The above drawing only shows one pipe and tube, but as many may be applied as are wanted. I have one that has four different apparatus attached.

Albany, Sept. 8, 1842. MELLEN BATTEL.

The following certificate is from the Alms House committee of this city, consisting of Messrs. G. V. S. Bleecker, J. Groesbeck, and V. Ten Eyck:—

"We, the Alms House committee, have now in use, two of the above mentioned Steamers for cooking and washing, and have no hesitation in recommending them to the public, to be superior to anything we have had in use—being more durable, and less expensive to keep in order, or fuel."

SOUTH AMERICAN EVERGREEN GRASS.

MESSRS. GAYLORD & TUCKER—Enclosed I send you a specimen of grass, which I have been anxious you should receive for the last 18 months. You will, however, necessarily receive it greatly impaired in many of its most valuable features, from the mode of conveyance, which I exceedingly regret, since you will be unable to form an adequate idea of the luxuriance which it possesses, while I pluck it from the stalk. It is a native of South America; evergreen in its character, and capable of withstanding, uninjured, the frosts of our winters—spreading forth, as the spring advances, its luxuriant velvet branches, under the opening genial rays of our southern sun; and multiplying its stalks frequently from 50 to 150 and even 200, in a bunch. It grows upon a rich, loose soil, from 24 to 30 inches in height, and may be mowed, in our climate, twice during the spring and summer, giving from two to three tons per acre, of the very best hay I have ever seen, and *afterwards furnishes a green pasture during the entire winter.* You will not fail to *observe,* I think, when you touch the specimen, its velvet softness, a *distinguishing feature,* in the green state,—rendering it at once highly acceptable, as an article of food, to every individual of our domestic animals, from the horse down to the fowl. Indeed, I am sure, as I have witnessed frequently the present season, that the horse, cow, and Berkshire, will leave the finest oats, to graze upon this grass. Horses and cows are equally fond of it, when fed to them as hay, as I know from trial; and I presume sheep will like it equally well as hay, since they will graze it on the pasture to the very soil. I might say much more in its praise, and I think deservedly so too, but I will for the present, however, only remark that I am of the opinion, from my short experience with this grass, that it is destined to prove to the southern planter —when we shall have *repudiated* the present *kill* and *cripple,* and in every way injurious system of agriculture that is now practiced among us, what your clovers, herds and blue grass, and timothy, are to the north, eastern, and western farmers.

I am sorry that I am unable to give you its true botanic name, and as such, will simply give you the name which I received with the seed, viz: *South American Evergreen pasture Grass.* Its value, I hope will prove not less extensive than its name. I would remark, further, in reference to an article in the May No. of the Cultivator, over the signature of your excellent correspondent, "Commentator," that I think it quite likely this may be the same grass as that "recommended to the South Carolina State Society, by Col. Wade Hampton, which he calls *Musquito Grass,*" the seed of which, he says, was sent him by a Mr. Carter, of Alabama. If this be Col. Carter, of Montgomery co., he does not live above 30 or 40 miles from Mr. Stone, on Talapoosa river, who gave me the seed in the winter of 1840; who informed me at the time, that his seed were from Metamoras, on the confines of Texas, and there, from South America, hence its name. Should it prove the same, or whether it does, or does not, I will promise "Commentator," if he still wish it, that as early after the 1st of June next, as practicable, I will send a bushel or two of the seed to Mr. Ellsworth, of Washington city, for distribution, as I am exceedingly desirous to see this grass extensively and fairly tested. In our southern climate, the seed may be sown at any season, and do well; the proper time however, I think, as does Mr. Stone, is from the 1st of Aug. to the 1st of Oct.

Respectfully yours,
N. B. CLOUD, M. D.

Planter's Retreat, Ala. Sept. 1, 1842.

N. B. Unless I be greatly deceived in some experiments in which I am engaged, in the culture of the *Cotton Plant,* I think I shall astonish some of your subscribers in the cotton region, toward the winding up of the present crop, in regard to an entirely *new and improved mode* of culture; by which I propose *curtailing* the expense of producing this great national staple, *to one-third its present enormity!* I hope to be able to communicate to you for publication in your very excellent paper, by the 1st of January next, the result of my operations and experiments; in which I will furnish you with the complete *modus operandi,* from the first furrow made on the land, to housing the cotton. This is my *Henry Clay cotton!* improved from the common seed of the country by an improved culture. *No humbug to sell seed, either!* If successful, the nation shall have the benefit of it, without money and without price. And that it will prove successful, is already most triumphantly apparent.

MANURING GRASS LANDS.

EDITORS OF THE CULTIVATOR—I have made some experiments on manuring grass lands, this season, to which, (notwithstanding the source of error to which they were exposed, and to which I shall hereafter allude,) I attach some value. I therefore forward them for publication in the Cultivator.

3d mo. 24th, staked off five square rods of ground contiguous to each other; their direction north and south. Soil, clay; an old meadow which has beeen mowed for upwards of 40 years; the grass is blue grass, timothy, red top, and red and white clover; its surface is nearly level, but inclines to the north enough to make the water run that way. No. 1 was left without manure. No. 2 had one bushel of strong ashes. No. 3 one bushel of air slacked lime. No. 4 two bushels of clear dry cow dung. No. 5 two bushels of clear horse manure, free from straw and chaff. In a few days, No. 2 was distinguishable at a considerable distance by its vivid greenness.

8th mo. 30th, mowed the grass on the above squares. On the 31st, weighed them as follows:—No. 1, $28\frac{1}{2}$ lbs.; No. 2, $39\frac{1}{2}$ lbs.; No. 3, 25 lbs.; No. 4, $28\frac{1}{4}$ lbs.; No. 5, $25\frac{1}{2}$ lbs.

They were all in a greener state when weighed, than I wished, but an approaching shower prevented me from delaying any longer. An obvious source of fallacy in all such experiments is the unequal drying of the respective squares; to this I attribute the weight of No. 1. Before they were cut, Nos. 1 and 3 appeared about equal, as far as the eye could judge. When I weighed them, No. 1 was evidently greener than the rest, and more unequally spread. If therefore we substitute 25 lbs. for $28\frac{1}{2}$ lbs. in No. 1, I believe the numbers will pretty correctly express the relative value of these manures on clay soil meadows. Just 180 squares are contained in an acre.

Stockport, 9th mo. 7th, 1842. N. N. D.

THAT BALK.

CHATTING with a friend the other day, while we were looking over his farm, and at the time examining a piece of corn, I asked the reason why a few rows near the center of the field were so much superior to the others?

"Oh, that is an old balk," was his reply.

"Can you tell me," I said, "why that strip of land is so much richer than the other part of the field, as the luxuriance of the corn proves it to be?"

"In the first place an old fence has stood there for years, while the fields on each side were under cultivation to some extent," was the reply.

"But you do not suppose that the old fence contributed much to the fertility of the soil where it stood?"

"No; but when the fields were cropped; the corners of the fences grew up to grass, which was undisturbed and rotted; or when in pasture, as much of the time it was, the sheep would lie along by the fence to get out of the sun, and drop much of their manure there; all these causes combined have given the fertility you see."

"The result of the matter then is," I said, "the richness has been given by the addition of manure in the shape of decayed vegetable matter, and animal manure; for it is not reasonable to suppose that rest alone, has added much to its productiveness."

"You are probably about right," said my friend.

"Well then, if so, would it not be best to make the whole farm into baulks?"

"Yes, certainly; but how could it be done?"

"By simply applying to every part of the farm, as much decomposed vegetable and animal matter as is found in that. In short, manure the whole as effectually as that strip has been, and all will be as productive and rich. Nature herself has pointed out the way to renovate our soils; it is for us to closely follow her footsteps, and profit by her teachings."

AN ONONDAGA FARMER.

THE BEECH TREE.

MESSRS. EDITORS—My attention has lately been called to the question whether the Beech tree, *Fagus sylvatiea,* is ever struck with lightning; and after an extended inquiry and examination, I am brought to the conclusion, that for some reason as yet unexplained and unaccounted for, this tree has always escaped the effects of atmospheric electricity. This fact has been noticed for more than a hundred years, both in Europe and this country, and yet it is not so generally known as it should be; at least, very little improvement seems to have been made of it. In an address delivered by Dr. S. L. Mitchell, in 1826, before the New-York Horticultural Society, there is a letter from Dr. Beeton, of Tennessee, in which the writer says: "Neither tradition, nor more authentic history, give any account of injury having been sustained by a beech tree, from the effects of electricity. So notorious is that fact, that in Tennessee, it is considered almost an impossibility to be struck by lightning, if protection be sought under the branches of a beech tree." "Other trees may be surrounded by these and shivered to splinters, while the beech remains entire and unhurt." Dr. Mitchell adds, "improvement might and ought to be made of this fact, by planting and rearing beeches near and around the dwelling houses and barns of our farmers, for the immunity of cattle as well as human beings from the violence of lightning. Let a *beech grove,* as easy to rear as a plantation of *butternuts,* accompany every inhabited spot, and let solitary beech trees arise here and there over every farm and plantation." How often do we read of some flock of sheep, some two or three horses or cattle, or men, being killed by lighting, who had taken shelter under some oak, maple, or hickory tree! And yet few farmers suffer a beech tree to stand, notwithstanding it is as shady and ornamental as the maple. "Woodman, spare that tree." H. A. P.

Buffalo, Aug. 1842.

NEW ARTICLES OF CULTURE.

MESSRS. EDITORS—In your No. for August, p. 123, you appear to confound saffron, (Crocus officinalis,) with safflower, (Carthamus tinctorius.*) To a cultivator this mistake might produce some disappointment, and of course arrest his enterprise. Saffron gives only a yellow color, and is now rarely used in the arts, it being too costly, the price varying from six to ten dollars per lb. The principal application to the arts was for the purpose of flaming red morocco colors, but a cheaper substitute is now very generally applied. It is used more in medicine, cookery and confectionary. The only portions gathered from this plant are the yellow stigmas and part of the style. Safflower gives a beautiful pink, and is extensively used in cotton and silk dyeing, as well as for calico printing. A pigment is also made from it, which is a favorite application by those ladies who wish to give the tint of the damask rose to their cheeks. Genuine pink saucers are made from safflower. The price is exceedingly variable, depending much on the fashion of the day. I have given fifty cents per pound for it, and have bought it as low as nine cents; it is now worth twenty-five, but would fall immediately were any quantity imported. It will probably range much lower in future than in times past; as by the aid of chemistry, artists are now enabled to fix cochineal colors on cotton, answering for nearly all the colors for which safflower has been used. I am well convinced that it can never become a profitable crop for our agriculturists, until female labor can be obtained at six cents per day and find themselves.

If any of our farmers are desirous of introducing new articles of culture, there are several far more likely to make profitable returns than saffron or safflower. Madder is very extensively used, upwards of five thousand tons having been consumed in this country in one year. It is mostly imported from Holland and France. In Kentucky, families raise it in their gardens after the following manner:—They first dig their ground to a good depth, making the mold very light and mellow; they then plant small madder roots in rows, and when they have thrown up stalks of about a foot in length, they bend them down, and throw over them a layer of mold; these will throw up fresh stalks, which undergo the same process. This covering up is continued until the third year, when the bed is opened with a pitch fork, and all the roots large enough for use, are washed and dried under a shed. The smaller roots are planted in fresh beds. The beds must be kept clean from weeds. The stalks when laid down become roots. I frequently bought these roots in the market at Cynthiana, and they proved of excellent quality. As madder is a three years crop, it will be necessary that those who go into the cultivation, should plant a field every year, as few of our farmers would be willing to wait three years for returns.

Sumach is another article of extensive import, many thousands of tons being annually imported from Sicily and Trieste. This is a perennial plant from which two crops is said to be taken in one year. It is mowed down like stubble. Many of our farmers may ridicule the idea of raising sumach, when it grows wild around them, but the imported is altogether a different species from the American, and sells at more than double the price. Ours is the Rhus glabrum, the imported is the Rhus coriaria. I have seen plants of the latter growing in this country, but they are very rare.

The Rhus cotinus is a species of sumach, the wood of which is extensively used in Europe for golden yellows. It is grown in this country as an ornamental shrub. The leaves when crushed, have a fine acid scent, and it bears a large drab colored flossy flower, but no berries. As it thrives well in this climate, I think it could be raised to advantage. WM. PARTRIDGE.

New-York, Aug. 1842.

DOMESTIC FOWLS.

MESSRS. EDITORS—Can some of your readers inform me where I can obtain a few *full blood* Poland, or top knot fowls. I have not been able to find any in this vicinity that are better than some I have on hand, and these, in my opinion, are far from being *pure* blooded.

I have heretofore paid considerable attention to the raising of turkeys, and some of the varieties of domestic fowls, and my success has led me to suppose that I can impart some information upon these matters. But few persons seem to possess the art of raising turkeys; and many think it impossible to succeed at all, unless the old ones run at large. I have made some experiments which which satisfy me that such a "notion" is wrong. I expect now to be in a situation another season, to make experiments on a large scale, and will give the results, if worth any thing. I now think that one hundred turkies can be raised at much less expense than the same value can be obtained from any other animals on a farm.

Hartford, Ct. J. K. L.

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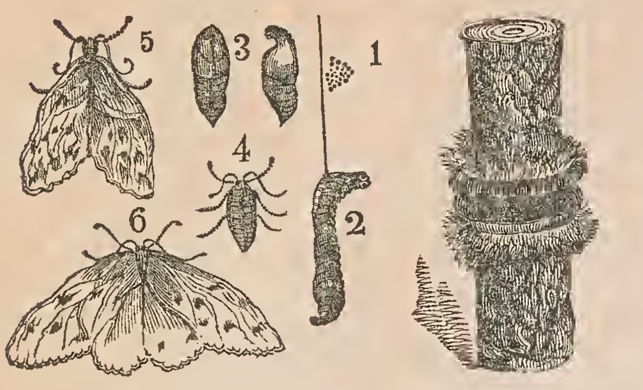
* We were aware of the distinction made by our correspondent, but as the inquiry seemed to refer to the first or most common saffron, we did not consider it necessary to enlarge on the difference. We however thank Mr. P. for his paper, as calling the attention of farmers and others, to the cultivation of other coloring matters still more important than saffron.

The Garden and the Orchard.



THE CANKER WORM.—(Fig. 94.)

1, canker worm's eggs—2, a full grown worm—3, chrysalis—4, female—5, male—6, male with its wings spread; at the right hand the section of a tree with a trough upon it.

Respected Friends—I forward thee a cut of the Canker worm in its various stages, and my patent apparatus for preventing them from ascending trees, which has been very successfully used in three of the New England states for several years; and where they have been put on, in some instances the orchards have produced a thousand bushels of apples in one year. I make the troughs of a strip of sheet lead, four inches wide, bent in the form of the figure 2, with the foot cut off, and inverted; thus forming a trough and roof of the same piece of metal, and bending it to conform to the shape of the tree, and soldering the ends together. It is made so large as to leave the space of one inch between the trough and the tree, which is filled with hay, straw, seaweed, or any other substance that will prevent the insects from passing between the trough and the tree, and will be easily compressed by the growth of the tree; the ends of the substance used to pack with, must be cut off, to prevent them from hanging over and forming bridges for the insect to pass the trough. Any substance that will absorb the oil and hold it in contact with the bark of the tree, should not be used for packing the space between the trough and the tree. The trough is held in its place by tacking three or more nails into the tree for it to rest upon. After the packing has been put in, the top ends should be daubed with a little tar to stick them together, taking care not to let the tar get upon the trough or the tree, and then it may remain for years without further care, or until the tree grows so as to burst open the trough, when a small piece of lead may be soldered in at a trifling expense, and the trough will serve another term of years; and thus the troughs may be increased in size as the trees grow, so long as there is any use for them, and when the lead is taken off, it is worth two-thirds of its original cost. There is not much doubt but that the troughs will always be wanted, as the canker worms have been in some neighborhoods for the last fifty years, according to the authority of the oldest inhabitants.

Codfish oil, or what is termed liver oil, by the dealers in the article, is said to be best to put in the troughs, as it will remain the longest without drying, and for that reason is never used for painting, and is about as cheap as any fish oil, being fifty cents per gallon. These troughs should not be filled more than one-third or one-fourth full of oil. It is now well known, that a part of the canker worms leave the ground in the autumn, beginning about the last of the ninth month, (Sept.) and ascend the trees and deposit their eggs. They continue to to ascend the trees from the time abovementioned, until the first or middle of the fifth month, (May,) following, whenever the weather suits them and the ground is thawed so that they can escape.

I have a number of certificates in my possession, signed by a large number of intelligent gentlemen, who have used my troughs successfully, who certify "that it is the cheapest, and most effectual, and more durable than any other method they have any knowledge of, and requires less care and attention." I have deposited a sample of the troughs at the office of the Cultivator.

Thy friend, truly, J. Dennis, Jr.

Portsmouth, R. I. 8 *mo.*, 25, 1842.

FRUIT TREES.

Messrs. Editors—Respecting the piling of stones around peach trees, whether they will have the effect of keeping worms from the tree, I know not: but this I do know: they will afford an excellent harbor for mice that will eat the bark, and in a very short time do more damage than all the worms could possibly do them. I have frequently seen tan, chips, long dung, &c. piled around the bodies of fruit trees; depend upon it, this is all wrong; they serve only as a harbor for vermin. Keep the sward from around the roots, and spade in short dung, and my word for it, it will answer a much better purpose. N. Warrington.

Springfield, Burlington co. N. J. Aug. 8, 1842.

THE TOMATO.

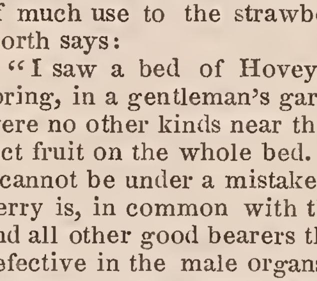
The Wayne Sentinel, published at Palmyra, in this state, informs us that "ripe Tomatoes, grown upon a last year's plant, which as an experiment had been preserved through the winter in a box, and set out in the garden in May, were picked by one of our citizens early in August. This is a simple and cheap, if not new mode, of obtaining an early supply of this valuable and delicious vegetable, and will no doubt be enlarged upon hereafter. Another experiment successfully made by the same individual, may be new to others, as it is to us: that is, the propagation of the Tomato plant by cuttings. They take root in a few days, if set out in a hot bed; or they will readily grow in open ground, after the weather becomes warm in the spring; and in this way, by taking cuttings from an old or bearing plant which has been preserved through the winter, the vegetable may be much advanced, and an early supply obtained with little trouble."

CULTURE OF THE STRAWBERRY.

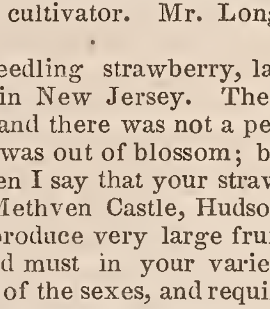
The horticultural readers of the Cultivator, may remember that in a former volume, we gave an account of a new seedling Strawberry, produced by Mr. Hovey of Boston, which for productiveness, size, and flavor, promised to be one of the very finest varieties of this delicious fruit. As it had never failed to fruit abundantly in the original bed, Mr. Hovey concluded that it would never fail to do so; but contrary to his expectations, many of the plants, sold to the cultivators of this fruit in different parts of the country, proved entirely barren. In the July number of Mr. Hovey's Magazine, is an interesting letter from N. Longworth, of Cincinnati, Ohio; explaining the cause of this, and in connection with the remarks of Mr. Hovey on the letter, giving information of much use to the strawberry cultivator. Mr. Longworth says:

"I saw a bed of Hovey's seedling strawberry, last spring, in a gentleman's garden in New Jersey. There were no other kinds near them, and there was not a perfect fruit on the whole bed. It was out of blossom; but I cannot be under a mistake when I say that your strawberry is, in common with the Methven Castle, Hudson, and all other good bearers that produce very large fruit, defective in the male organs, and must in your variety amount to a complete separation of the sexes, and require other plants, perfect in the male organs near them. I have kept the male and female Hudson in separate compartments for twenty years, to enable me to make a suitable selection in putting out new beds; those never had either produced a perfect fruit. * * * From the appearance of the vine of your strawberry, I anticipate a very large fruit; but I shall not risk it without a male Hudson near, except it be a single plant for an experiment. The moment I can see the blossom I shall be as well satisfied, as after cultivating it for years.

"I have been surprised to find no English gardeners that understood the true character of the strawberry. There is no strawberry that produces abundantly and very large fruit, where the male and female organs are perfect in the same blossom. In some varieties only, it amounts to a complete separation of the sexes; in others, those abounding in the female organs never produce a perfect fruit. Those abounding in the male organs, sometimes produce a fair crop, and where a few fruit only, it is often very large. * * * In all the monthly white varieties of the strawberry that I have ever seen, the male and female organs are perfect in every blossom, and as a natural consequence, the fruit is never large. The small Virginia Scarlet produces about half a crop of delicious fruit, but it is always small. I add a sketch of a male and female strawberry.



Female flower.—Fig. 95.



Male flower.—Fig. 96.

"The question has been started in England, whether all strawberries are mere varieties, or whether there are different species. I consider this question settled by the fact that the Hautboy strawberry, and some others, cannot be impregnated by the Hudson, Virginia Scarlet, or our native strawberry."

In a P. S. of May 16, 1842, Mr. Longworth adds:—"My plants [Hovey's Seedling,] are now in blossom, and young fruit. I have plants, with males of the Hudson variety near them, and not a blossom will fail to produce a perfect fruit. As an experiment, I placed a vigorous plant where it could be impregnated by no other variety, and the result is, what the blossom satisfied me it would be; it will not produce a perfect fruit. But this is a vigorous and hardy variety, and my present impression is, that it will prove superior to Keen's seedling in all respects. In my opinion its being defective in male organs increases its value, but it is necessary that those cultivating it should be informed of it, and plant a few vines perfect in the male organs, near them."

There is no gentleman in this country, whose opinions on matters connected with the cultivation of the strawberry and grape, and we may perhaps add, fruits generally, is more entitled to confidence, than Mr. Longworth's. Cultivators of the strawberry, have been long aware that there were fertile and sterile plants, but Mr. Longworth was the first to point out in a clear and satisfactory manner, the cause of this difference. The very valuable paper from the pen of Mr. Downing, of Newburg, on the means of securing crops from plants defective or deficient in their blossoms, was the result of investigations and experiments instituted in consequence of facts pointed out by Mr. L. We agree with Mr. Hovey, that the public are much indebted to Mr. L. for his remarks on the strawberry, accounting as they do so truly for the manner in which many disappointments in the culture of this fruit have arisen, and teaching so clearly the manner in which such failures may be hereafter avoided.

This very strawberry under discussion, (Hovey's Seedling,) furnishes a proof how much the knowledge conveyed in Mr. Longworth's letter was needed. The bed of original plants of this valuable strawberry, in the garden of Mr. Hovey, produced most abundantly, and so invariably that one of the chief excellencies of the seedling, as set forth by Mr. Hovey, was that the blossoms were always fertile. In his own words, in the paper before us, "We took it for granted, that there could be no such thing as a *sterile* plant, when all bore a crop of fruit." It was found, however, that a very large proportion of the plants vended by him, of this variety, proved sterile, and this fact, while it was a source of surprise to Mr. Hovey, was calculated not to entirely satisfy the purchaser. Fortunately, the letter of Mr. Longworth pointed out the cause of the sterility, and its remedy; and thus enabled Mr. Hovey to account for the original plants being such abundant bearers. We make some extracts from Mr. Hovey's comments on Mr. Longworth's paper:

"In the spring of 1841 we had occasion to make a new bed, more particularly for the growth of young plants than for the fruit: this bed, in order to be sure that the variety should be kept distinct, was placed in a remote part of the garden, at least fifty yards from any other kind. During last season they made a good growth, and covered the ground with the vines in the autumn. From this bed immense quantities of plants were taken for sale at that time, and the present spring; yet there was a sufficiency left to produce a good crop, and before the plants began to throw up their flower stalks, Mr. Longworth's communication came to hand, and we were quite astonished to hear that he had seen a whole bed, in which there was not a perfect fruit: we at first believed that he could not have seen the true variety; but knowing Mr. Longworth to be a gentleman distinguished in horticulture, and upon whose statements we could rely, we determined to watch the bed carefully when the plants began to bloom, and satisfy ourselves. This we did; and the most rigid examination has convinced us that he is correct. The new bed above alluded to, flowered freely, but it has not produced twenty quarts of fruit, though it was large enough to produce at least two bushels. In this bed of upwards of five thousand plants, we did not find a flower with perfect *stamens*. We then had recourse to the original bed, where a few straggling plants were growing; after a careful inspection we found from forty to fifty, out of perhaps a hundred left, which had perfect flowers, that is, producing both stamens and pistils; these we took up carefully, and they are now doing well. The question then recurred to us, whether the original plant might not have been perfect in its flowers, but by the rapid manner in which the runners had been increased, the flowers had become imperfect. If this had not been the case, where should the *staminate* plants have originated, when not one was found in the new beds? Could they have been accidental seedlings? This question cannot be settled until the plants have produced fruit another year.

"But it may be asked, how our plants in the original bed should have produced such crops. This is easily explained: in *parallel* beds of fifty feet in length, each containing two or three rows, we cultivated the Wood strawberry, Keen's seedling, Methven, Pine, Early Virginia, and some others. The consequence was, that however deficient our seedlings might be in stamens, the abundance of them in the other kinds was sufficient to fertilize the whole bed. It was probably this which deceived us, and led us to the conclusion that the flowers were perfect, and the distance at which the bed we have before mentioned was placed from all other kinds, has been the means of convincing us of the truth of Mr. Longworth's statement."

We think Mr. Hovey has in the following paragraph well stated the remedy for sterile strawberry plants; and we recommend the method stated, to the adoption of all whose beds of strawberries are unproductive. Those who have but one kind of the plants named, and may wish to correct their sterility, will find that fertile or staminate plants of the common wild kinds in our pastures or meadows, will be as efficient as any other:

"After what has been written, it is only necessary to know that our Seedling, the Methven, Downton, and others, should be set out in beds, *near to a bed of Early Virginia, or some other staminate plants;* not *barren* ones, or those devoid of pistils, as some cultivators have advised, as it is just as well to have such as will produce a crop of fruit. Those who may have found our strawberry a shy bearer, after this explanation, will be able to produce as great a crop as they could wish."

NEW DISEASE OF THE PLUM.

We find in the July No. of Hovey's Magazine of Horticulture, (a publication we take great pleasure in again strongly recommending to our friends,) a notice of a new disease of the plum, from the pen of the distinguished Entomologist, Dr. T. W. Harris, of Cambridge, Mass. We copy his description, that our readers may be on their watch for the first appearance of this new enemy:

"Last year an undescribed disease of the plum made its appearance in some gardens in this vicinity, in the latter part of the month of May, and has been observed again the present season. Soon after the blossom had fallen, the fruit began to swell rapidly, and in the course of two or three weeks it had grown to more than ten times the size that it ordinarily attains in the same period. It was soft and compressible, as though it were puffed up with air, being filled with an elastic spongy substance of a whitish color. In some of these inflated plums no vestige of a kernel remained; in others, a little soft, and empty shell was found. After growing from one-half to more than three quarters of an inch in diameter, the fruit dropped, and by the middle of June, no more of it was to be seen on the trees."

Dr. Harris has determined the cause of this premature swelling of the fruit to be the attack of a small insect, a kind of *thrips*, which he supposes attacks the fruit while in blossom, destroys the pollen, and prevents the impregnation of the fruit. Dr. H. remarks, that as yet the affection has been confined to a limited number of trees, but that should the insect multiply and spread to other trees, they would prove most destructive to the plum tree fruit. The farmer should therefore watch for their first appearance, and endeavor to devise some method of killing them while the trees are in blossom, and the fruit forming.

Most of our readers in the Atlantic states, who have had the pleasure of gathering that first fruit of the season, the Honeysuckle apple, have witnessed the effect of this insect, the Thrips, in the production of those enormous puffy masses called *leather breeches*. We have never seen them on any variety of the plum, with the exception of the wild, sweet red plum, once so common in all the west. When we first moved to Western New-York, we had a large number of the wild plum trees planted out; but the fruit was of so little value, owing to the attacks of this or a similar insect, which caused it to swell in precisely the manner described by Dr. Harris, that at the earliest opportunity, we replaced them by the cultivated kinds, and on these we have never seen a single instance of this defective fruit.

CULTURE OF THE GRAPE.

We answer the inquiry of J. Hereert, Esq. of New Jersey, by complying with the request of another correspondent, (U. C.) to publish the annexed article on the culture of the Native and Foreign Grape, from the *Orchardist's Companion*, to which it was communicated by Dr. Underhill, of New-York:

"I have been extensively engaged for more than ten years, in the cultivation of some of our native grapes, particularly the Isabella and Catawba. These two kinds I consider preferable for vineyard cultivation for the use of the table, to any others with which I am acquainted. In 1828-9, I planted about four acres of the choicest French vines, selected by Andre Parmentier, from vineyards in France, among which were the White Chasselas of Fontainbleau, Burgundy, Frontignac, Imperial Tokay, &c. After three years cultivation, they produced but a small crop of fruit. Although cultivated in the best manner as vineyard grapes, they soon showed symptoms of decay, and the fruit was not as sweet or as fine flavored as either the Isabella or Catawba. Several gentlemen laid out vineyards of the above kinds in the vicinity of New-York, about the same time I planted mine, which, after a large outlay of money and loss of time, proved to be worthless.

"In 1832, I cleared my vineyards of all the foreign vines they contained, considering them to be an incumbrance. I regard the question respecting the raising of foreign grapes in open field cultivation, in this country, as settled; that they will do very well under glass, I have not a doubt: indeed, you furnish the evidence of this fact, to your numerous readers, in the third number of that splendid work, the "Orchardist's Companion."

"Having abandoned the foreign vines, and wishing them better success in the hands of those who may be so unfortunate as to plant them in open vineyards, I turned my attention to those which are indigenous to the United States. I commenced replanting my vineyards with the Isabella in 1832, and with the Catawba in '35, and have been increasing them to the present time. I have now about twenty acres of these grapes, principally the former, under the most successful cultivation, and shall continue to increase the number of vines, till all my vacant ground is occupied. I find the native grapes, like other classes of plants, and the different species of our domestic animals, susceptible of vast improvement by cultivation. The Isabella and Catawba, which were growing in the wild state about forty years since, have improved exceedingly, and are capable of still further improvement by high culture.

"The quality of my fruit has changed very much within a few years; the clusters and berries are much larger and sweeter, the skin thinner, and the *pulp has nearly disappeared*. But I do not wish to be understood as conveying the idea that others, having a suitable situation, and good vines, with properly directed efforts in planting, pruning, &c., cannot succeed in raising as fine fruit as grows upon "Croton Point."

"The improvement in these, and others of our native grapes, will be found to be progressive, and in a few years we shall have no cause to regret the impossibility of transferring to our soil, the delicate vines of Europe, rendered feeble by centuries of close pruning. The native vigor of the Isabella and Catawba is so much greater than that of most of the vines cultivated in the vineyards of Europe, that we shall be able to raise a greater quantity per acre, than they can possibly obtain.

"The cultivation of the native grapes for the manufacture of wine, has received some share of public attention. On this subject I cannot speak from personal experience. If we are to credit the statements of many persons of intelligence, there cannot be a doubt that excellent wine can be made from many of our native grapes. Considerable quantities are now made in the Carolinas, Pennsylvania, Ohio and Indiana. The progress of the temperance reformation over this country, would seem to have removed the apparent necessity of turning our farms into wine vineyards to furnish the juice of the grape as a substitute for ardent spirits. But it is certain that a much greater quantity of pure, unadulterated wine, will be required for medicinal purposes, and for the Church, than we shall be able to supply by the multiplication of vineyards for many years to come. The Isabella is said to make a light sweet wine, and also champaigne; the Catawba, on the contrary, a very strong, excellent wine, not inferior to Madeira. This is the opinion of a number of gentlemen who have made the latter, and taken much pains to test its qualities. The most prominent object I have had in view, in my efforts to promote the more extensive cultivation of the grape in this country, has been the introduction of a healthy and delicious article for the use of the table. Having been fortunate in the selection of such native vines, as not only possess these qualities, but are well calculated to make excellent wines, I give them a decided preference. If however, their consumption, as an article of food and luxury, should increase in our principal cities, in any thing like the ratio they have for the last five years, it will be a long time before our markets are fully supplied."

LIST OF FRUITS, for a Small Garden.

English writers on the culture of fruit, find no difficulty in making out lists of the finest kinds adapted alike to different portions of their country. The small extent of their territory and consequent similarity of climate, and the experience of centuries in determining the adaptation of fruits to that climate, give them a great advantage over the horticulturists of this country. Here, general attention is hardly yet directed to the acquisition of the finest; great difficulties exist in procuring genuine varieties; and when these are obtained, it becomes a matter of extreme doubt whether they may be suited to the particular region intended for them in a country of such extent, the climate of whose extreme northern and southern points, is as dissimilar as that of Norway and Morocco.

Very few European fruits are ever found of much value when introduced here. All our apples ranked as decidedly first rate, with the exception of two or three, are of American origin. A few foreign pears are indeed excellent; but such is the variable character of some, that the distance of a few hundred miles, in the same latitude, seems wholly to change their qualities. The Virgalieu, for instance, in the vicinity of Boston, is considered as perfectly worthless, and as having "*run out*" from old age; while in Western New-York it is uniformly healthy, vigorous, productive, and only inferior in delicious qualities to the far-famed Seckel. On the other hand, pears cultivated at Salem, and pronounced there by the highest American authority, Robert Manning, as decidedly excellent, are found to attain scarcely the charaeter of second rate in quality, when introduced here.

The cherry and plum do not appear liable to such a degree of change, and the same varieties are probably adapted in most cases to the chief of the northern and middle states. And although there are some exceptions, a considerable number of our best apples preserve their fine qualities through most of the New England and middle states. With all our disadvantages, if those fruits we already have, were only extensively known and cultivated, and proper attention given to the best which the country affords, a revolution of no trifling character would be the result.

To give a well chosen list of fruits, would require a general and extensive collection, with years of comparison and trial. But imperfect as the following may be, it may assist many in improving what they already have. Every variety has been proved to be excellent, and suited to Western New-York, and will doubtless succeed in climates similar in character.

The apples may be for an orchard either large or small; the number of trees of the different varieties, in either case, will be in a great measure determined by the uses intended, whether for market, for domestic table use, or for feeding farm stock. It may be merely remarked that if for the latter, a few trees of our finest early fruits, will be found excellent for domestic animals during summer and autumn, and they will not be less cheap for being rich in quality.

The times of ripening are according to the order in the lists.

Apples.

Yellow Harvest,
Bough,
American Red Juneating, (of Manning,)
Sine Qua Non,
Buffington's Early,
Tool's Rareripe,
Strawberry,
Fall Orange,
Gravenstein,
Rambo,
Fall Pippin,
Bellflower,
Peck's Pleasant,
Esopus Spitzenburg,
Jonathan,
Rhode Island Greening,
Swaar,
Tallman Sweeting,
Roxbury Russet,
Northern Spy.

Pears.

Amire Joannet,
Madeleine,
Skinless,
Julienne,
Stevens' Genesee,
Summer Bonchretien,
Seckel,
Virgalieu,
Beurre Diel.

Peaches.

Early Ann,
Sweetwater,
Tillotson,
Red Rareripe,
Early York,
White Imperial,
Yellow Alberge,
Noblesse,
Malacatoon,
Seabolt's,
Lemon Cling,
Old Newington Cling,
Late York,
Heath Cling.

Plums.

White Primordian,
Orleans,
Yellow Gage,
Green Gage,
Washington,
Imperial Gage,
Huling's Superb,
Coe's Golden Drop,
Blue Imperatrice.

Cherries.

May Bigareau,
Black Tartarian,
White Tartarian,
Mayduke,
China Heart,
Elton,
Elkhorn,
Yellow Spanish,
Transparent Guigne,
Carnation.

Apricots.

Breda,
Peach,
Musch.

All these, except the apples, may stand in a fruit garden occupying but quarter of an acre. Where the ground is of greater extent, two or more trees of each sort may be planted.

The apples will afford a succession of ripe fruit from harvest until harvest again; the peaches, from soon after harvest till winter; the pears, from a week before wheat harvest till mid-winter; the plums, from the same till late frosts; the apricots, for one month at mid-summer; and the cherries from the early part till the middle of summer.

Some celebrated fruits are omitted; as the Summer Queen, Newtown pippin and Vandevere apples, which are much subject to mildew on the fruit in Western New-York; the Yellow Egg plum, its place being supplied by the Imperial gage; and some others.

Some fruits of secondary quality, may be profitable for farm stock, from their great productiveness; as for instance, the Maiden's blush apple, ripening in autumn, and the Black Gilliflower, an apple excellent for keeping in winter. J. J. Thomas.

Macedon, N. Y. 9th mo. 1842.

PLANTING FRUIT GARDENS.

An additional recommendation of the mode of planting trees in rows, as described in the last number of the Cultivator, which was omitted by mistake, is the facility with which the ground may be kept cultivated. Where it is not convenient to plant small hoed crops with the trees, a plow may be passed on each side of the row, using a one-horse plow for the part nearest the trees. In this way a strip of land on each side, several feet wide, may be kept clean and mellow at a very small expense. To those who have habitually neglected the cultivation of their fruit trees, the change in two or three years will be astonishing. A single fact to the point: A friend who has a very large peach orchard, sowed it this year with peas, which is indeed far better than sowing with wheat or oats, or leaving in grass; on two sides, which had no boundary fence, was a thinly planted crop of corn, which was several times plowed and hoed. The effect of this treatment was, the two rows of peach trees, *one-half* of whose roots were covered with the *cultivated* corn crop, were so much greener and thriftier than the remaining trees whose roots were *wholly* covered by the *uncultivated* crop of peas, that the difference could be easily perceived at the distance of half a mile. The probability is, that many fruit gardens and orchards, whose annual product is worth a hundred dollars, might, by an annual outlay of two dollars in judicious cultivation, be made to double at least the yearly crop, and yield two hundred dollars worth of fruit. J. J. Thomas.

TO DESTROY BUGS ON VINES, &c.

Messrs. Editors—Your correspondent "H. W. S. C." in the last August Cultivator, is desirous of information regarding the rose bug on his grape vines. It would have been better had he given a short description of the insect. In a good many treatises on the cultivation of the vine, which I have had an opportunity of perusing, various insects are mentioned as preying occasionally on it, but the rose bug is not stated as one of them. I have many rose bushes, but have never found any insect on them but the green fly; so that I am not acquainted with the rose bug.

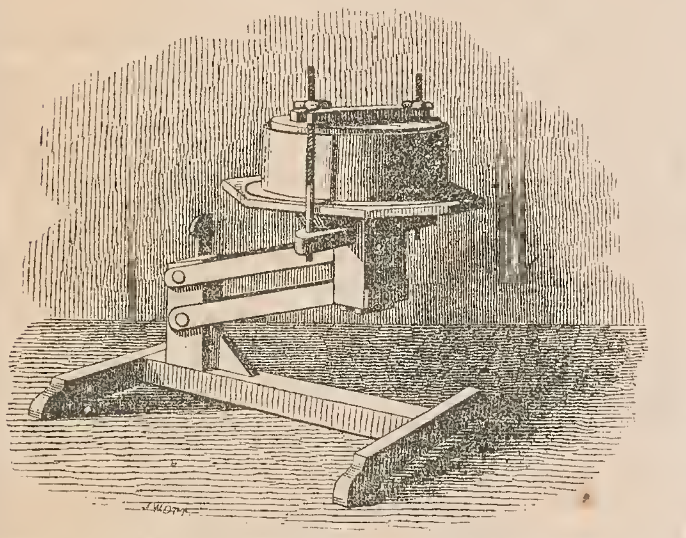
In the year 1827, or 1828, my vines were attacked by an insect, which I was satisfied at the time was what is mentioned in books under the name of The Turtle Bug; being a clumsy, flat shaped beetle, of a brown or yellowish color, a few of them as broad as a six cent piece, but the great mass of them not larger than the striped bug that infests the melon and cucumber plants. They appeared on the bushes in immense numbers; and on striking the branches smartly with a stick, dropped off by hundreds, and remained on the ground as if dead. I happened to have at the time three or four hens kept in the garden in small coops; each coop large enough to contain only one hen with her brood of small chickens; the slats of the coop close enough to confine the hen, but wide enough apart to admit ingress and egress to the chickens, and to allow the hen to put out her head and neck to take food and water. This contrivance I had previously observed in the garden of Mr. Earl Stimson, of Galway, a gentleman well and extensively known as one of the best practical farmers of America. These chickens soon learn to pick up worms and insects of all kinds; they become very tame and familiar, and will quickly come at the call of their feeder or any one else, in expectation of something to eat. On observing the insect to drop off as above stated, it occurred to me to call the chickens, and they devoured them as quickly as if they had been grains of wheat. By repeating this for three or four successive evenings, the whole swarm appear to have been annihilated; as not one has been seen on the bushes ever since. I think it probable the rose bug may be got the better of by this means. It is proper to add that these chickens, though answering a good purpose on account of the vermine they destroy, must not be allowed to remain in the garden until they grow large and strong enough to do mischief by scratching, digging holes, and injuring fruit and vegetables.

It is to be hoped the rising generation of farmers may see the propriety of paying some attention to the study of entomology; a department their fathers and grandfathers might be said to be in a great measure ignorant of; and none more so than is, gentlemen, your well wisher and humble servant, Senex.

Saratoga county, August 21, 1842.

☞ Since the above was in type, we have received another reply to "H. W. S. C." from Dr. Underhill, of New-York, which shall have a place in our next.

Domestic Economy.



COLLINS & STONE'S CHEESE PRESS.—(Fig. 97.)

One of the Cheese Presses, of which a figure is given above, may be seen at our office, and will be exhibited at the State Fair. If it works as well as it appears, it cannot fail to command the admiration of Cheese makers. The following communication accompanied the press sent to us:

Messrs. Editors—Will you allow me a small space in your widely circulated paper, for the purpose of inviting the attention of that portion of your readers who are particularly interested in the subject, to a newly invented Cheese Press, for the introduction of which, I am the general agent of the patentees. One of these presses has been forwarded to you, and we design to exhibit them at the Fairs in different sections of the country, and invite criticism.

I claim for this press, as some of its qualities, the following:—It is simple in its construction, not liable to get out of repair; occupying but little room, (about two feet square;) perfectly convenient to place the cheese upon it, and *not expensive.* I think all cheese makers, will admit at once, that these are good qualities. But with many, these things are, very justly, of but secondary account; and I speak with some confidence, when I add to the properties of this press, what, combined with those named above, must be of no small importance. The cheese becomes the *weight* to press itself, each pound giving a pressure of twelve pounds. It can be constructed, however, to press 10 or 8, or any other number, to 1. The *precise* pressure may be known, and it is sure not to exceed *in any position,* the given amount; and this is what cannot be said of any other press with which I am acquainted. If more pressure than the weight of the cheese is desired, it can be obtained by placing weight upon the platform: 1 lb. giving a pressure of 12.

I noticed in the Aug. No. of the "American Agriculturist," the statements of the Messrs. Allen and Mr. Marvin, giving details of their modes of making cheese, upon which they obtained premiums at your last fair. In one case it is stated that the cheeses were pressed "under a weight of *seven* or *eight cwt.,*" and in the other, nothing is said of the weight of pressure; leaving it to be inferred, either that the precise amount could not be given, or that it was of no consequence. I presume to say there are but few cases where the weight under which cheeses are pressed, can be given with any tolerable degree of accuracy. Enough importance is not attached to the pressing of cheese. The dealers in cheese in this vicinity, inform me that in some parts of the country, much of it is injured by improper pressure; and they name counties in the state of N. York, where this is the case to a great extent.

There has not been sufficient time, since the first presses under this patent were made, to test it very extensively by actual experiments; but the few cheese makers, into whose hands they have been placed, speak of them in the highest terms. They have been, however, critically examined by some of our most scientific gentlemen, and annexed is a copy of a certificate of Dr. Comstock, the author of one of the best works upon mechanical powers, now in use, which, if not asking too much, I should be pleased to see in the Cultivator.

Yours respectfully, L. Kennedy, Jr.

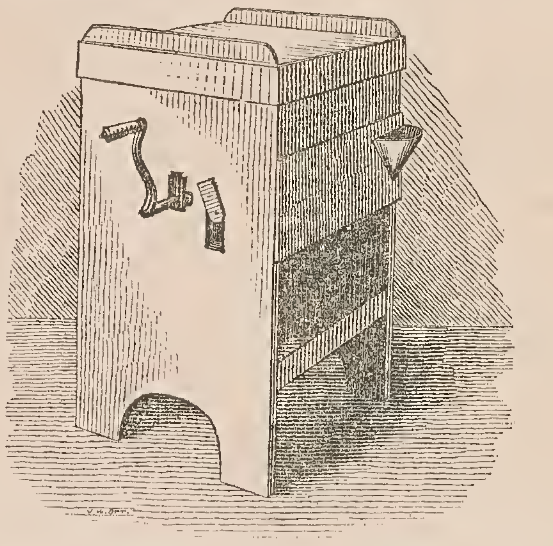
Hartford, Ct. Aug. 23, 1842.

Having examined with attention, the Cheese Press recently invented and patented by Messrs. Collins & Stone, I am clearly of the opinion that for simplicity of construction, smallness of size, and practical use, it is, so far as I am informed, much superior to any machine of the kind heretofore offered to the public.

One of its peculiarities is, that the amount of pressure is graduated by the weight of the cheese, and hence, not only the exact force may be known, but the same press is applicable to daries of all grades.

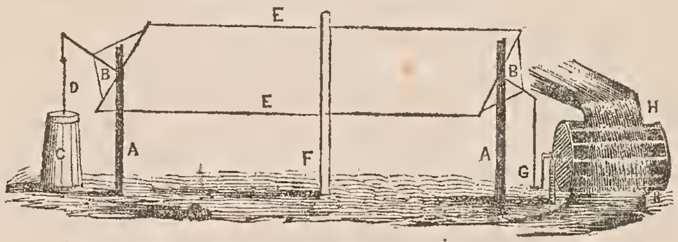
(Signed,) J. L. Comstock.

Hartford, Aug. 1842.



CROWELL'S THERMOMETER CHURN.—(Fig. 98.)

Above we give a drawing of Mr. Crowell's Patent Thermometer Churn, one of which Mr. C. has been so kind as to send us, from Lime Rock, Ct., where he manufactures them. We have not yet had an opportunity of trying it, but it is a neat well made article, and appears admirably adapted to facilitate the operation of churning. Mr. C. says they are in general use in his neighborhood, where "they have taken the place of all other churns, and are highly approved as the best and the most simple method of obtaining butter, both as to quantity and quality, and in the shortest time." The price is from $5 to $7,00.



WATER POWER CHURN, &c.—(Fig. 99.)

Messrs. Gaylord & Tucker—Of the improvements given in your paper, of the different kinds of farm implements, the great majority seem to be for the more especial ease and convenience of the lords of creation. Now if this omission has been the result of selfishness or indifference on the part of those who were bound by strong obligations of reciprocity to have done better, would I lay myself open to a charge of treason, were I to advise the ladies to take this matter into their own hands, by letting their *noble lords* shirk for themselves, while they are engaged in improving those little household indispensables, and bringing them up to as warrantable a state of advancement as the present time will admit. The kind of system I propose recommending, it is true, requires water power, but in our country, such privileges are very common, (small streams being sufficient,) and as in this plan, distance is no material objection, it will be within the reach of a great majority of our butter makers. In order to illustrate its operation fully, and make it very plain and intelligible, I fear I shall have to trouble you with a drawing.

It appears to me that with this drawing, it will hardly need an explanation; but lest some may not think it so plain, I shall go into detail. A, A, are two pieces of timber firmly set in the ground to support the moveable frames B, B, by a pivot through where one piece of the frame meets the other at right angles. D, is the dash fastened to the other piece by two holes through them, both with pins and strings. E, E, are wires to be made of suitable length to extend from the creek to the place where the churning is to be done. The wires should be so fastened together with hooks made on the end of them, as to allow of taking down in winter. F, is an upright post to support the wires, and must be multiplied where great length is required. G. is the crank, H. is the wheel. Where there is three feet fall, and water enough to fill a hole three inches square, there is power sufficient to operate a churn on this principle. I will close this description by remarking, for the benefit of those who have small streams, that tight bucket wheels are considered the most powerful as well as economical. Let none who have convenient situations neglect to put them up, and then perhaps when the storm is raging without, you will find a calm sunshine within.

I noticed a short time since, a few patches of Canada thistles on one part of the farm, and was very much troubled about them. I at first thought of plowing them, but upon the advice of a friend who should be experienced in such matters, I was persuaded to abandon it. I then took a hoe, cut them down quite in the ground, and put a handful of salt on each, laying a stone on it to prevent its getting away. The result has been, they have given no signs of life this spring. G. Cook.

Tivoli, N. Y. June 7, 1842.

THE TOMATO AND ITS USES.

Every body cultivates the tomato, and every one who has not deliberately made up his mind to be ranked among the nobodies has learned to eat it. There is a great deal of fashion in this, it must be confessed, but it is not often that fashion is active in forwarding so good a work; for if the opinions of numerous M. D.'s of great celebrity, are to be allowed of any weight, there are few things more conducive to health than a liberal use of tomatoes. The fruit has long been extensively used in Italy and the south of France, and within a few years its cultivation as an article of luxury, if not of necessity, has spread over the greater part of Europe and the United States. The fruit is the best in a warm climate, where it has an acidity and briskness unknown in a colder one. In our southern states the fruit is finer and the flavor richer, than in the northern ones; still in these last, abundance of tomatoes of excellent quality are grown, where proper precautions are taken to give them an early start in the spring. Frequent inquiries are made by those who have but lately commenced their cultivation, as to the best modes of cooking or preserving them. To answer these inquiries fully, it might be necessary to consult the taste of each individual, and to gratify these tastes as far as possible, we have collected from various sources, aided by our own experience, such directions for the use of this fruit, as will probably meet the wishes of most.

Tomato Catsup.—Use one pint of good salt to one peck of sound ripe tomatoes. Bruise them, and let them stand two days; then strain them dry; and boil the liquor until the scum stops rising, with two ounces of black pepper, the same quantity of spice, one ounce of ginger, one of cloves, and half an ounce of mace. Strain through a sieve, bottle and cork tight.

Daily use of Tomato.—Slice up as you would cucumbers, good tomatoes after peeling them, with salt, vinegar, and pepper. Some prefer covering the tomatoes when so sliced, with sugar. Either way they will prove palatable and healthy.

Tomato Soy.—Take ripe tomatoes, and prick them with a fork, lay them in a deep dish, and to each layer add a layer of salt. Let them remain four or five days, then take them out of the salt, and put them in vinegar and water for one night. Drain off the vinegar, and to each peck of tomatoes put half a pint of mustard seed, half an ounce of cloves, and the same quantity of pepper. The tomatoes should be put in a jar, with a layer of sliced onions to each layer of tomatoes, and the spices sprinkled over each layer. In ten days they will be in good eating order.

Tomato Omelet.—Slice and stew your tomatoes. Then beat up half a dozen new laid eggs, the yolk and white separate; when each are well beaten, mix them with the tomato—put them in a pan and beat them up, and you will have a fine omelet.

Tomato as a relish for Beef Steak.—Wash them clean, cut them once in two, lay the inside upon the bars of the gridiron, set them over pretty hot coals for about ten minutes, then turn them over, sprinkle them with salt and pepper, renew the coals, and set them to broil fifteen or twenty minutes longer; when taken up, butter them or eat them with gravy, as best suits the taste or convenience.

Stewed Tomatoes.—Take ripe tomatoes, slice them, put in the pot over the fire without water. Stew them slow, and when done, put in a small lump of butter, and eat as you do apple sauce. If you choose, a little crumb of bread, or fine crackers, may be added.

Another mode.—Take the tomatoes and pour boiling water upon them to make the skin come off easy, let them stand three or four minutes, and then peel them. Cut them open and take out the most of the seeds, as too many of these cooked makes the tomatoes too astringent. To one dozen good sized tomatoes, put a small tea spoon full of salt, and a large spoonfull of sugar. Stew them from three-quarters of an hour to an hour and a quarter, according as how fast they cook. Stew them down so as to leave very little syrup, and be sure to serve them hot; a shallow vessel is the best to cook them in when stewed in this way.

Tomato Preserves.—Prepare a syrup by clarifying sugar, melted over a slow fire with a little water, by boiling it until no scum rises; or good molasses may be clarified by adding eggs, boiling and carefully scumming. Take the tomatoes while quite green, put them in cold syrup, with one orange sliced to every two lbs. of tomatoes. Simmer them over a slow fire, for two or three hours. There should be equal weights of sugar and tomatoes. Some, when superior preserves are wanted, add fresh lemons sliced, and boil with the tomatoes a few peach leaves and powdered ginger in bags. Tomatoes when ripe, make a fine preserve, peeled and treated as above; but the fruit is apt to fall to pieces in the process of preserving, consequently more care is required when it is desirable to prevent this.

To Pickle Tomatoes.—Take your tomatoes and place them in layers in a pickling jar with garlic or shred onions, mustard seed, horse radish, red pepper, spices, &c. as wanted, until the jar is filled. A little salt must also be added, as the layers are put in, it aiding much in preserving the tomato. When the jar is full, pour on the tomatoes pure cold cider vinegar till all are covered, then close up tight for use.

Tomato Figs.—Take 6 lbs of sugar to 16 lbs. or one peck of the fruit. Scald and remove the skin in the usual way. Cook them over a fire, their own juice being sufficient without the addition of water, until the sugar penetrates and they are clarified. They are then spread on dishes, flattened and dried in the sun. A small quantity of the syrup should be occasionally sprinkled over them while drying; after which pack them down in boxes, treating each layer with powdered sugar. The remaining syrup is concentrated by boiling, and bottled for use.

Tomatoes for Winter.—Tomatoes for winter use may be preserved by placing them in layers with salt, in jars or tight boxes. When wanted, they must be soaked in water, in the same manner as cucumbers preserved in the same way. Some prefer stewing the tomatoes until well cooked, then spreading the mass on plates or other smooth surfaces, and drying them fully, when they can be put in bags and kept in any dry place. This is the mode adopted by many in New England and elsewhere, for drying and preserving the pumpkin.

Some of the above directions or recipes have already appeared in former volumes of the Cultivator, but as the present is the season of tomatoes, it was thought that a collection of them might be acceptable and useful to our readers.

DAIRY SALT.

Perhaps there is no process in domestic economy in which the skill of the operator is more required, or exhibited to better advantage, than in those belonging to the dairy; and we are convinced that the success here, is much more frequently depending on the salt used than is generally imagined. The least impurity in salt, will seriously affect the quality and preservation of butter; as it will aid and hasten the chemical changes through which butter passes while losing its fine flavor, and becoming rancid and intolerable. Salt that is very white and fine in appearance, is not unfrequently combined with other substances which injure its conservative powers; and hence that can only be relied upon which is prepared in such a way that a separation of these substances takes place previous to crystalization. In pure rock salt, nature has effected this separation perfectly; and where such can be obtained, and then ground fine, nothing as to the quality is left to be desired. The examinations made by our state geologists, prove, that next to this rock salt, (and vastly superior in strength and purity to the great part of it,) is the coarse salt produced at the Onondaga Salines, by solar evaporation. Thus Dr. Beck's analysis shows (see page 36, of the Report for 1838,) that the salt made by solar evaporation at Geddes and Syracuse, contains 992 parts of pure chloride of sodium in 1000; while Turks Island and Liverpool fine salt, gave from 984 to 988 parts in 1000. The fine salt put up as table salt, at Salina, exceeds the Liverpool in purity, and may be used in the dairy with perfect safety. But for a superior article, and one about which there can be no mistake, it is probable our farmers will find the salt made by evaporation, and then ground, the best butter salt that can be used; and we are confident if such salt was generally used in our dairies, the quality of their products would be most materially improved. Those who cannot obtain this salt, should use the best Liverpool fine they can procure, or purchase rock salt, clean, and grind it. This latter course, we understand, is taken by the Quakers at Fairfield, in Maine, the excellence of whose dairy products, is admitted wherever they are known. There can be no question but the methods adopted in making and working butter, have a decided influence on its quality; but we are inclined to believe that the kind of salt used, exercises its full share in determining whether the product of the dairy shall be good or bad, and is deserving of more consideration than has usually been given it by the dairyman.

CHEESE MAKING.

From the statement of Stephen Yates, of his process of making cheese, published in the Report of the American Institute, we copy the following:—"In the making of cheese in the ordinary way, as is practiced by the dairymen of Herkimer county, I discovered that when the curd was scalded, an oil would arise to the top and run off in the whey. I directed my dairymen not to scald the curd, and found that I not only retained the aromatic oil, but also all of the cream that otherwise would escape in the whey; and I kept the cheese in the press for some days, (occasionally turning them,) until the linen wrapper was no more moist; after which they were attended in the usual way, except that they were anointed with hog's lard instead of whey butter."

Mince Pies.—To make mince pies without *apples or cider*, take the requisite quantity of meat, and one-third the quantity of beets, that is commonly used of apples. Boil the beets, and let them pickle twelve hours. Chop them very fine, and one-eighth of grated wheat bread. Sweeten and season with spices, &c. to taste.

Wiskonsan, 1842. F. W. S.

For coloring Orange Color.—Take black alder bark, boil it well and strain the liquor; wet the cloth with a strong lye, and dip it into the alder liquor; let it remain until cool enough to wring, and you have an indelible orange color. A.

Veterinary Department.

DISEASE IN THE SHOULDER OF THE HORSE.

In a letter from A. Pope, Esq. of Georgia, making some inquiries as to the Morgan Horse, he says,—"I have *used up* some five or six horses in the three years just past, and the one I now have, has what our farriers call *big* or *slip shoulders*. Are you acquainted with such a disease; and if so, what remedy is the best to effect a cure?"

The disease spoken of by Mr. Pope, is occasioned by some violent shock or sprain given the deep seated muscles, by which the shoulder blade of the horse is attached to the body. The injuring of these is not common; but when it does occur, inflammation ensues, and their thickening, and the consequent enlargement of the shoulder is the result. In sprain of the shoulder, from the position of the muscles injured, few local measures of relief can be adopted. At the commencement of the inflammation, bleeding from the vein on the inside of the arm, (the plate vein,) may be beneficial, a dose of physic be given, fomentations employed on the inside of the arm close to the chest, and the horse must be kept as quiet as possible. At a later period, the cure, if ever accomplished, must be left to time and rest from all exertion.

DEATH OF A MAN FROM GLANDERS.

It has long been known that glanders was one of the most incurable and fatal diseases of horses, and contagious in the extreme; and within a few years the alarming fact has been disclosed, that man was susceptible of the contagion from the brute, and numerous cases are now on record, where hostlers and others, having the care of glandered horses, have fallen victims to well marked cases of the disease. A late No. of the "Veterinarian," gives from the Lancet, an account of the death of M. Rocher, a student of the hospital Necker of Paris, from this disease, contracted from a patient of which he had charge, and which died of glanders; thus proving that it may not only be communicated from the horse to man, but from one man to another. To demonstrate the nature of the disease from which M. Rocher died, M. Leblanc, a distinguished surgeon, inoculated a horse with the matter discharged from the tumors formed on body of M. R. previous to his death, and the animal died, exhibiting every appearance of acute glanders in its most malignant form. The facts of this case, which are recorded at length, show that great care should be used by those having the management of glandered horses; indeed, the public good requires that every such horse should be destroyed at once. It was the opinion of the eminent physicians M. Berard and M. Leblanc, who attended the unfortunate Rocher, that he did not receive the disease by inoculation, but that in the acute stages of the disease, there is a miasmatic infection, similar to that of scarlatina or variola, and consequently greater precautions are necessary than in diseases which can be only communicated by actual contact.

BLOODY MURRAIN.

Messrs. Editors—Having frequently seen notices of the bloody murrain among cattle, and various things recommended as a cure for this disease, I take the liberty of stating what little I know of it. I have seen a number of cattle that have died of this disease, and have lost two cows myself. In all, the symptoms were nearly the same, and all died in from three to twelve hours after they were taken, never having exhibited any symptoms of it before. Both of my cows, though they died 3 years apart, were in very good condition, hvaing uniformly had good food and water. One died in May, and the other in February. On a post mortem examination, I found in each, a large quantity of extravasated blood among the viscera, and the liver greatly diseased, almost rotten, and from half to three quarters consumed. Hence I have concluded, that the disease is probably of some months standing, and as the animal shows no symptoms of it till just before death, there is no cure, and the only hope in regard to it is in prevention. H. A. P.

RELIEF OF CHOKED CATTLE.

Messrs. Gaylord & Tucker—I find in your Oct. No. of last year, a receipt by David F. Lott, to relieve choked cattle. I some months since, sent to the Agriculturist, Nashville, a receipt, and in a few weeks after its publication, received the thanks of a gentleman who by using the prescribed means, saved a fine horse, after trying all other means recommended without effect. I send it to you:—Raise one of the fore feet as the smith does when shoeing a horse, tie a strong cord, whip cord or drum line will answer, tight above the knee while the foot is up, let the foot go, and if the animal refuses to put it to the ground, as it probably will, a smart stroke with a whip must be dealt, and in a second the beast is relieved; be careful in tying the string, to tie a slip knot that you can loosen quick, for the pain is excruciating. How it operates is immaterial; my theory (probably a false one,) is this, the hard cord acting on the nerves of the arm, produces nausea, the muscles of the throat are relaxed, and the substance by which the brute is choked is thrown from the gullet. John A. Jones.

Fairie Knowe, Geo. 1842.

Let no man or woman be ashamed to work.

SOUTH DOWN BUCKS.

THREE very superior South Down Bucks, clothed with fine wool and long enough for combing, imported direct from England, from the flock of the late John Ellman, Esq , of Clyde, near Lewes, Sussex, are for sale, or to be let for the season, by the personal friend of the breeder.

OBADIAH ELLIOT

Elizabethtown, N. J., August 27, 1842.

ISABELLA GRAPE VINES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase, will receive such instructions as will enable them to cultivate the grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., 400 Broadway, N.Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the northern, all the western, middle and southern states. *Sept.*, 1842.

ALBANY NURSERY.

THE proprietors of the above establishment would respectfully give notice to the lovers of good fruits, flowers, &c., that they have now on hand and for sale, as large and extensive assortment of fruit and ornamental trees, shrubs, greenhouse plants, &c., as will be found in this or any other section of the country. They would also notify those who wish to purchase fruit trees the coming fall, not to delay in sending their orders early, to ensure a good selection, as well as to size as fruit.

Specimens of over fifty or sixty varieties of fall and winter apples can be seen at the nursery, raised on the farm of the late Jesse Buel, deceased; also several very fine varieties of pears, &c., which purchasers would do well to call and examine, and select from the fruit.

J. B. & Co. would respectfully tender their thanks to the public generally for the very liberal patronage bestowed upon them, and would solicit a continuance of the same, in which they pledge themselves to sell as cheap and please as well as any other similar establishment in the country.

Catalogues may be obtained of our city agent, Geo Dexter, Druggist, &c., State-street, Albany, or at the Cultivator Office. All orders should be addressed, post paid, to Jesse Buel & Co., Albany Nursery, Albany. JESSE BUEL & CO.

FRUIT TREES,

Of Excellent and Proved Varieties.

IN addition to the list of peaches given in the last number of Cultivator, the subscribers have for sale the following select varieties of the *Cherry*—Black Tartarian, White Tartarian, Early Richmond, Black Corone, Mayduke, Transparent Guigne, and Carnation. The trees are of large size, and of uncommonly fine growth; price, fifty cents each.

Nectarines, two excellent varieties, the Elruge and Early Violet; price, twenty-five cents each.

Apricots, three very fine varieties, the Breda. Early Peach, and Peach Apricot; thirty-seven and a half cents each.

Pears, six excellent varieties, Madeleine, Skinless, Julienne, Summer Bonchretien, Seckel and Virgalieu; price, thirty-seven and a half cents each.

Apples, consisting chiefly of select summer and autumn table fruit, and a few winter apples, of the following varieties—Yellow Harvest, Bough, Woolman's Early, Sine Qua Non, Buffington's Early, Strawberry, Rambo, Bellflower, Tallman Sweeting, and Swaar; price, twenty-five cents each.

The object of the proprietors has been to reduce their list to a few of the very finest kinds, and none are ever offered for sale by them but PROVED VARIETIES, whose *adaptation to our climate* has been fully tested by experience.

Orders with remittances, directed "Thomas & Smith, Macedon, Wayne co., N. Y.," will be promptly and faithfully attended to. and the trees, well packed, sent by the Erie canal or by the Auburn and Rochester railroad.

Catalogues, with practical directions, furnished gratis on *post paid* applications. J. J. THOMAS,

Macedon, 10th mo. 1, 1842. W. R. SMITH.

TO FARMERS, PLANTERS, HORTICULTURISTS, AND DRUGGISTS.

THE compound chemical whale oil soap may be considered at the present moment the best preparation that ever was compounded for the total destruction of every species of insects infesting the vegetable kingdom—the rose bugs, the caterpillars, on grape vines, melons, the hessian fly, the cut and army worms, will, after a few applications, be exterminated.

Likewise fly paper, for excommunicating flies and musquitoes from rooms, stores, stables, &c.

Poisons, warranted the only original and safest ingredients to destroy and exterminate the moths, bed bugs, rose bugs, caterpillars, cockroaches, rats, mice, musquitoes, fleas, flies, ants, lice, and every other vermin, or larger animals, warranted to eradicate and to perform all what it is intended. Seed Protector, for guarding all seeds when planted, against the attack of the grub worm, and the young sprouts from the approach of the caterpillar, crow bird, &c.

Sulphate of soda, a most valuable ingredient for adding to manure. Dr. LEWIS FEUCHTWANGER,

New-York, 1842. Chemist, No. 1, Wall-street.

DENNIS' PATENT TROUGHS,

TO prevent canker worms from ascending fruit or ornamental trees.

State, County, and Town Rights for sale.—The demand for the patent circular troughs has so much increased, that I am unable to supply the increasing wants from various parts of the country. I am therefore very desirous to sell state, county, and town rights; where rights are not sold I wish to appoint agents.

Agents Wanted.—Where I do not sell the right, I should like to grant the privilege to some competent persons to make and apply the troughs, they paying me a certain sum per pound for all the metal used. In granting a privilege as above, it offers an opportunity to any person to commence business without capital, upon the most favorable terms.

Gentlemen wishing their trees protected, are requested to recommend a suitable person that will accept the agency for putting on the troughs.

Persons wishing to purchase rights or obtain the privilege of putting on the troughs, will please address (post paid,) JONATHAN DENNIS, Jr., Portsmouth, Newport County, R. I., who has for sale, Apple Trees, a choice collection of fifty different kinds, many of them of large size.

Caution.—All persons are cautioned against making any patent circular troughs without my written permission, as the patent law allows treble damages in cases of infringement.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO.

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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Handsomely stitched in printed covers,

Can be furnished to new subscribers—Vols. I. II. III. IV. at 50 cents each, and Vols. V. VI. VII. VIII. at $1. each.

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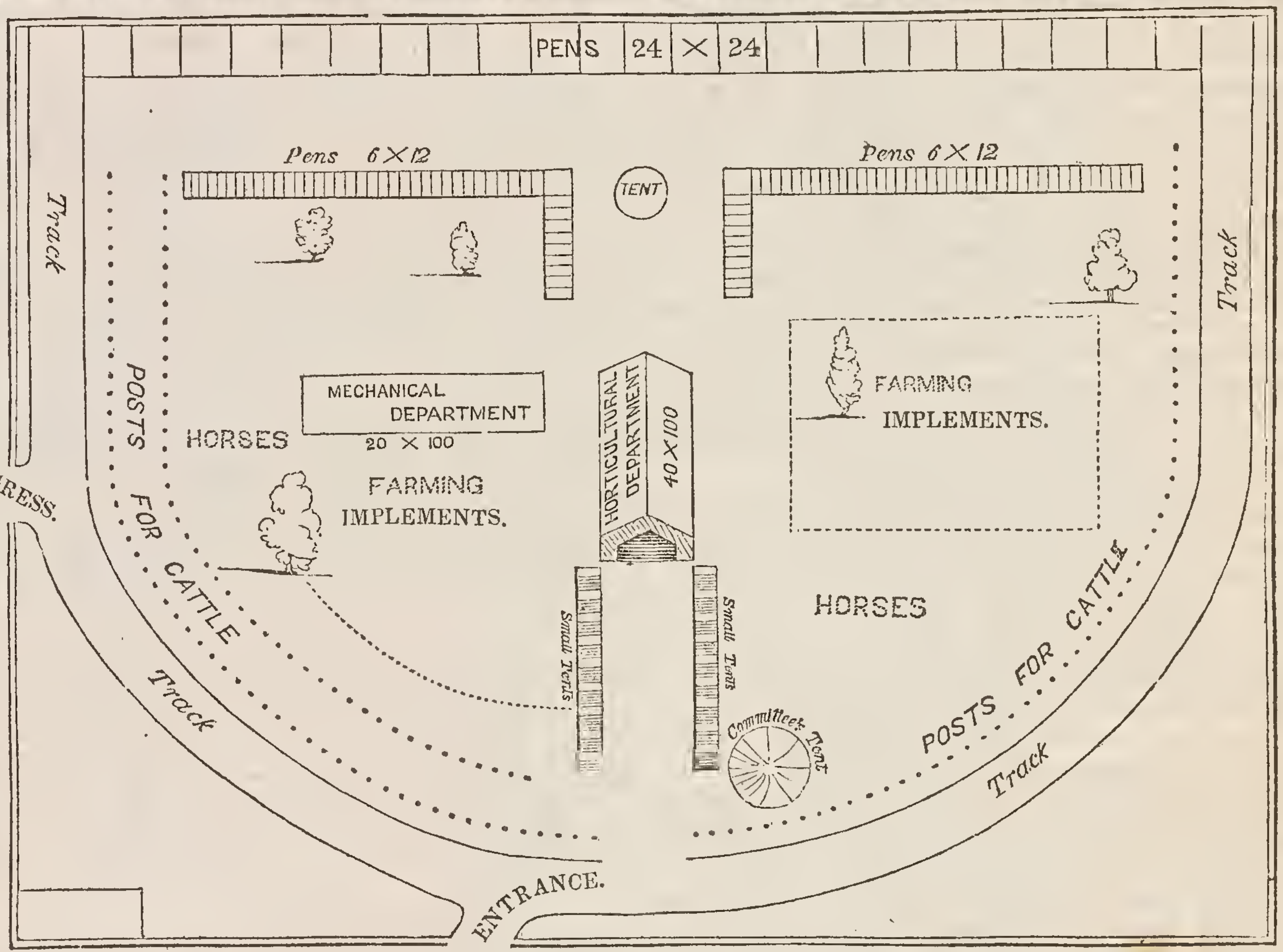
THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

We do not consider it necessary to make any apology to our readers for the space we occupy this month with the proceedings of the State Agricultural Society, and those of such other Societies as have come to hand. We are confident the friends of agriculture will peruse them with much satisfaction, affording the most cheering proof, as they do, that the public feeling the present year has been enlisted in the support of these societies to a far greater extent than heretofore. Notices of new publications in readiness for this number, must be deferred till our next; as must many of the favors of our correspondents, and answers to inquiries.

CATTLE SHOW AND FAIR
OF THE
NEW-YORK STATE AGRICULTURAL SOCIETY.

The Cattle Show and Fair of the New-York State Agricultural Society was held agreeably to the announcement, on the 27th, 28th, and 29th days of September; and high as were the expectations that had been formed of the great Farmers' Meeting, they were, we think it perfectly safe to say, fully realized. The experience of the last year at Syracuse, had not been in vain, and in making the arrangements for the present meeting, the knowledge thus acquired was turned to the best account; and the whole passed off in a way which will cause the three days of the Fair to be long remembered by every farmer who had the high pleasure of attending it. The immense number of animals on the ground for premium or for exhibition; their admirable arrangement, which gave all who chose an opportunity of seeing the whole; the multitude of spectators constantly within the enclosure; the splendid equipages, and crowds of beautiful women; and the intense feeling of interest and gratification manifested by all, rendered the days of the Fair proud and auspicious ones for the interests of Agriculture in the state of New-York.



Ground Plan of Show Yard—(Fig. 100)

The ground selected by the committee of arrangements for the Fair, was at the Bull's Head Tavern, on the Albany and Troy Road, a short distance above the beautiful mansion of Gen. Van Rensselaer, at the northern verge of the city. The excellence of the road, one of the finest in the United States, and the line of accommodation coaches that ran continually between the city and show ground, rendered the place easy of access at all times. The proprietors of the establishment, have enclosed an extensive area in an oval form, with a substantial, high, and close fence; and within this fence, graded and leveled, is a fine carriage track of exactly one mile, which is much used as a trotting course by the amateurs of good horses in the neighboring cities. This enclosure was obtained for the exclusive use of the Society during the Fair, and the result proved that it was most admirably suited to the occasion. To the east of the grounds, spread out rich and highly cultivated fields, through which the great Erie Canal meanders on its way to the Hudson; and still beyond, flows the silvery river, its bright bosom dotted with white sails, or ruffled by the passage of some of those splendid steamboats that make this river their thoroughfare. The fence encloses some forty acres, about one-third of which was occupied by the arrangements of the Society. The plan of the grounds, which accompanies this paper, will exhibit at a glance, the general nature of these arrangements. By the most competent judges, and those most familiar with exhibitions of this kind, the Show and Fair was pronounced decidedly superior in extent and interest, to any that had before taken place in this country.

The first impressions on entering the gate, were of the sublime and imposing kind. Near the center of the occupied ground, a large pavilion was erected, in which, arranged on tables, shelves, &c., the vegetables, butter and cheese, roots, horticultural implements, articles of domestic manufacture, fruits, flowers, &c. &c. were placed for exhibition. Here the rare, rich, and beautiful collection of fruits contributed by the Messrs. Downing, of Newburgh, and the unrivaled products of Mr. Holbrook, of Hyde Park, arrested the attention of every observer. Nor were the fruits, &c. presented by many other gentlemen, much inferior. The mouths of the bystanders watered at the sight; and while the practical were contrasting the immense difference between fine and inferior fruit, the more poetical were wandering in their imaginations to the fruits and the flowers of Eden. A canvass hall, some one hundred feet in length by twenty in breadth, was filled with a beautiful and well arranged display of the products of Mechanic skill, a proper notice of which will be found in its place; and which deservedly attracted much attention from the thousands thronging the grounds. If any one has been disposed to question the ability or mechanical skill of the American workman, a walk through this hall, must, it is believed, have done much to relieve him of his scepticism.

The implements of agriculture were arranged in the open spaces between the vast circle of animals and the tents, and exceeded in manufacture and variety, any thing of the kind we have ever witnessed. Among these were Harrows, Cultivators, Drills, Threshing Machines, Horse Rakes, Fanning Mills, Straw Cutters, Portable Steam Generators, Mott's Furnaces, Corn and Cob Crushers from Baltimore and from Richmond, Plows, common and subsoil, Hoes, Hussey's Reaping Machine, (a figure of which has appeared in the Cultivator,) with a great variety of miscellaneous implements, as the auctioneers say, too numerous to mention. A new Horse Hoe, the invention of Mr. Langdon, of Troy, attracted much notice. The principle appears novel, and we were assured by a gentleman who tried it effectually the past season, that it operated admirably. It has a double broad winged share, flat and sharp edged, to cut weeds and loosen the soil, with double guards on each side, to pulverise the earth as it is moved by the share. On the ground were also wagons, carriages, sleighs, &c. in great numbers, and very fine specimens of work. More than 30 plows were entered for trial before the committee on plows. This single fact demonstrates the importance of meetings where such implements can be tested; and further, the interest which both makers and users feel in this grand implement of agriculture.

The number of animals entered for exhibition and premiums, was great, not far from six hundred. We place the several classes together in the following table, to show at a glance, the number and kinds:

Improved Breeds—Full blood.		Grade Cattle and Natives,	25
Bulls over 3 years old,	21	Working Oxen, some very fine,	20
Two year old Bulls,	11	Fat Cattle,	11
Yearling Bulls,	17	Horses,	53
Bull Calves,	20	Swine, from 120 to 150, say	140
Cows,	63	Sheep,	200
Two year old Heifers,	18		
Yearlings,	15		
Heifer Calves,	24		

Besides these, which were entered for competition, large numbers of others were on the ground for exhibition merely. Among these were some beautiful Durham cattle, owned by Mr. Henry Whitney, of New Haven, Connecticut; and from New Jersey, the splendid Norman horse "Diligence," imported by Mr. Harris.

It was a subject of general regret that more of our native cattle were not offered for exhibition and premium; and that those presented should have been no better. We have multitudes of animals in the country, not indeed equal to the Short Horns and Herefords, but such as no good farmer need be ashamed of, and specimens of which should always be found in numbers at our Fairs. Greater numbers of grade animals should always attend; since opportunities of comparison, as well as observation, are wanted at such times; and where numbers are present of all grades, as well as pure, the influence of blood is made more clearly apparent. But there was another deficiency among the animals more deserving of reproof from farmers than even the want of native cattle. We like the Devons; we like their color, their bright eye, and their quick, elastic step; and we have never, we think, tasted finer beef than the Devons have produced. We are sorry to say that in this respect the show was not what it might have been; for our country has fine Devons, pure and grade, that would not essentially suffer, even when placed by the side of the Durhams or Herefords. Every one who has had an opportunity of looking on the fine cattle of New-England, where this blood is abundant, or those of some parts of our own state, will, we think, admit the justice of these remarks. It is to be hoped, hereafter, that the Durhams, splendid as they are, will not be the only cattle to be seen at our Fairs; but that our native herds, particularly our fine native milkers, and our Devon stock, pure and grade, will be fully represented.

Among the animals not particularly noticed by the committee on cattle, were a beautiful Ayrshire cow and calf, lately imported by Judge **Van Bergen**, and offered by him, there being no one present to call the attention of the committee to her. These fine animals were purchased by Mr. **Rathbone** of Albany, and will add to the valuable stock already collected in this vicinity.

Not the least interesting or novel part of the exhibition, was the herd of some thirty Buffaloes, from the foot of the Rocky Mountains and the sources of the Missouri. Their shaggy forms and uncouth figures presented a striking contrast to the beautiful forms of the Durhams and Herefords on the ground.

Among the objects which attracted no little attention, was a fine specimen of the sugar and the syrup produced from the corn stalk, made by Mr. **Webb**, and presented by Dr. **Thompson**, president of the Newcastle Ag. Society of that state.

M. Bommer, proprietor of the patent for manufacturing manures in a speedy and economical manner, had commenced his process a short time before the Fair on the grounds of the society, and the result was of the most satisfactory kind. From a mass of straw, cornstalks, weeds, litter, and other refuse matters, he had formed, in the course of a few days, a compost heap of the richest fermented manure, ready for application to the soil or to crops. There is no mistake that the method of M. Bommer will, when properly carried out, fullfil all he promises in the preparation of manure.

The fineness of the weather during the whole of the Fair, contributed in no small degree to the pleasure which seemed to be experienced by the tens of thousands that flocked to the place of exhibition; and the smiles of cloudless skies were reflected from the beaming eyes of the beautiful and the fair, who honored the society and the exhibition by their presence.

The number of gentlemen, farmers and others, from our own and other states, was very great; and all received a most hearty welcome. That noble association, the New-York Institute, sent up a delegation of twelve, headed by that veteran in the great cause of American industry, General Tallmadge. Large and respectable delegations were also present from several of the Agricultural Societies of Massachusetts, Connecticut, Virginia, Penn., N. Jersey, Delaware, &c. The agricultural press of other states was also very well represented. From Maine, Mr. Lincoln of the Maine Cultivator, and Mr. Drew of the Plow Boy. From Boston, Mr. Merriam of the Boston Cultivator, and Mr. Cole of the Farmer. From Virginia, Messrs. Botts and Burfoot of the Southern Planter. It was gratifying to witness the presence of so many of the staunch friends of the farmer and the agricultural interests from distant parts of this state, from the neighboring states, and from Canada. Of these, did our limits permit, we should be glad to give a numerous list; but it is needless to particularize; for here the freeborn independent tiller of the soil, the horticulturist and gardener, the mechanic and manufacturer, the amateur farmer, the grain grower, and the breeder of improved animals, were all present to interchange their greetings with one another, and freely communicate their opinions, or the rich results of their observation and experience.

On the 27th, the examination and trial of the plows offered for competition took place. Of the great variety on the ground, no less than 30 were entered for trial; the most of them beautiful implements, and finished in the neatest manner. Notwithstanding the ceaseless labor of the committee on this and the two following days, it was found impossible to investigate the respective merits of each, in the time alloted, so as to give a satisfactory decision; and with the unanimous consent of the competitors, they concluded to refer the whole matter back to the society, with the results of their investigations, to be followed up more fully at the next meeting of the society. The committee also recommend that the sums offered in premiums on plows be increased.

Wednesday the 26th, was devoted to an examination, by the several committees, of the several kinds of stock offered for competition and premiums. Mr. Prentice's herd, and particularly the family of Short Horns, from his cow Matilda—thirteen in number, cows and calves—received much attention, as did also Messrs. Corning & Sotham's beautiful and extensive herd of Herefords, from the assembled thousands. The imported bull, "His Grace," brought on the ground by Paschal Morris, Esq. of Chester county, Pennsylvania, was much admired; and added much to the value of the exhibition, as enabling breeders to compare the merits of different families of Short Horns. The same may be said of the beautiful cows, "Rocket," and "Strawberry," exhibited by Mr. Whitney of New-Haven, Connecticut. The Norman horse, Diligence, imported from France, and brought on the ground by Mr. Harris of New-Jersey, was much noticed by the amateurs of good horses; and by most, considered as the proper animal, by a cross of which with the lighter horses of this country, a better breed of farm horses might be produced. The fat cattle offered for premiums, presented a truly magnificent sight. The ox shown by Mr. Rust of Syracuse, the pair by Mr. Godfrey of Geneva, those by Mr. Jones of Oneida, and the Durham cow of Mr. Schuyler of Watervliet were, particularly the first, literally mountains of flesh. Those who have not seen this animal, will have some difficulty in conceiving an ox weighing 4,200 pounds. The show of sheep was very superior, embracing as it did specimens of the best flocks in the state—Long wooled from Messrs. Clift of Putnam, Morrison of Orange, Corning & Sotham, McIntyre, Dunn and others—South Downs from Messrs. Rotch of Otsego, Waite of Orange, Bement and McIntyre of Albany—Saxonys from Messrs. Grove of Hosick and Hull of New-Lebanon, &c. &c.

At two o'clock on Thursday afternoon the society convened at the Assembly Chamber of the Capitol, the President in the chair, when a large and highly respectable audience, a large part of which was composed of practical farmers, and intelligent agriculturists from all parts of our country, listened with much interest to an address from Governor **Seward**. The address was in the highest degree honorable to the head and heart of the Governor, and was received with marked applause. The thanks of the Society were tendered to his Excellency upon the conclusion of the address, and a committee appointed to request a copy for publication. This able production, the more creditable for the very limited time allowed for its preparation, we have the pleasure of presenting to our readers.

GOV. SEWARD'S ADDRESS.

Fellow Citizens:—The display of animal and vegetable productions, the expositions of culture and the trial of implements of tillage, under the patronage of the New-York State Agricultural Society, are completed; and it only remains to confer the civic prizes which have been so honorably won. Shall scenes so animating though so peaceful, so instructive though so simple, pass without comment?

If our country has a citizen imbued with the philanthropy, and learned in the philosophy of agriculture, eminent in political wisdom and transcendant in eloquence, here are his forum and his theme. Such a citizen you have expected to hear. Let my temerity in assuming the place he has left vacant, and others have declined, find an apology in the gratitude which the abundant kindness of my fellow citizens has inspired.*

In that time-worn Tower which tells many a deed of treachery and of tyranny, the British Government exhibits the armor and arms of Kings, Nobles, Knights, Soldiers and Seamen, who have borne the standard of St. George around the circumference of the globe. France, with pride more refined, displays in the galleries of the Louvre, the chefs d'ouvre of her artists with what she yet retains of the productions of the pencil and the chisel of which Napoleon despoiled the nations of Europe. These monuments excite admiration, but they leave generous and grateful sympathies unmoved, while the benevolent mind recognizes in the axe, the plow and the loom, agents of civilization and humanity, and exalts them above all the weapons that ambition and rapine have forged, and even above all the embellishments of social life that arts merely ornamental have ever produced. Nor need we overvalue our agricultural inventions, or bestow exaggerated praise upon their authors. Admitting the inferiority of our schools to the Universities of Europe, and the deficiency of our artisans in learning and experience, we may yet maintain that all scientific acquirements here, and all inventions, pass immediately to the general use and contribute directly to the general welfare. Such are now our means of diffusing and preserving knowledge, that no really useful invention can either be lost or fail to be employed in every region of our country. Let this festival,

————"Pastorally sweet
And rurally magnificent,"

be preserved, and the increasing emulation of our yeomanry and mechanics maintained, and the effect will be seen not only in the improvement of Agriculture, but in the amelioration of the character of the people. Thirty years before the revolutionary war, at a celebration in Massachusetts, the Matrons and Maidens of Boston, appeared on the Mall, each industriously plying the busy spinning wheel. Need it then excite surprise that our sister State now excels with the shuttle, and extorts wealth from the floods, the ice and the rocks! The character of a people may be studied in their amusements. The warlike Greeks fixed their epochs on the recurrence of the Olympic games. The husbandmen of Switzerland at stated periods celebrate the introduction of the vine. Well may we then, continue ovations in honor of agriculture, which, while they give expression to national rejoicing, promote the welfare of our country, and the good of mankind.

Farmers of New-York—You do wisely in collecting from every district and every region, the various species of plants, and adopting such as find our soil and climate most congenial; in introducing new branches of culture and mechanic industry; in choosing out of domestic and foreign stock, the animals which propagate most rapidly, with the least expense of subsistence, and yield the largest returns for the husbandman's care; in stimulating invention to the discovery of new principles of tillage, machines and implements, for increasing the fertility of the soil and the productiveness of human labor. But these efforts alone, well conceived and beneficent as they are, do not fullfil the responsibilities of the American Farmer.

Similar exertions, though less effective, have been made by the tillers of the earth in every age, however benighted, and in every country, however subjected. The God of nature has given us a territory stretching through fifty degrees of longitude with almost the breadth of the temperate zone, embosoming numerous lakes, and traversed by capacious rivers. Every variety of soil north of the tropics, and every mineral resource, with mountain, forest and plain, are abundantly supplied. We stand in relation to this wide territory not unlike the progenitor of our race in regard to the earth over which he received dominion from the Almighty. He has permitted us to learn wisdom from the rugged experience of almost sixty centuries, and establish a system of government new and peculiar, which, while it effectually secures personal rights and domestic tranquility, does not favor war, and is not adapted to aggression, which chastens avarice, and represses ambition, which favors equality, subdues individual power, and stimulates, strengthens and combines the power of the masses—a system resting on the consent and kept in action only by the agency of the governed. To these advantages is added a social organization which rejects in every form the principles of involuntary or reluctant labor and gradation among the members of the state, and by offering equal rewards, calls forth the equal industry and enterprise of every citizen. These peculiarities of our political and social condition indicate an era in civilization, and inspire a generous confidence that it may be our privilege to open for our race the way to a brighter and better destiny than has yet been attained.

Hitherto, civilized men, enslaved or oppressed, have doubted whether advancement from the savage state of existence was a blessing, and have struggled for liberty as if mere liberty was the end of human achievement. But we have learned that civil liberty is only one of the conditions of human happiness, and is desirable chiefly because it favors that social advancement which is the ever fulfiling destiny of mankind. In every stage of that advancement hitherto, Agricultural improvement has been last, though it should always be first. By Agriculture, nations exist; it supports and clothes mankind; it furnishes the resources for protection and defence, and the means even of moral improvement and intellectual cultivation. Portions of a community, cities, and even states, may exist by exercising the mechanic arts, or by going down to the sea in ships, but there must nevertheless be somewhere, some larger Agricultural community to furnish the productions and fabrics indispensable even in such forms of society. The necessary minerals, iron, lead, copper, and others, are beneficial only because they are employed in aid of Agriculture, or in preparing its productions for our use, and even the metals which by consent of mankind are called precious, have no value except as representatives of the fruits of industry. Other interests may rise and fall, and other masses may combine, dissolve and re-combine, and the agricultural mass be scarcely affected, but the whole body politic sympathise when this interest is depressed and this class suffers.

> "Princes and lords may flourish or may fade,
> A breath can make them, as breath has made:
> But a bold peasantry, their country's pride,—
> When once destroyed, can never be supplied."

It is an obvious responsibility of the American People to restore the natural and proper order of social improvement, by renovating Agriculture—for this is the tendency of our institutions. It is a maxim in other countries that society necessarily consists of two classes—the ruling few and the governed many. The latter are designated under the most liberal forms of government as "the laboring poor;" in the polished countries of the South as "Peasantry," and in the ruder North as "Serfs." Here we know not as a class, Serfs, Peasantry or Poor; and the laboring many constitute society. Whether designedly or not, they who apply to our condition, analogies derived from monarchical or aristocratic States, would mislead us, and these deceive themselves who expect that our government will operate otherwise than for the security and benefit of the masses. The legislators of our country are its citizens; and since the predominating mass of citizens consist of tillers of the soil, the American Farmer is the American Statesman. The government, therefore, necessarily tends to sustain and promote Agriculture.

In Europe, the cost of land fit for tillage is twice or three times greater than here; the price of labor here is more than double that in Europe. Our land is therefore cultivated imperfectly, and its productions are seldom equal to one-half its capacity. Thus one of our great advantages is counterbalanced by a deficiency of physical force. Notwithstanding our population augments with unprecedented rapidity, by domestic increase and immigration—yet such is the demand for labor and service in commercial towns, and in the improvement of roads and rivers, and so attractive are our new settlements in the West, that the deficiency of labor continues the same, and its value, under ordinary circumstances, constantly increases. Immigration, therefore, is an auxiliary to Agriculture. The condition of society in Europe favors emigration. The nations are reposing after long and exhausting wars. The masses increase in disproportion to their territory and subsistence; and although a democratic spirit is abroad, slowly renovating their institutions, there is still a restless desire to participate in our social advantages and enjoy our perfect liberty. But with the sturdy, enterprising and virtuous immigrants, there will also arrive on our shores, the infirm, the indolent and the depraved, while a change of home and country is always liable to be attended by accident and misfortune. These circumstances increase the charges for public charity and justice in our populous cities, and hence their inhabitants often regard immigration as itself a calamity.

But, aside from all questions of humanity—if we compare this incidental misfortune with the addition to the national wealth and strength derived from the one hundred thousand emigrants who annually disperse themselves over the country, and take into consideration the increase of our physical strength by their descendants, we find every principle of political economy sanctioning the policy of our ancestors, which freely opened our ports and offered an asylum to the exiles of every land. Nor need I urge before such an enlightened assembly, that prejudices against emigrants, and apprehensions of danger from their association, are as unwise as they are ungenerous. The experience of mankind has proved that mutual intercourse and the most intimate relations between the various branches of the human family are indispensable to the progress of civilization and humanity.

The Agricultural Interest, though the last to suffer, is always slowest in recovering from any national calamity. Associations in other departments deranged, may be renewed. Capital destroyed may be supplied, and masses overborne may recover. But Agriculture, once embarrassed, is with difficulty restored. War, however justifiable or necessary, or however it may stimulate production for a season, is always a national evil, and in its least desolating form is destructive of agricultural prosperity. To cultivate the disposition and the arts of peace, and to guard against domestic disturbance and civil discord, are important therefore, not merely to the improvement, but to the prosperity of Agriculture

Agriculture can never flourish where its rewards are precarious, or inferior in value to those obtained in other departments of industry. Perpetual care is necessary to diminish the burthens to which it may be subjected. Hence the necessity of an economical conduct of public affairs—of improving those inland communications which serve for the conveyance of agricultural productions to places of exchange and consumption, and of such commercial regulations as secure advantageous markets either at home or abroad. But these considerations are so familiar that they need not be dwelt upon, notwithstanding their acknowledged importance.

The preservation of equality among the people in regard to constitutional and legal rights, and perpetual adherence to the policy which by laws regulating descents, devises, and trusts, prevents the undue accumulation of estates, are indispensable to agricultural prosperity. It is this policy, co-operating with the natural advantages of our position, which has made the Agricultural class here a community of freeholders, in contrast with the systems of other countries, under which lands are cultivated by tenants, the rewards of whose labor pass to the benefit of landlords.

Not only was the "primal curse" of labor universal, but acquiescence in it was wisely made a condition of health, happiness, wisdom, and virtue. This condition, however, implies that equal rewards are allowed to mankind, while equal labor is exacted from them. Whatever institution, then, on any pretext, relieves any portion of a community of the necessity of labor, or withholds its incentives or excludes them from equal competition for its rewards, not only is unequal and unjust, but by diminishing the whole amount of social labor, increases the burthens of those on whom the subsistence of society depends. We are all accustomed to recognise this important truth in the operation of domestic servitude. But every form of unequal legislation, every custom and every prejudice which causes any mass or any portion of a mass to abate their efforts to secure independence and wealth, operates in the same manner, although to a less extent.

While the patrons of Agriculture will keep steadily in view these principles, their most strenuous efforts must be exerted for the diffusion of knowledge. To knowledge we are indebted for whatever of ease or security we enjoy; and the safety and happiness of every civilized community not overborne by foreign oppression, are exactly in proportion to its intellectual cultivation. So also, as a general proposition, individuals prosper and exert influence according to the standard of their attainments. This truth applies also to masses in a community. The Agricultural class here, as well as in every other country, notwithstanding their numbers, enjoy comparatively inadequate compensation and abated influence, because they have a lower standard of education than other classes. There is not, as is often supposed, a certain amount of knowledge which it is profitable for the farmer to possess, and dangerous to exceed. Learned men sometimes fail in this honorable pursuit, but not in consequence of their acquirements; and the number of such is vastly less than those who fail through ignorance. It is a fact, which, however mortifying, cannot be too freely confessed, or too often published, that an inferior education is held sufficient for those who are destined to the occupation of Agriculture. The standard established for them, is seldom as high as the full course of instruction given in our common schools, and consists in an ability to read, but scarcely with pleasure or advantage, to write without facility or accuracy, and to perform simple processes in the art of numbers. Higher attainments than these are allowed to all other classes. The mechanic and the artisan are at least instructed in the nature and properties of the substances which they use, and in the principles and combinations of the mechanical powers they employ, while each profession jealously guards against the intrusion of any candidate, who however skilful in its particular mysteries, has not completed a course of scientific or classical learning.

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* The Hon. Daniel Webster was expected to deliver the Address.

There is no just reason for this discrimination. The domestic, social and civil responsibilities of the farmer, are precisely the same with those of every other citizen, while the political power of his class is irresistible. The preparation of the soil to receive a germ, the culture of the plant, its protection against accidents, and the gathering of its fruit—each of these apparently simple operations, involves principles of science more recondite than do the studies of the learned professions. Every other department of industry has willingly received aid from science. In mechanism, the laws of power and motion are so well understood, that achievements to which human energy was once deemed inadequate, are easy and familiar. The hand is now almost unnecessary in the fabrication of cloths. Animal power is beginning to be dispensed with in locomotion on the land, and the intercourse between nations separated by seas, heretofore so difficult and uncertain, is rendered speedy and regular by the use of steam. But Agriculture is regarded as involving no laws of nature, requiring no aids, and capable of no improvement. Physical power is considered the only suitable agent, and that power is most wastefully expended. Admitting the beneficent effects of the cotton gin, the improved plow, the cultivator, the threshing machine, and other implements which have been instrumental in effecting a slow advancement in agriculture, it must still be confessed that while other arts are more rapidly improving, this, of human arts the first and last, whose cultivation leads to plenty, and is cheered by health and contentment, remains comparatively unassisted and stationary.

But, independently of the aid which mechanical science owes to agriculture, if the principles of economical geology, of agricultural chemistry, and of animal physiology, which have been laid open by Lyell, by Priestly, by Davy, Liebig, Johnson, and Dana, and our own Buel, were universally known and applied, the productiveness of the soil would be incalculably increased. Regarding the education of the agricultural class, then, only in the light of economy, its importance cannot be over estimated. But this is its least interesting aspect. Education is necessary to elevate the agricultural masses to their just eminence, and to secure their enlightened action in the conduct of government and of the various interests of social life. Praises of Agriculture and acknowledgments of the purity, patriotism, and wisdom, of those who pusue that most peaceful calling, are the never failing themes of all who court their suffrages. Yet it is a sad truth, that the interests of Agriculture, and of those who subsist by it, are often considered subordinate, and sometimes injuriously neglected. The avenues to preferment are open to all, but they are seldom traveled by the Farmer. Questions of peace and war, of revenue, of commerce, of currency, of manufactures, of physical improvement, of free and foreign labor, of education, are too often discussed and decided without just consideration of their bearing upon the interests of Agriculture. The reason is obvious. The art of Agriculture is learned by imitation and habit. Those who are destined to that pursuit, are not early instructed in the principles of the government, or its relations to other States, in their own legal rights, their civil duties, the pathology of the human constitution, the nature of the substances with which Agriculture is concerned, or their properties, or the laws regulating their development, or even in the simple art of tracing geometrical lines and calculating their contents, not to speak of the range of physical and exact sciences, history and ethics, classical learning, the philosophy of language and the art of eloquence.

These attainments, though open to all, are reached exclusively by other classes, and the Farmer in mature years, is sent to the Press for political instruction, and to the Clergy he must yield implicit confidence, and must depend upon the Lawyer for the defence of his simple rights, upon the Physician for information whether he is diseased, upon the Professor for explanations of the properties of the soil he cultivates, and upon the Civil Engineer for even the measurement of his acres. When such dependence upon these various classes is established, can it be a matter of surprise that precedence is conceded to them in the various departments of society? Let me not be misunderstood. I deprecate not the influence of the learned classes, and I would promote by every proper means their higher improvement—nor would I excite jealousy against them, or in the least diminish the respect or confidence they enjoy—but I desire to see the Agricultural class equally elevated, and for that purpose I would stimulate them to corresponding attainments. This is the true theory of republican institutions. When it is carried into practical and complete operation, and not until then, shall we enjoy a regular, safe, equal, and enlightened administration of civil government.

Your task then, is nothing less than social revolution—a revolution, however, which, like all your pursuits, will be peaceful and beneficial. You aim no blows at the government of the country, or the power, the prosperity, or the influence of any class of its citizens. On the contrary, you will render them all the aid and all the support they need. Nor will you justly encounter the opposition of any class, for all are equally interested with yourselves in the great work you have undertaken, and upon which depend the stability and permanence of our institutions and the hopes of mankind.

The agency required in this great work is already prepared, and awaits your adoption. The primary schools, the voluntary religious establishments, the academic seminaries, and the unisities which you require, are already founded, and liberally endowed. In our school district libraries, an auxiliary is furnished, whose efficacy is scarcely surpassed by the invention of Cadmus, of Faust, or of Fulton. With pride and pleasure I add, that this agent was called into action by a farmer of New-York, James Wadsworth. These libraries, which are placed at almost every angle of our thoroughfares and byways, and contain treasures richer than those the world lamented in the destruction of Alexandria, may be made the vehicles of not merely the literature which adorns, but of the science which elevates, and of that moral and political wisdom which gives beneficent direction to the human mind.

Little remains for you but to guide the rising generation to the improvement of these facilities, nor will that task be difficult. Science, though repulsive to the ignorant, is attractive to the iniated, and its attraction increases just in proportion as truths are presented which are adapted to the comprehension and satisfying to the curiosity of the young mind. In the dark ages, the system of instruction was so contrived, as to present to faculties undeveloped, the deductions of science without their explanation, and recondite truths without their illustration. Whatever was simple and easy of apprehension, was thought unworthy to be known, and the philosophy which explains the formation of the earth, and its perfect adaptation to the subsistence and happiness of our race, was not then conceived. Something of this strange error still remains, but a change has commenced, and we may soon hope to see a system of education which will lead the mind by an easy and natural process, through the truths of external nature, to the mysteries of mind and the study of the Supreme Author.

Let it be your effort to hasten this change, and thus divest knowledge of its repulsive features, to excite the emulation and stimulate the patriotism of the young, by making known to them the attainments of which they are capable, the advantages they may acquire, and the responsibilities they are to assume. The desire for knowledge, once excited, will increase, and will find ways to continue its pursuit. Then the youth destined to agricultural occupations, instead of being employed in perpetual labor, will be allowed to acquire the knowledge which renders those occupations cheerful, dignified, and successful; and parents instead of hoarding their gains to be divided among their offspring, to relieve them from the necessity of enterprise, will devote their wealth freely in bestowing that better patrimony which cannot be lost. Need I point out to such an audience, how this work shall be commenced? Let it be the task of individual effort to awaken the attention of our fellow citizens to the importance of keeping the Common Schools open during a greater portion of every year, of a more careful regard to the qualifications of teachers, of the introduction of the natural sciences into the schools, of allowing the children of the State, at whatever cost, to persevere in the course of education commenced; and above all, of removing every impediment and every prejudice which keeps the future citizen without the pale of the public schools. The State has been munificent to the rising generation. She has not only founded a system of universal instruction, but she has at great cost, explored the animal, vegetable, and mineral kingdoms, and exposed their mysteries. The benefits of these discoveries, though diffusive, will be experienced in an eminent degree by Agriculture.

You have already wisely employed the agency of association, but the principle is susceptible of more varied and comprehensive application. Be not content with organizing a State Society, and County Associations, by which you excite the efforts of the few who least need improvement; but organize an Agricultural Society in every School District, and thus secure the co-operation of all our citizens. Such Associations, while they would promote agricultural fellowship, and vigorously second efforts immediately tending to the improvement of the art, would apply themselves diligently in exciting an interest in the important subjects which have been discussed, and in circulating treatises upon proper studies, and watching over the interests of education and of agriculture in the Schools, in the primary action of society, and in the Legislative Councils.

But, gentlemen, in whatever direction your efforts may be made, you will encounter difficulties and discouragements. You will be opposed by that contented spirit which regards every improvement as innovation, and which perpetually, though falsely, complains that mankind degenerate, without making an effort to check the progress of error. You will be regarded as visionary, by those who consider skill in acquiring, and success in retaining wealth, as the perfection of human wisdom; but you will remember that such as these seldom bestow their countenance upon the benefactors of mankind, nor does Fortune always distinguish them by her favors. Robert Morris, the financier of the Revolution, died a bankrupt. Christopher Coles, our most efficient advocate of inland navigation in the last century, was interred by private charity, in the Stranger's burying ground. The essays of Jesse Hawley, which demonstrated the feasibility and importance of a continuous canal from Lake Erie to the Hudson river, were sent forth from a debtor's prison; and De Witt Clinton, whose name is written upon the capital of every column of our social edifice, was indebted to private hospitality for a resting place. It is the same generous and patriotic spirit which animated these philanthropists, and sustained them in their struggles with the prejudices of the age in which they lived, that I desire to invoke in favor of Agriculture. This spirit, wisely directed, cannot fail, for it has been irresistible in every department it has hitherto entered. But let us all remember that the only true way to begin reform, is to find the source of error; and that if we cultivate Man, the improvement of the animal and vegetable kingdoms will surely follow.

AWARD OF PREMIUMS.

The Governor's address was followed by the reading of the reports of the judges and the award of premiums. These reports were listened to with much attention. They were of high interest; and their examination will not only exhibit the rapid advance of the society since the last year, in the amount and number of premiums, but also in part the great mass of objects on the ground, and the arduous nature of the duties performed by the examining committees. Those who wish to learn the amount of the prizes awarded in each case, are referred to the Cultivator of March, 1842, page 43.

ENTRIES OF STOCK, FOR THE PRIZES.

Class I.—*Bulls over Three years old.*

1. By John Johnston, Geneva, "Royal William," Durham, 3 yrs. 3 mos. *Second Premium.*
2. William Kirby, Guilderland, "Comet," Durham, 3 yrs.
3. J. H. Coons, Brunswick, "Young Monarch," Durham, 4 yrs.

4. 5 & 6. E. P. Prentice, Mount Hope, near Albany, three Durhams—to "Nero," no. 5, 5 yrs. 1 mo. was awarded the *First Premium.*

7. C. N. Bement. Three Hills Farm, "Astoria," Durham, 4 yrs. 2 mos. *Third Premium.*
8. C. N. Bement, Three Hills Farm, "Clan Albin," Durham and Ayrshire, 3 yrs.
9. C. Proctor, Bethlehem, "Dale," Durham, 5 yrs.
10. Stephen Van Rensselaer, Albany, "Lennox," Durham, 3 yrs.
11. Thomas Hillhouse, Watervliet, "Ajax," Durham, 10 yrs.
12. W. P. Van Rensselaer, Greenbush, a Durham, 5 yrs.
13. V. Van Wie, a Durham, 3 yrs.
14. J. Ives, Bridgwater, a Durham and Holderness, 4 yrs.
15. J. W. Russel, "Osceola," Durham, 3 yrs. 3 mos.
16. John Soop, Bethlehem, "Young Copson," 4 yrs.
17. J. V. B. Teller, Greenbush, "Diamond Hill Comet," Dur.
18. D. D. Campbell, Schenectady, a Durham, 3 yrs. *Diploma.*
19. J. B. Nott, Guilderland, "Norman," Durham & native, 3 yrs.
20. S. Schermerhorn, Schenectady, a Durham, 4 yrs.
21. M. Bullock, New Scotland, "Mexico," Durham, 4 yrs.

Class II.—*Two Years Old Bulls.*

1. By James Percy, Hoosick, a Durham, 2 yrs. 6 mos.
2. Corning & Sotham, Albany, "Sir George," Hereford, 2 yrs.
3. George Clark, West Springfield, "Major," Hereford, 2 yrs. 5 mos. *Second Premium.*
4. E. P. Prentice, Mount Hope, "Fairfax," Durham, 2 yrs. 4 mos. *First Premium.*

5 & 6. John Sampson, Troy, Durhams. *Diploma.*

7. George Vail, Troy, "Duke of Wellington," Durham, 2 yrs. 11 mos. *Third Premium.*
8. A. Van Bergen, Coxsackie, "Wallace," Ayrshire, 2 yrs. 9 mo.
9. Wm. Russell, Bethlehem, a Durham, 2 yrs.
10. J. McCarty, Coeymans, a Durham, 2 yrs. 5 mos.
11. N. C. Sweet, Clifton Park, a Durham, 2 yrs. 2 mos.

Class III.—*Yearling Bulls.*

1. By James Percy, Hoosick, a Durham, 1 yr. 6 mos.

2 & 3. Harman Bussing, Bethlehem, Durham & Devon.

4. E. P. Prentice, M't Hope, "Dangerous," Hereford, 1 yr. 7 mos.

5, 6, 7 & 8. Corning & Sotham, Albany, four Herefords.

9. Henry Adams, Bethlehem, a Durham, 1 yr. 4 mos.
10. B. A. Hall, New Lebanon, ——— 1 yr.

11, 12 & 13. Stephen Van Rensselaer, Albany, three Durhams—to "Rockingham," no. 11, *First Premium*—to "White Prince," no. 12, *Third Premium.*

14. D. D. Campbell, Schenectady, a Durham, 1 yr.
15. G. Vail, Troy, "Meteor," Durham, 1 yr. 2 mos. *Diploma.*
16. E. C. Delavan, Ballston Centre "Leopard," Durham, 1 yr. 5 mos. *Second Premium.*
17. Henry Holland, West Milton, a Durham, 1 yr. 4 mos.

Class IV.—*Bull Calves.*

1 & 2. By J. W. Canfield, Schodack, Durhams.

3. C. N. Bement, Three Hills Farm, "Mars," Durham.

4 & 5. E. P. Prentice, Mount Hope, Durhams—to "Cato," no. 5, *First Premium.*

6. Isaac Lovejoy, Greenbush, a grade Durham, calved Mar. 15.
7. Joseph Hill, Geneva.
8. Corning & Sotham, Albany, "Young Trojan," Hereford,
9. J. P. Noxon, Stillwater, 4 months old.
10. J. H. Coons, Brunswick, "Warrior," Durham, calved Ap. 23.
11. B. A. Hall, New Lebanon.

12 & 13. S. Van Rensselaer, Albany, Durhams.

14 & 15. Thos. Hillhouse, Watervliet, Durhams.

16. J. M. Sherwood, Auburn, "Damon," Durham. *Diploma.*
17. J. Ives, Bridgwater, a Durham & Holderness, calved July 5.
18. Arthur Foster, Albany, a Durham and Native, 4 mos.
19. George Vail, Troy, a Durham, calved Mar. 30. *Diploma.*
20. N. C. Sweet, Clifton Park, a Durham, calved April 4. *Second Premium.*

Report of Judges on Classes I, II, III, and IV.

The Committe appointed to judge on Classes I, II, III, and IV, beg leave to report that they have unanimously awarded the Premiums as follows:

Class I—1st, to No. 5, Mr. Prentice's Nero.
2d, to No. 1, Mr. Johnston's Royal William.
3d, to No. 7, Mr. Bement's Astoria.
4th, to No. 18, D. D. Campbell's Durham bull.
Class II—1st, to No. 4, Mr. Prentice's Fairfax.
2d, to No. 3, Mr. Clark's Major.
3d, to No. 7, Mr. Vail's Wellington.
4th, to No. 5, Mr. Sampson's No. 5.
Class III—1st, to No. 11, Mr. Van Rensselaer's Rockingham.
2d, to No. 16, Mr. Delavan's Leopard.
3d, to No. 12, Mr. Van Rensselaer's White Prince.
4th, to No. 15, Mr. Vail's Meteor.
Class IV—1st, to No. 5, Mr. Prentice's Cato.
2d, to No. 20, Mr. Sweet's.
3d, to No. 19, Mr. Vail's.
4th, to No. 16, Mr. Sherwood's Damon.

The Committee cannot close their Report, without remarking upon the very creditable display of stock brought before them, and which reflects much credit upon the farmers of the state.

ADAM FERGUSSON, Watertown, U. C.
PAOLI LATHROP, So. Hadley, Mass.
HENRY WHITNEY, New-Haven, Ct.
J. O. CHOULES, New-York.

Class V.—*Cows, 3 years old and upwards.*

1. By C. Proctor, Bethlehem, "Flower," Durham, 4 yrs.
2. M. Carty, Greenbush, "Leonora," Durham, 10 yrs.
3. J. H. Coons, Brunswick, "Young Princess," Durham, 14 yrs.
4. H. D. Grove, Hoosick, a Durham and Devon, 3 yrs. 5 mos.

5 to 8. C. N. Bement, Three Hills Farm, two Durhams, 1 Durham and Ayrshire, and one Ayrshire.

9 to 21. E. P. Prentice, Mount Hope, 12 Durhams and one Hereford—to "Daisy," no 13, *Second Premium.*

22 to 34. Corning & Sotham, Albany, 12 Herefords, and one Durham and Hereford—to "Matchless," no. 22, *Extra Premium* of $15—to "Martha," no. 24, *Extra Premium* of $16—to "Maria," no. 31, *Diploma.*

35 to 40. Stephen Van Rensselaer, Albany, six Durhams.

41. J. B. Dill, Auburn, "Gazelle," Durham. *Third Premium.*

42 to 45. J. M. Sherwood, Auburn, four Durhams—to "Stella," no. 42, *First Premium*—to "Pansey," no 45, *Diplomo.*

46 to 50. Thos. Hillhouse, Watervliet, five Durhams.

51. John Sampson, Troy, a Durham, 5 yrs. 6 mos.
53. Martin Malany, Utica, a Durham, 4 yrs.

54 & 55. D. D. Campbell, Schenectady, Durhams.

56. George Vail, Troy, "Queen," Durham, 4 yrs.
57. A. Van Bergen, Coxsackie, "Jessie," Ayrshire, 5 yrs.

58 & 59. J. H. Bullock, Bethlehem, Durhams.

60. David Russel, Bethlehem, a Durham, 7 yrs. 5 mos.
61. J. H. Bullock, Bethlehem, a Durham, 7 yrs.
62. D. D. Campbell, Schenectady, a Durham, 3 yrs.
63. M. Wood, Albany, a Durham, 5 yrs. 6 mos.

Class VI.—*Two Years Old Heifers.*

2. By H. D. Grove, Hoosick, a Durham and Devon, 2 yrs. 3 mos.

3 & 4. Corning & Sotham, Albany, "Matilda," 2 yrs. 4 mos., and "Flora," 2 yrs. 6 mos., Herefords.

5. Michael Carty, Greenbush, "Narcissa," Durham.
6. J. H. Coons, Brunswick, "Snow Drop," Durham.

7, 8 & 9. E. P. Prentice, Mount Hope, "Sally," 2 yrs. 8 mos. *Second Premium.* "Louisa," 2 yrs. 8 mos., "Caroline," 2 yrs. 6. mos. *Third Premium.* Durhams.

10, 11, 12 & 13. Christopher Proctor, Bethlehem, Durhams.

14, 15 & 16. Thomas Hillhouse, Watervliet, Durhams.

17. J. B. Dill, Auburn, "Hebe," Durham. *First Premium.*
18. J. H. Bullock, Bethlehem, Durham.

Class VII.—*Yearling Heifers.*

1, 2 & 3. By C. N. Bement, Three Hills Farm, "Meg Merrilies," 1 yr. 8 mos., (in milk,) Durham and Ayrshire—"Gazelle" and "Eudora," Durhams.

4 & 5. Corning & Sotham, Albany, "Adelaide" and "Princess," Herefords.

6, 7, 8 & 9. E. P. Prentice, Mount Hope, "Charlotte," 1 yr. 10 mos. *Second Premium.* "Cora," "Dora," and "Jenny," Durhams.

10. Michael Carty, Greenbush, a Durham.
11. Henry Adams, Bethlehem, a Durham.
12. Stephen Van Rensselaer, Albany, "Lilac," Durham.
13. J. M. Sherwood, Auburn, "Norna," Durham. *First Prem.*
14. Samuel Robbins, Camillus, "Iris," Durham.
15. George Vail, Troy, "Victoria," Durham.

Class VIII.—*Heifer Calves.*

1. By J. M. Sherwood, Auburn, Durham.

2, 3, 4, 5 & 6. C. N. Bement, Three Hills Farm, Durhams.

7, 8, 9, 10, 11 & 12. E. P. Prentice, Mount Hope, Durhams—to "Nell," No. 10, calved Jan. 13, 1842, was awarded the *First Premium*—to "Duchess," No. 12, calved May 11, the *Second Premium.*

13, 14, 15 & 16. Corning & Sotham, Albany, Herefords.

17 & 18. Stephen Van Rensselaer, Albany, Durhams.

19, 20 & 21. Thomas Hillhouse, Watervliet, Durhams.

22. George Vail, Troy, Durham, calved April 11. *Diploma.*

23 & 24. J. B. Nott, Guilderland, a Durham and Native.

☞ The report of the judges on Classes V, VI, VII, and VIII, is not in our possession. It will be given hereafter.

Class IX.—*Grade Cows.*

1. By Jesse Buel, Albany, Devon cross. *Second Premium.*
2. Jesse Ives, Bridgwater, Durham and Holderness.
3 & 4. Not present.
5 & 6. Arthur Foster, Albany, Durham cross.
7. G. W. Risley, New Hartford, Durham cross. *First Prem.*

Class X.—*Grade Two Years Old Heifers.*

. By Francis Lansing, Waterford.
2. S. S. Fowler, Greenbush. *First Premium.*
3. L. V. V. Schuyler, Watervliet. *Second Premium.*
4, 5, 6 & 7. Arthur Foster, Albany.

Class XI.—*Grade Yearling Heifers.*

1. By C. N. Bement, Three Hills Farm, "Cream Pot," Durham cross. *First Premium.*
2. John Lossing, Albany, Durham cross.
3 & 4. Arthur Foster, Albany, Durham cross.

Report of Judges on Grade Cattle.

The Committee appointed to examine Grade Cattle, in Classes IX, X, and XI, beg leave to Report,—

That the competition on this occassion, has been extremely limited, both as to the number of Cattle, and the variety of the crosses. No specimen of a cross between the Native stock and the Devon, or Hereford, or Ayrshire, has been presented; and the crosses of the Durham are much less numerous than might have been expected. This is much to be regretted. Nothing but experiments on all the breeds now imported, will enable us to ascertain their relative value in crossing, and it is obvious that the result of these experiments must be made known in the most public manner, in order to be widely useful.

The committee regard public exhibitions of this kind, eminently calculated to diffuse such information, and they conceive that in neglecting them, the breeder neglects as well his own, as the interest of the public.

They have selected No. 7, (Mr. Risley's cow,) of Class IX, No. 2, (Mr. Fowler's 2 year old heifer,) of Class X, and No. 1, (Mr. Bement's Cream pot,) of Class XI, as entitled each to the first premium of their respective classes. They have also assigned to No 1, (Mr. Buel's Cow,) in Class IX, and No. 3, (Mr. Schuyler's heifer,) in Class X, the second premium in their respective classes.

JAMES NEILSON,
G. V. SACKETT,
JOHN JOHNSON.

Class XII.—*Native Cows.*

1. By John Taylor, Albany.
2. E. Chesebro, Guilderland Centre, "Rose." *Second Prem.*

Class XIII.—*Native Two Years Old Heifers.*

1. By L. V. V. Schuyler, Watervliet.

Class XIV.—*Native Yearling Heifers.*

1. By L. V. V. Schuyler, Watervliet, (in milk.) *Second Prem.*
2. E. Chesebro, Guilderland Centre, "Cherry."

Class XV.—*Dairy Cows.*

1. By E. Chesebro, Guilderland Centre, 9 yrs. old. *Diploma.*

Report of Judges on Native Stock and Dairy Cows.

The Committee on Classes XII, XIII, XIV, and XV, Report,—

On Class XII, Cows, Native breed,—Only one was presented for competition, being a red Cow, called Rose, 9 years old, belonging to E. Chesebro, of Guilderland, Albany co.; to which we award the second premium of $8.

Class XIII, Native Heifers, between 2 and 3 years.—But two were presented, neither of which, in our opinion, is entitled to a premium.

Class XIV, Native Heifers between 1 and 2 years.—But one was presented for competition, being a red, with white face, 16 months old, and had a calf four weeks since, belonging to L. V. V. Schuyler, of Watervliet, Albany co.; to which we award the second premium of $5.

Class XV, Dairy Cows of any breed,—But one was presented for competition, agreeably to the terms and restrictions set forth in the prize list, and which is the native cow mentioned in Class XII, and which made 37 lbs. butter in 30 successive days, and to which we award, under this class, a Diploma.

The committee add, that it is very much to be regretted that the owners of Native stock have not presented them for exhibition and competition, and we are compelled to believe, that the great and splendid display of Blooded Cattle, has been the cause of their not being produced; and we trust that at the next Annual Fair and Exhibition, this defect will be amply supplied, not only from the vicinity, but from more remote parts, where we are well assured they do exist of very superior qualities, and in large numbers; and without any disparagement to the splendid Blooded Cattle, will be found, if equal care shall be bestowed upon their selections and breeding, they will meritoriously and pecuniarily reward their owners in an eminent degree.

SAMUEL JAQUES,
WATSON NEWBOLD,
HENRY BURRELL,
TYLER FOUNTAIN,
Albany, Sept. 29, 1842. J. W. REQUA.

WORKING OXEN.

1. By Winthrop Phelps, Chatham, Devon and Holderness. *First Premium.*
2. Corning & Sotham, Albany, Durham and Devon, 8 yrs.
3. Jacob L. Ten Eyck, Bethlehem, 6 yrs. *Diploma.*
4. Daniel Haywood, Chatham, 6 yrs.
5. Henry Adams, Bethlehem, Devon, 6 yrs. *Fourth Premium.*
6. Benjamin Aikin, Greenbush, cross, 5 yrs. *Second Premium.*
7. E. H. Ireland, Watervliet, native twins, 6 yrs.
8. Jacob Pachman, Schodack, 6 yrs.
9. Wm. N. Sill, Bethlehem, 4 yrs. *Third Premium.*
10. H. G. Ten Eyck, Bethlehem, 5 yrs.

Report of Judges on Working Oxen.

The Committee on Working Oxen, and Three Year Old Steers, consisting of Messrs. Colt, of Pittsfield, Mass., Wadsworth, of Durham, Conn., Cross, of Shaftsbury, Vt, Fuller, of Skaneateles, and Haswell, of Hoosick 4 Corners, New-York, have attended to the duty assigned them, and respectfully report,—

That the number of working Oxen upon the ground, were nine yoke, well matched and unusually well trained; there were but few among them that did not carry marked proofs that they came from a land of peace and plenty, and were strangers to Pharaoh's lean kine. We cannot but express our gratification at their grand display; it was with difficulty the committee could decide between the merits of the competitors, which is an evidence of an improvement in this department; and we think by judicious crossing with stocks adapted to the rich grazings of New-York, that it will not only be said that its blooded stock stand among the first in our country, but also with its present means of crossing, that the working Oxen may stand first.

Your committee have carefully examined all the animals belonging to their province, and have endeavored to do strict and impartial justice to all the applicants, not knowing to whom they belonged until the awards were made, and give the premiums as follows:

For the best yoke of Working Oxen, No. 1, four years old of the Devon and Native cross, to W. Phelps, of Chatham, $20.

For the 2d best yoke, No. 6, five years old, of the Devon and Durham cross, to Benj. Aikin, of Greenbush, $12.

For the 3d best yoke, No. 9, four years old, of the Devon and Durham cross, to William N. Sill, of Bethlehem, $8.

For the 4th best yoke, No. 5, six years old, of the Devon and Native cross, to Henry Adams, of Bethlehem, $5.

For the 5th best yoke, No. 3, six years old, of the Native breed, to Jacob L. Ten Eyck, of Bethlehem, the Society's Diploma.

The committee regret to say, that there were no three year old Steers entered for examination. All of which is respectfully submitted. ROBERT COLT, *Chairman.*

PREMIUMS TO BREEDERS.

To E. P. Prentice, breeder of best Bull in Class I, $10.
To Francis Rotch, breeder of best Cow in Class V, $10.
To Henry S. Randall, breeder of best Heifer in Class VI, $10.

FAT CATTLE.

1. By L. V. V. Schuyler, Watervliet, cow "Cherry," Durham, 7 yrs.
2. E. P. Prentice, M't Hope, steer "Proctor," Durham, 2 yrs. 5 mos.
3 & 4. Chas. Godfrey, Geneva, oxen. *Second and Third Prem.*
5 & 6. Jesse Ives, Bridgwater, oxen, 7 yrs.
7. Edmund Terry, Marshall, an ox, 6 yrs.
8. T. E. Jones, Utica, a native ox, 6 yrs. *Diploma.*
9. E. P. Prentice, M't Hope, cow "Susan," Durham, 13 yrs.
10. D. D. Campbell, Schenectady, Durham steer.
11. A. R. & D. Hunter, Watervliet, native ox, 7 yrs.
12. P. N. Rust, Syracuse. *First Premium.*

FAT SHEEP.

1. By F. M. Rotch, Butternuts, South Down wether. *First Premium.*
2 & 3. J. M'D. McIntyre, Albany, Cotswold and South Downs. *Second Premium* and *Diploma.*

Report of Judges on Fat Cattle and Fat Sheep.

The Committee on Fat Cattle and Sheep, report,—

That the first premium is awarded to P. N. Rust, of Syracuse, Onondaga co., for the fattest Ox. The second premium is awarded to Mr. C. Godfrey, of Geneva, for the second best Ox; and the third Premium is likewise awarded to Mr. Godfrey, for the third best Ox; and the diploma to Mr. T. E. Jones, of Utica, Oneida co., for the fourth best Ox.

The Committee have awarded the first premium to Francis Rotch, of Butternutts, Otsego co., for the fattest wether Sheep. The second to Mr. John McD. McIntyre, of Albany, for the second best wether, and also the diploma for the third best.

PHILIP H. FINK,
CHARLES BROOM,
THOS. KIRKPATRICK.
Albany, Sept. 28, 1842. JAS. J. CURTISS.

The following Certificates show the manner and the quantity of food, with which they have been fed, and the cost:

The "Syracusian," owned by P. N. Rust, of Syracuse, Onondaga co., is 8 years old. He has been fed 19 months last past, on corn meal, from 12 to 16 quarts per day, and in the winter season about half a bushel Ruta Bagas or Potatoes a day. During summer months, has been fed about four quarts oil meal per day, in addition to his corn meal. Corn worth 37½ cts. per bushel, say hay per week, 25 cts., roots 50 cents.

P. N. RUST.

C. Godfrey, of Geneva, fed his Cattle, as follows: On 12 to 14 quarts of corn and pea meal per day, during the year; the meal worth 50 cents per bushel. In summer, on grass. In winter, on hay.

T. E. Jones' Ox. The Ox has been fed fifteen months; the first five months, half bushel potatoes, and 6 quarts shorts, per day—10 months, half bushel potatoes, and 6 quarts meal, per day. Hay per week, 25 cts.; Potatoes, 20 cts. per bushel; Shorts, 20 cts. do.; Meal, 50 cts. do. T. E. JONES.

Mr. Rotch received his South Down Wether from England, in October, 1841. Through that winter, the sheep was fed as well as possible, with hay, potatoes, oats, and oil cake, having suffered from the voyage. On the 1st of May, his feed was gradually reduced, so that by the 10th of May, he was turned out to grass only, and has had nothing but salt from that time till he was put into the wagon, and traveled 80 miles to Albany.

FRANCIS ROTCH.

The two wethers I entered as Fat Sheep, are grass fed through the past summer, and through the previous winter fed only on clover hay and turneps; no grain whatever having been fed to them. J. M'D. McINTYRE.

STALLIONS.

1. By M. Moore, Johnstown, "American Eagle," 13 yrs.
2. John M. Fonday, Troy, 7 yrs.
3. E. Long & Son, Cambridge, "Eclipse." *First Premium.*
4. E. Long & Son, Cambridge, "Sir Henry." *Sec'd Premium.*
5. E. Long & Son, Cambridge, "Magnum." *Diploma.*
6. J. H. Cole & Co., Claverack, "Othello."
7. S. R. Garrett, Ballston, 13 yrs.
8. Daniel McKinney, Minaville, "Sir Henry." *Third Premium.*
9. Henry C. Southwick, Albany, "Sir Henry," 10 yrs.
10. Joel Falkner, Glenn.
11. D. D. Campbell, Schenectady, "Irishman," 4 yrs.
12. H. H. Wadsworth, Pittstown, "Brutus," 8 yrs.
13, 14 & 15. Calvin Morse, Lansingburgh, "Young European," 8 yrs.; 14 and 15, 4 yrs.

BREEDING MARES.

1 & 2. By E. Long & Son, Cambridge.
3. George Mark, Watervliet, 18 yrs.
4. H. R. McCarthy, Minaville, 7 yrs.
5. E. H. Ireland, Watervliet, "Betsy Baker," 6 yrs.
6. Isaac Haswell, Watervliet, 20 yrs.
7. Henry C. Southwick, Albany, 8 yrs.
8. J. McCarty, Coeymans, 10 yrs.
9. R. Fox, Albany, 5 yrs. 6 mos.
10. E. Lake, South Westerlo, 12 yrs.

THREE YEARS OLD STALLIONS.

1. By Corning & Sotham, Albany, "Sampson," 3 yrs. 4 mos. English Cart Horse.
2. John D. Leonard, Bethlehem, "Young Florizelle," 3 yrs.
3. M. Malany, Utica, "Arabia," 3 yrs. 4 mos.
4. Calvin Morse, Lansingburgh.

THREE YEARS OLD MARES.

1. By Jacob Pachman, Schodack.
By A. Donnan, Princetown, a two year old colt.

MATCHED HORSES.

1. By E. P. Prentice, Mount Hope.
2. O. Wiswall, Hudson.
3. Peter F. Mesick, Ghent. *Third Premium.*
4. Edwin McKie, Cambridge.
5 & 6. A. T. Dunham, Watervliet.
7. Joel Falkner, Glenn.
8. Edward Brinckerhoff, Albany. *First Premium.*
9. A. D. Patchin, Albany.
10. Robert Johnson, Florida. *Second Premium.*
11. Calvin Morse, Lansingburgh.

Report of Judges on Horses.

The Committee on Horses, beg leave to report that they have awarded the following premiums:

For Stallions over 4 years old.

1st premium of $20, to Mr. Long's chestnut horse Eclipse.
2d premium of $12, to Mr. Long's sorrel horse Sir Henry.
3d premium of $8, to Mr. M'Kinney's chestnut horse Sir Henry.
And a Diploma to Mr. Long's dapple bay horse Magnum, as 4th best.

For Stallions three years old.

The committee regret that but two were shown, and that, under the rule laid down by the Society, they did not feel authorized to award a premium to either.

They have likewise to regret that in the first class of brood mares and colts, nothing was shown, which in their opinion, merited the premiums offered by this Society.

In the second class of 3 year old Brood mares, there was but one mare offered; there being no competition, no premium could be awarded.

For Matched Horses.

1st premium of $15 to Mr. Brinckerhoff's pair of bay horses.
2d premium of $10 to Mr. Johnson's pair of black horses.
3d premium of $5 to Mr. Mesick's pair of bay horses.

The Committee are of opinion that the style of horse contemplated by the Society, as the "horse of all work," has not been exactly represented by any of the horses offered for competition. Thay have endeavored to the best of their judgment, to award the premiums to such horses as approached the nearest to the required model.

EDWARD HARRIS,
J. M. SHERWOOD,
W. T. PORTER.

I agree with the committee in the foregoing report, except as to breeding Mares and Colts. I think the mare Clio, and the colt by her side, entered by E. Long, of Cambridge, entitled to the first premium offered by the Society.

L. CHANDLER BALL.

FOREIGN STOCK.

The Committee on Foreign Stock, would respectfully report:

They have had the pleasure of examining a grey four year old Norman Stallion, presented by Mr. Edward Harris, of Moorestown, N. Jersey, and imported by that gentleman from France. This horse belongs to the breed used for the diligence, or stage coach, in France, and although not decidedly fleet, they are remarkable for their bottom and endurance. It may indeed, be well doubted whether any other variety of horses would drag those cumbrous vehicles so great distances in a given time. Like their descendants, the Canadian horses, they are easily kept, will feed on the coarsest materials, and are remarkable for their freedom from disease, and their iron hardihood and endurance under all circumstances.

Your committee consider Mr. Harris' horse one of unusual substance and symmetry, for the breed. The shoulder lies well back, the back is short, the whole conformation betraying immense strength. He has a great length and substance of forearm, and the limb below the knee is clean and short, for the character of the breed. He also displayed free and spirited action. Your committee cannot but believe that in its pure state, this variety of horses would prove one of the most valuable for heavy draft; and there is little doubt that crossed with the light mares of our country, would produce a peculiarly hardy and active race of horses, fit for the road or the plow.

The society were much obliged to Henry Whitney, Esq. of New Haven, Conn., for the opportunity afforded them of seeing specimens of his fine Short Horn stock, his valuable imported bull "Rocket," by "Norfolk," out of "Carnation," bred by Mr. Hargrave, in England, and his red roan cow "Strawberry," an animal that attracted much attention for her substance, and general good appearance. More it would not become us to say, as she is engaged in a sweepstakes. His beautiful heifer "Cornelia," we understand to be also in a sweepstakes, and therefore feel it necessary to abstain from comment.

Your committee further had the gratification of viewing a fine specimen of the Duke of Leed's stock, in the imported bull "His Grace," brought on the ground by Paschal Morris, Esq. of Allerton, Chester co. Pa. This animal was by "Anthony," out of "Vinea," she by Mr. Whittaker's Frederick, &c. "His Grace" is an aminal of great substance, and much excellence. He was selected, as we are informed, by Mr. Whittaker, in England, and sent over to this country in 1838.

Your committee trust that no foreign stock exhibited on this occasion, was overlooked by them—if so, the immense concourse of men and animals on the ground, and the confusion necessarily attending such a scene, must serve as their apology. All of which is respectfully submitted.

HENRY S. RANDALL,
FRANCIS ROTCH,
GEORGE J. PUMPELLY.

LONG WOOLED SHEEP.—Bucks.

1 & 2. By J. M'D. McIntyre, Albany, Cotswolds, 3 and 4 yrs. *Second Premium.*
3. C. M. Hall, Greenbush, Bakewell.
4, 5, 6 & 7. Corning & Sotham, Albany, Cotswolds, 3 yrs.
8. Thomas Dunn, Albany, Cotswold, 3 yrs. *First Prem.*
9. Thomas Dunn, Albany, 2 Leicesters, 2 yrs.
10. L. D. Clift, Somers, Cotswold, 3 yrs. *Diploma.*
11. J. H. Bullock, Bethlehem, Cotswold, 1 yr.
12. George Mark, Watervliet, Leicester, 4 yrs.
13. Hamilton Morrison, Montgomery, Bakewell, 4 yrs.
14. T. A. Brayton, Bethlehem, 2 Cotswolds, 3 yrs.
15. T. A. Brayton, Bethlehem, 1 Bakewell, 2 yrs.
16 & 17. E. C. Delavan, Ballston Centre, Cotswolds. *Third Premium.*

Buck Lambs.

1. By J. McD. McIntyre, Albany, 3 Cotswolds.
2. Corning & Sotham, Albany, 20 Cotswolds.
3. Ezra Chesebro, Fleming, 4 lambs, 6 mos.
4. L. D. Clift, Somers, 7 yearlings, Lincoln and Cotswold.
5. L. D. Clift, 1 yearling, Lincoln.
6. Henry Holland, West Milton, 1 Leicester, 5 mos.

Pens of 3 Ewes.

1. By J. M'D. McIntyre, Albany, Cotswolds, 2 yrs. *Diploma.*
2. C. M. Hall, Greenbush, Bakewells.
3. Corning & Sotham, Albany, Leicesters. } *First Prem.*
4, 5, 6, 7, 8 & 9. Corning & Sotham, Cotswolds, }
10 & 11. Thomas Dunn, Albany, Leicesters. *Third Premium.*
12. L. D. Clift, Somers, 2 Lincolns and 1 Dishley. *Sec'd Prem.*
13 & 14. J. H. Bullock, Bethlehem, Cotswolds.
15. Ham. Morrison, Montgomery, Bakewells.

Ewe Lambs.

1. By J. M'D. McIntyre, Albany, 3 Cotswolds.
2. Corning & Sotham, Albany, 20 Cotswolds.
3. L. D. Clift, Somers, 2 lambs.

Report of Judges on Long Wooled Sheep.

The Committee upon Long Wooled Sheep, Class No. I, have carefully examined the several specimens of this useful animal, which have been submitted to their inspection. Where the claims of individuals in some instances are so nearly balanced, it is difficult to do exact justice. The committee, exercising their best judgment, and having regard to the purpose which mainly recommends this class to the attention of farmers near our large towns, namely, the value of the carcase for the table, have endeavored to award the premiums with a fair discrimination, which shall command the approbation of the parties immediately interested.

The Committee award the premium for the best buck to Thos. Dunn, of Albany.

The premium for the second best buck to J. McD. McIntyre, of Albany.

The premium for the third best buck to E. C. Delavan, of Ballston.

The premium for the fourth best buck to L. D. Clift, of Putnam county.

The committee award the premium for the best pen of three ewes, to Messrs. Corning & Sotham, of Albany.

The premium for the second best pen of three ewes, to L. D. Clift, of Putnam county.

The premium for the third best pen of three ewes, to Thomas Dunn, of Albany.

The premium for the fourth best pen of three ewes, to J. McD. Intyre, of Albany.

The number and excellence of the animals submitted to the inspection of the committee, cause regret at the limited number of premiums at their discretion. They would particularly notice a pen of three ewes, belonging to H. Morrison, of Orange county, and a pen of twenty-three beautiful lambs, belonging to Messrs. Corning & Sotham, which commanded their admiration as choice specimens of this class of sheep, which is now attracting public attention, and for the introduction of which from abroad, the country is indebted to the liberal enterprise of several gentlemen, distinguished for their zeal in promoting the interests of agriculture.

EFFINGHAM LAWRENCE,
E. KIRBY,
CHESTER MOSES,
F. M. ROTCH.

Albany, Sept. 29, 1842.

MIDDLE WOOLED SHEEP.—Bucks.

1 & 2. By C. N. Bement, Three Hills Farm, South Downs, yearlings.
3 & 4. F. M. Rotch, Butternuts, South Downs. *Sec'd Prem.*
5. J. M'D. McIntyre, Albany, South Down, 2 yrs. *First Prem.*
6. J. M'D. McIntyre, Albany, South Down, yearling.
7. L. D. Clift, Somers.
8. S. Waite, Montgomery, 6 South Downs. *Third Premium and Diploma.*

Buck Lambs.

1. By C. N. Bement, Three Hills Farm, 3 South Downs.
2. J. M'D. McIntyre, Albany, 3 South Downs.

Pens of 3 Ewes.

1. By C. N. Bement, Three Hills Farm, South Downs. *Diploma.*
2. J. M'D. McIntyre, Albany, South Downs. *Second Premium.*
3. S. Waite, Montgomery, South Downs. *Third Premium.*
4. F. M. Rotch, Butternuts, South Downs. *First Premium.*

Ewe Lambs.

1. By C. N. Bement, Three Hills Farm, 3 South Downs.
2. J. M'D. McIntyre, Albany, 3 South Downs.

Report of Judges on Middle Wooled Sheep.

The Committee on Middle Wooled Sheep, would respectfully report,—

That the Sheep offered for their inspection, were, with one exception, all South Downs, and in these the competition was very close; so much so that it was with considerable difficulty that the committee decided upon the comparative merits of the sheep belonging to Messrs. Rotch and McIntyre. But after mature deliberation, the committee have awarded the first prize on middle wooled Bucks, to J. M'D. McIntyre, of Albany; the second to F. M. Rotch, of Butternutts; the third, and Diploma, to S. Waite, of Montgomery.

The committee have also awarded the first prize on middle wooled Ewes, to F. M. Rotch, of Otsego; the second to J. M'D. McIntyre, of Albany; the third to S. Waite, of Montgomery; the Diploma to C. N. Bement, of Albany.

E. MARKS,
S. W. JEWETT,
D. S. GURTISS.

FINE WOOLED SHEEP.—Bucks.

1. By H. D. Grove, Hoosick, Saxony, 3 yrs. *Second Premium.*
2. H. D. Grove, Hoosick, Saxony, 2 yrs.
3. H. D. Grove, Hoosick, Saxony, 1 yr.
4. C. W. Hull, New Lebanon, Saxony, 4 yrs. *First Premium.*
5. John Mott, Mechanicsville, Saxony, 5 yrs. *Third Premium.*

Pens of 3 Ewes.

1, 2, 3 & 4. By H. D. Grove, Hoosick, Saxony. *First and Second Premiums.*
5. C. W. Hull, New Lebanon, Saxony, yearlings. *Diploma.*

Report of Judges on Fine Wooled Sheep.

Report of the Committee on Fine Wooled Sheep, Class No. III.

We the subscribers, the Committee appointed to examine the Fine Wooled Sheep exhibited for premiums, beg leave to report—That the number of animals of that description, that were presented for exhibition, was small—nothing in number to what we were entitled to expect, considering that Albany is the center around which it is thought there are large and valuable flocks of that useful animal. In the state of New-York, there are probably as numerous, and as fine wooled sheep, as there are in any state in the Union. Some patriotic and spirited gentlemen, early entered into that branch of Agriculture, and it has been pursued from that period until this time, by a large number of our best farmers, with the best spirit and more or less success. It is a branch of agriculture that will keep pace with the increasing wealth of our people, and the capacity of our manufacturers to make a good article from the raw material. From the ingenuity of the American people, we have every reason to believe that in the manufacture of fine cloth, the time will soon come, that for cheapness, strength, and finish, their cloth will compete with that of any people in Europe.

We report that Charles W. Hull, of New Lebanon, Columbia co., is entitled to $10, the first premium, for the exhibition of the best Saxony Buck.

That Henry D. Grove, of Rensselaer County, is entitled to $8, the second premium, for the exhibition of the second best Saxony Buck.

That John Mott, of Mechanicsville, Saratoga co., is entitled to $5, the third premium, for the exhibition of a fine wooled Merino Buck. The committee would wish to draw public attention to this class of fine wooled sheep, which have recently been neglected for the finer but not more profitable Saxony, from the fact that the Merino shear much the heaviest fleece, which in quality and price is but little inferior to their competitor, the Saxony, but in amount of money realized from the same number of fleeces, exceeds them. The fleece from the buck to which the last premium has been awarded, and which was exhibited with the animal, for instance, weighed 9¼ lbs. and was of fair quality as to fineness.

The committee award $10, to Henry D. Grove, of Rensselaer, for the best pen of Ewes, and to the same person, $8, for the second best pen; and to Charles W. Hull, of Lebanon, Columbia co., a Diploma for the fourth best pen. All of which is respectfully submitted.

J. P. BEEKMAN, of Columbia,
E. C. DELAVAN, of Saratoga,
S. D. COLT, of Pittsfield, Mass.

Albany, Sept. 29, 1842.

BOARS OVER 10 MONTHS.

1. By C. N. Bement, Three Hills Farm. *Diploma.*
2. C. N. Bement, Three Hills Farm, Neapolitan, 1 yr.
3. Sam'l Shaw, Berlin, Berkshire. *Third Premium.*
4. Corning & Sotham, Albany, Berkshire, 1 yr. 5 mos.
5. Wm. Kirby, Guilderland, Derbyshire, 1 yr. 1 mo.
6. John Lossing, Albany, Berkshire, 1 yr. 4 mos. *Sec'd Prem.*
7. S. S. Crocker, Kinderhook, Berkshire, 1 yr. 3 mos. *Diploma.*
8. Chas. Thornton, Watervliet, for B. Knower, "Jim Crow," Berkshire, 2. yrs. 3 mos. *Diploma.*
9. Harman Bussing, Bethlehem, Berkshire, 1 yr. 2 mos.
10. J. B. Nott, Guilderland, Cheshire, 1 yr. 3 mos. *Diploma.*
11. W. Salisbury, Leeds, Berkshire, 2 yr. 3 mos. *First Prem.*
12. W. Salisbury, Leeds, Berkshire, 1 yr. 1 mo.
13. H. Holland, West Milton, Berkshire, 2 yrs 2 mos.

BREEDING SOWS OVER 10 MONTHS.

1. By C. N. Bement, Three Hills Farm, Chinese, 3 yrs. *Diploma.*
2 & 3. C. N. Bement, Three Hills Farm, Improved Chinas, 1 yr.
4. Jesse Buel, Albany, China and Neapolitan, 1 yr. *Diploma.*
5. A Van Bergen, Coxsackie, Berkshire grade, 2 yrs. *Diploma.*
6. Corning & Sotham, Albany, 2 Berkshires, 1 yr. 6 mos.
7. Corning & Sotham, Albany, Cheshire, 2 yrs.
8. Corning & Sotham, Albany, Cheshire and Berkshire, 1 yr.
9 & 10. John Lossing, Albany, Berkshires, 1 yr. 11 mos. and 1 yr. 4 mos *Diploma.*
11. G. Middleton, Albany, Berkshire, 2 yrs. 5 mos. *Third Prem.*
12. Chas. Thornton, Watervliet, for B. Knower, Berkshire, 3 yrs. 3 mos.
13 & 14. Harman Bussing, Bethlehem, Berkshires. *Diploma.*
15. W. Landon, Albany, Berkshire & Derbyshire, 2 yrs. *Dip.*
16 & 17. Benj. Gibson, Albany, Berkshires, 2 yrs. and 1 yr. 10 mos. *Second Premium.*
18, G. Donaldson, Bethlehem, Berkshire, 2 yrs. 3 mos. *Dip.*
19. T. C. Abrahams, Watervliet, Berkshire, 2 yrs. *First Prem.*
20. R. Fox, Albany, Berkshire and Cheshire, 4 yrs. *Diploma.*
21. H. Holland, West Milton, Berkshire, 10 mos.

PIGS UNDER 10 MONTHS.

1. By Corning & Sotham, Albany, 6 Berkshires.
2 & 3. H. Bussing, Bethlehem, 10 Berkshires, 4 mos. and 5 of 6 weeks.
4. B. Gibson, Albany, 4 of 5 mos. *Diploma.*
5. Thos. L. Pemberton, Albany, Grass, 9 mos. *Diploma.*
6. G. Donaldson, Bethlehem, 4 Berkshires, 5 mos. *Diploma.*
7 & 8. S. R Schuyler, Watervliet, 11 Berkshires, 4 mos. *Dip.*
9. Henry Sloan, Guilderland, 3 Cheshire & Grass, 5 mos. *Dip.*
10. C. N. Bement, Albany, 3 China and Mackeys. *Diploma.*
11. Thos. Beighton, Albany, 4 China and Mackeys, 3 mos. *Dip.*
12. Henry Sloan, Guilderland, 1 Cheshire and Grass, 5 mos.
13. A. Schuyler, Watervliet, 4 Berkshires, 4 mos. *Diploma.*
14. Samuel Cheever, Albany, a Berkshire, 5 mos. *Diploma.*

Report of Judges on Swine.

Judges.—William Lincoln, Worcester, Mass.
Samuel Cheever, Albany, N. Y.
A. Marks, Durham, N. Y.
William B. Ludlow, Hudson, N. Y.

The judges of Swine, of the New-York State Agricultural Society, respectfully submit their report:

They have had the great honor of waiting on a great company of those amiable animals, who claim our warmest affections, by all those dear relations which connect the pots and plates of those who desire to live well. The hogs have made Albany the "banner county" of pork. They sent no delegates to the state convention of stock; they attended in person, and formed one magnificent "mass meeting." Seventy swine were present, and deserved seventy premiums. Probably there has never been a time since the century plant began to grow, nor a place within the Yankee land or western world, where such large quantity and rich quality of the most beloved of all races, have ever before been gathered into a party, independent of political distinctions.

The judges have had great difficulty in deciding as to the relative merits of the four-footed competitors for prizes. The balance of excellence was often so even, that the weight of a single fibre of Saxony wool, would have turned the scale. If the results of their deliberations shall not prove to be satisfactory to all, they must fall back on the reserved right of consoling themselves by the reflection that they have examined with care, and have discharged their duty with the earnest desire to do exact justice. The wide separation between the homes of the several members of the committee, and the habitations of the pigs, will prevent any suspicion that the swine have availed themselves of any local partialities, or exerted improper influences.

The first premium of ten dollars for the best boar, was awarded to Gen. William Salisbury, of Leeds, for a beautiful animal of the Berkshire breed.

Mr. John Lossing, of Albany, was entitled to the second premium of eight dollars, for his excellent Berkshire boar. It is possible that this creature might have obtained a majority of the votes of the electors, if he had not manifested some aristocratic feeling by remaining in a box during the exhibition, instead of adopting the democratic principle of equality, by coming into the pens with the people of his race.

The third premium of five dollars is given to Mr. Samuel Shaw, for his Berkshire boar.

Mr. J. B. Nott, is entitled to a diploma, for his Cheshire boar, whose grandfather was imported from England, by Mr. Corning.

It is recommended that very large premiums of praise should be bestowed on other gentlemen. Mr. B. Knower, of Albany, exhibited a Berkshire boar named "Jim Crow," who could exceed the fame of his illustrious predecessor, in every thing except the facility of jumping and turning about, which he could not do. This, however, was not considered a material defect. So many turn about in these troubled times, that a hog who regards his own dignity, may be excused if he deviates from the fashionable way and stands still. Mr. Knower should have a diploma. So should Mr. S. S. Crocker, of Kinderhook, which has been celebrated for the greatness of its inhabitants, on account of his Berkshire. Another diploma should be given to Mr. C. N. Bement, of Albany, for his boar of the improved China stock.

It is requested by the committee, that the thanks of the Society should be tendered to Messrs. S. S. Crocker, of Kinderhook, for enriching the show by the exhibition of his Berkshire boar; to Mr. William Kirby, of Guilderland, for bringing a good specimen of the Derbyshire breed; and to Mr. Harmon Bussing, of Bethlehem, for a fine Berkshire boar.

Mr. C. N. Bement, whose praise as a successful improver of stock, is in all the pens and styes of the west, exhibited two Neapolitans, who were as destitute of clothing as the famous "no haired horse." The hair of a pig should be short: so should be that of a man. As the poet almost says,

> "Man wants but little *hair* below,
> Nor wants that little long."

However well they might flourish in the sunny clime of their nativity, they would need great coats or blankets, to protect them against the stern winters of northern regions. They were finely formed, and were said to be peculiarly valuable for delicacy of flesh. The committee were of the opinion, that although they might grace the table of the epicure with a rich repast, that they would bring less of profit to the pot of the practical farmer, than pleasure to those who are luxurious in pork.

The representatives of the females of the community of swine, were beautiful, as all females are, by whatever name they are called.

For breeding sows, the first premium of ten dollars, was awarded to Mr. T. C. Abrahams, of Watervliet. His excellent matron was surrounded by a large and pretty family, only three days old, living witnesses of the ability of the mother to increase the population of the Empire State. The repose of this pleasant domestic circle, was unhappily disturbed by the untimely death of one of the sisters. It is hoped that the last moments of the departed pig, were cheered by the reflection that it perished in promoting the great cause of agriculture.

The second premium was assigned to Mr. Benjamin Gibson, of Albany.

The third premium was given to Mr. Gerrit Middleton, of Albany.

As a testimonial of the excellence of the swine exhibited in this department, the committee recommend that diplomas should be presented to Messrs. C. N. Bement, Jesse Buel, John Lossing, William Landon, and R. Fox, all of Albany; Mr. A. Van Bergen, of Coxsackie; and to Mr. Harmon Bussing, of Bethlehem.

Fifty-seven pigs were in the pens; the census of those who were out of the pens, was not taken. All were of remarkable excellence.

No specific premium was proposed for the young citizens of the commonwealth of swine, by the society. They will afford to their owners, by their present merits and future value, higher rewards than can be measured by any pecuniary recompense in the power of the committee to bestow.

The committee have derived so much gratification from the interviews they have had with these nice little creatures, that they recommend to the society to present a diploma for success in good breeding, to Mr. Gerrit Donalson, of Bethlehem, Mr. S. R. Schuyler and Mr. A. Schuyler, of Watervliet, Judge Samuel Cheever and Mr. Gibson, of Albany, for their fine Berkshire pigs; to Mr. Thomas Pemberton, for a pig of the Grass breed; to Mr. Henry Sloan, of Guilderland, for specimens of the Cheshire and Grass cross; and to Mr. Thomas Beighton, and C. N. Bement, for examples of the mingled blood of the China and Mackay stocks.

There were two pigs of Mr. Bement's, which enlisted sympathy and excited admiration. They were left as desolate orphans, at the early age of ten days, by the decease of their venerable maternal parent. Their owner has since brought them up by hand, and has thus afforded another instance of his handiwork in benefiting the farmer's stock. His good breeding is so well known, that it cannot be doubted these pigs will have a liberal education.

A great mass of facts has been collected, illustrating the comparative merits of the various breeds of swine, and the genealogy and biography of celebrated individuals. It has seemed convenient to communicate the opinions of the judges with that brevity which is demanded by the hurry of an occasion where it is more desirable to see than to hear, and to ask leave hereafter to submit a supplementary statement in relation to topics of general interest to the agriculturist.

In the deliberations of the committee, the chairman has participated slightly. He has conceived it to be his duty to record their decisions accurately, and he regrets that it has not been in his power to report them more fully and perfectly. The matters which have been stated, have been determined by his associates. For the manner in which they have been communicated, he alone must be responsible.

The chairman ventures, without the sanction of the committee, to take the further responsibility of repeating sentiments which have been sanctioned by high authority.

Pigs are happy people. We may talk disparagingly about living like a pig. To live like a pig, is to live like a gentleman. Although it is not permitted by the order of nature, that a pig should laugh, or even smile, he enjoys the next best blessing of humanity, the disposition to grow fat. How easily he goes through the world! He has no fancy stocks to buy—no bank notes to pay—no indignation meetings to attend—no log cabin assemblies to hold. He has no occasion to take the benefit of the bankrupt act, or to have his estate confiscated to defray the expenses of the settlement. Free from all the troubles that disturb the busy world, he is as unconcerned among the changes of earthly affairs, as was the citizen who was waked in the earliest light of morning, by being told day was breaking: "Well," said he, as he turned again to his repose, "let Day break, he owes me nothing."

When we look at the comparative condition of the human race and of the swinish multitude, we may come to the conclusion, that if a man will not be a man, he had better be a pig.

For the Committee,
WILLIAM LINCOLN, *Chairman.*

PLOWS.

1. By C. N. Bement, Three Hills Farm, "Scotch."
2. Ruggles, Nourse & Mason, Worcester, Mass. 4 kinds.
3. Truman Minor, Peekskill, 2 kinds.
4. George D. Avery, Oxford, 3 kinds.
5. J. S. Tefft, Williamsville, "Washington."
6. Martin Malany, Utica, "Iron."
7 & 8. Charles Buel, Albany, "Saratoga Scotch," and "Iron."
9. Harman & Whiteside, Schenectady, "Wiskonsan."
10. Henry Mooers, Ithaca, "Side Hill."
11. W. U. Chase, Amsterdam.
12. Chas. Howard, Hingham, Mass.
13. Howard Delano, Mottville, 2 kinds.
14. Eliakim Elmer, Delta.

☞ The report of the Judges on Plows, of which Rev. Mr. Colman was chairman, has not been received. It will be given hereafter.

THRESHING MACHINES.

1. By John A. Pitts, Albany. *First Premium.*
2. Leonard Bostwick, New-York. *Diploma.*
3. D. G. Stafford, Syracuse. *Second Premium.*

FANNING MILLS.

1. By I. T. Grant & Co. Schaghticoke. *First Premium.*
2. P. W. Dickie, Phelps. *Second Premium.*
3. W. Thorburn, Albany, "Clinton's."
4. J. R. Bullock, New Scotland. *Diploma.*

STRAW CUTTERS.

1. By Christopher Proctor, Bethlehem.
2. Leonard Bostwick, New-York, "Warren's."
3 & 4. Gilson & Gage, Waterford, "Gilson's."
5. Burfoot & Botts, Richmond, Va. *Diploma.*
6. I. S. Wright, Jordan, "Wright & Filley's."
7. A Merwin, Lexington Heights.
8. William Hovey, Worcester, Mass. "Hovey's." *First Prem.*
9. Philip H. Kells, Claverack, "Kells'."
10 & 11. R. Sinclair Jr. & Co. Baltimore, Md.
12. Ruggles, Nourse & Mason, Worcester, Mass.
13. John Standish, Fishkill Landing. *Second Premium.*
14. W. Thorburn, Albany, "Armstrong's."

HORSE RAKES.

1. By Lewis Stiman. Bethlehem. *Diploma.*
2. J. Downer, Castleton. *Second Premium.*

Report of Judges on Threshing Machines, &c.

The Committee appointed to examine Threshing Machines, Fanning Mills, Straw Cutters, and Horse Rakes, beg leave to report:—

That they have attended to the arduous duties assigned them, and had it ever been questioned, the exhibition at this meeting would satisfy us that a good portion of the spirit of Yankee ingenuity and enterprise, had been manifested.

The attention of the committee was first directed to the Threshing Machines, and they much regret there were so few competitors, there being only four machines entered for competition.

Among the great improvements of the day, which have been made in implements of husbandry, the Threshing Machine may be named as an instance. Our ancestors used the flail or horses to beat out their grain, which, to say the least, was a slow and tedious operation; but thanks to modern invention, a machine has been invented, moved by horse power, that threshes out as much, and more effectually, grain in one day, than one man could in thirty days, with the flail. We now have a machine that will not only thresh, but deliver the grain ready for the mill or market, in the open field, without any loss in the operation.

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* There is no gentleman in our country to whom pigs are so much indebted for their celebrity, or who uses so large a proportion of attic salt in the management of porkers, as Mr. Lincoln. If the entire nation of pigs do not raise one universal squeal of lamentation when their warm hearted friend, and able chronicler of their virtues, shall be called to make his final report, (may it be a thousand years hence!) then there will be reason to apprehend that bringing the genus *Sus* into propinquity to the genus *Homo*, has been the means of deteriorating the former by imparting to them some of that vile quality for which republics are said to be famous—ingratitude to benefactors.—[Eds.

On a careful examination of the different machines offered, and on trial, the committee did not hesitate to award the Society's first premium of $20, to John A. Pitts, of Albany, for his Threshing Machine and Separator.

This is considered by the committee, as well as by those who have had it in use, a very perfect machine; and the growers of wheat are much indebted to Mr. Pitts, for his perseverance in constructing and perfecting a machine that will thresh and clean, with less labor, as much grain in a day, with the same power, as any that has yet been introduced.

The second premium of $10, we award to Mr. Stafford, of Syracuse.

This machine exhibited great skill and finished workmanship, and from its appearance and operation, well calculated for doing a great business. The horse power, we consider well worthy attention, being constructed on correct principles, and of the best materials. The thresher, also exhibited good workmanship, and finished in good style, and its performance very satisfactory.

On small farms, where a one or two horse power is desirable, the committee cannot resist the opportunity of recommending the two horse power presented by Leonard Bostwick, of New-York, as a valuable portable and well constructed implement, and at the low price which it is offered, comes within reach of the more numerous and humble farmer; we therefore award to Mr. Bostwick, a diploma.

The Endless Chain Power, presented by Mr. Kells, of Claverack, was much admired for its workmanship, and presented some improvements on Davis' machine, but there appeared too great a disproportion between the power and the speed of the thresher, to insure perfect work. Where a power on this principle is wanted, we do not hesitate to recommend it as well worthy of attention; and had we funds at our disposal, would award Mr. Kells a premium.

Agriculture, hitherto, compared with manufactures and the mechanic arts, has derived until recently, little or no advantage from labor-saving machinery. The farmer is literally compelled to earn his bread "by the sweat of his brow," and whatever invention may contribute to abridge his toil and enable him, at a less expense, to extend his productions, must be a welcome auxiliary; by multiplying the means of human subsistence and comfort, will prove beneficial to the community, and encourage the hard working laborious farmer with the hope of keeping in sight, in his own art, the "art of all arts," though at an humble distance, of the other rapidly advancing inventions of the age.

The committee are constrained to mention with approbation, the evident improvement made within the last year, in the construction of straw cutters; there being great competition in that article by fifteen different makers, several of which we are gratified to say, are from neighboring states, and afforded at prices ranging from five to fifty dollars. The committee found great difficulty in determining the superiority of several machines, and have been influenced in their decision, in several cases, by their preference to those machines which work on the side, rather than on the front, whereby one person can feed and operate them at the same time; which decision rejects several of great ingenuity of construction, and perfection of operation. They have endeavored to prefer those which by their arrangement and construction, seem best adapted to the wants of the farming community; they have therefore awarded the first premium of eight dollars, to Wm. Hovey, of Worcester, Mass.

The second premium of $5, to J. Standish, of Fishkill, Dutchess co. N. Y., for his Guillotine Cutter.

To Messrs. Botts & Burfoot, of Richmond, Va. a diploma.

This machine was exhibited under rather unfavorable circumstances, having been injured some by transportation. The advantages of this machine, as set forth by the proprietors, in their statement, are as follows: "The extreme simplicity of the knife, it being only 4 1-2 inches wide, and *straight* on the edge, putting it in the power of any laborer to grind it and set it on again. The peculiar management by which the "*draw-cut*" is obtained with a straight blade; the rapidity and ease with which the straw is cut, discharging as much or more than any other machine which cuts as short as this; the great strength and durability of the whole machine; no liability to get out of order; the great excellency of the feeding apparatus, and the ease and rapidity with which it is driven, it being in the power of a boy to cut sufficient straw or hay for a large herd, &c."

The committee avail themselves of the present opportunity of recommending this machine to their southern friends, as being in their opinion, a very efficient machine, and well adapted to cutting hay, straw, and corn stalks, and earnestly hope the enterprising proprietors may receive that encouragement they so richly deserve.

There were two machines, one for hand, the other for horse power, presented from the well known and popular establishment of the Messrs. R. Sinclair Jr. & Co. of Baltimore. These machines are made in a workmanlike manner, combining some important improvements, great strength and power, and well adapted to large establishments; have been long in use and much approved of, and had we funds at our disposal, would most willingly award them a premium. For the horse power machine, they are entitled to a diploma.

The committee cannot pass over in silence, the new constructed and very ingenious machine, presented by Mr. Kells, of Claverack. This machine embraced some new principles in the feeding apparatus, by which means the cut from 0 to 2 inches could be effected by merely raising a small bolt or slide. It also compressed the substance to be cut, nearly into a solid mass to receive the knife, by which means the straw was cut square and clean, and the greatest objection to it was the slowness of its operation, having but one knife. With an additional knife, we think it would be a very efficient machine. It has been got up in good style, and reflects great credit on the inventor and maker, and worthy encouragement.

There were other very meritorious machines on the ground, but the committee have not had time to enumerate and describe them.

The Horse Rake is generally considered a great labor saving and important implement on most farms, and a most valuable invention, and its utility has exceeded the expectations of many; and that on tolerable smooth meadows, a man with one horse, will rake as much hay, and do it in as clean a manner, as eight men can do it in an equal time with the hand rake.

The committee regret that there was so little competition, there being only two implements of this description exhibited: and as there was no improvement manifested on the common horse rake, which has been long in use, the committee have thought proper to withhold the first premium; but in consideration of the superior workmanship, have awarded a premium of $3, to J. Downer, of Castleton, Rens. co. N. Y.

To Lewis Stiman, of Bethlehem, for the second best horse rake, a diploma.

The committee next examined the Fanning Mills, four of which were entered for competition. The one exhibited by Messrs. I. E. Grant & Co. of Schaghticoke, Rens. co. has been got up with great care and superior workmanship; and by a peculiar arrangement of the screens, it appeared to combine some improvement over the ordinary machines; the committee therefore have awarded them the first premium of $8.

The second premium of $5, to Phineas W. Dickie, of Phelps, N. Y. for a mill of good construction and great power, combining some valuable improvements, and well adapted for a large grain growing country.

The committee recommend a diploma to John J. Bullock, of Guilderland, Albany co. for a well finished and well constructed machine, well adapted to this section.

In concluding this report, the committee avail themselves of this opportunity to express their great satisfaction at the present exhibition, and earnestly hope at the next and all future meetings of this society, the mechanics and manufacturers of the country, would bring forward the productions of their ingenuity and industry, which so much contributed to make the exhibition as interesting and satisfactory as those of any other country. At the meeting of the Royal Agricultural Society of England, in July last, between four and five hundred articles of Agricultural implements and machinery were exhibited.

Those persons who have been accustomed to follow the same course of husbandry which their fathers and grandfathers adopted, have formed the opinion that little is to be learned upon this subject. It is difficult to make them comprehend that this art involves principles as extensive, and as hard to be understood, as any other art which can occupy the attention of men. They never considered that agriculture is an important branch of Natural Philosophy; nor have they ever attempted to understand the nature of different soils; the regular and systematic rotation of crops; improved modes of tillage; the different breeds of cattle, sheep, and swine; and the different kinds and qualities of fruit and fruit trees, vegetables, &c.; and yet they are subjects which the skilful farmer will deem necessary to understand, and he will devote his attention to them, as the study of an important and difficult science. All of which is respectfully submitted by C. N. BEMENT, *Ch'n.*

CULTIVATORS.

1. By Eliakim Elmer, Delta. *Diploma.*
2. R. Sinclair Jr. & Co., Baltimore, Md.
3. Calvin Olds, Marlboro, Vt
4. W. Thorburn, Albany, "Schenectady."
5. Ruggles, Nourse & Mason, Worcester, Mass., "Bement's." *Second Premium.*
6. Jos. H. Coons, Brunswick. *First Premium.*

HARROWS.

1. By Christopher Proctor, Bethlehem. *Second Premium.*
2. Joseph H. Coons, Brunswick.

3 & 4. Daniel Caley, Bethlehem. *Diploma.*

5. Marcus Adams, Adams' Basin. *First Premium.*

PLANTING AND SOWING MACHINES.

1. By Lewis Stiman, Bethlehem.
2. Calvin Olds, Marlboro, Vt. *Diploma.*

OX YOKES.

1. By Winthrop Phelps, Chatham.

CORN CRUSHERS.

1. By R. Sinclair Jr. & Co. Baltimore, Md. *Second Premium.*
2. C. N. Bement, Three Hills Farm, "Ransom's."
3. Obed Hussey, Baltimore, Md. *First Premium.*
4. James Murray, Baltimore, Md. *Third Premium.*
5. Jas. Murray, Baltimore, Md. "Hand Crusher." *Diploma.*

CORN SHELLERS.

1. By John A. Whitford, Saratoga Springs. *Diploma.*
2. George E. Waring, Stamford, Ct.
3. W. Thorburn, Albany, "Adriance's."

MISCELLANEOUS IMPLEMENTS.

By B. Langdon, Troy, Cultivator Plow. *Diploma.*
W. Thorburn, Albany, Wheeler & Rollins' Root Cutter.
T. R. Hussey, Auburn, Reaping Machine. *Premium*, $10.
I. T. Grant, Seaghticoke, Grain Cradle and Scythe. *Diploma.*
James Murray, Baltimore, Md., self sharpening Hand Mill.
Lewis Stiman, Bethlehem, Plowing, Sowing, Cultivating, Rolling and Dragging Machine, Saw Filing, Machine, Water Wheel, and Hand Rake.
George D. Avery, Oxford, Dynamometer.
William Platt, Waterford, Patent Chuck.
Daniel Caley, Bethlehem, Improved Probang, *Premium.* Hog Catcher, and Straw Basket.
Augustus Thayer, Chatham, Columbian Pump.
Ruggles, Nourse & Mason, 1 doz. Hoes, Subsoil Plow.
H. Clark, Petersbugh, 1 Hoe. *Diploma.*
W. Jacks, Cocymans, Lever Railway Hay Press. *Premium.*
C. N. Bement, Three Hills, Farm, Poultry Feeding House.
Mr. Crowell, Lime Rock, Ct., Thermometer Churn. *Diploma.*
P. Van Antwerp, Coeymans, Re-acting Churn Dasher.
Collins & Stone, Hartford, Ct., Cheese Press. *Diploma.*
A. R. & S. H. Fox, Sand Lake, Window Glass.
Mellen Battel, Albany, Portable Steam Generator. *Medal.*
J. L. Mott, New-York, 2 Agricultural Furnaces. *Diploma.*
Chollar & Jones, West Troy, Cauldron Kettles.
J. A. Pitts, Albany, Self Protecting Bee Hive.
L. Tucker, Albany, Week's Vermont Bee Hive, and Hall's Self Protecting Bee Hive.

Report of Judges on Cultivators, Harrows, &c.

Mr. Geo. W. Patterson, from the Committee on Harrows, Cultivators, Drill Barrows, Yokes, and agricultural implements not specially under the examination of other committees, would respectfully report,—

That they have been exceedingly gratified with the ingenuity displayed in the manufacture of many of the articles exhibited for their inspection, some of which will be noticed in the proper place in this report.

Although Drill Barrows are in general use, and every practical farmer in the state, has, (or ought to have,) an ox yoke, still neither of those articles were presented for our inspection.

The Harrows presented, were by no means perfect in their construction, but after mature deliberation, the committee came to the conclusion to award to Marcus Adams, of Monroe County, for his wrought iron hinge Harrow, the first premium of $8.

To Christopher Proctor, of Bethlehem, Albany co., for the 2d best Harrow, with sliding attachment and improved hinge, a premium of $5.

To Daniel Caley, of Bethlehem, Albany co. for the 3d best Harrow, a Diploma.

The Committee after examining all the different Cultivators presented, came to the conclusion to award the first premium of $8, to J. H. Coons, of Rensselaer county, for his wheat Cultivator. It will be found a very useful implement upon summer fallows, and for covering the wheat when sown.

To Ruggles, Nourse and Mason, of Worcester, Mass, for Bement's Corn Cultivator, with graduating roller, and an improvement in the manner of extending or contracting the width of the implement, a premium of $5.

To Eliakim Elmer, of Delta, Oneida co., a Diploma, for the common Corn Cultivator, an article of beautiful workmanship.

The Committee examined a very superior horse hoe, invented by Mr. J. C. Langdon, of Troy, and take great pleasure in recommending it to the favorable consideration of the agricultural community, as an implement of much value in dressing corn, and earthing potatoes, and they award to the inventor a diploma.

There were a large number of Cast Iron Corn Crushers and Grinders, presented for the examination of the committee, all from the city of Baltimore. We were much pleased with all these machines, and more particularly with that part of them which is calculated for crushing the corn when taken in the ear, the grinding part being of less importance to the farmers in most parts of this state.

From the imperfect manner in which the committee were enabled to test these machines, it is very difficult to determine which would be most useful to our farmers. The committee would be gratified if they had the necessary means at command to bestow it liberally to each of the gentlemen presenting machines, but as they are not thus fortunate, they have come to the conclusion to award to Mr. O. Hussey, for the best machine, taking into consideration the price, a premium of $8.

To Robert Sinclair, Jr. for the 2d best, a premium of $6.

To James Murray, for the 3d best machine, a premium of $4.

These machines are all calculated for horse power, and would take up but little room on the granary floor of our farmers, and would be of essential service in preparing feed for stock.

The Committee would further remark, that Mr. Murray presented a Crusher, calculated for hand power, on the same principle of his larger ones, which would be valuable for farmers where they have but few cattle to feed, and are of limited pecuniary means, for which the committee award him a Diploma.

A Grain Cutter, invented by Obed Hussey, was presented by T. R. Hussey, of Auburn, Cayuga co., for the inspection of the committee. This machine is propelled by horse power, and is calculated to cut from twelve to eighteen acres of wheat in a day.

It is so constructed that the wheat may be cut at any distance from the ground the farmer may desire. It has been used in many of our western counties, with perfect success, doing the work in standing grain, better than the ordinary way of harvesting. A great saving of labor, as well as grain, is effected in the use of this machine. Some members of the committee have seen Mr. Hussey's lately improved machines fully tested, and can speak from personal knowledge, of their utility. They are calculated to operate well on level land, or where it is moderately uneven. The committee, therefore, award to T. R. Hussey, for his machine, a premium of $10.

Mr. Calvin Olds of Marlboro,' Vt., an ingenious mechanic of the "Mountain State," presented two Grain Sowers, one calculated for horse power, and the other to be drawn by hand. These machines are very creditable to the inventor, and furnish another evidence of "Yankee" ingenuity and enterprise. These machines have never been fully tested, but are intended for sowing all kinds of grain, grass seed, and plaster, and there is little doubt that the inventor, after the machine has been in use a short time, (if it is not now perfect,) will endeavor to make it so; and as there are no funds at the disposal of the committee, for premiums on Grain Sowers, they award to Mr. Olds, a diploma, which he has richly earned.

There were several Corn Shellers on the ground, which were examined by the committee. They all appeared to be well constructed, but as the committee were unable to find the owners of any but one of the machines, they award to J. A. Whitford, of Saratoga Springs, a diploma, for the best Corn Sheller and Cleaner, examined by the committee.

A "Poultry Feeding Fountain," was presented by C. N. Bement, Esq. of Albany, a very ingenious and valuable article for feeding domestic fowls, inasmuch as there can be no waste of the grain, and the expense must be so trifling, that every farmer can afford to procure one. The committee therefore award to Mr. Bement, a diploma.

The Committee also award to Henry Burden, Esq. of Troy, a diploma, for a beautiful specimen of Horse Shoes, made by machinery. This "labor saving machine," in the opinion of the committee, is a valuable improvement, and is destined to create an important change in the construction of that indispensible article.

The Screw Railway Hay and Cotton Press, offered by W. S. Jacks, of Catskill, N. Y. It is a machine combining great power, convenience of operation, and constructed on true and philosophic principles, and is a great desideratum to the river counties, and all places not contiguous to market, and also to Cotton and Hop growers; and the committee think they do not exaggerate, when they say, it is in their opinion, the perfection of machinery for that purpose. The committee therefore award to Mr. Jacks, a premium of $5.

The Thermometer Churn, presented by Mr. Crowell, of Lime Rock, Conn. seems to remedy one of the evils that have beset the dairy maid and housewife, from time immemorial—explaining the cause of the difficulty of the *coming* of butter, and doing away with the necessity of using the heated horse shoe, or iron wedge, to expel witches. The committee award to Mr. Crowell, a diploma.

Self-acting Cheese Press. An ingenious contrivance for making the weight of the cheese press itself, presented by Collins & Stone. This press is in use in many parts of Connecticut, with perfect success. The committee award to Messrs. Collins & Stone, a diploma.

The trowel tempered, cast steel, goose necked Hoe, presented by H Clark, of Rensselaer county, a well made, neat, and durable article. The committee award to Mr. Clark, a diploma.

The Columbian Pump, made by Augustus Thayer, of Chatham, Columbia co., N. York. This article is got up with great judgment as to correct principles, and combines some new and valuable principles not heretofore introduced. The commiette award to him a diploma.

A superior grain Cradle was presented by Isaac T. Grant & Co. for which they are entitled to a diploma.

Mott's Agricultural Furnaces. Two of these very valuable furnaces were exhibited by Mr. J. L. Mott of New-York, to whom a diploma is awarded, Mr. Mott having received the highest premium for the same article, at the last State Fair.

And last, though not least in importance, among the various articles presented for our inspection, is a very useful, and beautifully constructed and improved Probang, invented by Mr. Daniel Caley, of Bethlehem, Albany co., for relieving choked, and hoven, or bloated cattle. This implement is calculated for the removal of potatoes, apples, or other substances, with which an ox or cow, may be choked, without any considerable pain to the animal, and with perfect safety. It will, without the least difficulty, extract from the stomach of a bloated animal, the saliva, gas, or wind, and thus effect an instant cure. It is an article so much needed by every grower of cattle, that the committee would be glad to see them in the possession of all our farmers, and would urgently recommend to the Executive Committee to award to Mr. Caley, a discretionary premium, or silver medal. All which is respectfully submitted.

GEO. W. PATTERSON, *Ch'n*

HORTICULTURAL IMPLEMENTS & GARDEN ORNAMENTS.

1. By B. F. Smith & Co., Syracuse, 1 pr. Hedge Shears, 1 pr. Grass Shears, 2 Pruning Saws, 1 Manure Fork, 1 Cast Steel Shovel, 1 Iron Shovel, 2 large Spades, 1 small Spade, 1 boy's Shovel, 1 Bill Hook, 1 Tree Scraper, 1 Floor Scraper, 1 Deck Scraper, 1 Garden Reel, 2 Potatoe Hoes, 1 Weeding Hoe, 1 Ladies' Hoe, 6 Hoes, 1 Garden Syringe, 3 Weeding Trowels. *First Premium.*
2. By Jordan L. Mott, New-York, Cast Iron Vases. *First Prem.*

Report of Judges on Horticultural Implements, &c.

The Committee to whom was assigned the examination of of Horticultural Implements and Garden Ornaments, respectfully report,—That they have attended to this duty, but regret that there are so few competitors in this branch of agricultural implements. The committee have come to the unanimous conclusion that Messrs. Benj. F. Smith & Co. of Syracuse, are entitled to the first premium for the best assortment of Horticultural Implements, $10.

To Mr. Mott of New-York, for the best cast Iron Vase, $5. All of which is respectfully submitted.

SAM'L S. FOWLER,
E. HOLBROOK,
Sept. 29, 1842. CHAS. DOWNING.

Report of Judges on Miscellaneous Articles.

The committee to whom was referred such specimens of the products of farms, gardens, and shops, as they may think worthy of notice, and deem objects of encouragement, beg leave to report,—

That from the general division and distribution of the objects that would be presented to the Society for their approbation, among the numerous general committees, your committee were green enough to believe that their appointment would prove almost a sinecure; but when they arrived upon the field of observation, from the multitude of objects, scattered in rich profusion, of the production of nature and art, they found hardly time and space in the limited period allowed them, to do ample justice to the duties assigned them. They therefore, to carry out the views of the Society confined themselves to such efforts of art as more immediately fixed their attention, evincing such skill, superior workmanship, and elegant finish, as successfully to make our artizans compete with those of foreign countries —to such productions of nature as they deemed useful to be grown for the benefit of the people of our common country—and to such useful inventions as would contribute to the common benefit and happiness of all.

1. The first object that came under the observation of your committee, was a beautiful specimen of Window Glass, manufactured by A. R. & S. H. Fox, Sandlake, with so few curls or waves in it, as to make it almost equal to crown glass. With such improvements in the art of making common glass, the community, by patronizing the establishment, need no longer be apprehensive, when they *want light*, of seeing through a glass *darkly*. Your committee award a diploma.

2. The next article that fixed the attention of your committee, were some beautifully polished Screw Augurs, from the firm of Pruyn, Wilson & Vosburgh, Albany, so superbly polished, that the committee, on close *reflection*, came to the conclusion, that it would at least be a *bore* if they could not make their *way* in the world upon their own merits, without any other recommendation.

3. Contiguous to this last article, were some handsome silver plated Door locks, which seemed to combine beauty with utility, manufactured by O. B. Oakley, Albany. A diploma.

4. They were next invited to pass through a building erected especially for the display of mechanical objects. The *coup d'œil* at once presented a spectacle exceedingly gratifying to the eye of the observer. The first specimens that fell under their consideration, were those of Saddlery and Harness. The saddles were made of black leather, which the committee consider a desideratum, as they would not admit of stain; the material was new, of beautiful enameled leather, remaining perfectly pliable, and without the stiffness of the japanned patent leather; the harness of the same material, combining some improvements in the make, adding strength as well as lightness. They award a diploma to Lyman J. Lloyd, the manufacturer, Albany.

5. Adjoining this, they observed Allen's Self cocking and Self-revolving Pistols, which seem to be an improvement upon Colt's, as a weapon of defence; when a man's *pistoles* are demanded, and it becomes necessary to present *the pistol*, by the simple action of drawing the trigger, its self-cocking and self-revolving barrel power will enable any man effectually to answer the demand at sight. The committee are willing to fire a shot for the proprietor, by simply recommending the article, as they are confined to awarding premiums to artizans of this state.

6. Some Cast Steel Hammers, manufactured by G. Burley, Troy, and polished like a mirror, deserve a passing notice. For the perfection of finish, the committee award a diploma.

7. Mr. McKeever, of Albany, showed some neatly made Horse Shoes. The committee would recommend to the manufacturer to reduce the bevel, which is so great as to endanger the foot of the horse, by the gravel getting between the sole and plate of the shoe.

8. P. Conrad, of Albany, offered a fine assortment of files and rasp cutters. The committee award a diploma.

10. One of the greatest objects of attraction presented, was a fine display of highly polished Cutlery, from the shop of Edward Owens, Albany, consisting of surgical instruments, &c. Mr. Owens has been long celebrated for the beauty, perfection, and finish of edge instruments, and if he continues to sustain his well-earned reputation, he will be in the envied condition, these hard times, of "*owing* no man any thing." They award a medal.

11. A fine specimen of Coach Lace, was offered by Alfred Pierce, of Albany, equal, in the opinion of the committee, to any imported. The manufacture of this article has been recently introduced into this country, and they award a diploma.

12. Some Coffee Urns, of block tin, were presented by John Iggett, of Albany. From the finish of the article, and the judicious arrangement of the heaters, they suggested to the committee in the first place, the comfortable thought of the hot coffee to be derived from them, and repelled the idea from a man owning one of them, the belief that he ever would be reduced to cold coffee himself. They award a diploma.

13. Beautiful Leveling and Surveying instruments, exhibited by Mr. Andrew Meneely, of West Troy. From a *survey* of these articles, the committee believe that they would *level* all objections to the use of them in preference to those of foreign competition. They award a diploma.

14. Cane Bottomed Chairs, very handsomely carved, of the curled maple, from the manufactory of W. & R. Tucker, Albany, were exhibited. The committee would recommend them to the notice of the public, and hope this opinion of the *Chair* will be sustained.

15. Some splendid specimens of Complicated Door Locks were exhibited from the shop of John Woolensack, Albany. It is said poetically, that love laughs at locksmiths, but the committee are of opinion, that these locks would defy all the arts of *Cupid*, as well as those of *cupidity*. They award a medal.

16. Some well manufactured Leather Trunks, perfect in their kind, combining the advantages of writing desks and port folios, with ease in stowing and packing, deserved a diploma for Mr. F. A. Keeler, Albany, and a recommendation to the traveling public.

17. Mr. Jacob Hochstrasser, Albany, presented specimens of beautiful Japanned patent Leather—a truly fine mirror for the sable gentry of our country, casting no unjust reflections. A diploma.

18. Screw Plates, that seemed from their color, to be well tempered, were offered by Daniel B. King, Waterford.

19. Alum-dressed Lamb Skins, exceedingly white and soft, were shown by Thomas Guest, of Albany. Under shirts of this material, in winter, would make our *Guest* a *bosom friend*.

20. Mr. Geo. Simms, of Troy, offered some Black goat skin Morocco, to the inspection of your committee, apparently so well manufactured, that they award a diploma.

21. To all those who would preserve a relic of the olden days of this city, the committee would recommend to procure one of the Canes, made from the oak of the old Dutch Church of this city, by John Pierce, Albany.

22. Jesse Vail, Albany, exhibited some Cast Iron Grates, and fire screens, splendid specimens of casting. A diploma is awarded for this *grate* improvement in the art.

23. A very ingenious Card making Machine, was offered by P. Mather & Co. of Troy. It seemed to work like magic. A diploma.

24. Window Shades, manufactured by De Mauney, New-York, likely to throw all other competitors in the *shade*.

25. Fine specimen of Type, from the Foundry of C. Van Benthuysen, Albany, entitled him to a medal from the hands of the committee, which they hope may prove a *type* of even better things

26. Sleighs from the manufactory of J. D. Wemple, and J. Goold, Albany, well sustain the character of Albany mechanics for these articles, which are sent to remote parts of our country.

27. Mr. I. Cunningham, Albany, presented a very ingenious Mortising Machine, which appeared to do its work with despatch, and would seem to dispense with the necessity of a great deal of manual labor usually employed in the business. A diploma.

28. Benson & McCall, of Albany, had a fine display of every variety of Planes. The purchasers of this article, by industry, *plain* living and *plain* dealing, need never fear of always being above *board*. A diploma.

31. Some magnificent Sleigh Robes, owner not known.

32. Fine Hats were offered for exhibition, by E. Hills and L. G. Smith, Albany.

33. Bryan & Son, exhibited their Fur Caps, &c. They are too well known to need any encouragement from your committee.

34. John Gibson, Albany, *Plane Maker*, came in for a just share of the praise which the committee have awarded to Benson & McCall.

35. Thos. B. Ridder, of Albany, exhibited a great display of Tobacco and Segars, manufactured by him. [The minority of the committee being a little ultra in these notions, refused to encourage the consumption of the noxious weed. The majority were willing to compromise the matter, by going so far as to wish that the prospects of the manufacturer might *end in smoke*, yet for the present were willing to give him a *puff*.]

36. Mr. Andrew Meneely, of West Troy, exhibited some of his large Church Bells, of a peculiarly fine tone. A diploma.

37. A Domestic Cooking and Washing Steamer, was put in operation on the ground contiguous to the building. The capacity of the fire place seemed to be little more than a gallon, and placed in front of the boiler. Boilers were ranged round, of all sizes, and it seemed to the committee to do its work to a charm. It no doubt is a valuable improvement, and for which the committee award a medal to Mr. Battel, of Albany.

38. Among the variety of articles offered, were some immense Dorking Fowls, by Mr. Chapman, of Brooklyn. Without doing *foul* injustice to others, the committee think that Chapman may *now crow*.

39. In connection with these, Mr. E. Chesebro, of Albany co. exhibited some fine white Ducks, with immense topknots, rivaling the *Ducal* feathers of England's proudest nobility.

40. Robinson & Vanderbelt, of Albany, had on the ground a a splendid coach, price $800, of exquisite color and finish.

41. Also exhibited a fine finished trotting wagon, weight 264 lbs, with a new improvement in the reach, being double, and giving additional strength; it supersedes some of heavy ironing —made by two young mechanics of this city, to whom are awarded a diploma each.

42. Mr. R. Harman, of Wheatland, Monroe co., offered 21 samples of beautiful wheat. neatly done up in bottles, all produced on his own farm, and some millet and potatoe oats, producing, from his statement, 76 bushels per acre.

43. A. T. Van Slyke, of Coxsackie, Greene co., presented some boxes of white honey. It looked very enticing, and we doubt whether the bees of Hybla could do better.

44. The committee can hardly do justice to the many beautiful articles of Embroidery, produced on the occasion, from various parts of the state, by the handiwork of those from whom our sex derive so many of the comforts, luxuries and elegancies of life. They do not want the inclination, but they want the time, to describe them as they deserve. Suffice to say, they award diplomas to Miss Mary E. Fountain, of Peekskill, for beautiful embroidered table covers. Also to Miss Waterman, of Albany, for various specimens of her exquisite work of lamp mats, and other embroidery. Mrs. M. Haines, for embroidery, gorgeous wreath; and to Miss Margaret Hudson, of New-York, for a pair of Lisle net gloves, more beautiful than any member of the committee have known to be imported. To Miss Helen M. Whipple, of Albany, for her splendid embroidered lamp mats, of flowers, &c. To Miss C. Southworth, of Avon, N. Y. for two beautiful hearth rugs, worked with the needle, and which must have been the result of great industry and perseverance. To Mrs. Prentice, of Albany, for two quilts of piece work, made of silk. And to the Principal of St. Joseph's Orphan Asylum, for numerous pieces of exquisite embroidery. Arachemn, who contended with Minerva, for skill in embroidery, would not have met with her fate in being turned into a spider by the goddess, if she had possessed half the skill of our interesting countrywomen. The committee again aver, that time is wanting to do justice to the infinite variety of the beautiful articles.

45. A very handsome Pipe Clay Vase, for ornamental pleasure grounds, exhibited by Thorburn, of this city.

46. Mr. A. Walsh, a most indefatigable member of this Society, from its commencement, exhibited a number of specimens of products from his garden, consisting of Madder, Teazel Wood, and Senna; and in addition, presented one of the crowning ornaments of the fair, a beautiful Miniature Plow, ornamented with the most rare and beautiful flowers of the season, suspended in vials full of odors sweet, as an humble tribute from Flora to Ceres, indicating Horticulture to be the handmaid to Agriculture. The committee in considering these offerings, and his many services, award a medal.

47. Mr. Andrew Meneely exhibited a new and improved Town Clock, describing the improvement to consist in the dead beat, rendering it less liable to get out of order than those in use. The committee do not possess knowledge enough to pass upon the improvement.

48. Some very white specimens of Coarse and Fine Salt, from Syracuse, exhibited by John Townsend, of Albany, made by solar evaporation.

49. Mr. Melancton W. Mason, of Auburn, exhibited at the Capitol Park last evening, one of the most brilliant lamps for rail roads, canal boats, &c., that can be conceived. Its light was so intense, that at the distance of the capitol steps from the gate, your committee could see to read perfectly well the print of a newspaper. The improvement consists in the material and peculiar shape of the reflector. It is used with common oil. From the safety this lamp may give to human life in this railroad age, the inventor is richly entitled to a medal.

50. To Maurice Cunningham, gardener to Rob't F. Pell, Ulster co. is awarded a diploma, for the introduction into this county, of the Tomato Fig and Patagonian Squash, 4 feet in length.

In conclusion, the committee have been unable to do justice to the ample materials offered for exhibition to your society, and make any thing like a perfect report, having been obliged to do it in the short space of time allowed this day. All of which is respectfully submitted.

J. B DUANE, Duanesburgh,
J. J. VIELE, Hoosick.
WM. PARTRIDGE, N. York.
H. T. CHAPMAN, Brooklyn.
H. C. MERRIAM, Boston.
Albany, Sept. 29, 1842. W. A. McCULLOCH, Greenbush.

COCOONS.

1. By Elijah Chesebro, Guilderland Centre.
2. J. H. Cole, Claverack.
3. Elmer Knowlton, Ballston.
4, 5 and 6, David Palmer, White Plains—*Second Premium* and *Diploma.*
7. G. M. Stevens, Albany.
8. A. P. Heartt, Troy—*Third Premium.*
9. Louisa Steele, Troy—*First Premium.*

REELED SILK.

1, 2, 3 and 4. By David Palmer, White Plains—*First* and *Third Premiums.*
5. J. Slater, Ithaca.
6. Mrs. Shove, Navarino—*Diploma.*
7. A. P. Heartt, Troy—*Second Premium.*

MANUFACTURED SILK.

1. By Mrs. T. Backus, Rochester—*Diploma.*
2. H. Polhemus, Auburn.
3. Prince & Vibber, Richfield—*Second Premium.*
4. David Palmer, White Plains—*Third Premium.*

SEWING SILK.

1. By David Palmer, White Plains.
2. H. Polhemus, Auburn.
3. Prince & Vibber, Richfield.

SILK REELS.

1. By A. B. Jones, Buckland's Corners, Ct.—*First Premium.*

Report of Judges on Cocoons, Silk, &c.

The Committee on Silk, would respectfully report:—

That they have examined several lots of very superior Cocoons, and as between the three first samples, have found it nearly impossible to arrive at any accurate decision.

1st premium, $15, to Miss L. Steele, of Troy.
2d premium, $10, to David Palmer, of White Plains
3d premium, $5, to A. P. Heartt, of Troy.
4th premium, diploma, to David Palmer,

The specimens of Reeled Silk, were not as numerous as could have been wished. Several, however, were of beautiful quality.

1st premium, $15, to Doct. David Palmer.
2d premium, $10, to A. P. Heartt.
3d premium, $5, to Doct. D. Palmer.
4th premium, Diploma, to Mrs. Shove.

The specimens of manufactured Silk were numerous, and of a highly gratifying character.

1st premium, $15, to Henry Polhemus of Auburn, for a quantity of wove Silk; also about 40 lbs. of sewing Silk, and a quantity of Twist.
2d premium, $10, to Prince & Vibber of Richfield.
3d premium, $5, to David Palmer.
4th premium, Diploma, to Mrs. T. Backus of Rochester.

The committee would remark that the specimens to which the first premium was awarded, were presented by Mr. Polhemus, the agent of the State in the Auburn Prison, and were the labor of convicts. They were presented by Mr. Polhemus, for the purpose of showing to the citizens of our state, the feasibility of rendering this a successful branch of industry in our penitentiaries, and demonstrating beyond the possibility of doubt, that silk can be manufactured in the U. States, equalling the best class of imported articles. In sewing Silk, your committee made as accurate a comparison as the case would admit of, between that presented by the State Agent and the best specimens of M. Finessio, (red letter,) and other Italian manufacturers. The Auburn silk was thought to excel all but that of M. Finessio, and could not be distinguished from that, only on the closest inspection. The wove Silk, Handkerchiefs, &c. were also very superior.

Mr. Polhemus begged leave to return any premium which should be awarded to him, to the Society.

The first premium of $10, was awarded to —— Jones, for a highly ingenious silk reel, of a new construction.

HENRY S. RANDALL,
ORVILLE HUNGERFORD,
PETER RELYEA, Jr.

BUTTER.

1. By J. W. Canfield, Schodack.
2. Harvey Lyon 2d, Ogdensburgh.
3. Israel F. Goodwin, Westmoreland. *Second Premium.*
4. and 5. John S. Bull, Washingtonville, Orange. *Diploma.*
6. Thomas Satterlee, do.
7. John S. Bull, do.
8. George Cowles, Blooming Grove. *First Premium.*
9. John S. Bull, Washingtonville.
10. B. A. Hall, New-Lebanon. *Fourth Premium.*
11. Hamilton Morrison, Montgomery. *Third Premium.*
12. E. Chesebro, Guilderland Centre.

Report of Judges on Butter.

The Committee to whom was assigned the examination of butter submitted for Premium, at the Fair of the New-York State Agricultural Society, most respectfully report:—

That in pursuance of their appointment, they have examined the various samples exhibited by eleven competitors, and it is to the committee, as it doubtless will be to the Society, a matter of great regret, that in a state famed as is ours for the products of the dairy, only this small number of competitors should have presented themselves with the products of the dairy.

From the superior quality of much of the butter exhibited, the committee have no reason to doubt that had our dairymen generally exhibited their butter, an exhibition in point of quantity as well as quality would have been seen, excelling anything of the kind ever before exhibited in this country.

Several of the samples presented were so nearly equal in quality as to render decision difficult, though the committee finally unanimously united in awarding the premiums to the owners of the samples hereafter noticed.

Before giving their decision, the committee are of the opinion that the manufacture of butter is of sufficient importance to justify some general remarks on the subject.

The dairy business in this state is extensive, employing a very large capital and yielding a handsome revenue to the farmers, and is constantly on the increase; and upon the perfection of the article depends whether it shall secure a market as extensive as may be demanded, and prices such as to remunerate the farmer, and add to the rapidly increasing wealth of our state.

Without dwelling at length on the subject, the committee believe that there are some things which are indispensable to the production of a very choice article, and without which, whatever else may exist, butter of the best quality cannot be made. We are more impressed with the importance of these considerations, from an examination of the statements accompanying the butter exhibited, which were furnished us after the decision was made.

We notice as absolutely necessary, neatness in every thing connected with the dairy. The quality of the butter, its purity as well as its flavor and character in market, depends upon this. The milk must be kept at proper temperature while the cream is separating, and the cream should be taken off and churned before its quality is in any manner impaired. Salt of the very best quality should be used, and the milk must be entirely separated from the butter, and no more salt used than can be dissolved; and when this is accomplished suitable packages should be prepared, and the butter solidly put down, entirely excluding the air.

Much depends upon the manner of packing for market, and the committee regret that more attention was not paid to it with some of the samples exhibited. Firkins and tubs are most generally used, and either of them, with proper care and attention, will answer every purpose. Some of the samples exhibited were put up very neatly indeed, and attracted the attention of every spectator.

There can be no good reason assigned why all our butter should not be well manufactured; and no keeper of a dairy should permit an inferior article to leave his premises for the market. Much of the butter which now finds it way to market, from a neglect of the suggestions we have made, has a very poor sale, and brings an inferior price. This should not be so, and we appeal to every dairyman and to his wife and daughters, to remedy this defect without delay.

It is a matter of congratulation, that persons employed in purchasing butter for the markets the present season, have in some sections of the state made a discrimination in their purchases, which is waking up attention to this subject.

The committee would recommend that premiums be awarded as follows :—

1st Premium,	To George Cooley, Blooming Grove, Orange Co.
2d "	To Israel F. Goodwin, Westmoreland, Oneida Co.
3d "	To Hamilton Morrison, Montgomery, Orange Co.
4th "	To B. A. Hall, New Lebanon, Columbia Co.
5th, Diploma,	To John S. Bull, Orange Co.

The committee also examined a sample of butter made from scalded milk in 1841, and to which a premium was awarded at the Annual Fair in February last. This sample was kept by Mr. Merrifield to test the preserving qualities of the butter. We regret that it is not in as good condition in that respect as could have been desired, and probably does not in all respects, answer the expectation of the owner. We believe that butter can be so prepared as to remain sweet and good for a much longer time than this butter has been made, and when perfection shall have been more nearly attained, we shall expect at every Fair, butter of age competing with that of more recent manufacture for premiums.

The statements of the successful competitors accompany our report.

BENJ. P. JOHNSON,
ROBERT DENNISTON,
ELIJAH RHOADES,
HOWELL GARDNER,
JNO. DEAN.

Albany, Sept. 29th, 1842.

Mr. Cooley's Statement.

Made from 13 cows, from 16th to 24th September, and seven pounds of salt and a teaspoon full of salt petre, used in keg of 80 pounds.

Cows kept in usual way, and run in grass; had pure water daily, and salt twice a week.

Milk set in pans until cream rises and becomes thick; then churn all the milk immediately; dog churn used.

Method of freeing butter from the milk is to skim out the butter with a ladle, and work out the milk with a ladle with pure cold water, but using as little water as possible, as the water has a tendency to take away the good flavor or sweetness of the butter; and care must be taken not to work it too much, as it will become greasy. The best method of keeping butter in the summer, is in a cool place in white oak firkins, covered with a weak brine. GEORGE COOLEY.

Blooming Grove, Orange Co.

Mr. Goodwin's Statement.

Time of Making.—Since the first of the present month; number of cows kept, 14.

Mode of Keeping.—Mostly in stable in winter, and feed hay; and in the spring roots or some grain; in summer, grass.

Treatment of Milk and Cream.—Strain in tin pans, and set in a room that has a northern aspect and free circulation of air; set the cream in a cellar till ready to churn.

Mode of Churning in Summer.—In a barrel churn, in a cool room.

In Winter —Keep the milk and cream in a warm, instead of a cool room; churn in the same manner.

Freeing Milk from Butter.—By pressure.

Salt used.—The best quality of Onondaga ground salt; the quantity is tested by the taste of the dairy woman.

A very delicate tincture of the best loaf sugar is used, but care should be taken to not use too much; no other substances used.

Best time for churning in Summer.—In the morning, or when it is cool.

Best manner of keeping in Summer.—Keep the butter in tubs, jars or firkins, in a cool cellar; I think jars are best.

Westmoreland, Sept. 28, 1842. I. F. GOODWIN.

Mr. Morrison's Statement.

Made in September; 10 cows kept; milk kept in tin pans; churned by dog machine; freed from milk by ladle and water; fine rock salt; no other ingredient used; churned in the morning; preserved in firkins. H. MORRISON.

Montgomery, Orange County.

Mr. Hall's Statement.

The undersigned offers for the New-York State Agricultural Society's Premium, 87 pounds butter, made from seven cows in two weeks of the present month. The cows were kept on grass feed only; the milk set in tin pans for 48 hours; the cream then taken from the milk, and kept in stone jars three or four days; churned in a circular churn with revolving paddles; the butter freed from the milk by the use of a wooden ladle; the salt the best kind of blown or rock salt, and the quantity regulated altogether by the taste, as it requires more salt in warm weather, as more passes off with the milk; no other substance is used except a slight addition of refined lump sugar pulverized.

The best time for churning in hot weather is in the coolest part of the day; and the best mode of preserving it at any time of the year is in stone jars; pack it in solid, and exclude the air from it entirely. B. A. HALL.

New Lebanon, Col. Co. Sept. 25, 1842.

Mr. Bull's Statement.

The butter was made from the 6th to 20th Sept., from nine cows; the cows were kept on a part of the farm known by the name of the Clinton farm, Gov. Clinton's birth place; the quantity of salt used in said firkin of butter was 6½ of lbs. fine salt, called Ashton salt; no salt petre nor any other subsstance used. J. S. BULL.

CHEESE.

1. By Harvey Lyon 2d, Ogdensburgh.
2. John Bringold, West Leyden.
3. Isaac Haswell, Watervliet. *Fourth Premium.*
4. Ezra Chesebro, Fleming. *First Premium.*
5. Samuel Green, Herkimer. *Third Premium.*
6. H. P. and G. Allen, Duanesburgh.
7. A. S. Fish, Cedarville. *Second Premium.*
8. Thomas Burch, Little Falls. *Diploma.*
9. John Bringold, West Leyden, Whey Cheese and Milk Sugar.

Report of Judges on Cheese.

The Committee on Cheese respectfully report :—

That the quantity and variety of cheese offered for premium was unusually small; none remarkably good.

The best specimen in the judgment of your committe was that presented by Mr. Chesebro—the second best, that of Mr. Fisk—the third, that of Mr. Greene—the fourth, that of Mr. Haswell—the fifth, that of Mr. Burch.

With the exception of the two first lots, there was but little difference in quality, rendering it very difficult for your committee to determine between them.

For the mode of making this cheese the committee ask leave to refer to the written statements accompanying each lot, and which are herewith delivered; all which is respectfully submitted.

H. BALDWIN,
DANIEL STAUNTON,
J. N. RUST,
L. BRONK,
HENRY HOLMES.

Mr. Cheesebro's Statement.

Number of cows kept 50; keep them stabled through the inclement season; feed them from three to four times a day with good hay; when near coming in feed one peck of potatoes each a day, till turned to pasture; salting twice a week in summer, and once in winter, and water accessible at all times; milking very regularly.

The rennet is prepared by taking some whey and salting it till it bears an egg; it is then suffered to stand over night; it is then skimmed off clear; to this is added an equal quantity of water brine strong as the whey; add to this some sweet brier, thyme, cloves or other sweet herbs, also a little salt petre; the herbs are kept in the brine three or four days, after which it is put into a tight vessel clear from the herbs; add a little essence of lemon or orange; also four large rennets to six quarts of liquor; rennets saved in the ordinary way; cheese made from two milkings, no addition of cream.

Treatment of Milk.—The milk at night is strained into tubs, cooled by setting stone crocks filled with water in them; stand till morning, then dip the top of the milk into a kettle placed over a slow fire, continually stirring till sufficient to warm the whole blood heat, then add the morning's milk; very essential to have it a proper—which is of a blood heat; then add the rennet, two quarts to eighty gallons of milk; let it stand about 30 minutes, then cut it into checks about an inch square with a cheese knife; then gently break it with the hand and whey off; then work it fine with a sharp knife; then add the scalding whey; have it a light scalding heat; let it stand about half an hour, then separate the whey from the curd; then add one tea-cup full of ground Onondaga salt to every 15 or 20 pounds of curd; if the curd is very dry of whey to 20 pounds of curd; then dip it into the hoop and put to press; press in a lever press two days, turned once in the meantime; then taken out, rubbed with annatto, soaked in ley, then rubbed with lard; placed on shelves and turned daily through the season.

Fleming, Sept. 24, 1842. EZRA CHEESEBRO.

Mr. Fish's Statement.

The cheese presented with this statement was made in the month of ——— from the milk of twenty cows; one day's milk or two milkings; the quantity of salt one pound of refined Salina salt to forty pounds of curd; the quantity of rennet no more than sufficient to digest in 30 minutes; curd prepared for the hoops and put to the press; turned down the first day and pressed in all 48 hours; then taken from the press, placed upon tables prepared for the purpose; turned and rubbed daily, and moistened with whey oil as often as necessary to keep them smooth and prevent cracking. A. L. FISH.

Litchfield, Herkimer Co. N. Y.

Mr. Green's Statement.

The cheese presented with this statement was made in June last, from the milk of twenty-three cows; one day's milk or two milkings; no addition of cream; the quantity of salt, one tea-cup full refined Salina salt to 20 pounds curd, or about 2½ pounds salt to 100 pounds curd; rennet prepared by steeping several at a time until the strength is obtained, and then straining off the liquor; use a sufficient quantity to digest in 45 minutes; one tea-cup full to 30 pounds curd, generally answers the purpose when prepared as above; curd prepared and put into the hoop, pressed one hour, then turned and change of cloths, and pressed from six to eight hours; then turned and cloths changed again, and pressed in all 24 hours; then taken from the press; placed upon tables prepared for the use; turned and rubbed daily, and moistened with whey oil as often as necessary. SAMUEL GREENE.

Fairfield, Herkimer Co.

Mr. Haswell's Statement.

My cheese was made in the month of July from eight cows, with two milkings; with no addition of cream. I used Liverpool salt, about half a pint; the rennet used in quantity about two inches square, and steeped in half a pint of cold water eight hours previous to its being put into the milk; they were put in a lever press and remained there 44 hours; were turned three times, and salted in the press; were taken into the cheese room and rubbed and turned every day.

Watervliet, Sept., 1842. ISAAC HASWELL.

Mr. Burch's Statement.

The cheese exhibited here were made on the 20th and 22d of May, from 44 cows and two milkings; 47 cows were milked in the dairy in all the season; no additions were made of cream, but the cream from the milk kept over night was put in. We use the Onondaga salt, the purest we can get, in the proportion of a common tea-cup full to 16 pound of cheese; after the curd is broken up fine in a machine with two cylinders set with small wire teeth, the salt is put in and the whole well stirred and mixed.

The rennet when taken from the calf is turned inside out, and stripped clean with dry hands, no water being used; after laying in salt three days, it is turned, stretched on sticks and dried. When wanted for use, one rennet is soaked in two quarts of warm water, and one tea-cup full used for one cheese, weighing as these do, 115 and 116 pounds. The cheese is pressed in "Hales' Patent Self Acting Lever Press," 24 hours, and turned once in the time.

From the press the cheese goes on to the tables; is colored with annatto, and rubbed over with butter made from cream taken from the whey. Bandages are put on the first day; the cheese turned, rubbed and greased at least twice a week, and through the early part and warm season, nearly every day; much depends upon the faithful performance of this part of the treatment.

The cows are always milked in the stanchels, and the milk conducted from the barn to the cheese room, a distance of 118 feet, in ⅜ inch lead pipe. The advantages gained by this are : keeping the milk from the impurities unavoidable from milking out in rainy weather, and in muddy and filthy yards; and the greater comfort in milking. THOMAS BURCH.

Little Falls, Sept. 27, 1842.

MAPLE SUGAR.

1. By Erastus Bigelow, Sangerfield. *Third Premium.*
2. B. Gauss, jr., East Bloomfield. *First Premium.*
3. Otto F. Marshall, Wheeler.
4. C. Hepinstall, Albany. *Diploma.*
5. Joel Woodworth, Watertown.
6. Wm. E. White, Walton. *Second Premium.*
7. J. A. M'Neil, Argyle.
8. O. F. Marshall, Wheeler, Maple Molasses.

Report of Judges on Maple Sugar.

The committee on Maple Sugar respectfully report, that they have endeavored faithfully to discharge the duties assigned them. There were seven samples presented to them for their consideration, between some of which it was somewhat difficult to discriminate, as they approached each other very nearly both in flavor and color. They award the first premium of $15 to Mr. B. Gauss, jr., of East Bloomfield. This is a very splendid specimen of Maple Sugar, particularly on account of its whiteness, approaching very nearly to the best refined loaf sugar. Your committee award the second premium of $10 to Mr. W. E. White, of Walton. They award the third premium of $5 to Mr. E. Bigelow, of Sangersfield. Your committee remark that they consider this a very handsome specimen of Maple Sugar; and although not as white as those to which allusion has been made, is fully equal to, if not superior, to them in point of flavor. They award the diploma to C. Hepinstall of Albany. The specimens exhibited by Mr. O. F. Marshall of Wheeler, and Mr. Woodworth of Watertown, the committee consider as deserving of much praise.

L. BRONK,
HARVEY BALDWIN,
P. N. RUST,
J. C. MATHER

Mr. Gauss' Statement.

Ontario County, ss.—Benjamin Gauss, jr. being duly sworn, deposeth and saith that he manufactures from six to eight hundred pounds of Maple Sugar a year. That he taps about three hundred trees. He boils in a sheet iron pan set upon an arch. When the sap is boiled to a syrup, it is then carried to the house, strained and settled; afterwards it is put into a kettle, boiled and cleansed with milk and the white of eggs, until it will grain. It is then put into pans to drain; then put into boxes to drain. These boxes converge to a point, so that the molasses settles to the bottom. On the surface of the sugar in the boxes, flannel cloths are placed, constantly kept wet with cold water. When sufficiently drained with these cloths, the sugar is melted over again, cleansed again with milk and eggs, and the same process gone through again with the flannel cloths. These cloths are washed every day to extract all the coloring matter from the sugar. The box of Sugar accompanying this or containing this paper, was manufactured by the said Benjamin Gauss, according to the foregoing process

BENJAMIN GAUSS, jr.

Mr. White's Statement.

Cleanliness is necessary in every part of the process. Coloring matter should be carefully avoided; if the sap is scorched in the least, it will hurt the grain and color of the sugar.

My method is, first have all the sap tubs scoured with sand and scalded before they are carried to the trees.

Treatment of sap.—Boil the sap without delay, and strain the sap before it is boiled; use sheet iron boilers which hold five pails each; boil about twenty pails of sap into one of syrup.

Method of cleansing.—Stir in the white of two eggs into one pail of syrup; place it over a slow fire till it boils. After it is cleansed, strain it through a flannel strainer; place it over a brisk fire till it will rope an inch, then pour it into pans till it grains; from thence into wooden drains filled with gimlet holes, and made tapering from the top to the bottom. Cake Sugar is made in the same way, only it is boiled lower till it will stir dry in a spoon. WILLIAM E. WHITE.

Walton, Delaware Co.

REPORT OF THE COMMITTEE ON FRUITS.

OF APPLES, several fine collections were exhibited. A part only, were correctly and distinctly labelled; confusion and repetition in names sometimes occurred, and in one instance, a fine and extensive collection contained the same fruit under three distinct names. Many too, from inferior quality, were considered by the committee as unfit to be classed with good *table apples.* Hence some lists were necessarily much reduced in numbers, before they could be placed on the grounds for competition. The committee also considered their labors as confined to such fruits as were actually cultivated by competitors; as without this restriction, the merest novice might purchase in market and exhibit as large a collection as any, without any merit as a cultivator. For these reasons, and the want of time, and the confusion necessarily resulting from the crowd of spectators, as well as the absence of the names of some contributors, the committee found it impossible to obtain a full and accurate list of all the fruits presented. Among some excellent collections, which the limited number of premiums prescribed by the Society, prevent them from otherwise noticing, and for which the thanks of the Society are especially due for such fine additions to the exhibition, the committee particularly observed the following :—

An extensive collection of apples from *Elwanger & Barry,* nurserymen, Mt. Hope, near Rochester, containing some excellent and desirable varieties; a large collection from *Hall Colby* of Greece, Monroe county, presented by M. B. Bateham, some of them fine and but little known, of which the committee regret they are unable to furnish a list; and a fine collection from Gen. *R. Harmon* of Wheatland, Monroe county. There were also presented by *A. P. Heartt* of Troy, the following varieties: Fall Pippin, Pound Sweeting, Esopus Spitzenburg, Rhode Island Greening, King Sweeting, American Golden Pippin, Baldwin, Sweet Russet, Jersey Sweet, Lady Sweet, and several others; by *A. J. Downing & Co.* Newburg, the following varieties: Beauty of Kent, Blenheim Pippin, Bedforshire Foundling, Baldwin, Benoni, Cornish Aromatic, Canfield, De St. Julian, Dominie, Downton Pippin, English Golden Pippin, English Nonpareil, English Russet, Federal Pearmain, Flushing Spitzenburg, Grand Sachem, Greenwich, Holland Pippin, Kirk's Lord Nelson, Lemon Pippin, Lucomb's Seedling, Porter, Roe's Sweet, Ross' Nonpareil, Ribston Pippin, Red Bellflower, Scarlet Pearmain, Summer Sweet Paradise, Schoonmaker, Watson's Dumpling, Winter Spice, Wormsley Pippin, Wine, Royal Calville, Yellow Bellflower, Zank, Adams' Pearmain, William's Favorite, with several other well known and excellent varieties; by *Wm. P. Buell,* Albany: Dutchess of Oldenburg, Striped Pippin, Astrican, Hoary Morning, Kerry Pippin, Pumpkin Sweeting, Drap d' Or, Fall Pippin, Cheesebro Russet, German Black, Harrison, Black Apple, Jonathan, Swan's Egg, Winesap, Golden Pippin, Surprise, Newark Pippin, Newtown Pippin, Newtown Spitzenburg, Esopus Spitzenburg, Baldwin, Downton Pippin, and many others; by *E. Holbrook,* Hyde Park, handsome seedling apples; several varieties by *B. Pollock,* Watervliet; very large specimens of Mammoth Pippin by *Isaac Lovejoy,* Greenbush; several varieties from *A. T. Van Slyck,* Coxsackie; six varieties from *Harmon Bussing;* and a number of varieties from *Peter G. Vandenburg,* Watervliet.

OF PEARS, but a very few collections were offered. The best decidedly, was an extensive one from *A. J. Downing & Co.,* Newburgh, consisting of the following varieties: Althorpe Crassane, Belmont, Angleterre, Brown, Beurré, Beurré Easter, Beurré Rose, Belle et Bonne, Beurré Van Marum, Buffum, Bezi de la Motte, Bergamotte Suisse, Easter Bergamot, Blecker's Meadow, Colmar d' Autome, Crassane, Compte de Lamay, Fulton, Capiamont, Frederick de Wurtemburg, Gilogil, Henry IV, Leon le Clerc, Louis Bonne, Passe Colmar, Princess of Orange, Swan's Egg, Seckel, Urbaniste, Virgalieu, Wilkinson, Winter Nelis, Beverly, Stevens' Winter, Flemish Beauty, Beurré Knox, Beurré Rans, &c. *Wm. P. Buel* of Albany, presented specimens of Marie Louise, Bartlett, Virgalieu, Grey Doyenne, Gansel's Bergamot, Beurré Rans, and Winter Nelis; *A. P. Heartt* of Troy, fine specimens of Bartlett, (or Williams' Bonchretien,) and Virgalieu; *G. M. Stevens* of Albany, Bartlett and Bay pears; and *A. Ross* of Hudson, very fine specimens of Virgalieu.

Only three collections of QUINCES were noticed by the committee; one from *E. Holbrook,* Hyde Park one from *A. Blake,* Albany; and one from *A. Ross,* Hudson, all of which were decidedly fine.

Very few PEACHES were presented, only one collection being large enough for the state premium, which from the inferior quality of some, the committee did not feel authorized to award. They would, however, notice some unnamed specimens from

A. P. Heartt, Troy; from *S. Van Rensselaer*, Albany; several single specimens from *Elwanger & Barry*, Rochester; and a very large and fine one of a new variety, which measured 11 and a quarter inches in circumference, from *S. Comstock*, Lansingburgh.

There were several fine specimens of PLUMS, among which were Coe's Golden Drop, Yellow Egg, Green Gage, St. Catharine and some others, from *A. P. Heartt*, Troy; Yellow Egg from *J. McDonald McIntyre*, and from *A. Van Voast*, Albany; and unnamed varieties from *A. Ross*, and ——— *Benson*, Hudson; and *John Bull*, New Lebanon.

Only one collection of NATIVE GRAPES appeared in quantities large enough for the premium, and only one of exotics. The committee however noticed four very fine specimens of unlabelled exotic grapes from *S. Van Rensselaer*, Albany; fine specimens of White Chasselas, Sweetwater, Isabella, and Red Bland, from *Elwanger & Barry*, Rochester; and of Sweet Water and Spafford grapes, from *A. Walsh*, Lansingburgh.

The committee have made the following awards. The Chairman, A. J. Downing of Newburgh, being one of the competitors, was not consulted in cases where his own contributions were under consideration.

For the greatest collection of table apples, A. J. Downing & Co., Newburgh.

For the second greatest collection of table apples, Wm. P. Buell, Albany.

For the third greatest collection of table apples, A. P. Heartt, Troy.

For the best twelve sorts of table apples, A. J. Downing & Co., Newburgh.

For the greatest variety of table pears, A. J. Downing & Co., Newburgh.

For the second greatest variety of table pears, Wm. P. Buell, Albany.

For the greatest variety of winter pears, A. J. Downing & Co., Newburgh.

For the best twelve quinces, E. Holbrook, Hyde Park.

For the best twenty-four plums, A. P. Heartt, Troy.

For the best six bunches native grapes, (Isabella) Alex. Ross, Hudson.

For the best six bunches foreign grapes, (Black Hamburg,) A. T. Van Slyck, Coxsackie.

The committee recommend a discretionary premium of a Diploma, to S. Comstock of Lansingburgh, for his fine seedling peach; and also a discretionary premium to S. Van Rensselaer, for his fine specimens of exotic grapes.

By order of the Committee. J. J. THOMAS.

REPORT OF JUDGES ON FLOWERS.

The second Floral Show of the New-York State Agricultural and Horticultural Society was held on the 28th and 29th days of September, in the spacious building erected expressly for the exhibition of the products of the Garden and the Farm on the Show Ground.

The committee could scarcely have been furnished with a more suitable or better located building to accommodate the immense multitude in constant attendance.

On entering the hall, the rich groups of native and exotic plants tastefully arranged and decorated, affording a pleasing *coup d'œil*; an appropriate and beautiful garnish to the fruit and vegetable inmates of this vast arena.

Among the most striking of the green house plants were some fine specimens of Acacia pubescens, Acacia decurrens, Aster argophyllus, Azalea lateritia, Mamillaria acanthrophlegma, Camellia japonica, var. Camellia philadelphica, Camellia Beali, Chorizema varia, Chironia decussata, Citrus medica, 6 inches high, in fruit, Citrus nobilis or Mandarin orange, Diosma rubra, Diosma ericoides, Erica polytrichifolia, from the green-house of Mr. L. Menard, who also contributed some thirty plants of which we would notice Mamillaria chemanii, Mamillaria discolor, Mamillaria scopa, Mamillaria cerifera, Echinocactus cornigera, Echinocactus glaucus, Cereus deppi, Cereus russelliamus, Opuntia pulvinata, Calothamnus villosa, Camellia japonica, var., Camellia fimbricata, Camellia sombricata, Camellia nobilissima nova, Camellia albertus, Gladiolus ramosus, Melaleuca fulgens, Metrosideros crassifolia, Polygala cordata, Buddlea madagascariensis, Erythrina crista-galli, Hotzia coccinea, Æschymanthus grandiflora, Fuchsia corymbiflora, Fuchsia youelli, Fuchsia globosa, Fuchsia grandiflora, Fuchsia standishii, Calceolaria rugosa, var., meteor, Manettia cordifolia, Heliotropium intermedium, Pimelia decussata. These, placed on the extensive central table, surrounded by numberless boquets of choice cut flowers, redolent with the most pleasing odors, from the grounds of Messrs. Jackson, Heartt, Downing, Van Rensselaer, Warren, Burden, Willson, Buel, Thorburn, Walsh, etc.

The collection would doubtless have increased in splendor and variety, and shed still greater charms on the occasion, but for an early frost that cut off nearly all the dahlias in the vicinity of Albany, among which it is said were many rare seedlings. Flowers have furnished a theme for poets; playful imagination wove them into language; they have been bound round the brow of the conqueror; they have been strewed on the path of the brave; they delight the infancy of the cradle, and have dressed the monuments of the dead. As evidences of popular approbation, they have been showered on the heads or cast at the feet of the successful candidates for popular applause. All have acknowledged the influence of the flower, and the lovelier sex confessed their indebtedness to the attractions of the rose..

> "Strew, ye fair, his way with flowers,
> Strew your hero's way with flowers."

Such was the conclusion of the ode of the mothers and daughters, when, dressed in white, they strewed the path of Washington with flowers, as the father of his country was passing through Trenton on his way to New York, to assume the first office in the gift of a confiding and grateful people. Who would not be a Washington? What lady would be without her flower garden? Solomon in all his glory was not clothed as one of these.

The following are the awards of the committee.

On the greatest quantity and variety of flowers—
- 1st. To L. Menard, Watervliet.
- 2d. To Prof. J. W. Jackson, Schenectady.
- 3d. To A. P. Heartt, Troy.

For the best Floral Ornament—
- 1st. To Alexander Walsh, Lansingburgh.
- 2d. To S. E. Warren, Troy.

For the best 25 varieties of Dahlias—
- 1st. To A. J. Downing, Newburgh.
- 2d. To S E. Warren, Troy.
- 3d. To Prof. J. W. Jackson, Schenectady.

To E. Whitfield, Albany, for several beautiful Floral Paintings, in water colors and pencillings—discretionary premium.

George C. Thorburn, New-York, contributed 25 varieties of superb Dahlias, too late to compete for premium.

E. Holbrook, Hyde Park, contributed some pretty seedling Dahlias. Owing to an error in labelling, they were not inspected by the committee.

All which is respectfully submitted.

ALEXANDER WALSH,
J. O. CHOULES,
J. W. JACKSON,
A. P. HEARTT,
Committee.

REPORT ON VEGETABLES.

The display of Garden productions was very fine. The quantity, variety, and excellence of the vegetables exhibited, reflected much credit on those who raised them, and afforded gratifying evidence of the onward progress of Horticulture. Notwithstanding the very limited number and amount of the premiums offered on the occasion, the number of competitors was quite large, and the Society are much indebted to several gentlemen for their pains in sending articles a considerable distance, to enrich this department of the exhibition.

E. Holbrook, Esq. of Hyde Park, exhibited fine Celery, Carrots, Parsneps, Table Beets, Salsify, Onions, and Lima Beans. Also three heads of Cabbage, weighing 71 lbs.; three Canadian Squashes, weighing 77 lbs.; six White Sugar Beets, weighing 101 lbs. and 12 fine Cuba Tomatoes.

Mr. D. Payne of Bethlehem, exhibited some very large Cabbages, Squashes and Pumpkins; three varieties of Melons; four of Tomatoes, six of Potatoes; some fine Carrots, Onions, Sweet Corn, Turneps and Mangel Wurtzel.

Mr. J. S. Pangburn of Bethlehem, exhibited very large Squashes, Cabbages, and a Pumpkin; also three sorts of Onions, fine Carrots, Parsneps, Sugar Beets, Mangel Wurtzel, and Potatoes.

J. B. Nott, Esq. of Guilderland, exhibited 12 very large and long Parsneps.

C. N. Bement, Esq. Albany, Sugar Beets and White field Carrots, both very large and fine.

Jesse Buel, Albany, nine varieties of Potatoes, some new and evidently valuable kinds. Three very fine Crookneck Squashes, one large Pumpkin, one dozen Tomatoes, two kinds of Carrots, and some beautiful Dutton Corn.

Wm. P. Buel of Albany, six varieties of Potatoes, three of Onions; fine specimens of Pie Plant, Celery, Tomatoes, Blood Beets, large White and Orange Carrots and Drumhead Cabbages, and fine Dutton Corn.

Mr. Jas. Wilson, Albany, very large Drumhead Cabbages, and fine heads of Broccoli, and a bunch of double curled Parsley.

E. P. Prentice, Albany, large White field Carrots, Mangel Wurtzel and Sugar Beets.

W. H. Sotham, Albany, 12 very large Ruta Bagas.

Alex. Walsh, Lansingburgh, 16 varieties of Potatoes, specimens of Globe Artichoke, Sea Kale, and a variety of other useful or curious productions.

E. Chesebro, Guilderland, one large Pumpkin, weighing 93 lbs. one doz. fine Onions and some Seed Corn.

Dr. Wendell, Albany, by M. Bow, gardener, very large Squashes and Pumpkins, ten varieties of Potatoes, (including the "Kelsean," a new and very productive and excellent variety,) new Giant Celery, White and Orange Carrots, Savoy, Wellington and Drumhead Cabbages, fine Beets, Parsneps and Seed Corn.

S. V. R. Ableman, Almshouse Farm, Albany, very large Cabbages, and fine Dutton Corn.

Jas. Coffee, Albany, beautiful Lemon and Orange Carrots, Mammoth Tomatoes, Blood Beets, Drumhead Cabbages, fine curled Parsley, and German Greens or Scotch Kale.

V. P. Douw, Albany, Seymour's new White Celery, White and Red Onions, large Beets, Parsnips and Carrots, and double curled Parsley.

J. B. Hudson, Albany, a fine lot of Carrots, Beets, Celery, Parsley, Egg Plants, Potatoes, Ruta Bagas, and Mangel Wurtzel.

Solomon Leonard, Albany, large Tomatoes, Carrots, Beets, and Celery, several kinds of Potatoes, and double curled Parsley.

Jno. Townsend, Albany, fine Lemon and Orange Carrots, Parsneps, Celery and Dutton Corn.

A. Marks, Durham, a beautiful specimen of White Egg Plant, with eleven eggs on one plant; three very large Ox heart Peppers, and one large and curious Beet.

Robt. L. Pell, Pellham, two Patagonian Gourds, about five feet long, very singular and curious, but not useful.

Levi Safford, Albany, Potatoes, Beets, Celery, Parsley and Dutton Corn.

Friend Humphrey, Albany, several large Pumpkins and Mangel Wurtzel.

J. Strachan, Saratoga co. large Squashes and Pumpkins.

Harman Bussing, Bethlehem, a large Pumpkin and some Kelsean Potatoes.

E. H. Ireland, Watervliet, 6 sorts Potatoes, bunch White Corn.

Z. Weaver, Rotterdam, doz. large White Carrots.

S. E. Warren, Troy, doz. fine yellow Onions.

S. R. Schuyler, Watervliet, large Beets and Carrots.

B. Pollock, Watervliet, large bunch Seed Corn.

J. H. Cole, 3 sorts of very fine Onions.

George Sparks, ———, doz. large Onions.

J. J. Thomas, Macedon, specimens of the Bassano Beet, a very fine new early beet, from Italy, introduced by M. B. Bateham, Rochester.

If any exhibitors of vegetables or seed corn, are not mentioned in the foregoing list, it is because the committee were unable to learn their names.

The following is the list of Premiums awarded:

For 6 best stalks Celery, V. P. Douw, Albany, $2.
For 2 best heads Broccoli, Jas. Wilson, Albany, $2.
For 12 best Carrots, Wm. P Buel, Albany, $1.
For 12 best Beets, E. Holbrook, Hyde Park, $1.
For 12 best Parsneps, J. B. Nott, Guilderland, $1.
For 12 best Onions, J. H Cole, Hudson, $1.
For 3 best Cabbage, Jas. Wilson, Albany, $1.
For 12 best Tomatoes, Sol. Leonard, Albany, $1.
For 2 best Egg Plants, E. Holbrook, Hyde Park, $1.
For half peck Lima Beans, E. Holbrook, Hyde Park, $1.
For the best bunch Curled Parsley, J. B. Hudson, Albany, $1.
3 best Squashes, Dr. Wendell, Albany, $1.
Largest Pumpkin, 93 lbs. E. Chesebro, Guilderland, $1.
Best 12 ears Seed Corn, Dutton, J. Townsend, Albany, $1.
Best half peck Potatoes, Jesse Buel, Albany, $2.
Second best half peck Potatoes, D. Payne, Bethlehem, $1.

Discretionary Premiums, $1 each.

To E. Holbrook, Hyde Park, for a very large White Sugar Beet.
To E. Holbrook, Hyde Park, for fine bunch Salsify,
To D. Payne, Bethlehem, for 3 fine Musk Melons.
To Jas. Coffee, Albany, for German Greens.
To A. Walsh, Lansingburgh, for 15 varieties of Potatoes.
To Dr. Wendell, Albany, for Kelsean Potatoes.
To W. H. Sotham, Albany, for large Ruta Bagas.
To J. S. Pangburn, Albany, for 3 fine Winter Squashes.

M. B. BATEHAM,
JAS. WILSON,
D. BELDING,
R. DAVIDSON,
WM. BROOKSBY.

Albany, Sept. 28, 1842.

MECHANICS' EXHIBITION.

THE State Society were much indebted to the Mechanics of Albany, who erected a pavilion one hundred by twenty feet, on the show grounds, which was well filled with the choicest products of their skill, and which added very materially to the interest and importance of the Fair. In giving the following Report, we have omitted such articles as were noticed in preceding Reports.

The committee appointed to inspect and award premiums for articles exhibited by mechanics at the fair held at Albany, September, 1842, report that they have completed their examination, and recommend that diplomas be awarded as follows:

To G. Conkling & Co., for the best slaughter hemlock Sole-leather.

Wm. Watson & Co., for the best Spanish do. do.

J. Ruyter of Greenbush, best oak-tanned do.

Young & Server, for a beautiful specimen of ladies' gaiter Boots and Slippers.

O. Churchill, a show case containing specimens of Gun Mountings of his own manufacture, inlaid in various kinds of wood, tastefully arranged; also gun implements in great variety.

Wm. Brown & Co. for a variety of Plated Ware, different kinds.

Ab'm Koonz, for a superior Rug, Coverlid and Carpeting.

E. S. Herrick, for best fur Hat—for northwest natural lynx Muff, and for best fur Cap.

To Mrs. P. M. Haynes, 29 Hudson-st., for beautiful specimen of Tapestry, consisting of Table Spreads, Ottomans, &c.

J. McManus, for best Silk Hat.

Gavit & Co., for a beautiful specimen of Engraving.

Beriah Douglass, for the best Cooking and Parlor Stoves for wood and coal.

E. N. Pratt & Co., for self-regulating air tight Parlor Stove.

H. H. Corning, for an elegant specimen of Book-Binding.

A. D. Rosekrans, for superior Writing Ink of different colors.

Jacob Henry, for Chimney Tops, an excellent article for smoky chimneys, and a small Furnace for burning Anthracite Coal.

Armstrong's machine for Scouring Knives, an excellent article for large taverns and boarding houses.

J. Gilligan, for Superior Paste Blacking.

Daniel Curtis, for best small Church Bell.

Goodsell & Parkhurst, Bureau Kobs.

Wm. Richardson, best Silk Umbrella.

Matthew Gormley for a beautiful specimen of Copper Tea Kettles.

D. Benson, for an improved Punching Machine for cutting saw-teeth, &c.

P. McKeever, for Cart Axletree and Horse Shoes.

Wm. N. Prince of Richland, Otsego County, for best Screw Auger.

The committee also examined a Fire Engine, manufactured by J. Rodgers of Albany, of superior power and workmanship; they examined it when in full operation, throwing 440 gallons per minute, and would recommend a diploma to the maker. Also one to the maker of the Hose, L. J. Lloyd, and one to the manufacturer of the Hose Leather, Jacob Hochstrasser.

Among the many articles exhibited worthy of notice, the committee would recommend a model of Window Hinges and Fastner invented by Wm. Baker of Utica; Umbrellas manufactured by Weaver and Richardson, Albany; Bellows by J. Curtis; Spool Stands, a very pretty article by H. V. Scattergood; a Center Table, painted in imitation of different kinds of wood, by Robert Nixon; Charles Anderson also exhibited a beautiful specimen of his Confectionary; King & Barton of Waterford, a machine called a Mill Bush; D. B. King of Waterford, a Stock and set of Dies; James Burt, Birdcages; Geo. Peck & Co. Fairfield, Conn., Russian Oil of Bark for renovating leather—a new discovery; Cornelius Brooks, 2 very elegant 12 keyed Flutes; Jas. De Golyer, a specimen of Coach Varnish; Richard C. Morgan, a card of superior wrought Horse Nails; Joshua Monro exhibited a model of a chair for an invalid, called a Valetudinarian Chair; J. Walker, West Troy, Hats; Jospeph Gibson, Planes; Leonard Proctor, an improved Washing Machine; Joel W. Andrews, a Spirit Level on an improved plan, also an Apple Paring Machine; there were also various models of Stoves exhibited, such as Jenks' Parlor Stove; Stanly & Co.'s Rotary Cooking do. Troy; Anson Atwood's Empire do. Troy; Mott's Cooking do. New-York; John Curtis, Parlor do. Auburn. The committee, not having an opportunity to see them all in operation, could not judge fairly of their merits perhaps; but after much labor, they came to the conclusion as above stated.

The committee also inspected several articles exhibited by merchants of Albany, which they pronounce of superior workmanship, and not inferior to any imported, to wit: Mr. Geo. Warren exhibited Allen's self-cocking and revolving Pistol, a superior article. It contains six barrels in a solid piece of cast-steel, having no communication with each other—revolves and discharges by merely pulling the trigger. The six charges may be fired at the pleasure of the holder in a few seconds. With this a man is a host, a platoon, an army. The construction is simple, and action perfect. Made by Allen & Thurber of New-England Village, Mass. They also exhibited Ball's patent Gravitation Lock, David Ball, Sandy Hill, patentee, which supersedes the use of spring locks, which so often become useless. It commends itself to the observer from its simple construction, durability and ease of action, and is, we understand, used by many of the builders in Albany; also American Table Cutlery, manufactured by G. & D. N. Ropes, Portland, Maine, made of cast steel, excellent patterns; also Coach Wrench, manufactured by H. W. Miller, Worcester, Mass., and American Latches, manufactured by Parker & White, Meriden, Conn.; also Mr. Wm. M'Elroy exhibited a beautiful specimen of Woolen Yarn, manufactured in Columbia county.

The committee, although all practical mechanics, are aware of their incompetency of acting as judges of the merit of all articles exhibited; but they have acted with a view of doing justice to all, without prejudice to any.

Respectfully submitted.
JOHN IGGETT,
J. W. NETTERVILLE,
GEO. TRAVER,
} Committee.

WM. H. SHIFFER, Clerk.

REPORT ON DOMESTIC MANUFACTUEES.

The Committee on Domestic Manufactures respectfully report, that having examined the various articles submitted, they award the following premiums, viz:

To A. J. Pine of Pittstown, Rens. co. for the best pair of Woolen Blankets, manufactured in his family, $5.

To J. J. Viele of Hoosick, Rens. co. for the best 15 yards and upwards of Wool Carpet, $5.

To A. Koonz of Albany, for the best double Carpet Coverlid, $5.

To Asa Fitch, Jr. of Salem, Washington co. for 12 yards of Linen Diaper. The premium upon this article is $5, but inasmuch as there was no other competition for the premium, and the article presented was not in the judgement of the committee, of a superior character, the committee award a premium of $3.

To E. Wilson of Oneida co. for the best Hearth Rug. This rug was manufactured by Mrs. Southworth of Avon, Livingston co. with the needle, and is of woolen yarn. It displays much skill and taste, and is a very beautiful article, and well worthy the premium of $3.

To A. J. Pine of Pittstown, Rens. co. for the best pair of knit Woolen Stockings, $5.

A. LINN,
O. WISWALL,
AMOS BRIGGS.

Albany, Sept. 28, 1842.

NOTE.—The entries of Fruits, Flowers, Vegetables, specimens of mechanism, miscellaneous articles, &c. are omitted because the lists in the hands of the Secretary are far from complete. It is proper to remark, also, that the entries of stock, implements, &c. are incomplete; many articles and animals not having been entered on the books as they should have been. That some articles, which were duly entered, were unnoticed by the judges is not surprising, when we consider the great variety exhibited and the constant crowd which thronged the show grounds during the examination of the committees. Among the articles thus unnoticed, we may mention the following:

1. A beautiful sample Cornstalk Sugar, made by Mr. Webb of Delaware, and presented by Dr. Thompson of that state; and a bottle of Syrup, or Molasses, made from the cornstalk—also

from Mr. Webb. We learn from Dr. Thompson that while the disappointments and losses sustained by Mr. Webb in his experiments this season have been considerable, he has obtained information which has been highly satisfactory. Facts have been developed by the juice extracted from certain parts of the acre, and the sugar made from certain parts of the juice, sufficient to prove that the estimate made by him last year, of 1,000 lbs. per acre, is rather under than over-rated.

2. Two jugs of Maple Molasses; a very clear and handsome article, from Gen. O. F. Marshall, of Wheeler, Steuben county.

3. A cage of pure Poland Hens, from B. Knower, Esq. of this city, which attracted much attention and were in great demand, but were not to be had for love or money.

4. A variety of articles from Dr. Fleuchtwanger of New-York.

5. A sheet of very superior Parchment, manufactured by Mr. Charles E. Delong of Utica.

6. A mammoth Hop Vine, 36 feet in length, from the garden of Mr. Wm. Gibson of this city.

7. Beautiful specimens of Wheat, from Messrs. E. K. James, Poughkeepsie, Jas. P. Hawley, New-Baltimore, Henry Adams and C. N. Bement.

8. Specimens of Barley, from Messrs. Henry Adams, C. N. Bement and P. Vandenbergh.

9. Specimens of Oats, from Messrs. S. S. Fowler, H. Adams, C. N. Bement, E. Chesebro, Wm. Bennett.

PLOWING MATCH.

One of the most exciting incidents of the three days, and the one which created the widest interest, was the sweepstakes plowing match, which came off on the forenoon of Thursday the 29th. The match originated from a proposition made in the Cultivator of August, by a farmer of Albany county.

For this display of skill in the management of the plow, ten entries were made; and the ground selected for the trial was the flat in front of the Bull's Head, on the east side of the canal, and of course between that and the Hudson river. It was a fine, close, tough sward, perfectly smooth; and a spot better adapted to such an exhibition could scarcely have been selected. The recent rains had placed the soil in a good condition for the plow. Nine plows entered the field, amid a vast concourse of spectators, including many ladies, stationed in carriages in view of the field. It is needless to say the work was most beautifully done in every case; and to an unpracticed eye, the task of deciding, where all appeared faultless, seemed no easy matter. The report of the judges will show the result.

Report of Judges on the Plowing Match.

The Committee appointed to examine the different specimens of Plowmanship, and to determine which of the Plowmen who had entered the list for the sweepstakes, was entitled to the preference, would respectfully report:—

That by the terms of the match the committee are required to decide the superiority of the workmanship, "by the uniformity of the breadth and thickness of the furrow slice, and also by the parallelism of the sides."

Being thus limited, it might be thought by those who were not present at the match, or who have not seen the ground since the work was performed, that the committee must have had a very easy task; but it was not so, and it required much time in taking a minute measure of the width and thickness of the furrow slices of the different portions of the ground, before the committee could arrive at a conclusion satisfactory to their own minds.

It is a source of great gratification to the committee to be able to say, that in their opinion the plowing, taken as a whole, has seldom been equaled, and never surpassed in this country. It has been the good fortune of most of the committee, to have witnessed plowing matches, both in this and the neighboring states, and they say unhesitatingly, that the work is better done than they have ever seen elsewhere.

The persons whose names were entered as competitors for the sweepstakes, were as follows: Patrick McKeever, W. H. Sotham, E. H. Ireland, C. F. Crosby, William Brooksby, James Logan, John Keeler, John Randerson, Mr. Moat, and Mr. Carswell.

The committee were not present at the trial, nor do they know the name of the man in whose favor they decide; and it is but just to themselves and to the workmen, to say that there was so little difference in the workmanship on many of the lots, that the committee were not able to arrive at a conclusion entirely unanimous, but a majority of the committee decide in favor of the plowman of lot No. 1. (Mr. John Keeler.)

All which is respectfully submitted.

G. W. PATTERSON, *Ch'n.*

BOMMER'S METHOD OF MAKING MANURE.

We invite attention to the annexed Report of Dr. Beck, on Bommers' Method of preparing Manure. From a careful examination of the specifications and directions furnished us by Mr. Bommer, as well as from a personal examination of the process, from the forming of the heap to its opening, we are convinced that the method must prove valuable, and the manure so prepared of the best quality. There are many farms on which immense quantities of coarse grass, thistles, sedge, flags, and other weeds, are annually grown, of which no use can be profitably made; all these, and with them the large piles of straw which are heaped round many barns to cause them to decay, may by this method, be expeditiously and cheaply converted into the best of manure—the cost of the materials which the farmer will have to purchase being only from fifteen to twenty cents per cord, and the labor only such as is necessary to form a compost heap of any kind.

Report on Bommer's Process for Making Vegetable Manure by Fermentation.

At the request of Mr. Bommer, the undersigned were present on the 14th of September, at the preparation of the materials used by him for making the above manure. As Mr. Bommer's process is patented, it will of course not be expected that the committee can go into details farther than what he himself makes public. They have, however, no hesitation in stating that the materials mentioned in his specification were all used; that the experiment was in every respect fairly made; and that the whole is evidently conducted on the most approved chemical principles.

Two heaps were prepared; the first made of dry materials, principally straw of various grains, and probably weighing about 1,000 pounds; the second was composed of ligneous vegetables, dry and green—such as cornstalks, potato stems, thistles and various other weeds. This weighed probably about 450 lbs. and was propped against the first heap.

The following table was kept at the request of the committee. It exhibits the degree of heat developed during the process of fermentation, ascertained daily by immersing the bulb of a thermometer in the centre of each heap.

First Heap—Dry Straw.	Dgs.	*Second Heap—Green Stuff.*	Dgs.
Sept. 15, At 6 o'clock P. M.	76	Sept. 16, At 6 o'clock P. M.	80
" 16, At 7 o'clock A. M.	87	" 17, At 7 o'clock A. M.	109
" At 6 o'clock P. M.	90	" At 6 o'clock P. M.	127
" 17, At 7 o'clock A. M.	96	" 18, At 8 o'clock A. M.	161
" At 6 o'clock P. M.	98	" 19, At 5 o'clock P. M.	136
" 18, At 8 o'clock A. M.	103	" 20, At 7 o'clock A. M.	152
" 19, At 5 o'clock P. M.	95	" At 6 o'clock P. M.	161
" 20, At 7 o'clock A. M.	102	" 21, At 7 o'clock A. M.	173
" At 6 o'clock P. M.	107	" At 6 o'clock P. M.	178
" 21, At 7 o'clock A. M.	113	" 22, At 7 o'clock A. M.	184
" At 6 o'clock P. M.	117	" 23, At 10 o'clock A. M.	142
" 22, At 7 o'clock A. M.	126	" 24, At 10 o'clock A. M.	157
" 23, At 10 o'clock A. M.	112	" 25, At 10 o'clock A. M.	182
" 24, At 10 o'clock A. M.	123	" 26, At 10 o'clock A. M.	201
" 25, At 10 o'clock A. M.	137	" 27, At 10 o'clock A. M.	138
" 26, At 10 o'clock A. M.	152	" 28, At 9 o'clock A. M.	146
" 27, At 10 o'clock A M.	116		
" 28, At 9 o'clock A. M.	122		

The fermentation was discontinued Sept. 28, when the heaps were opened for exhibition. The committee examined them on the 8th of October, and are quite satisfied that the result is a satisfactory one. The heap formed of 1,000 lbs. dry straw was found to contain by measurement 225 solid feet, or one cord and three quarters, estimated to weigh 4,000 lbs. The material furnished must prove a valuable manure; and the more so, as it employs many articles now worthless or deleterious. In all matters of this nature, experience is of course worth more than mere theory; but it will be a matter of great disappointment if a process combining, as this does, an application of the most correct chemical principles, with the employment of the most efficient agents, does not in due time become a favorite with the farmer.

T. R. BECK, Ch'n.

Mr. Bommer states in his prospectus that the merit of his method essentially consists in the four following important points:

1. In being able to reduce in a short time all kinds of straw and ligneous weeds to a rich, unctuous and durable manure, such as wheat straw, barley, rye, buckwheat, and other black grains; stalks of Indian corn, rice, and other plants; dried or green potatoe tops, leaves, stalks, and roots of all kinds of plants; green or dried reeds, green rushes, sea weeds, sea rushes, heather broom, stubble, in fact everything belonging to the vegetable kingdom, and a great many other things lying about farms which are often allowed to go to waste. Even the ground itself may be converted into the best manure or compost.

2. In the combination or alliance of fecundating substances, the use of which when separated would not and could not produce the desired effect.

3. In the production of a very considerable quantity of factitious water, which, when combined with other ingredients, forming Lees, furnishes the farmer with a fertilizing liquid, the commixture of which in either vegetable or mineral substances, gives a manure of the richest kind.

4. In the production of a quantity of nitrate of lime and caustic potash; of ammonia and saltpetre—four substances which modern chemistry has found to contain the most fecundating properties possible.

PUBLIC MEETINGS.

On the evening of Tuesday, a respectable number of gentlemen assembled at the rooms of the Young Men's Association, in the Exchange Building, for the purpose of freely discussing topics connected with agriculture and its kindred pursuits. Mr. Sacket, of Seneca county, was called to the chair; and Mr. Colman, of Rochester, appointed secretary. Among the subjects introduced for consideration, the duties of farmers, as regards their own interest, the tariff, domestic manufactures, and the great cause of agricultural education, were prominent ones.

Mr. Merriam of Boston opened the discussion by presenting some interesting statements relative to the wool trade, and the disastrous effects which the permitting the low priced wools of South America to be admitted duty free, must have upon the wool growing interest of the country. Mr. Merriam also urged with much force and pertinence the necessity of a better education among farmers: one adapted to their standing in the community and the wants of the country. His remarks on these topics were received with marked approbation.

Mr. Holkham of New-Castle, Delaware, was then introduced, who, in some very sensible remarks, "paid a just tribute to the influence of agricultural journals, and particularly to that able journal, the Cultivator; and referred to a work published by Judge Buel—The Farmers' Companion—the reading of which had led him to abandon his profession, and devote himself to agriculture. Mr. H. spoke of the tariff as important to the agricultural interests of the whole Union; and said that in the state of Delaware all parties were for protection.

Mr. Miller of Richmond, Va., said he was a plain practical farmer, and more addicted to working than talking. He bore strong testimony to the usefulness of an agricultural press, and the importance of such associations as they were now attending, for the advance of agriculture." He remarked with severity on that deficiency in our systems of education, which, by wholly neglecting the farmer, has the tendency to lead their own sons to look upon the profession of their fathers with disrespect, if not with contempt. Mr. Miller said that in visiting the North, he had discovered what made the difference in the comparative prosperity of the South and the North. The South raises her crop and eats it; the North raises her crop and sells it. He said the South was daily becoming more attached to the cause of home industry; as on the success of that, it was evident the prosperity of the country was mainly depending.

Mr. Broom, of Sullivan county, followed Mr. Miller in some brief remarks on the value of agricultural journals to the farmer, and the importance of giving them a prompt and efficient support. He traced the great changes which have taken place in the agriculture of our country within a few years, the introduction and improvement of stock, &c., mainly to the influence of these journals.

Mr. Johnson, of Oneida, said that he had listened with much pleasure to the remarks of the several gentlemen that had preceded him, particularly those of Mr. Merriam of Boston on the subject of the tariff; although as he had some doubts as to the propriety of discussing that topic before the agricultural society, as such, he should not now enter upon it. On the subject of an agricultural education, he said he felt a deep interest. It was time the farmers took the management of this matter into their own hands. If they would be true to themselves, and to the agricultural interests of the country, they would at once demand of every seminary in the land, a department for instruction in the cultivation of the soil, that their sons, when they leave these schools, might be willing and glad to devote the labor of their hands, and the powers of their minds, to this most honorable and important of employments. As matters were, the course of education, and the misdirected tone of the public mind, made them ashamed of the pursuits of their parents, if not to look upon them with disgust. He ably maintained that if any class of men should be well educated, it was that of the farmer. They were the men who chose our rulers, paid our taxes, and carried our country through all its perils; and their education could not with safety be neglected. He said that agriculture furnished a field wide enough to engage the highest intellect, and fully employ the best cultivated mind. Mr. Johnson made an impressive appeal to the friends of agriculture present to act promptly in this matter, and secure to themselves the position they should of right occupy in the state and nation.

When Mr. Johnson had concluded, Mr. Clapp of Northampton, Mass., suggested the propriety of appointing a committee to report on the subject of education, at the meeting to be held at the capitol, on the evening of the next day. The suggestion was adopted, and Mr. Johnson of Oneida, Mr. Merriam of Boston, Mr. Newbold of New-Jersey, Mr. Peters of Pennsylvania, Mr. Holkham of Delaware, Mr. Baldwin of Onondaga, Mr. Nott of Albany, and Mr. King of Seneca, were appointed the committee.

At the meeting on Wednesday evening at the Assembly chamber of the Capitol, the committee reported the following resolutions, which were unanimously adopted, after an animated and interesting discussion, in which Mr. Johnson of Rome, Judge Peters of Penn., Mr. Miller of Va., Mr. Merriam of Boston, Rev. Mr. Colman of Rochester, Mr. Baldwin of Syracuse, Mr. Fuller of Geneseo, and Col. Stone of New-York, took part:

Resolved, That we deem it a subject of vast importance to the best interests of the agricultural community that a different system of education should be adopted in this country, by which the subject of agriculture shall receive that attention in a course of thorough education which it demands.

Resolved, That it be recommended to the farmers of this country, to take such means as will most successfully bring into speedy action such a system of Education as will secure the above object.

Resolved, That the establishment of agricultural schools and experimental farms, would, in the opinion of the convention, be productive of great benefit to the interests of agriculture.

A committee of one from each senate district, consisting of the following gentlemen, was appointed to prepare a memorial to the Legislature of this state, on the subject of Agricultural Schools:

1. REV. MR. CHOULES, New-York.
2. J. J. BROOKS, Orange Co.
3. J. P. BEEKMAN, Columbia.
4. JNO. SAVAGE, Washington.
5. B. P. JOHNSON, Oneida.
6. H. BALDWIN, Onondaga.
7. G. J. PUMPELLY, Tioga.
8. JAS. S. WADSWORTH, Livingston.

This committee met and organized on the following day, and adjourned to meet in Albany on the 17th of January next, the day preceding the annual meeting of the State Agricultural Society.

ANNUAL DINNER.

THE Annual Dinner of the New-York State Agricultural Society came off at Knickerbocker Hall on the evening of Thursday, and was a most appropriate *finale* to the three days of the Fair. Under the supervision of Messrs. Briare & Walker, (the proprietors of the Hall,) by whom the supper was prepared, this elegant establishment was tastefully decorated and brilliantly lighted for the occasion. The walls were hung with portraits of famed and valuable animals, rich as specimens of art, and certainly most appropriate to the time and place; while through the whole extent of this magnificent hall extended three tables, with several side-tables, lengthwise of the hall. The tables were loaded with delicious and substantial viands, interspersed with vases of fragrant and beautiful flowers. Leland's excellent brass band were in attandance, and enlivened the feast at intervals with their spirit-stirring music.

The President of the Society, JAMES S. WADSWORTH, Esq., presided at the centre table, Lieut. Gov. BRADISH on his right, and Gen. JAMES TALLMAGE, president of the American Institute, on his left. At the opposite end of the table sat the Hon. G. Y. LANSING of Albany, with Dr. J. P. BEEKMAN and C. N. BEMENT, Esqr., on his right and left.

At the head of the table, on the right of the President, the Hon. G. W. PATTERSON, late Speaker, presided, with

Messrs. Brinckerhoff of Albany, and Pumpelly of Owego on his right and left. Joel B. Nott, Esq., of Albany presided at the table on the left, and on his right and left Messrs. Sherwood of Cayuga and Col. Stone of New-York.

Grace was said in an impressive manner by the Rev. Mr. Choules of New-York, and the company proceeded to the discussion of the multitude of good things, so bountifully provided by the gentlemanly hosts. After an onslaught on the choice viands, which demonstrated the company were as much at home at the table as in the field, and the physical part of the man had been well cared for,

Mr. Wadsworth rose under warm tokens of applause from the company. He adverted to the interest manifested by the public generally, in the enterprise in which the society had embarked—to the large concourse of intelligent and practical men which the occasion had drawn hither from various and remote states of the Union, and even from the Provinces—dwelling upon these as unequivocal and encouraging indications of the general sentiment, as happy omens of the future usefulness of the society—as strong and cheering proofs that the great primeval occupation of man, had not lost any thing of its dignity and attraction in its hands. [Cheers] He hailed these indications also in their wider aspect, as infallible premonitions of the future greatness, independence and substantial prosperity of the American People. And he took the occasion in passing, to pay a tribute to those who through good and through evil report, against so many obstacles, in spite of prejudice and ridicule, had from the first, sustained with their powerful influence and efforts, the Agricultural Society of the State of New-York. [Cheers.] He was sure they must now regard with honest pride the result of their labors and enterprise. He could with the greater propriety bear his testimony to their high deserts, because he had to confess (and he did so with unfeigned regret, and not without mortification,) that he was not one of them. Mr. W. here called up other and kindred recollections warmly cherished by every American citizen, and by none with higher satisfaction than the agriculturists—recollections, he said, calculated to make us better men, if not better farmers. He reminded the company that he whom we delighted to call the "Father of his Country," was a cultivator of the earth. Need he, could he, say more for the dignity and utility of our avocation, than that Washington was a Farmer? That the call of his country to the command of her armies, found him in the field of agricultural labor—that his retirement from public life was to the same favorite occupation, and that he continued in it, until the God of Battles called him to himself? That all the great men who had succeeded Washington in the high office of chief magistrate of the Republic, had like him, sought in the pursuits of agriculture, a dignified retirement and occupation? Nor did Mr. W. suffer the occasion to pass without adverting to the beneficent aid which the cause of Agriculture had received within the last few years, from our own state of New-York. In presence of the distinguished gentleman on his right, (Lieut. Gov. Bradish,) he could not forget what New-York had contributed, as a state, to Agricultural improvement, through its extensive, thorough and able geological survey, nor forget the enlightened statesmen who lent their aid to the commencement and prosecution of that great work. Mr. W. concluded by giving

The health of our Lieut. Governor. The Agriculturists of New-York do not owe less to him than to any of our eminent statesmen. [Cheers.]

Lieut. Gov. Bradish, returned his acknowledgments to the company—remarking that although in agricultural matters generally, it was a sound maxim to work much, and talk little, yet he might be deemed wanting in gratitude, did he not make an effort to respond to the flattering notice gentlemen had been pleased to take of him. The Lieut. Governor went on to congratulate the Society on its present prosperous condition, and future prospects. He had for years witnessed its efforts with the greatest anxiety and interest. He was aware of the difficulties to be overcome; and he rejoiced that these were being most triumphantly surmounted. For much of what had been done, particularly in the improving of our animals and implements, it must be admitted we were indebted to our sagacious and ingenious neighbors of the east. There could be no doubt that emigrants from that quarter, incorporated with our original and excellent Dutch population, had at once improved our character and our agriculture. He would relate an instance that had fallen under his own notice. A young man, one of a family whose numbers almost equaled the acres of the paternal farm, found the homestead too narrow for his broad ambition, so he determined to emigrate over to New-York. So taking his estate, which was all in his head and his pocket handkerchief, he made his way to New-York, and very soon into the presence of one of our excellent Dutch citizens, by whom he was, as every New England man has been, kindly received. [Cheers.] Little had been said, before the good Dutch burgher asked the young man why it was that so many of his countrymen left home for New-York? The young man answered—first we come to teach your children—in the second place to marry your daughters—[Laughter]—in the third place to manage your estates. [Laughter.] Well sir, was the reply—but this is very frank for a young man at least—yet you seem to have some cleverness, and we'll see what we can do for you. It is scarcely necessary to add that a few years found the New Englander the son-in-law of the honest Dutch burgher, in a few years he had about him a goodly number, not of Anglo-Saxons, but of Yankee Dutch. [Laughter.] We have engrafted on the proverbial prudence and industry of the Dutchman, the intelligence, enterprise and activity of the Yankee. Sir, it is a good cross. [Cheers.] The Lieut. Governor concluded by giving the following sentiment:

Agriculture and Agriculturists—The former not more essential to the prosperity, than the latter to the maintenance of the constitutional liberties and free institutions, of our country. [Cheering, and Hail Columbia from the band.]

Mr. Colman of Rochester, moved that the house be called upon to answer by States.

Mr. Nott remarked, that to carry out the suggestion, we must begin with Maine. The difficulty was that Maine was not here to answer. After some complimentary remarks upon the course and influence of the American Institute, he concluded by saying that among those connected with that institution, he knew of none more distinguished than its honorable President, Gen. Tallmadge, and he hoped to hear from him more fully the results of that noble institution. [Cheers.]

Gen. Tallmadge, being loudly called for, returned his acknowledgments—and in answer to the allusions made to the Institute, developed its general features and objects—taking occasion to speak of the exhibition which had just closed, as a show which in the agricultural and its connected departments had never been equaled in the state of New-York. He took occasion also to inculcate on the company the necessity of turning its attention to another interest included in the scope of its incorporation—which he said was essential to production, and that was the subject of a market and the means of consumption. And here Gen. Tallmadge entered upon an elaborate argument in favor of a protective tariff, enforcing his peculiar opinions with much ability and earnestness. He concluded by offering the following:

The Greatest of inventions—The union of labor and science, with protection that is neither accidental, incidental nor horizontal. [Laughter.]

Dr. Beekman of Columbia, expressed the gratification it had given him to witness the attendance here, and at the show yard, of so many gentlemen from other and remote states. He felt, personally, under great obligations to them, and on behalf of the Society, he took the liberty to return them its thanks, as well for their attendance here, as for the additions they had brought to our stock, not with a view to compete with us for the premiums, but to contribute to the rarity and excellence of the collection, and for the assiduity, intelligence, and discrimination, they had brought to the different committees of award. This tribute was received with warm applause.

Mr. Ferguson, of Canada, rose to respond on behalf of the visitors from other states, to the very handsome compliment, he said, which the gentleman at the other end of the table had just paid to them. But before I offer one word in reply, (said he,) I beg leave, in the spirit of good fellowship, to ask if there is in this room, the humorous chairman of the committee on pork? [Laughter.] Because, if that gentleman is present, I will not add one word more until I hear him. [Renewed laughter. The allusion here was to Mr. Lincoln of Mass., who made a report on the swine family, on Thursday afternoon, that kept the audience in a roar from beginning to end. The mere allusion to it by Mr. F., called up a vivid recollection of all Mr. L.'s very happy points.] He is not present, (continued Mr. F. in a tone of disappointment.) I then, gentlemen, will tell you why. It is to save his bacon. [Laughter.] Now, gentlemen, I address you as fellow farmers. I have no right to say fellow citizens, but fellow farmers. As farmers, I beg leave first to express to you my deep sense of gratitude for the honor conferred on me, a backwoodsman of Canada, in being permitted to be present at such a meeting as this, and for the pleasure and instruction I have received here. And let me say, before I forget it, that this office of a judge is a very difficult and thankless one, and that you may discharge your duty never so faithfully and conscientiously, and you are perfectly sure not to give entire satisfaction. At the same time, they who have undertaken that duty, have a right to call on the society for whom they have to act, support them in their awards, and to see that no undue remarks are made on their judgments.

Having said thus much about my fellow judges, permit me to rub my eyes, and look about me, and think what a glorious meeting we have had—what an exhibition of stock—how great New-York is. Why, ten years ago, it would have defied all our means to have produced any thing like what we have seen. The spirit was not in existence then. But it is now, and we will speed it onward. There are, gentlemen, in every great community—in the great state of New-York particularly—I don't say gradations of rank, but gradations of circumstances; and one of the happy results of these meetings is to bring the rich into contact with the honest farmer, and to teach the former what true nobility and independence is, and where it is to be found. [Cheers] If happiness is to be found on earth—if independence is ever to be secured—it is within the stilts of the plow. There it is. The honest farmer comes into the city, and is bewildered and astonished, by the splendor that meets his eye on every hand. But, gentlemen, what sort of splendor is that? A single shock, a crash somewhere, and down they go like nine pins. [Laughter.] The farmer has always a sure reliance. He has his pork barrel, and his flour barrel, and his good honest wife and children. [Cheers.] That is the place to cultivate real, true independence—real, true, rational enjoyment. [Cheers.] Nay more—there you find honor, morality, religion, virtue, [cheers,] in their purest form. Who does not know, that men, mixed up together in the cares and excitements of busy life, do not appreciate what it is to be an honest farmer, living on his paternal acres? But we must not forget that we were made, thank God! to help one another. We are all links of one great human chain. And I say perdition to the man that would break one of them. [Cheers.] I want to see all men equal in their rights. I live under a monarchial form of government. You under a republic. But I say we are all brothers. [Cheers.] More than that, we are all scions of the same common stock. [Cheers.] We are of one common family. I say it without fear of contradiction here, that Americans and Britons have the love of liberty in their hearts. [Cheers.] I say it without reference to our living under a Queen or a President. I hope there is no high Canadian Tory present, that will go home and tell of me. [Laughter.] Don't mistake me—I am a true, loyal, British subject. [Roars of laughter.] What I meant to convey was this—that the great outline of the two greatest nations in the world are the same. We have our property and lives secured by the habeas corpus, and the trial by jury. That is no mean matter. We have an executive head. We have a house of Peers—or a Senate—call it what you please. And we have representatives of the people. These are the great leading outlines of the constitutions of both nations. Why allow any thing to rankle in our hearts, who have every reason as nations, to go together? Who can, if they will, so play into each other's hands? I go with the gentleman opposite, (Mr. Tallmadge,) as to free trade. But that is a subject far too wide and too difficult for me to enter on here. I beg pardon for intruding too long. [Cries of "go on," "go on."] I have been trying for a long time to get on my legs, and now I don't know how to sit down. [Laughter.] Because if I had the talent to give vent to it, I am overflowing with matter. [Laughter.]

It has just flashed across my mind, gentlemen, what a progress this world is making, and this country in particular. We can know nothing of it. I need not ask here—for who has not read Washington Irving? Who has not read Knickerbocker? [Laughter.] I should like to see how Rip Van Winkle would have looked if he had opened his eyes, after a thirty year's slumber, on the Bull's Head yesterday or to-day. [Laughter.] He would have given his eyes a double rub, to see the progress made since he went to sleep down the river. And what would he not have done to have been told that two great nations, by the simple power of steam, had been brought within a fortnight's sail of each other? To see mother and child, hitherto estranged by distance and feeling, brought together, as it were, into close proximity? For there was a time when an American in London was treated as a wild beast, and if a Briton came over here, why he was the Devil and all. [Laughter.] This is not so now. As we come to see each other, we come to like one another better than ever before. I have said already, I am a loyal Britain, and I rejoice—I cannot tell you how I rejoice—in the present state of affairs between our two countries. [Cheers.] I assure you gentlemen, I am not alone in this. Hundreds and thousands of British hearts are beating with joy at this moment, at the prospect of a termination of all our difficulties. I sincerely hope, gentlemen, though I have no objection in the world to meeting the Americans in the field—aye, on the tented field—that if we must meet, it may be on the tented field of the Bull's Head. [Roars of laughter.] That is the field for me. No drilling, if you please, but the drilling of turneps. [Laugher.]

Gentlemen, I hardly dare trust myself to speak of that glorious man—the Father of his country—to whom allusion was made so handsomely just now. Gentlemen, I revere the memory of Washington. If ever there was a Patriot on earth, Washington was the man. [Cheers.] I visited Mt. Vernon not long since, and I am not ashamed in this company to say, how my heart swelled as I stood at that great man's tomb. I could not help repeating, to the astonishment of the man who showed me the grounds.

"How sleep the brave who sink to rest,
By all their country's wishes blest!
When Spring with dewy fingers cold,
Returns to deck their hallowed mold,
She there shall dress a sweeter sod
Than Fancy's feet have ever trod.
By fairy hands their knell is rung,
By forms unseen their dirge is sung;
There Honor comes, a pilgrim gray,
To bless the turf that wraps their clay—
And Freedom—

Gentlemen, I forget the rest of it. [Cheers loud and long.]

Mr. F. touched briefly in conclusion, on the subject of agricultural education. He felt totally incompetent to say how the object was to be brought about, but he would say this, that farmers might be educated too high, and might be kept far beneath their proper position. The point to be aimed at, was that men of high education should be acquainted with the practical details of husbandry, and that men who understand the practical details should not be ignorant of science. He knew an individual, who like many in London, had acquired fortunes in business, determined to have done with the shop, and buy an estate. He closed his books, and down he went to the country. His first inquiry there, as an Englishman's was apt to be, was, where the nearest butcher's was? [Laughter.] He was told that every gentleman killed his own mutton. "D—d dirty work," said he, "but I'll try." The man knew no more of country life than the weathercock on the steeple. [Laughter.] Mr. F. concluded by giving—

Domestic Manufactures—Plenty of feet for children's stockings, and the good honest housewife that bears them. [Three cheers given standing.]

Mr. Comstock of Oneida, remarked that there was a gentleman present from the Old Dominion, who was closely identified with her agricultural interest, and whom he should be glad to hear. He alluded to Mr. Botts, editor of the Southern Planter.

Mr. Botts being loudly called for, rose and said that he had arrived but a few hours since, and wearied as he was, was unfit to make a speech. But the name of the old State that had given him birth, had touched a cord in his breast to which every fibre of it would always respond. He had the pleasure of expressing for himself and a few of his fellow citizens, their thanks to the company, for the kindness and hospitality they had received while they had sojourned here. They hoped one day to reciprocate this kindness, and give to all present a Virginia welcome, on Virginia soil. [Cheers.] He said he should follow the customs of his home, and call out his own man, and in compliance with that custom, he gave—

This State and City—The one distinguished for its cultivation—the other renowned for its Cultivator. [Cheers.]

The President remarked that the Cultivator appeared to be absent, but the city of Albany was represented, and well represented, here.*

G. W. Patterson, Esq. said he hoped the gentleman [Mr. Barnard,] who represented Albany so well in Congress, would not fail to do so at the festive board. If not a farmer now, he [Mr. B.] was a farmer's son, and that amounted to the same thing. [Laughter.] When young, Mr. Barnard knew how to hold a plow, and now understood very well how to make a speech.

Mr. Barnard, being called for, said he regarded himself as a very unfit person to address an Agricultural Society; that those present were aware he was not much of a farmer; but that he remembered the time when he enjoyed a degree of satisfaction in the pursuits of agriculture, which had seldom, if ever, been exceeded since. He said it had been the day dream of his life, that before its close, he should live in the country, possess a farm, and follow agricultural pursuits. That hope he still cherished, and great would be the disappointment, should he fail of realizing those agreeable prospects and promises.

The economical part of farming, Mr. B. thought, was very well understood in this country; and the requisite skill and knowledge, with the means used, in a fair way to be supplied. He wanted to see—and in this he but echoed the sentiment of the eloquent gentleman before him, [Mr. Ferguson,] and of the eloquent address of the Governor at the Capitol—he wanted to see the dignity of this employment raised in the general estimation of the public mind. Various influences had been brought to bear on this point; these influences he desired to see extended. He wished to see Farmers, as a body, assume, maintain, and deserve a dignity and rank, equal to the just, substantial, and superior claims which really and properly belonged to them. [Cheers.] Mr. Barnard described in terms of great beauty and truth, the condition of the independent American farmer, with his hundred acres of land under good cultivation, and said he knew not why he should not be as true and refined a gentleman as any in the land. There he is—the owner of his farm—the safest property in the world—[cheers]—and a property which is sure under all circumstances, not only to produce an abundant supply of the prime necessaries, but of many of the good things of life.

Mr. Barnard feared he was detaining the company too long. What he desired to insist on—and that had been his main object in addressing the meeting—was that it is not only important for the American farmer to improve his soil, his breed of animals, his instruments of tillage and of husbandry, but that he should improve himself—[cheers]—improve the man—his tastes—his appointments—his scale of character—his pleasures—and in this way elevate the class to which he belongs in the range and scale of society. He offered for a sentiment:—

The Cottage Home of the enlightened American Farmer—Filled with contentment, virtue, plenty, and peace—as the home of every American farmer ought to be. [Cheers, Home, Sweet Home.]

Col. Stone said, in allusion to the remark made by Mr. Ferguson, respecting Rip Van Winkle, that he regretted the gentleman from her Majesty's dominions, should have missed meeting with that ancient citizen; for (said the Col.) Old Rip was a visiter at the Show Yard, and the plowing match; he saw every thing, aye, and took note of them, and before he left the city, he communicated to one of our Vice Presidents—Anthony Van Bergen—a neighbor of his, all the observations he had made at the Fair, and I am sure this gentleman will give us all that Rip said to him. One thing is unfortunate, Old Rip speaks Dutch: but when he makes a communication, even second hand, I have no doubt all will be gratified to hear him.

Judge Van Bergen responded to the call made upon him, and in broad Dutch, which it would require the Lieut. Governor's Yankee Dutch to report, gave the substance of Old Rip's observations—concluding with the following sentiment in the vernacular:

Farmers—Nature's nobility—the highest order among freemen. [Cheers, and Yankee Doodle.]

Mr. Nott remarked that, as the gentleman from Canada had said he did not understand Dutch, he thought this eloquent though second hand speech of Rip Van Winkle should be translated for the use of the company; and of all the gentlemen present, he knew no one so well qualified to do this faithfully as Col. Stone of New-York. He took the liberty to call on him to perform that duty.

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* It may not be improper to state here, that the representative of the Cultivator at the Fair—Mr. Tucker—was at the table, but was unfortunately called from the room while Mr. Botts' was speaking, and did not return until Mr. Barnard had commenced his remarks. Had it been otherwise, he would have felt it a pleasure to have responded not only to the high compliment of his valued friend and able co-adjutor in the great cause of Agriculture, from Virginia, but expressed his gratitude for the many similar expressions of satisfaction, the course of the Cultivator had called forth from gentlemen present at the Fair. He must also be permitted to say here, that his arduous duties as one of the managers of the Fair, prevented his paying that attention to gentlemen and strangers present, which otherwise he would have been most happy to have rendered them; and the same reason will also prevent notices of many things which were doubtless deserving of being more fully recorded.

Col. Stone, after repeated calls, finally rose, saying, Why, Mr. President! [Laughter.] Why, sir, I was never so badly treated in my life. [Laughter.] If the gentleman had had the the humanity to call on me to render a speech in the Mohawk, or some of the learned languages along shore, where I was picked up, I might have succeeded. Sir, this broad Dutch is not my vernacular, and I don't know how to respond to the call made on me. I would most cheerfully, if I knew how. Besides, sir, I am overwhelmed by the circumstances in which I find myself—the trepidations, and palpitations, and pretty much everything else, which have blurred my tongue, as you perceive. [Laughter.] When Boaz, who was a benevolent old gentleman—though he married a young wife [Laughter]—when he sent that pretty girl of his a gleaning in the field, he told the reapers not to go close, that she might have something to pick up. You have not treated me with the liberality with which he, Jew that he was, treated the stranger. You have plundered Earth, Ocean and Heaven, and Catskill besides [Laughter] of all their sweets, and scattered them about in such profusion that you have left nothing for a man to say. As to the tariff, the veteran on my right (Gen. Tallmadge) has told us all he knew, and how much more I'll not undertake to say. [Laughter.] Then we have our most potent, grave and reverend seignor from Her Majesty's dominions—[Mr. Ferguson]. He spoke eloquently on different subjects, and elicited so much applause that a man could't raise a cheer in gleaning after him. I respond to all he said; and am just as much rejoiced that little Queen Victoria and Brother Jonathan have kissed and made up, as he is. [Cheers.] And I am glad he has come here to tell us how they feel, on the Canada side of the pond, on the subject. I would have said something about Virginia, but the magnanimity and open heartedness which Virginia has displayed here, through one of her sons, has disarmed me there. I am very sorry for one thing. I have changed my politics since I came here. Still I thought it the best thing I could do. It is said that when Socrates undertook to discourse on the pleasures of married life, he did it so eloquently and forcibly, at the same time with such delicacy and tenderness, that he sent all his scholars home—the married men to fold their wives to their bosoms, and the unmarried to kiss their sweethearts. Now the gentleman from Albany, who represents this county in congress so much to his own honor and its advantage, has discoursed so eloquently of the pleasures of rural life, that I went for it. I was reared in that kind of life, but was caught some time ago. But I feel anxious about the one hundred acres and the cottage. I have got the other accompaniments. [Laughter.] But how to get the one hundred acres? Sir, to make a long story short, I begin to feel very much like an agrarian, and I propose a division of property. And [pointing to Mr. Wadsworth] I should like to cut in for a slice of the Genesee flats. [Laughter.] [Mr. Wadsworth.—You shall have the hundred acres.] Gentlemen will take notice that the bargain is made.

Now sir, to speak seriously, we have heard a great deal said on the education of farmers and the mistakes made on the subject. I don't think the farmers of this country down trodden, nor very ignorant men. Nor do I think we occupy our proper rank. The great error on the subject among young farmers themselves, who are ambitious to do something they are not fitted for, and which is in fact descending, is a propensity to rush to the city—to take even inferior situations in the shops—thinking that if they can dress themselves in a little finer cloth, wear linen shirts instead of cotton, measure off ribbons and talk flippantly to the demoiselles that do the shopping, that they can rise in society. There can be no greater mistake; and my advice to young farmers, who can take fifty acres and a wife, and take care of both, is to cling to the wife and the acres. [Cries of "good," "good," "sound."]

The gentleman who spoke with so many figures about the tariff (Gen. Tallmadge,) leaving his cyphering, indulged in a little metaphor. He alluded to that great work known as the Arabian Night's Entertainment, and spoke of Aladdin's Lamp. Now Aladdin's lamp is in the pocket of a gentleman sitting at one of these tables. There never was such a change as that performed in Albany, and by the gentleman sitting there [pointing to Alex. Walsh, Esq.] This induces me to say that in all the speeches made to-day, in all the sentiments offered and drank, we have entirely overlooked one very important part of the exhibition. I mean, sir, the beautiful horticultural display; and my design is to call up, at the proper time, the representative of King Solomon. Solomon, gentlemen, was a horticulturist. [Laughter.] He wrote a book that has been lost. [Laughter.] But he discussed there everything that the earth produces, from the Cedar of Lebanon to the Hyssop that springs on the wall. That shows that he was a laborious writer. He was well acquainted with flowers. There is no more beautiful employment than the cultivation of them. Our first parents have been called agriculturists; but this is altogether a mistake. They were horticulturists. I am not certain but the Garden of Eden was Lansingburgh. But there were not so many rivers running through it. We have had a display there of flowers, arranged with a taste that might have made Adam and Eve very comfortable, if they had had such a view as Lansingburgh presented, there! Gentlemen, allow me to tell you that the original language of man was by flowers. All Adam's courtship was carried on by flowers, before they got to the hieroglyphics. [Laughter.] Then came the deaf and dumb signs, and at last the miserable art of printing [Laughter] which seems to have been made for a change only. No matter for that. I think our friend from Lansingburgh [Mr. Walsh] is entitled to great credit for that part of the exhibition. We came very near forgetting it; and but for the allusion to Aladdin's Lamp, I should not have adverted to it. Sir, when I saw such a rich display of fruit on his table—when I saw such clusters of grapes, apples and pears, (judging from their outward appearance, understand) and such plums, than which Albany can produce no better—(I am glad she can produce something good besides public men)—and when I saw that in a twinkling all disappeared, and in place of it such an array as this before me—I could not but think of the potent charm—the mighty spell of Aladdin's Lamp. Col. Stone concluded with this beautiful sentiment:—

"*Flowers.*—The alphabet of angels, by which they write, on hills and fields, mysterious truths." [Great Cheering.]

Mr Walsh of Lansingburgh replied briefly to Col. Stone. He began by alluding to the intimate relation subsisting between agriculture and horticulture. The latter is the art by which nature is taught to improve her own products; or perhaps more correctly, it is the art by which man learns to "develop more fully the beauties of Divine Providence," and partake with greater relish of the fruits of his own labor. The garden is indeed a Paradise to those who have some knowledge of its manifold treasures, and taste and sensibility to appreciate its numerous delights. It is cause for felicitation that a taste for gardening is evidently increasing among our agricultural population. They are thus creating around themselves an atmosphere of greater purity and joy, and while, as horticulturists imitating our great progenitors, they are truly sharing in their delights. Every farm house in the country should have its *Eden* of fruits and flowers; promoting intellectual elevation, refinement of taste and feeling, a safe guard against corrupting pleasures, and a source of substantial comfort to the agriculturist; cheering him in his toils, urging him to more effective exertions for the cultivation and improvement of the soil, and thus adding to the sum of individual prosperity and national capital. Agriculture and horticulture are twin sisters, allied in feeling and interests, and alike contributing to strew the pathway of life with blossoms of bliss.

This has been a proud day for our State Society; but while we rejoice in its advancing prosperity, let us not forget our County Associations, with the prosperity of which our interests are so vitally connected. The Annual Fairs of many of these associations are about to follow in the train of our state festival; and let us in our several spheres extend to them our free and generous countenance and support. Mr. W. concluded with the following sentiment:—

The New-York State Agricultural Society.—"She retires from the field for the season," allowing her younger sisters of the state to occupy her place, and commending them most cordially to the public interest and favor.

Gen. Viele, of Rensselaer, was called up, and said that he was not disposed, after hearing so many eloquent addresses and beautiful sentiments, to obtrude anything upon the company in his humble, farmer-like way. For he claimed to be a practical farmer. He had passed his life, with but rare exceptions, on a farm. He had witnessed with lively interest, the attempts that had been made to elevate and improve agriculture and agriculturists. He rejoiced now to see the auspicious results of the efforts commenced some few years since. We had here representatives from almost every state in the Union. Maine, Massachusetts, Connecticut, New-Jersey, Pennsylvania, the Old Dominion (God bless her!) Young Michigan, and others that he knew not of, and last but not least, our friends of the Canadas, had honored us with their countenance and encouragement on this occasion. He thanked them for their valuable co-operation with us in the more responsible and arduous duties of the field: and in doing so, he knew he but echoed the general sentiment of the company. [Cheers.] He would not detain them at that late hour with any extended train of remark. But he could not forbear adverting to some things that happened ten or fifteen years ago, in contrast with the scene that now presented itself. At that time six persons only could be got together here in reference to this subject of agriculture. Year after year, (said Gen. V.) we met in this hall and in yonder capitol with a view to some steps to get up a spirit of emulation among farmers, and thus to give an impulse to the cause of agriculture. These efforts, at that time, met with very little encouragement. But though our number was small, our hearts were stout and willing; and those feeble efforts, seconded by at most some twenty individuals, had been crowned with at least partial success. It was gratifying to see how changed the scene now—how public opinion on this subject has been revolutionized.

Gen. Viele here took occasion to pay a passing tribute to the memory of the lamented Jesse Buel, whom he characterized as the pioneeer in this cause, and who to unwearied exertions to elevate the condition of the husbandman, added a spirit of expanded benevolence and philanthrophy, which entitled him to the distinction of having been in every sense of the word, a benefactor to the human race.

Gen. V. concluded with the remark that we had heard much about the Fair, and about the husbandman; but nothing about the wives and daughters of husbandmen. He therefore gave—

The New-York State Fair, and the Fair of New-York State. [Cheers.]

Gen. Viele, before taking his seat, said he would follow out the Virginia custom of nominating his successor; and he accordingly called up the Rev. Henry Colman, formerly a citizen of Massachusetts, now an adopted citizen of New-York.

Mr. Colman responded briefly to the call of the company. It was hardly fair, he said, to call on him to night. With the leave of the company he would give only a sentiment, which he trusted would find a warm response:

The Great Sub-soil Plow, Universal Education—Designed to break up and elevate and enrich the lower strata; and, in so doing, render better and more productive all the formations. [Cheers.]

Mr. Ferguson here reminded the company that they had left one thing undone, and he would supply the omission by proposing—

The Health of the Society's President. [Drank with cheers.]

The President (Mr. Wadsworth) to whose efforts much of the eclat and spirit of the scene may be attributed, made a brief and appropriate reply.

Col. Stone remarked that the gentleman who called on a clergyman to make a speech and got only a sentiment, should have extended the call to the class rather than an individual; and he went into a eulogy on the clergy at some length, concluding with—

The Clergy of the U. States—As a body, worthy of their sacred calling, and deserving of honor from every civilized man.

Col. S., after this toast, availed himself of his right to call on the Rev. Mr. Choules of New-York, and

Mr. Choules responded to the call in some brief remarks.

Mr. Colman followed, in a powerfull appeal to the clergy on behalf of agriculture, and urging upon them the duty of themselves setting an example of good husbandry as well for the moral effect of such a course, as for their own temporal interest.

Mr. Baldwin said he would avail himself of this occasion, to correct a mistake, into which he, or the printer, had fallen in reference to the name of the late lamented Judge Buel, of this city. At our last Annual Fair, in answer to a call on a similar occasion, I said, or *was made to say*, (in grouping certain illustrious names among the living and the dead, who had contributed largely to the advancement of the cause of Agriculture,) that that of Judge Buel, held to some others in this state, a secondary rank. Now, sir, I beg leave to remark, that such was not my sentiment or belief then, nor is it now—nor in my judgment was, or is it, the sentiment or belief of any intelligent man in America. In my humble opinion, sir, no man in this country, has contributed so much to the advancement and elevation of our cause, as did Judge Buel. His name and memory are closely associated with the Agricultural history of this state and nation; and palsied be the hand that should attempt to pluck a single leaf from the dearly bought and fairly won chaplet that encircles his brow. Let no returning anniversary of this Society pass, without paying a just tribute to his memory. I beg leave, in conclusion, to give—

The memory of the late Judge Buel of Albany—His successful labors in the cause of Agriculture, have placed his name high among the benefactors of mankind, and second to none in the state or nation. Let us revere his memory, and emulate his bright example.

Mr. Nott, after a few remarks highly commendatory of the skill and integrity displayed by the mechanics of the city of Albany, in the various articles of excellent workmanship exhibited by them at the Fair, gave:

Agriculture and the Mechanic Arts—Pillars of the social fabric—mutually essential to its stability and true greatness. [Cheers.]

Mr. Baldwin, in conclusion, gave the following:

The Earth—Our Mother Earth—From her we came; to her we shall all return. Let us in the mean time, as dutiful children, honor our parent, study her nature, cultivate her good will, court her smiles and win her favor.

Letters were read from the Hon. Daniel Webster, Hon. Henry Clay, Gen. Winfield Scott, Hon. John Davis, Gov. of Mass., Hon. A. P. Upshur, Sec'y of the Navy, Hon. Levi Woodbury, Hon. James M. Garnett, Prest. of the U. S. Ag. Society, and other invited guests, several of which it was our intention to have published, but we are compelled for want of room to omit them.

THE FUNDS OF THE SOCIETY.

In concluding our history of the Fair, it seems proper that we should give some facts in relation to the funds of the Society, and to explain the reasons why it was deemed necessary by the Board of Managers to charge the small sum of 12½ cents for admittance to the show-yard. On making the arrangements for the Fair, it was ascertained that the expenses in erecting the buildings, procuring tents, building pens, police, guards, &c., would amount to about one thousand dollars. How this sum was to be raised, was the question. The Society had not the funds to meet it; and further, it was thought unwise to burthen its treasury with such a responsibility, as it was believed that the moment the Society got involved in debt, its usefulness, if not its existence, would cease. It was at first proposed to raise the sum necessasary by subscription; but this was deemed inexpedient, inasmuch as it was found necessary to raise by subscription about $600 for the Society, to enable it to draw its quota from the state treasury and to pay its premiums. It was then proposed to adopt the plan pursued by the foreign Ag. Societies, by the American Institute, and many other societies—that of charging an admittance fee, to all but members of the Society. This fee was put so low, (12 1-2 cents,) that it was thought no person would have a right to complain; and, though some little complaint was made, the plan was found, upon the whole, to work admirably, as by it, not only the expenses of the Fair were paid, but the managers, having the sole control of the yard, were enabled to preserve a degree of order and quietness which could not otherwise have been attained.

The receipts for admission, were, …………………	$1,296·10
From which deduct bad bills, …………………	19·00
	$1,277·10
Expenses of building, tents, pens, police, night guards, laborers, &c. &c. say, …………………	1,000·00
Leaving a balance of …………………	$277·10

To be carried to the treasury of the Society.

The Society acknowledge the receipt of the following subscriptions in aid of its funds:

J. Lennox, N. Hamburgh,	$100	Pruyn, Wilson & Vosburgh Albany, ………	10
J. S. Wadsworth, Genesco,	100	Joel Rathbone, Albany, ‥	10
J. Townsend, Albany, …	50	J. L. Schoolcraft, Albany,	10
Jas. Wadsworth, Geneseo,	50	Jas. Stevenson, Albany, ‥	10
J. McD. M'Intyre, Albany,	25	L. G. Ten Eyck, Albany, ·	10
J. B. Nott, Guilderland, ‥	25	T. Van Vechten, Albany, ‥	10
W. P. Van Rensselaer, Greenbush, ………	25	C. Van Benthuysen, Albany	10
Martin Van Buren, Kinderhook, ………	20	B. R. Wood, Albany, ‥‥	10
Erastus Corning, Albany,	15	W. A. Wharton, Albany, ‥	10
A. Ayrault, col'd by him,	10	J. N. Wilder, Albany, ‥‥	10
W. H. Barker, Tivoli, ‥‥	10	Wehb & Douglass, Albany	10
W. E. Bleecker, Albany, ‥	10	A. Ayrault, Geneseo, ‥‥	5
V. P. Douw, Albany, ‥‥	10	P. Cagger, Albany, ‥‥	5
J. Edwards, Albany, ‥‥	10	Eagle Tavern, Albany, …	5
Gideon Hawley, Albany, ·	10	C. Foster, Albany, ‥‥	5
Friend Humphrey, Albany,	10	G. Lathrop, Albany, ‥‥	5
Rufus H. King, Albany, ‥	10	J. L. Rathbone, Albany, ‥	5
J. & A. M'Clure, Albany, ·	10	Wm. Thorburn, Albany, ‥	5

New-York County Agricultural Fairs.

We need not say that we are truly gratified at the evident advance made by these societies in public favor the present year—the great increase of attractions in the number and variety of objects presented—and the more successful management that has attended them; a result that was, indeed, to be expected from the experience gained. Our thanks are also due to our attentive friends who have forwarded us early notice of the doings of the several societies. We regret that we are not able to present a more ample report of each, but our limits, and the late period at which some of them have been received, forbid. We wish it to be understood, however, that though postponed, they are not forgotten.

RENSSELAER COUNTY AGRICULTURAL FAIR.

The first Fair of the Rensselaer Agricultural Society was held at Lansingburgh, on the 4th and 5th of October; and received the attention from the public spirited farmers of that county, which such exhibitions uniformly excite. The cattle, horses, sheep, and swine, exhibited, were quite fine; and few Fairs will be able to present a better display of fruits and flowers. The Short Horns of Messrs. Vail of Troy, Ball of Hoosick, Sampson and Coons of Brunswick, &c., attracted much notice. Mr. Comstock of Lansingburg, presented peaches 11¾ inches in circumference, and weighing 10¼ ounces. Lemons from Lansingburgh, beautiful quinces from the same place, and a rich collection of grapes from Lansingburgh, Greenbush, and Troy, were on the tables. A great variety of other fine fruits and vegetables were also presented; and their arrangement was in general most admirable. Some specimens of the green globe artichoke lately introduced into this country, and which promises to be quite an acquisition to our gardens, were exhibited by Mr. A. Walsh of Lansingburgh, to whose skill and taste much of the interest of the Fair in this department was owing. Saratoga, Albany, and Schenectady, contributed their quota of flowers; and altogether, a more splendid display of these rich and beautiful productions of nature, will with difficulty be made. We are firmly of the opinion that premiums for the best collections of flowers should be made by every county society in the state. Exhibitions of this kind would do very much to extend a taste for their cultivation among all classes of society, and this we think a positive good.

Silk, in the form of cocoons, reeled, and manufactured, was exhibited, and some specimens were particularly fine. The variety of agricultural implements was great, and properly excited much observation among the farmers present. The show of domestic manufactured articles was not great, but the quality of the articles was of the best kind. This point, the exhibition of domestic manufactures, is one which should receive particular attention from our societies. Nothing will so soon free us from our embarrassments as individuals, or as a nation, as domestic industry. This is the key to prosperity, and the securing it should never be lost sight of in our efforts to advance the condition of all.

The address, on the second day, was delivered by Wm. P. Van Rensselaer, Esq., of Greenbush, and was in the highest degree creditable to him as a scholar, and an agriculturist. It will doubtless be published. In the afternoon there was a sale of stock. This was well attended, and many animals were disposed of at fair prices; some indeed at high ones. We have only to add, that this first Fair of that rich and spirited county, excellent as it has been, is only a prelude and an earnest of what Rensselaer county will do hereafter.

JEFFERSON COUNTY AGRICULTURAL SOCIETY.

Jefferson County has kept up and supported an agricultural society longer than most other counties in the state, and the condition of agriculture there has consequently progressed much more rapidly than in many other counties. An additional impulse has been given by the bounty of the state, and the Fair of last year, and particularly the one held this year, have proved that the effect has not been lost on the public spirited men of this rich county.

The Cattle Show and Fair was held on the 15th of September, at Watertown, and although the day was quite rainy and unfavorable, the thousands that assembled evinced that their attachment to the objects intended to be advanced by the society was not to be damped or interrupted. Jefferson is fast becoming a first rate dairy county, and the specimens of butter and cheese shown on this occasion, prove that Orange and Dutchess must look to their laurels. The show of domestic manufactures was unusually fine, and the display of cloths, carpets, &c., &c., was most encouraging. Our Jefferson friends are right here; they are opening to themselves the true source of independence and wealth. The stock exhibited received general admiration. The plowing match came off in fine style; twelve competitors entering, and the excellence of the work, the several plows and teams, so nearly equal that the task of decision was a difficult one. The quantity of sugar made in Jefferson county is great. Mr. Canfield of Champion, made no less than thirty barrels of beautiful fine grained sugar this year; and abundance of fine samples were presented at the exhibition. The address was delivered by E. Camp, Esq., President of the Society, and we have rarely had the pleasure of perusing a production more pertinent to such an occasion, or more practical in its tendencies. The course of Jefferson county, in regard to premiums on farms, awarding three of ten, fifteen, and twenty dollars each, for the best farms in the county, and one of six dollars to the best farm in each town, where one shall be offered for examination, we think has a happy effect in encouraging farm improvement, and deserving attention from the managers of other societies. Certainly this course the last year, and the present, has furnished us in the form of farm reports, papers of the most valuable kind, and honorable to the gentlemen who executed the surveys. The following list of premiums awarded, will show the liberality with which this association is supported; a liberality which many other counties would find it for their interest to imitate:

3 of	$1 each,	$3
9 of	2 each,	18
35 of	3 each,	105
17 of	4 each,	68
16 of	5 each,	80
23 of	6 each,	138
2 of	8 each,	16
2 of	10 each,	20
1 of	15 each,	15
1 of	20 each,	20
No. of Prems. 109	Am't awarded,	$493

The committee on Farms and Dairies visited every town in the county, with the exception of Philadelphia. From their report we extract a few items relating to the dairy; and we shall hereafter endeavor to give the report of the second premium farm, as an interesting and honorable proof of what industry can accomplish, when directed by skill. The committee examined forty-three farms, twenty-seven cheese, and ten butter dairies, and traveled more than three hundred miles. "In the cheese dairies 829 cows were milked, and when examined, (from the 15th of August to the 1st of September,) they had made 197,734 lbs.; calculating the season to be three-fourths gone, they would make in all 263,645 lbs., which would be 318 lbs. to each cow. This, at $5\frac{1}{2}$ cents per pound, would amount to $17.49 per cow, and the butter made in the fall and spring from each of the same cows must amount to five or six dollars more. In the ten butter dairies 185 cows were milked, and they had made 15,020 lbs. Taking the aggregate of all the cheese dairies up to August 15th, each cow had averaged per day two pounds two and a half ounces of cheese; and the butter dairies, thirteen and a half ounces per day. Calculating cheese at five and a half cents, and butter at twelve and a half cents per pound, there would be a difference in favor of making cheese of about one and three-eighths cents per day, or one dollar and sixty-nine cents for four months. It was uniformly the case that the greatest quantity of butter was made from each cow, where the quality was the poorest. This goes to confirm the better opinion which already exists, that by letting milk stand until it becomes *loppered* the quantity of cream increases, while the quality deteriorates." We may remark here, that this opinion is at variance with the practice of the celebrated Orange dairies, where the milk which produces the fine butter of that county is invariably allowed to coagulate or become *loppered*, previous to churning. It is certainly desirable that this question should be decided, and we hope some of our dairy friends who have the means, will, by manufacturing butter in both ways, with equal skill and care, aid the public in this decision.

ONONDAGA CO. AGRICULTURAL SOCIETY.

The Cattte Show and Fair of this county came off on the 5th and 6th of October, and was in most respects worthy of the high agricultural character of Old Onondaga. The horses, cattle, (working cattle especially,) and sheep, were very fine; the show of the latter, in the opinion of many, being superior to that of the State Fair at Albany. The Onondaga Standard states from the several reports, the number of animals exhibited as follows:

Working Oxen,	26 pairs.
Matched Steers,	9
Working Horses,	7
Other Horses,	40
Sheep,	109
Swine,	70
Total of Animals,	373

Quite a variety of agricultural implements from the warehouse of Messrs. Smith & Co. of Syracuse, were exhibited and much admired. The number of dairy specimens was small, but the quality good; and the show of domestic manufactures limited. There is a decided fault in this respect in most of the Fairs of our country. Few things give more interest to such meetings, than a full display of the handiwork of the hands of our farmers' wives and daughters; and when this subject is better understood, we shall see more, not only of these products, but of the makers themselves, at these agricultural holidays.

We perceive that our correspondent, E. Marks, Esq., received the first premium offered for farms. There are hundreds, perhaps thousands, of farms in the county naturally as good, or even superior to Mr. Marks', and this result, so honorable to him, is a proof of what industry, directed by intelligence and skill, can accomplish in the management of a farm. Mr. M. also received the premium for the best bull; for the best fine wooled ewes; and for the best pigs. If possible, we shall make room hereafter for the report on plows, and the one on farms.

ONEIDA COUNTY FAIR, 1842.

Messrs. Gaylord & Tucker.—The Annual Cattle Show and Fair of this Society was held on the 12th and 13th, and two finer days never shone; and I venture to say, a more imposing exhibition has never been witnessed at a county celebration in the state or nation. We had made extensive preparations, anticipating a great show, and they were all needed. On Tuesday, cattle, sheep, swine, mechanic and domestic articles began to arrive; on Wednesday, the first day of the Fair, our streets were filled, and soon our public square was crowded with the cattle, sheep, and horses and their attendants, and farmers.

The show of cattle was fine; some first rate thorough bred animals were exhibited, and the grade and native stock was very superior. The show of swine, both in number and quality, I think was decidedly superior to the State Fair; mostly of the Berkshire breed and cross.

In sheep, the number small, but superior. In the dairy department, for premiums on butter, there were twenty-five competitors; and having myself examined the specimens at Albany, at the State Fair, and here also, I am of the opinion that the butter exhibited at our Fair was superior to that. It was truly a most splendid exhibition, and did great credit to the dairies of Oneida. In cheese, too, the show was excellent—eleven competitors—and had I an opportunity I would send you a specimen of one of the premium cheeses presented to the officers by H. Rhodes, Esq., of Trenton, which would be demonstration as to its superiority.

The ladies' department was supplied with fabrics which would have done honor to any Fair. The exhibition of flannels was not only very large, but very superior indeed. The committee, composed of men competent to decide, reported that it was the best collection of flannels they ever witnessed.

In the fancy department there was a great variety, and much taste was displayed.

Plows, of various patterns, and agricultural implements, from B. F. Smith's warehouse, Syracuse, and various other sources, were exhibited.

In the vegetable department, the show was very excellent. I cannot particularize.

Capt. Wm. Merwin, late of the U. S. Navy, a resident of Utica, presented six varieties of grapes of his own raising, as fine specimens as I ever saw; and also some excellent celery plants. You will doubtless be surprised to learn, that there were from eight to ten thousand people present. The court-house, where our ladies exhibited their handy work, was literally thronged from morning till night, and still more desired to be gratified. Such a body of farmers was never before collected together in Oneida. At two the society partook of a dinner at Stanwix Hall, got up in first rate order, at twenty-five cents each; not accompanied, as was the agricultural dinner at Albany, with wines, &c., but in accordance with temperance principles, such as farmers practice upon, and which I, for one, hope never again will be departed from by the officers of the State Society.

After dinner a procession was formed and proceeded to the church, which was filled with an audience composed of farmers, their wives and daughters, who listened to an address from the writer, prepared at very short notice. If their undivided attention, and a request unanimously made for its publication, is evidence that it met at least their approbation, all that was given.

On Thursday the plowing match came off. More than two thousand persons, ladies and gentlemen, attended. Seventeen competitors entered the field. Among the competitors was the President of our Society, the Hon. P. Jones, who entered the lists and did his work right well.

The quantity of each land, one quarter of an acre, was performed from one hour and five minutes to one and three quaarters; one ox team, a noble pair of red cattle, doing their work with more rapidity than most of the others. The plow was held by a colored man, who was an excellent plowman, but labored under the disadvantage of not being used to the team. The work was done admirably by all. The first premium was awarded to my associate of the Central Farmer, E. Comstock, his plowman having performed the best work. But it was all admirably done. All the plows which received premiums were of the Livingston county pattern.

After the plowing match, and a dinner at Stanwix Hall, the premiums were declared and paid off, amounting to over $650, and the numerous farmers and their wives and daughters returned to their homes; nothing to my knowledge, having taken place to mar the festivities of the occasion.

Great credit is due to the Hon. Arnon Comstock of Western, chairman of the Committee of Control, and Gen. Armstrong, Gen. Marshall, and Col. Utley, Marshals, for the good order and arrangement, which, in the exhibition of stock, &c., as well as at the plowing match, added so much to the enjoyment of all present.

I consider this a most proud occasion for the agricultural interest of Oneida. It shows that our march is onward, beyond all our expectation—the number of competitors much larger than last year—and the exhibition in every department far superior. If the State Fair should be held in this county, as I trust it may be in due time, we will give to you as good an exhibition from Central New-York as you had at Albany, and, in some respects, I think I may promise superior.

The report on crops, considering the season, was very fair: Winter Wheat, $24\frac{1}{2}$ bushels; Spring Wheat, 37; Oats, $112\frac{1}{2}$; Corn, 94; Barley, 64; Potatoes, 696; Rye, 33; Ruta Baga, 284; Mangel Wurtzel, 1,150; Sugar Beet, 519; Carrots, 554; the grain by standard weight, the roots weighed and 60 lbs. allowed as a bushel; the actual weight being, as you know, much less, which will increase the amount per acre nearly one-third.

The silk department showed a very great improvement, both in quality and quantity, since last year; Cocoons and silk exhibited, which were pronounced very superior.

Hoping hereafter to furnish for the State Society a detailed account of our Fair,

I subscribe myself, yours,

Rome, Oct. 15, 1842. B. P. J.

COLUMBIA COUNTY FAIR.

We are much indebted to our friend "N. N. D.," for his account of the recent Fair of the Columbia County Agricultural Society, which was held at Hudson Oct. 10. The crowded stated of our columns, however, compels us, much to our regret, to omit a part of it. He says:

"On the ground were 38 cows, 13 bulls, 18 bucks, 25 ewes, 17 hogs, 3 steers, 16 yokes of working oxen, and 16 horses, making 162 quadrupeds in all. Then there were plows and harrows, cultivators and fanning mills, root and straw cutters, pumps and hay presses, quilts and comforters, carpets and toilet covers, wax flowers and lace veils, bee hives and cocoons, sewing silk and fine linen, huge beets and potatoes, fine apples and pears, butter and cheese; of the former article one hundred and seventeen lots were exhibited, together with almost every other article produced or used on the farm.

"The best bull on the ground was Osceola, a thorough bred Durham from the Patroon's herd; he is owned by Ambrose Russel of Claverack. A bull owned by Ira Blakeman of Taghkanick, to which I alluded in my account of last year's fair, was again exhibited. He was sired by Osceola; his dam was a native cow. This was a most instructive specimen of the improvement which may be effected by a single cross of the improved Short Horns with our native stock; but let those who seek to produce this improvement remember that there is a vast difference even among this celebrated breed; none, therefore, but the very best should be selected for this purpose; for, as far as my observation extends, grade animals are very prone to copy with too faithful accuracy, all the *defects* of the race which is intended for their improvement. The very animal of which I am speaking, is an instance in point. Osceola's tail is set on nearly up to his hips, and shows that ominous depression at its root, so well described by R., at page 157 of your seventh volume; and this bull not only copies, but actually exaggerates the defect. But notwithstanding this, his superiority to the common natives is strikingly apparent to the most superficial observer.

"The finest cow on the ground belonged to Hugh McClellan of Greenport. She is a mixture of Holderness and Durham, and has all the points of a good dairy cow.

Near her stood a heifer which was calved by her on the 3d of 2d month, 1841; and on the 17th of 5th month, 1842, she, (the heifer,) had a fine calf, which was taken from her at the end of four weeks, when she gave an ordinary pail full at each milking. She is now as large as the ordinary native cows, and is in good condition. This speaks volumes in favor of the milking properties and early maturity of this cross. J. W. Jenkins of Claverack, showed a very fine calf five months and nine days old, weighing 500 lbs., having had no other feed than the run of the pasture and sour milk. I was not informed of its pedigree, but I suppose it was a cross of the Durham and Holderness.

"One of the most instructive groups in the exhibition, were the cattle of Justus McKinstry, Esq., consisting of two cows, two heifers, and a fine bull. They show the result of an experiment which has been for some years in progress, having for its object to engraft on the Devons those additional qualities which are desirable to adapt them to our soil, climate, and course of husbandry. To effect this purpose, crosses have been taken from the Durhams, Alderneys, and Holdernesses. I presume the Alderneys have been made use of to increase the richness of the milk; but I suspect they have lost more in form than they have gained in this respect. My limited knowledge on this subject does not enable me to pronounce on the success or ill success of this spirited and patriotic attempt to improve our cattle. Youatt says emphatically, that "to adapt the breed to the soil and climate, is the grand secret of breeding;" and if it be so, all who make the attempt richly deserve the gratitude and sympathy of farmers, either in case of failure or success. Some of the sheep were good, but none so good as to require especial notice. The working oxen were truly noble; this part of the show far surpassed the one in Albany. The hogs, with one Chinese exception, were Berkshires; and beautiful ones they were. My duties as one of a committee, did not allow me to bestow more than a passing glance at the horses. I was told by a good judge, that the animals exhibited were much better than those of last year. The best animals were of the Highlander and Messenger breeds. Among the agricultural implements was a corn planter, the invention of one of our mechanics, which is a very good implement, and can be afforded at a less price, ($8.00,) than any that I have seen before. It is difficult to draw, or to describe, its peculiarities being in the inside; but I hope the inventor will place one in the office of the Cultivator for public inspection. The specimens of female taste and skill were numerous, and very creditable to them. I cannot close without mentioning one beautiful toilet cover, presented by Justus Niles of Austerlitz, and worked by one of his daughters; it was of pure white, and fruit, flowers, and birds were worked upon it with very great taste and neatness. N. N. D."

Stockport, 10th Month 17th, 1842.

CAYUGA COUNTY FAIR.

The Cayuga Co. Ag. Society held their second Cattle Show and Fair at Auburn, on the 12th and 13th of Oct. The weather was favorable for the exhibition, and the number in attendance was very large; much larger than last year. The show of cattle was very large; of horses, sheep, and swine there was a good exhibit; and a good show of agricultural machines and implements of the different varieties; also a grand exhibition of household productions, such as domestic cloth of the different varieties. The specimens of needlework were very superior, and I think can not be beaten in any county in the state. In butter and cheese there was an exhibition worthy of all praise. The mechanics came in for a full share of praise, for their laudable zeal in presenting their specimens of workmanship for the inspection of the public. The exhibition of this day clearly proves that our agriculturists are awake to their best interests; and that Cayuga will stand one of the first in the state in respect to her quality of stock, and the enterprise and the success of her yeomanry. J. B. D.

Auburn, Oct. 1842.

CATTLE SHOW AND FAIR AT WORCESTER.

We had the great pleasure of attending this long established, and justly celebrated Fair, at its late annual meeting, and have rarely been more gratified, than while witnessing the manner and spirit of this favorite exhibition of the Old Bay State. We arrived at Worcester at 9 o'clock on Wednesday, in company with Col. Lincoln, whom we had the good fortune to meet in the cars, and immediately proceeded to witness the Plowing Match. The prize was contested by thirty teams, all oxen. Part of the plows had two yoke of oxen and a driver, the other part one yoke each without a driver. These teams were a splendid sight, well matched and trained. The plowing was of course done in the best manner, though the nature of the ground, full of small stones, fully tried the skill of the plowmen. One of the plows was held by a boy of 12 years of age, and boys have several times, we were told, received the premiums of the Society at this annual match.

From the plowing match we proceeded to the show yards, which were admirably arranged on ground belonging to the Society. Here the show of cattle, sheep, and swine, was truly splendid, the whole numbering between 400 and 500. At the Worcester Fair, may be seen in all their glory the beautiful native cattle of New-England—oxen, cows, and steers, so justly prized and lauded. We could not divest ourselves of the impression, however, that the *native* cattle of Worcester Co. owe much of their celebrity to the imported bulls which have occasionally, for many years past, been introduced into that state. In addition to this, the Fairs at Worcester and Brighton, for so many years past (some 30,) have had the effect of inducing farmers to select their best animals to breed from, and in this way a decided improvement has doubtless been made in the pure native stock. We saw a beautiful Ayrshire bull presented to the Society by J. P. Cushing, Esq. of Watertown, but smaller than most of our farmers would prefer. Some of his calves were also exhibited, a cross on the native stock, and as we thought a marked improvement. There were a great number of grade animals, crosses of the Durham, Holderness, Ayrshires, &c. with each other, or with the native stock. The show of native cows greatly exceeded our expectations high as they were. There were a number of cows with a dash of foreign blood, that were beautiful animals.

To test the power of draft in the oxen, in a trial for which 22 yokes were entered, a cart was loaded with two tons weight of stone, which they successively drew up a small elevation. In doing this, and in backing and turning, the teams had a fine opportunity of exhibiting their admirable training to the best advantage.

Of sheep there was a good representation, embracing some fine Dishleys, Leicesters, South Downs, Merinos, Saxony, and natives.

Of Swine there was a show worthy of the admiration of our friend W. Lincoln, Esq. whom we found in the midst of them, and who will doubtless commemorate their good qualities in his usual happy manner. In addition to some beautiful Berkshires, there was a variety called the "Hospital Breed," with which we were much pleased. They are a large white hog, much resembling the Berkshires in shape, and we think showing occasionally evidences of that blood. They are, we believe, a cross of several of the favorite breeds of Mackay, Leicester, and Berkshire.

Never have we seen so fine a display of butter and cheese as at this Fair. Many of our farmers might well afford to make a journey to Worcester, to learn to make and put up these articles for market. The butter was mostly in pound and two pound cakes, and when laid out for exhibition made a fine appearance.

The exhibition of Fruit and Flowers in the Horticultural department, was of the most gratifying kind. The show of apples could scarcely be exceeded; of pears, some sixty kinds were shown, all excellent; and one presented by Noah Allen, Esq. weighed 43 ounces.

The sketch of the history of the Society, presented by the President, the Hon. Levi Lincoln, was most interesting. When the Society was organized, six individuals gave their note for $3,000, that the association might receive from the state the grant of $600. This sum has not only been repaid by contributions, and the addition of members, but there is a balance on hand of $7,000. Gov. Lincoln has been president 22 years, and we think it no disparagement to him to say, that valuable as his civil services have been, the memory of the aid he has rendered agriculture, will remain long after the former shall have passed away. The address by J. Mason, Esq. of Templeton, was an able production and well received.

It may be mentioned as a coincidence, that during the dinner of the Society three years since, the death of Judge Buel was received, and announced. At the dinner of this year, the news of the death of Robert Manning, the distinguished Pomologist of Salem, was received, and announced by Gen. Dearborn. As a Pomologist, Mr. Manning was without a rival in this country, and probably equal to any man living.

Speeches at the table were made by Gen. Dearborn, Hon. J. Quincy Jr., Hon. J. T. Austin, Hon. L. Salstonstall, and others, which were interesting and received with applause.

In one respect at least, the Worcester Society has an advantage over most associations in the country. The present was its 30th anniversary, and all the value of experience is added to the public spirit of the men who manage it. The Society owns the ground on which the fair is held. The pens are substantial, built at an expense of $1,500. These, after the show, are taken down, and carefully packed in buildings erected for this purpose.

No one in the vicinity doubts the beneficent influence of this Society, not only on the Agriculture of the district, but also on the men of the county. Certain it is, we have never seen a finer looking body of men and women than we had the pleasure of meeting at Worcester. There were from 10 to 15 thousand present, and the Bay State may well be proud of her children.

After the fair, we paid a flying visit to Boston, and in company with Mr. Hovey, of the Magazine of Horticulture, visited some of the fine farms and residences in the vicinity of that city. Of these, none interested us more than Mr. Cushing's celebrated place at Watertown, over which we were shown by Mr. Haggerston, the gentlemanly and intelligent manager. The green houses, graperies, gardens, parks, orchards, meadows, &c. were all in a style of excellence and neatness not to be surpassed. He also showed us some superior Ayrshire cows. In the piggery, kept so neat there was scarcely a smell of swine about it, we saw some of the pure Mackay pigs, a beautiful white hog, also some pure China, with a variety of crosses. The splendor of the mansion and furniture when completed, judging from what we saw, will not be exceeded by any thing in this country. The example of Mr. C. in so highly improving his farm, will have a beneficial effect, in rendering the environs of that fine city still more inviting, as it can scarcely fail to be imitated to a greater or less degree.

Mt. Auburn is a delightful place. To the good taste, public spirit, and perseverance of Gen. Dearborn, the Bostonians are indebted for this beautiful spot; a place, where, after life's 'fitful fever,' it must be a pleasure to sleep, and to the memory of the General, should its proudest mausoleum be dedicated.

In our visit to Cambridge, we unhappily found our friend Buckingham absent, but we had the pleasure of examining the extensive green houses and nurseries of Mr. Hovey, also in this place. Mr. Hovey has lately purchased some 30 acres, and is now planting an extensive nursery. It was a matter of regret, that we had no more time to spend in examining the agricultural and horticultural improvements, so manifest in every direction around this city.

In a word, we have been much gratified with our brief excursion, from the "Anglo Dutch" city of Albany, to Worcester, and the Metropolis of New-England. There is a public spirit, an intelligence, an activity every where, which marks the New-England character, and makes one cease to wonder at the improvements every where visible. In this, industry is the great element of wealth, and no where is it more conspicuous, or seen to better advantage, than in this honored land of the Pilgrims.

BERKSHIRE CATTLE SHOW AND FAIR.

Much to our regret, we were unable to be present at the *thirty-second* Cattle Show of the Berkshire Ag. Society, which was held at Pittsfield, Mass., Oct. 5th and 6th. To our friend of the "Three Hills Farm," we are indebted for a description of it, which, however, we have been compelled to curtail in some measure, to enable us to give it a place this month. He says:

"The show of animals, particularly working-oxen and steers, exceeded any former exhibition which I have ever attended; there being 110 yokes on the ground, of well matched cattle, mostly red, and in high working condition: yes, some of them more fit for the shambles than some I have seen slaughtered for beef in Albany. It was a most gratifying display.

"The exhibition of cows, heifers, and calves, surpassed any former exhibition. They were in fine condition, and showed evident improvement both in size and form.

The show of bulls was not only deficient in numbers, but in quality; only one worthy of notice, and to him the first premium was very justly awarded. If a little more attention was paid to the quality, symmetry and style of the bulls, a very great improvement would soon be manifest.

The swine, though not numerous, were generally very good; and two of them would answerr well to the portraits, in a late London Farmer's Magazine, of the "Improved Essex" hogs, which took the first premium at the Fair of the Royal Agricultural Society of England.

The sheep I did not examine, but I understand they were very fair specimens.

The specimens exhibited in the Town-Hall, arranged as usual, with good taste, by Messrs. Beebe and Colt, of the handiwork of the industrious daughters of Berkshire bore evident marks of improvement. A pair of white woolen blankets, made and exhibited by Mrs. Chapman of Pittsfield, exceeded any thing of the kind I ever beheld. A piece of flannel made and exhibited by Mrs. Worden of Richmond, was much admired by all who examined it; so was also a beautiful piece of linen diaper, made by Mrs. Churchell of Pittsfield. The specimens of embroidery, presented by Mrs. Root, could hardly be excelled; and added much to the display, and furnished evidence that the females whose home is among the hills and vallies, know what constitutes the elegancies as well as the substantials of life. In short, take it altogether, this exhibition of *domestic* manufactures would satisfy the most skeptical, that we have the ability of rendering ouselves independent of foreign industry.

The number of competitors for the premiums on butter was greater than at any former exhibition; which was accounted for by reducing the quantity required from 100 to 50 lbs. There were 13 lots offered, all of which were of good quality and put up in superior order, and reflect great credit on the makers. There were only three lots of 100 lbs. each of cheese offered, but they were of rare quality.

The morning of the second day opened with a brilliant sun, a clear blue sky, with scarcely a cloud to be seen; and at an early hour the sacred stillnes which pervaded nature was broken by the busy hum of preparation for the most exciting and interesting part of the exercises—the plowing match, which was to take place at 8 o'clock. The field selected for the contest of the plowmen, was in the beautiful valley of the silent Housatonic, whose surrounding scenery of hills and dales were decked in Autumn's beautiful and varied foliage.

When I arrived on the ground, I found it surrounded on all sides by multitudes of both sexes, in anxious expectation for the coming contest. The field was laid off in lands of one-fourth of an acre each, and the time allotted for plowing that portion was one hour, with a rest of five minutes. There were 21 teams entered for competition—13 of horses and 8 of oxen. The longest time consumed by any plowman was 59 minutes; the shortest 45 minutes. Each plowman performed his work in a manner which reflects great credit on our improved husbandry, and with that skill for which the plowmen of Berkshire are so famed.

At 11 o'clock the procession was formed under the direction of the Marshal, and moved to the church, led by the excellent Berkshire Band. The annual address was pronounced by B. F. Barnard, Esq., of Sheffield, the President of the Society, and was listened to with great attention, by a large and very respectable audience. It was replete with good sense, and confined mostly to practical suggestions, and treated with great force and elegance.

After the address of the President, the several reports were read by the secretary, and the premiums, in plate, were delivered by the treasurer to the successful competitors.

After partaking of an excellent dinner at the Berkshire Hotel, kept by Messrs. Warriner & Cooley, I took the cars for Albany, well pleased with my jaunt.

C. N. BEMENT.

Three Hills Farm, Oct. 12th, 1842.

NEW CASTLE AG. SOCIETY, DELAWARE.

We have received the proceedings of this society, (one of the most active and efficient in the country,) at its fall exhibition of stock, implements, horticulture, domestic manufactures, and the plowing match, held on Sept. 14th and 15th, 1842. The weather was very unfavorable, but the display was of the most encouraging kind, manifesting the right kind of spirit among the farmers of that fertile district; and an immense crowd was present to view the splendid animals, native and imported, and the various improved implements of husbandry, upon the ground. The dinner came off at the Indian Queen Hotel. After the dinner, Dr. Thompson, the worthy and able President of the Society, made a few pertinent remarks, giving a satisfactory history of the society, and the great good it had accomplished, alluding to the discovery of the manufacture of sugar, by Mr. Webb, from the juice of Indian corn stalks, and ended by introducing to the meeting the Hon. Jas. M. Garnett of Virginia, well known to the readers of the Cultivator as one of the most distinguished agriculturists of the country, who was present by invitation to deliver an address before the society. It is unnecesssry for us to say that this was an able, eloquent, interesting production, abounding in matter of practical value, and exciting the highest attention and applause of the audience. A vote of thanks was adopted by the society, and a copy of the address requested for publication.

As usual at these exhibitions, the plowing match excited much interest among the spectators. The ground was one-eighth of an acre to each team, a clean green grass and timothy sod, to be plowed six inches deep, and after the ground was measured, each team marking out its own land, by running one furrow around it. Forty minutes was allowed for plowing. Six teams entered for trial, and as they were placed in the field, were numbered and performed the work as follows:

No. 1.	Horse team, Mooer's plow, English plowman,	19¼ min.
2.	Horse team, Moore & Wright, Wm. Robinson,	21½
3.	1 yoke 5 yr. Oxen, Garrett's plow, T. Rogerson,	28
4.	1 yoke 5 yr. Oxen, Prouty's plow, A. Simpson,	20½
5.	Horse team, Beach's plow, A. Hanson,	18½
6.	Horse team, Peacock plow, A. Coats,	18

Nos. 5 and 6 plowed a wider furrow than the others, plowing one round less to finish. "It appears," say the committee, "that the teams walked while under way, (allowing the average time to be 21 minutes, and the number of furrows 22,) at the rate of about three miles and the third of a mile an hour; or it is at the rate of plowing one acre of hard sod, six inches deep, in two hours forty-three minutes, or at the rate of about four acres of sod in a day, within the usual working hours."

The utility of such rapid plowing, as no farmer will presume to practice it on his own farm, the committee justly consider doubtful: although a team that has a lively step, and works with ease to itself, will always be preferred, and should therefore be taken into account in awarding premiums. Several of the lands were handsomely plowed; but the committee awarded the premium, (a plow,) to No. 2, and recommended that one should be given to No. 4.

MASSACHUSETTS HORTICULTURAL SOCIETY.

The Fourteenth annual exhibition of this Society, was opened at Boston, on the 14th of September, and the evening festival was given at Concert Hall on the evening of the 16th. It is very rarely that we have read a report with more interest and gratification, than that of this meeting, which appeared in the Boston Courier of Sept. 23. The only feeling of regret experienced was, that we could not have been there to see and hear. The beginning, the existence, and the progress of this Society, and the immense influence which it has exercised on the taste, the comfort, and the happiness of thousands, render it an object of interest not only in its native city, but to the friends of Horticulture throughout the Union. Fourteen years since a few individuals organized this association, feeble and unnoticed at first, but the plant had found a congenial soil, and it has struck its roots broad and deep, and has become a powerful physical and moral agent as far as its influence extends. It may be said during these 14 years, to have changed the aspect of Boston, and the country around it; and in the multiplication of fruits and flowers, and the creation of a taste for their enjoyment, it has done much upon which its patrons and founders must look with unmingled pleasure. A love of the beautiful in nature, is inconsistent with the indulgence of the violent passions; and the person who cultivates a taste for flowers, or fruits, rarely is found guilty of those outbreaks which render the man a criminal, or the multitude a mob. The Horticultural Society has done more to preserve the quiet, and the character of Boston, than half a dozen regiments of the line could have performed. In the language of the Courier—"In the city almost every vacant foot of earth is now decorated with a flowering plant, or shrub, and the partition fences, and even the walls of many houses, are enriched with vines, bearing luscious grapes of various kinds. The sale of fruits and flowers, too, has become a sort of professional employment: patronized not merely by the wealthy, but by the poorer classes of society; and it is no uncommon thing to see a day laborer carrying home a flower pot with some beautiful plant that has caught his eye, on the way from the scene of his employment. Formerly, perhaps the same man would have been seen going to his meals with a bottle of ardent spirit. Who can estimate the benefits that grow out of this change in the taste, inclinations, and habits of the community ?"

The address was delivered before a large concourse of ladies and gentlemen, by J. E. Tessemacher, well known as one of the most scientific horticulturists and florists of the country; and is spoken of as an effort most creditable to his taste and acquirements. The Hall was decorated in the most splendid manner from the contributions of fruits and flowers; and the tables literally groaned under the weight of the grapes, apples, pears, peaches, &c., &c., all of the finest kinds, heaped upon them. Among these fruits, vases of flowers were scattered, regaling at once the senses with beauty and perfume. On a tablet at the end of the hall, was this inscription—

> "The world was sad—the garden was a wild,
> And man, the hermit, sighed, till woman smiled."

More than two hundred persons, including the Mayor of the city, the Hon. Abbott Lawrence, President Quincy of Harvard, &c., &c., and a large number of ladies, embracing much of the beauty and loveliness of the city, were seated at the tables. As this was the first time the ladies had been invited to partake in the anniversary festivities, it is not to be wondered at that they should have come in for a large portion of the speeches and the toasts of the evening. These speeches and sentiments were worthy of the place and the occasion, dignified, tasteful, and delicate; and we think the worthy horticulturists of the capital of the Bay State, will be so satisfied with the result of this first admission of the fair, that it will not be the last. With intermingled addresses, music, sentiments, and songs, several of the latter original and written for the occasion, it is unnecessary to say the meeting passed off delightfully. Success we say, to the Mass. Hort. Society. It richly deserves its present and increasing prosperity.

FOREIGN CORRESPONDENCE.

LONDON, OCT. 3, 1842.

The importation of foreign grain into the United Kingdom continues to be very large, not only from the northern ports and America, and Canada, but also from the Mediterranean, shipped from Russia and Austria. Indeed, there is now quite a glut in the British markets. The farmers are holding on, not being willing to thresh out their wheat for sale at the present rates, and since the importation of foreign oxen from the continental ports, they have refused to sell their cattle at the late ruling prices. Although prices have come down considerably, it is evident that these articles of consumption must both fall to a much lower standard. Of the Spanish cattle which have been recently brought over, none exceed 700 in weight, and the average is about 500. They are principally cream or fawn colored, and about the head look much like the buffalo. They are very deep in the shoulders, but thin in the hind quarter, and have realized hitherto about £10 a head. The highest price yet given is £14 5s. and the lowest £6, being about 40s. per cwt. There are several more extensive failures this month among our merchants. The large annual government contract for supplying the navy with Irish provisions, was recently taken at a reduction of about 25 per cent on last year's prices. The quantity required was 16,000 tierces of beef, and 14,000 tierces of pork. It was taken by London houses, at from 10s. to 12s. per tierce, below the prices of the Irish manufacturers. The prices were from £5, 9, 11, to 5, 14, 8 for pork, and from £5, 18, 6, to 5, 19 for beef; the price of the former being about 30s. and the latter about 26s. per tierce, lower than last season. The yield of grain has been very productive throughout the country, and a form of prayer and thanksgiving has been issued, and ordered to be generally read in churches for the bounty of Providence, in the abundant harvest, and fine weather.

The heat of the last summer was so general, and intense, that even Ireland is said to have felt its influence, and had a temperature as high as 20 degrees of Reaumur, 77 Fahrenheit.

I learn from Mr. Hebeler, His Prussian Majesty's Consul General, that Count Howpesch, a Belgian gentleman, has taken out a patent for the preparation of a manure, more powerful and cheaper than any yet invented. His plan is said to consist in fixing all the volatile parts of night soil and other such substances, by means of the ashes of the volitic shale of Portland. The shale is employed in the first place, as a source from which oil, turpentine, and other substances are extracted; the residue goes to the preparation of the manure, which is said to be converted some where on the Isle of Dogs, and sold in a dry state in the form of bricks. As the materials to be thus employed are inexhaustible, and at present almost valueless, it is expected that the preparation of the fertilizer in question, will become a matter of great national importance. As people have become too wise to wonder at sugar being made from old rags, so will they be equally prepared to hear, that oil, and tallow and soap, are to be fabricated from the hardened mud of the coal mines; for such is "shale."

Nearly four thousand pounds have been already subscribed for the monument, to the memory of the late Thos. Wm. Coke, Earl of Leicester. Prominent amongst the subscribers, is Lord Wodehouse, the Lord Lieut. of Norfolk, for £50, who had all through life been opposed to the deceased Peer in politics. This is as it should be; when the interests of our country and the improvements of agriculture are to be served, all party and party jealousies should be thrown overboard. In the spread of improvement among the cultivators of the soil, all are more or less interested, and should combine therefore, for the general welfare.

The distinguished founder of Organic Chemistry, Professor Liebig, of the University of Giessen, has been in England for about a month, one of his principal objects being to examine into the state of agriculture in this country.

Just about this period, most of the anniversary meetings of the numerous agricultural societies are held, and there are a great number of shows, dinners, &c. falling about this period. The American minister, the Hon. E. Everett, has been attending several, in order to make himself acquainted with all the routine of English agriculture.

The London *Farmer's Magazine* for September, contains the first part of a very interesting narrative, of an agricultural tour in England and Scotland, in the year 1840, by Count Conrad de Gourcy, translated from the French. The Count, who is an extensive and experienced agriculturist, visited many of our leading agriculturists, and his report of the information obtained from them, as to their mode of farming, breeding, &c. and his own observations thereon, will be found exceedingly interesting. As an instance of his good sense and impartiality, I cite the following passage:—

"I think that for the improvement of our flocks in France, and of our cattle generally, our rich farmers, having son's whom they mean to bring up to agriculture should have them taught, instead of the classics, English, a little mechanics, chemistry, and natural history, drawing, book-keeping, &c.;—should place in their hands the best works on agriculture, and the best agricultural periodicals, especially those that are published in England, and should instruct them well in French agriculture, and then send them to spend two or three years with the best English breeders, and Scotch farmers. If a number of young members went through this training they would soon do something towards altering the present condition of French agriculture, which is very bad in three-fourths of the Kingdom, especially as compared with that of England, Scotland, and Germany. We have excellent farmers in Flanders, and in some other parts of France, but they never dream of improving their breed of cattle.

The committee of the Manchester Agricultural Society, having learned that Professor Liebig, the distinguished author of "Organic Chemistry of Agriculture and Physiology," would then be in England, unanimously resolved that an invitation should be immediately forwarded to him, by John Moore, Esq. F. L. S. to attend the dinner; and many of the first agriculturists of the Kingdom when assembled at Bristol, signified their intention of paying their respects to him in Manchester, where his important discoveries have been so well investigated, and are so highly appreciated. It is universally admitted, that Professor Liebig is the first living analytical chemist. As a proof of how much the science of chemistry is appreciated at the present time in Great Britain, we have only to refer to the leading agricultural periodicals, where we shall find a large space devoted to the writings of such men as Dr. Madden, Prof. Johnston, Sprengel, and others. Every local agricultural society is discussing the subject, and I find a course of lectures recently delivered before the Bath and West of England society, (one of the oldest and best provincial societies) by Prof. Robinson, on Chemistry, Vegetable Physiology, and Meterology, as applied to agriculture, spoken of with the highest approbation. The highest advantages of all branches of art have been derived from a knowledge of chemistry, and the agriculturists are too much alive to its importance, to allow such a science to escape attention on the other side of the Atlantic. I observe that its value in connection with agriculture is appreciated, by the frequent allusions to its principles in the agricultural journals, and the announcement of reprints of Liebig's, Prof. Johnston's, and other works.

ARTIFICIAL WATERING PLACES.—Several inquiries have been made as to the artificial watering places described in a former volume of the Cultivator by a subscriber, as constructed by Mr. Robertson of Fishkill landing. The method consisted in merely digging a hole in the earth, placing a barrel in the hole, which was to be filled with small stones, and then, whether any indications of water had previously existed or not, water would soon accumulate and fill the reservoir. In the only trial made of the plan, that has fallen under our notice, it was a complete failure, although made under as favorable circumstances as can generally be expected. For ourselves we should have no faith in the plan.

"BOKHARA CLOVER."—SOILING.

We have a letter from **Jas. Gowen**, Esq. of Mount Airy, near Philadelphia, in relation to an article in our last, headed "Another Humbug Exploded," from which we copy the following:

"With its public introduction I know only this, that early in the summer of 1841, Mr. Buist, a practical Horticulturist of Philadelphia, sent to a meeting of "The Philadelphia Society for promoting Agriculture," a few plants, which he called "Bokhara clover;" on sight of which, I pronounced it to be identical with what I had a small patch of in my garden, by the name of "sweet scented, flowering clover," the seed of which I received from a friend who had procured it in New-York. On my return from the meeting to Mount Airy, I compared one of the plants exhibited with those growing in the garden, and found them precisely the same. This neither increased nor diminished my zeal for the increase of the so called "Bokhara" or "sweet scented clover." Already I had what might be called a clever patch, considering the few seeds I began with, and was determined to persevere till I could seed an acre, so as to be able to feed it in such quantity as would put its merits fairly to the test. The seeds were given to me as those of a flowering plant of exquisite perfume, and in view of this character they were sown; but when grown, its leaves so resembled the Lucerne, and its taste so highly clover favored, I thought its proper place was the field rather than the garden: to which it shall be transferred next spring, to be made up in fresh boquets for Dairy Maid and her companions, who, though they may indulge in a toss of their heads, will never, I'll warrant, turn up their noses at them.

Soiling, through the summer, is a favorite practice with me—I might add, a necessary one. My farm, about 100 acres, is of light soil, on one of the highest ridges in the high lands of the county of Philadelphia. To turn out some 30 to 40 head of cattle to pasture in the summer on these uplands, under our burning suns, would be to consume all the grass in these months, leaving none for hay—to keep the fields bare to summer's heat and winter's cold—thereby injuring the soil and diminishing the supply of grass for the next season, to say nothing of the comfort of the cattle under such exposure, gathering up a withered herbage from a scorched surface. These evils I obviate by soiling—keeping my cattle comfortable and in good condition upon some 4 acres of land under Lucerne, Rye, and Red clover; allowing me to save more than one hundred tons of good hay, and affording the best heap of manure from stable alone, since May last, from the same number of cattle, that can be met with any where. But I did not set out to write a chapter on soiling; the noticing it at all was merely incidental to showing how natural it is for me to take an interest in every thing likely to increase my means in carrying out the practice—and there is no grass or plant I have yet seen, that affords to me such promise as the "sweet scented" or "Bokhara clover," which, should it come up to my expectations, shall be made public for the benefit of agriculturists. If I be disappointed, I shall have no cause to complain, as I can console myself with having deserved success, and that the failure involved only a small share of attention to a few grains of seed presented to me by a friend, and that I never encouraged any one to lose time or money on its culture. But if it prove to be as valuable as I expect, it will matter but little whether the plant is indigenous or exotic—whether it luxuriates on the fertile plains of Bokhariah, or in the cultivated gardens of New-York."

The Cotton Crop.—Extract of a letter from our correspondent at Planter's Retreat, Alabama, dated Oct. 15:—"The present Cotton crop is gathering very fine—will probably equal that of 1839. Quality generally good."

Extract of a letter from a correspondent at Marianna, Florida, dated Sept. 29:—"The cotton crop is much earlier this year than usual, and will disappoint many when they come to tie the bales. The crop is short, although the staple is fair." The same correspondent also remarks—"You will be surprised to learn that the peach trees are in bloom here for a second crop."

Sale of South Down Sheep.—We cheerfully comply with the request, to call the attention of our readers to the public sale of South Downs, advertised to take place near Newburgh, on the 10th inst. The sheep, we are informed, "were selected by the Hon. Mr. Murray, from the flock of Lord Torrington, and are believed to be fully equal, if not superior, to any ever imported into this country."

Liebig's Agricultural Chemistry.—It will be seen by a notice in this paper, that the publisher of "The New World," has just issued an edition of this valuable work, as a supplement to that journal, at the extremely low price of 25 cents. We hope he may meet with sufficient encouragement to induce a further publication of Agricultural works in this cheap form.

Nurseries.—We have been favored with the new Catalogues of our friends A. J. **Downing** & Co. of the Highland Horticultural Nurseries, Newburgh, and Thomas & Smith, Macedonville, Wayne Co. N. Y. from both of which it was our intention to have given some extracts in this month's Cultivator. We have, however, only room to call attention to their advertisements—one of which was published in our last, and the other in this number of our paper, from which it will be seen, that at both of these establishments, fruit trees of "proved varieties" may be obtained. By selecting such fruits as have been tested, the purchaser will run no risk of disappointment. Messrs. **Jesse Buel** & Co., proprietors of the "Albany Nursery," have also just issued a new Catalogue of this well-known and popular establishment.

Trial of Plows.—Extract of a letter from a friend at Baltimore:—"We have just had a trial of Plows, which resulted as follows:—Barnaby & Mooer's, furrow 6 inches deep and 12 wide, draft 642 lbs. Plow from Ohio, entirely of iron except the handles, same depth and width of furrow, 550 lbs. R. Sinclair, Jr. & Co's Phœnix wheel plow, furrow 13 inches wide, and 6 deep, 562 lbs. The latter plow embraces all the recent American and Scotch improvements, and instead of the flat landside, has a wheel which relieves the friction, &c."

ACKNOWLEDGMENTS, &c.

Communications have been received, since our last, from Wm. Partridge, L. A. Morrell, A. Georgian, M. Quimby, Wm. Jennison, G. B. Smith, S. W. Jewett, Jas. Gowen, Jas. Bates, B. P. Johnson, C. N. Bement, J. J. Crocheron, Botts & Burfoot, S. Harwood, A. Reader, J. M. Weeks, A. H. C., A Young Farmer, A. R. M'Cord, S. E. Todd, Ein Landsman, N. K. Cone, A Subscriber, Wm. Weeden, Commentator, N. N. D., W. Cloud, P. L. Simmonds, D. Tomlinson, J. Watson.

Our thanks are tendered to *Thomas Hancock*, Burlington, N. J., for a copy of the "Transactions of the Penn. Horticultural Society, from Sept. 1839 to Sept. 1842"—To *Prof. Silliman*, for the Oct. No. of "The American Journal of Science and Arts"—To *W. C. Redfield*, Esq., for a copy of his essay on "Whirlwind Storms"—To the Editors of the London *New Farmers' Journal*, for the continued files of that excellent paper, and for an extra, containing four beautiful portraits of prize animals at the late Fair of the Royal Ag. Society—To *John Hannam*, Esq., North Deighton, England, for the "Leeds Intelligencer," containing the proceedings of the Wetherby Ag. Society—To *P. L. Simmonds*, Esq., London, for a copy of Mr. Everett's Speech at the Dinner of the Waltham Ag. Society, England—To *Wm. Canby*, Esq., and to some unknown friend, for copies of Mr. Garnett's Address at Wilmington.

SOUTH DOWNS AT AUCTION.

WILL be sold at auction on the 10th of November next, at 12 M., at Danskammer, near Newburgh, a flock of sheep; consisting in part of full blooded imported South Downs, selected from one of the best flocks in England for the late Edward Armstrong, and in part of half and three quarter bloods, a cross of those sheep with Merinos. The sale will be made in lots of not exceeding *ten* each to suit purchasers.

Any information in respect to the sheep, their pedigree, &c., may be obtained from Mr. FREDERIC J. BETTS at Newburgh-

Danskammer, Oct. 24, 1842.

DOWNING'S HORTICULTURAL NURSERIES.

THE subscribers offer for autumn planting a very large collection of Fruit and Ornamental Trees, Flowering Shrubs, Roses, Herbaceous Plants, &c. &c.

The Nurseries are especially rich in proved fruits, of which there is now a large stock of thrifty, handsome trees. The collection of Pears, Plums, Cherries, Peaches, Apricots, Nectarines, &c. &c., have received particular attention, and comprise at present almost every choice and valuable variety obtainable at home or abroad; and orchardists and amateurs will be supplied with the choicest assortment of those fine varieties, the accuracy and value of which have been tested in this establishment.

The new Catalogue of Trees and Plants contains valuable descriptive lists of these fruits, which will be found a great assistance to persons making a selection. It may be had on application by mail, or at the office of the Cultivator, Albany.

Orders addressed to the subscribers will receive careful attention, and the trees and plants will be packed for transportation to any part of the country.

Newburgh, N. Y., Oct. 1842. A. J. DOWNING & Co.

BOMMER'S PATENT MANURE.

THE committee of the New-York State Agricultural Society, who examined my method of making vegetable manure, having made a favorable report on its merits, (for a copy of which see Cultivator for Nov. 1842,) I think it necessary to inform the public on what terms I will dispose of my method, so that every farmer and planter may make the best use of this invention, and secure to themselves the advantages which its use offers. It is also important to inform them of the measures I have taken, as much for their interests as my own, in order to prevent frauds on the part of certain individuals, always ready to appropriate to themselves other people's property, and who for that purpose are traveling about the country to sell some fragments of my method, without troubling themselves about the success of the credulous purchaser. I therefore give notice that all copies of my method bear the number of the register, my signature and my seal. All persons who wish to purchase it must furnish their names and places of residence, and enclose the price of the method, invariably settled as follows:

For Gardens of any extent,	$6
Farms, under 200 acres,	10
Farms, from 200 to 400 acres,	15
Farms, over 400 acres,	20
Plantations of any extent,	25

For this small sum, the method becomes the property of the purchaser, for his own use forever.

I hope that cultivators will find this rate very moderate, inasmuch as more than half of the amount is expended by the costs of printing, advertisements in the newspapers, discount to agents, &c. I expect that they will think it reasonable and just that I have something left for my labor and trouble, and to defray all my expenses in bringing this invention to its present state of perfection.

To facilitate the circulation of my method, agencies will be established in the different states and counties; and to avoid frauds, these agencies will be advertised by me in the newspapers of the states and counties respectively.

At present, however, my method can only be had of the Rev. Eli Barnett, Westville, Conn., my agent for New-England—at the office of the Cultivator in Albany, and at my office, No. 16 Rector-street, New-York city, after the tenth of November, at which time I shall leave Albany for New-York.

The application of this system is very simple, and the process plainly explained in my method; but if any one of the purchasers should meet with any difficulty in its application, or should not realize the results that this method offers, they may apply to me for the instructions necessary in order to a complete success in the operation.

All orders by mail, post paid, will be promptly answered; and the printed method can be sent by mail, at the expense of pamphlet postage.

New-York, Nov. 1, 1842. GEO. BOMMER.

FRUIT TREES AND ORNAMENTAL PLANTS.

D. LANDRETH & FULTON, proprietors of the Nurseries near Philadelphia, so long conducted by the late D. & C. Landreth, are provided with an unusually large stock of the most desirable articles in their line. Particular attention is requested to the extent and variety of the decorative Trees, Evergreens, and Flowering Shrubs. Of Green House Plants, they also have a large collection, including nearly three thousand engrafted Camelias, choice Roses in great variety, and such other plants as are usually esteemed. The present season's Catalogue has just been published, and will be furnished on post paid application.

Philadelphia, Oct. 1842.

MOUNT HOPE GARDEN AND NURSERIES,
ROCHESTER, N. Y.

THE proprietors of this establishment offer for sale a general assortment of Nursery articles, comprising Fruit and Ornamental Trees, Flowering Shrubs, Herbaceous Plants, Tulips, Hyacinths, and other Bulbous Flower Roots, Double Dahlias &c. They have also on hand, a large and fine collection of Green and Hot House Plants, including Geraniums, Chinese Monthly Roses, Camellia, Japonica, Chinese Azaleas, Cape Jasmines, Cactuses, &c.

Orders for any of the above articles, whether large or small, will be promptly and faithfully executed, and charges in all cases will be very moderate. Persons ordering from a distance, may rely on having their articles securely packed, and marked and shipped, as their orders may designate.

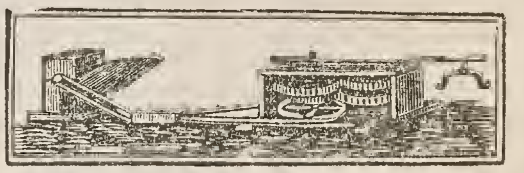
To such persons as are about forming new establishments, or who may wish to dispose of Trees, Shrubs, Plants, &c. in their neighborhood, our terms will be very liberal.

Gardens and Pleasure Grounds, will be laid out in any part of the country, and skilful gardeners furnished on reasonable notice, and information on any subject connected with the business will be cheerfully and promptly imparted.

It is expected that persons unacquainted with the proprietors, will either accompany their orders with a remittance, or name a guarantee in the city of Rochester, or vicinity.

Rochester, Oct. 1, 1842. ELLWANGER & BARRY.

N. B. Our Fruit Trees comprise the most desirable early and late varieties, and the utmost care has been taken in propagating from such trees only, as were in a bearing state, and whose qualities have been sufficiently tested. Priced Catalogues will be forwarded *gratis*, to all applicants.



WARREN'S HORSE POWER AND THRESHING MACHINE.

THE above is a representation of *Warren's Improved Patent Horse Power and Threshing Machine*, which at our late Fair, obtained the Diploma.

The construction of each is very simple: and being very compact, and their weight together being only 500 to 600 lbs. they are easily conveyed in a common wagon. They are also made in such a way as to require less attendance than any machine of the kind in use. We do not hesitate to recommend them as machines suited to the wants of many of our farmers throughout the state and country.

We understand that the agent, Mr. Leonard Bostwick, 58 Water st. New-York, is prepared to guarantee that his Two Horse Power Machines, (which are sold at $75,) will thresh in a clean and thorough manner, at least 30 bushels of Oats per hour, and other grain in proportion.

IMPORTANT WORK FOR FARMERS.

NOW in press, and will be issued on or about the first of November, in a double extra number of the New World, which is forwarded at newspaper postage to all parts of the country,

LIEBIG'S AGRICULTURAL CHEMISTRY.

PRICE 25 CENTS—FIVE COPIES FOR $1.

This is a work of inestimable value to every class of our citizens, but more especially to farmers and gardeners. It will be issued in a double number of the New World, in a beautiful octavo form, and sent, at newspaper postage, throughout the country.

No work has ever appeared in the English language, possessing the ability and interest of Liebig's Agricultural Chemistry; and not a farmer in the Union but should obtain a copy, though it were to cost *five dollars* instead of *twenty-five cents*. The following extracts from the preface, will show more fully the nature of this work:

"I have endeavored to develop, in a manner correspondent to the present state of science, the fundamental principles of Chemistry in general, and the laws of organic Chemistry in particular, in their application to Agriculture and Physiology; to the causes of fermentation, decay, and putrefaction; to the vinous and acetous fermentations, and to nitrification. The conversion of woody fibre into wood and mineral-coal, the nature of poisons, contagions, and miasms, and the causes of their action on the living organism, have been elucidated in their chemical relations.

"*Perfect Agriculture is the true foundation of all trade and industry—it is the foundation of the riches of states.* But a rational system of Agriculture cannot be formed without the application of scientific principles; for such a system must be based on an exact acquaintance with the means of nutrition of vegetables, and with the influence of soils and action of manure upon them. This knowledge we must seek from chemistry, which teaches the mode of investigating the composition, and of studying the characters of the different substances from which plants derive their nourishment.

"The chemical forces play a part in all the processes of the living animal organism; and a number of transformations and changes in the living body are exclusively dependent on their influences. The diseases incident to the period of growth of man, contagion and contagious matter, have their analogies to many chemical processes. The investigation of the chemical connexion subsisting between those actions proceeding in the living body, and the transformation presented by chemical compounds has also been a subject of my inquiries."

☞ Agents, postmasters, and all others, are requested to take an interest in the circulation of this work. Every farmer will take a copy if solicited, and its importance made known to them. They should club together and send one dollar through their postmaster, who will order copies for them free of postage. Agents wanted to obtain subscribers for the above work in every town in the Union. To such it will be put at $16 per hundred copies. All letters should contain the cash, (post paid) to receive attention. Address WINCHESTER,

30 Ann-street, N. Y

THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

CULT. VOL. IX.—NO. 12. ALBANY, N. Y. DECEMBER, 1842 CULT. & FAR. VOL. III.—NO. 12.

PUBLISHED MONTHLY.

GAYLORD & TUCKER, EDITORS.

LUTHER TUCKER, PROPRIETOR.

One Dollar per annum—Six Copies for $5.

(PAYABLE ALWAYS IN ADVANCE.)

20 per cent commission on 25 or more subscribers, and 25 per cent commission on 100 or more.

Subscriptions to commence with a volume; and the money to be sent free of postage.

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Handsomely stitched in printed covers,

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

☞ The Index and Title-page to this volume of The Cultivator, will be forwarded to subscribers about the middle of the present month.

A WORD TO OUR FRIENDS.

OUR subscribers are requested to bear in mind the fact that "THE CULTIVATOR" is published on the cash system; and consequently that it will hereafter be sent only to such as have paid for the next year. Those therefore who wish the next vol. (commencing on the first of Jan.) should at once renew their subscriptions by handing their dollar to the Agent or Postmaster.

With this number we send out Prospectuses for the next vol. to our Agents, upon whose public spirit and activity we must rely, as heretofore, in a great degree for our subscription; and we hope very many of our present subscribers who have not heretofore interested themselves in obtaining subscribers, will deem the matter of sufficient public importance to induce them to render their aid by exerting their influence to extend the circulation of "THE CULTIVATOR" in their respective neighborhoods. We should indeed be glad to have every one of our friends act as Agents, and for any efforts they may be pleased to make in our behalf, they will receive our hearty thanks. (See Address to Patrons in next column.)

ILLUSTRATIONS.—With the first number of our next volume, we shall issue an extra page of Illustrations, executed in a style superior to any thing which has yet appeared in our paper. It will contain a portrait of Mr. Prentice's splendid bull "Fairfax," to which was awarded the first prize of the N. Y. State Ag. Society at its late Fair, as the best two year old bull, and also the first prize of the American Institute, as the best bull over two years old—the elevation and plans of a Farm House, for the beautiful and highly finished Drawings of which we are indebted to T. M. Niven, Esq., Newburgh—several Farm Implements—drawings of the beautiful Sun Dial, cut in free stone by Mr. Thom, and Mr. Mott's Vase, which were exhibited at the late Fair of the American Institute; an ornamental Gate—a new Bee Hive by Mr. Weeks of Vermont, &c. &c.

THE NEW-YORK STATE AG. SOCIETY.

THE annual meeting of the New-York State Ag. Society will be held at the Lecture Room of the Young Men's Association, in the Exchange, Albany, on Wednesday the 18th day of Jan. 1843, at 9 o'clock, A. M.

Meetings of the Executive Committee will be held at the office of "The Cultivator," on the second Wednesdays of December and January, at 10 o'clock, A. M.

☞ All persons intending to compete for the premiums on Field Crops, are reminded that the statements required must be transmitted to the Recording Secretary, free of postage, on or before the first of Jan. next. The Essays, specimens of Painting and Engraving, and designs for Farm Buildings, intended to be offered for the premiums of the Society, must also be left with the Recording Secretary previous to the first of Jan. next.

LUTHER TUCKER,
Rec. Sec'y.

Albany, Dec 1, 1842.

TO THE PATRONS OF THE CULTIVATOR,

And the Friends of Agriculture in the United States.

THE present number closes the Ninth volume of the Cultivator, and we are unwilling to permit the occasion to pass away, without tendering our acknowledgments to our numerous friends and patrons, who have kept us company through the year;—those who have so effectually aided us as contributors;—and those who have so kindly assisted us in extending the circulation of our Journal. It has been a subject of gratulation to us, that notwithstanding the hardness of the times, and the multiplication of the new Agricultural journals, so few of our former patrons have left us; while the additions of new subscribers from our own and other states and territories of the Union, prove that our efforts are not without the decided approval of the friends of improved agriculture every where. To our subscribers, and indeed the agricultural public generally, the course and character of the Cultivator is too well known to render necessary a word of explanation or comment; but as there may be some unacquainted with the work, the following particulars are stated for their benefit.

1. The circulation of the Cultivator is greater than that of any other Agricultural journal in the United States, and probably greater than that of any similar journal in the world. It presents in this respect, a most favorable medium through which practical and experienced farmers can communicate their opinions, practice, and experiments, to their agricultural brethren.

2. In the number and high standing of its contributors, both as farmers and as men of science, the Cultivator is without a rival. This will be seen by an examination of the list of contributors to the present volume, or that given with the volume of 1841. It is to the scientific acquirements of many of these contributors, the thorough practical acquaintance with agricultural pursuits possessed by most of them, and the general intelligence of all, that the Cultivator is much indebted for the favor with which it is viewed by all classes in the country. With contributors from every state and territory in the Union, and from the British provinces, as well as several of distinguished merit from abroad, it is not surprising that the Cultivator should have come to be considered as the best exponent of American Agriculture, both at home and abroad.

3. The quantity of matter furnished in the Cultivator, is altogether greater, indeed nearly double that of any other journal in the country, published at the same price. As an easy illustration of the quantity of reading it contains, we will select for comparison, a work with which most are familiar—the North American Review. A careful examination shows that each number of the Cultivator contains as much matter as 145 pages of the Review; in other words, a volume of the Cultivator is equal to three and a half volumes of the Review; the one costing one dollar, the other eight dollars seventy-five cents. A similar comparison might be instituted with other periodicals, but it is unnecessary.

4. In the number, variety and excellence of its illustrations, the Cultivator is unequaled. This department is attended with great expense, but as its adoption has given general satisfaction, it will be continued and improved to every reasonable extent.

5. In the mechanical execution, the quality of the paper used, and the adaptation of the journal to preservation and binding, it is such as to give it a favorable claim to the consideration of the public. Stereotyped as the work is, any number or volume wanted, can be furnished at once, and the increasing demand for the entire series, proves that the Cultivator is beginning to be considered not only the cheapest, but the best Encyclopedia of Practical Agriculture, existing.

The readers of the Cultivator will not expect or require any pledges or promises of the conductors as to the future. They are aware that no effort will be spared in any department of the paper, to fully sustain the high character it has acquired, and render it a welcome visitor in the family of every friend of Agriculture and Horticulture in the country. Devoted, as it has been, to the improvement of the soil and the mind—to the extension of agricultural knowledge and an improved husbandry—and to a better taste in farm management, and farm architecture—such it will continue to be, but with enlarged and more efficient means of usefulness.

It has been the endeavor of the conductors of the Cultivator, to place it on such a basis that they might furnish it to agents, and those disposed to take an interest in its circulation, on such terms as to give them a reasonable compensation for such time and trouble as may be required, and they are happy in the belief that they have, to a considerable degree, succeeded in doing this. These terms they wish every friend to the agricultural interests of our country to examine, and act as inclination or a sense of duty shall dictate.

The conductors of the Cultivator are anxious to extend, or even double the present circulation of the paper, because they believe that the best interests of the country would be promoted by such a result. But in doing this, they do not wish to interfere with, or occasion the loss of a single subscriber by any other agricultural journal. The field of labor before us is a broad one; and to all who are engaged in cultivating it, they cordially tender the right hand of fellowship, and wish them every success. There cannot be in the United States, less than two millions of families who would be benefited far beyond the expense, by the receipt of an agricultural or horticultural paper. How many such journals are circulated? One hundred and twenty thousand, it is believed, would be a large estimate. It cannot then be doubted that there is ample room for the labors and for an extension of the circulation of all.

In bringing their paper to the notice of the agricultural public, the conductors must rely, as they have hitherto done, on the kind offices of the friends of agriculture throughout the United States. To Postmasters generally, and to those Editors with whom we exchange, as well as many others, our thanks are due for the essential aid they have rendered us. That it will still be continued, they cannot permit themselves to doubt. Judging from the experience of the past, and certainly in accordance with our anxious wishes and expectations, the commencement of another volume will find us in the company of most of our present subscribers; and if each of these would endeavor to introduce us to a new friend, as constant as themselves, they would greatly enhance the obligations we feel to them personally.

IMPROVEMENT IN THE CULTURE OF COTTON.—We publish in this paper the first of a series of three numbers on the Culture of Cotton, from the pen of Dr. CLOUD of Alabama, which, if we mistake not, will be of high interest to cotton planters. In a private note, dated Oct. 12, Dr. C. says—"I am this season absolutely raising from 3,000 to 5,000 lbs. of cotton per acre under the improved system, when the same land, under the system at present practiced throughout the cotton region, could not possibly yield above from 300 to 500 lbs. per acre, and with but a trifling shade of difference in the expense." In a later letter, Dr. C. informs us that he has actually picked 5,989 lbs. per acre.

CORRECTION.—The grass mentioned in Dr. Cloud's article, p. 164, should have been printed *Musquite* instead of *Musquito* grass.

☞ We beg to call the attention of the scientific and agricultural public to the advertisement of Messrs. Tagliabue & Casella, philosophical instrument makers, London, which appears in another column. They are the principal and oldest established real implement makers in the United Kingdom; and the newly invented rain guage which they have brought out is highly commended by the Meteorological Society of Great Britain, and now much in use by all interested in the fall of rain. Their other instruments for registering meteoric phenomena are also highly approved.

AMERICAN SILK.—To Mr. Salmon Higgins of Ithaca, N. Y., was awarded a gold medal for the best specimen of raw silk exhibited at the late Fair of the American Institute. This beautiful specimen of silk, made in the family of Mr. Higgins, was, as we learn, sent to the Fair of the State Ag. Society for exhibition; but for some reason, unaccountable to us, it appears to have been removed after having been opened for exhibition; so that it is supposed it was not seen by the judges who examined the specimens of silk.

SALE OF STOCK.—Col. J. F. Scribner of Sheldon, Vt., who has, as we are informed, a very superior flock of South Down sheep, from importations by way of Quebec, recently purchased two superior buck lambs of the same breed (one weighing 108, and the other 112 lbs.) of Mr. Bement of the Three Hills Farm. Mr. B. has also lately sent a buck and two ewes, of the same breed, to our friend Capt. R. S. Hardwick of Sparta, Ga.—a buck and four ewes to Wm. Sumner, Esq. Pomaria, S. C.—three Durham calves, a bull and two heifers, to John Warren, Esq., Columbus, Ga. These calves were sired by his famous and well-known Astoria, which we regret to hear, he has been so unfortunate as to lose, after only 24 hours illness. To Mr. John Bonner of White Plains, Ga., Mr. B. has recently sold the beautiful pair of Berkshires, which received the first prizes at the Syracuse fair.

Notices of New Publications.

NATURAL HISTORY OF NEW-YORK:—*Part* I. *Zoology, by James E. DeKay.*

We have before us the first of the volumes resulting from the scientific survey of the state which has been several years in progress; and can say that it is in all respects worthy of the men whose labors the series is designed to record, and to the state whose munificence has thus far so successfully carried this great work forward towards its completion. The volume before us consists of two parts; the first, an introduction from the pen of Gov. SEWARD, and the second the Report on the Zoology of the State, or a History of all the known animals of the State, prepared by the Zoologist of the Survey, Dr. J. E. De Kay.

The "Introduction" occupies about 200 pages; and is a comprehensive and beautifully written essay,on the past and present condition of the state, embracing all its various and extensive interests, and presenting at a single view a mass of historical facts, interesting to all, and rarely to be met with in an accessible form. Among the subjects treated by Governor Seward, we find the constitution of the state; its colleges and academies; libraries; school system; school libraries; newspapers; religion; medicine; jurisprudence; penitentiary discipline, (a well written note by Mr. Sullivan;) canals; railroads; physical sciences; agricultural improvement; horticulture; civil engineering; Croton aqueduct; architecture; coast surveys; historical and other writers; natural history; geological survey, &c. &c.

The part devoted to the labors of Dr. De Kay contains, 1st, a well written preface showing what had been done by others, and the course pursued by the writer in illustrating this important branch of natural history. 2d. A tabular view of the Genera of Mammalia observed in the State of New-York. 3d. A description, scientific and popular, of all the animals embraced in this series. And 4th. A series of thrty-three finely executed plates, embracing figures of all the animals described as existing within the limits of the state.

A critical examination of the Zoology we are compelled to leave to others, our limits only permitting us to say that to those wishing to become acquainted with the mammalia of New-York, their character, habits, &c. Dr. De Kay has furnished a most satisfactory guide. The engravings add greatly to its value, and the descriptions embrace information of much use to the agriculturist as well as others.

The Scientific Survey of New-York is one, the progress of which we have watched with great anxiety, as constituting, so far as its natural history is concerned, an important era in the history of New-York. Its execution thus far has been most honorable to the men who conceived it, those who have superintended and assisted in the execution, and to the state whose liberality has furnished the means of its performance. The volumes which record the results, will long remain a proud monument of the liberality, science, and mechanic skill of the present times; and those who have had the pleasure of examining the present magnificent volume, will wait with no little impatience for the appearance of those which are to follow it. Of these, it is understood there will be some five or six in number. The present, is a large quarto, beautifully executed at the press of Thurlow Weed, printer to the State, well bound, and sold at four dollars. This is one of those works which no public library, and few private ones, can afford to be without. The whole will be executed at the expense and under the superintendence of the state.

JOURNAL OF ARTS AND SCIENCE.—*Professor Silliman, New-Haven, Ct.*

The October number of this always welcome periodical, is received, and a hasty examination has shown us that it contains several papers of much interest. The history of geology, as given in the address of Prof. Silliman, will be read with interest by all who are wishing to become acquainted with this science. There are two papers on tornadoes, one by Mr. Redfield of N. Y. and the other by Prof. Loomis of Hudson, Ohio. We think they establish the whirling character of most if not all tornadoes most conclusively. There is a brief bibliographical notice of Prof. Liebig's new work, by the editors, in which an opinion highly favorble to the work is expressed. They say, "The views of Prof. Liebig, founded on the incontrovertible evidences of numerous analyses, cannot be gainsayed." "It is a most lucid condensation of years of laborious research, not of the author only, but of all his contemporaries." The miscellaneous notices are very valuable. That respecting the production of insects, by prolonged electric action, will arrest attention.

NORTH AMERICAN REVIEW. *Boston.*

The October number of this periodical is before us with its usual compliment of good things. College Education, is a capital paper in the form of a review of Pres. Wayland's work on our present collegiate system. It tells plain truths, in a manner that should make them heard. Field Sports, is a comparison of the game offered sportsmen in this country and in Great Britain; and will be acceptable to those fond of such pursuits. The paper which will attract most notice from men of science, is a review of Liebig's late work on Animal Chemistry. On some points it is quite severe on the philosophy of the great German; parti-particularly on that part relating to physiology and pathology. We apprehend, however, that it will be found easier to cavil at, than confute, Liebig's positions on these topics. As soon as we can make room, we shall present a notice at some length of such topics in this work as properly belong to our publication. There are other papers of interest, particularly a caustic one on the plunderings of some of the English reviews, in which the question, "Who reads an American book?" is answered in a good natured but conclusive way.

PHENOMENA AND ORDER OF THE SOLAR SYSTEM.—*Dayton & Newman,* 199 *Broadway, New-York.*

We are indebted to the publishers, Messrs. Dayton and Newman, for a copy of this interesting and instructive volume, from the pen of J. P. Nichol author of "Views of the Architecture of the Heavens." The work is illustrated with numerous plates, exhibiting some of the most striking appearances in the planetary and solar system. This is one of those volumes which should find a place in every Family and every School District Library. The reading of such works gives a healthy tone to the mind, and enlarged conceptions of the skill of the architect of the universe. They teach the minds of the young to look through nature up to nature's God.

UNCAS AND MIANTONOMAH.—*Dayton & Newman.*

This is another volume from the same publishers as the above. The basis of it is an address delivered by Col. Stone of New-York, at Norwich, Conn., on the occasion of the erection of a monument to the memory of Uncas, that distinguished chief,and friend of the first settlers of Connecticut, July 4, 1842. Those who have read Col. Stone's Life of Brant, or of Red Jacket, will need little persuasion to induce them to peruse this brief record of the chief who did so much to aid and succor the hardy pioneers who raised the standard of religion and civilization on the banks of the Connecticut. Col. Stone seems at home among the Indians of North America, and his record of facts, relating to those times, and the principal actors in them, cannot fail of being read with interest.

Answers to Inquiries, &c.

IMPROVEMENT OF THE SOIL.

MESSRS. EDITORS—I am about to commence farming on a small scale. I have purchased an acre of land a few minutes walk from my office, on which I intend to reside, and bestow my leisure moments in cultivation. I am anxious to make it as productive as possible in vegetables and fruit,—let me then tell you my plans.

My grounds are a mixture of dark loam and sand, with a subsoil of yellow clay. I propose to dress it with 50 loads of good stable manure, 50 barrels of charcoal dust, and 25 bushels of shell lime. Previously to spreading them, I shall plow the land to the depth of 10 inches, and at the same time subsoil plow to the depth of 18 or 20 inches; harrow thoroughly, and spread the manures, then cross plow and harrow again. Is this a judicious course, or can I add for a more permanent fertilizer, bone dust? If not bone dust, what, and how much, of any thing else? A. P. C.

New-York, Oct. 1842.

The plan proposed by our correspondent, is an excellent one, and if carried out, can scarcely fail of success. One thing only may be necessary—if the subsoil is moist, under draining would make it much more suitable for fruit trees; if not moist, subsoil plowing will be all that is necessary. Bone dust can scarcely be considered a permanent fertilizer; its effects are great, but immediate; and the manures he proposes will equal any thing else for such a use. Charcoal is useful in several ways—it makes the soil warmer, it renders it more porous and friable, and it absorbs and treasures up the ammonia of the manure and the air for the use of the plants. For a first dressing, the materials named will be abundantly sufficient.

CULTIVATION OF THE OLIVE, &c.

MESSRS. GAYLORD & TUCKER—A writer in the Sept. No. of the Cultivator, from Chester co. Pa., has inquired if the Olive could not be propagated in the U. States, in sufficient quantities to furnish Olive oil for our own consumption, and be rendered a substitute for lard or hog oil. This question cannot be answered with certainty; but there is reason to believe that the climate of the U. States is too cold or changeable for the growth of that tree, with the exception of Georgia, Alabama, Mississippi, and Louisiana, and probably limited to the southern portion of these states. In 1819, a grant of land in Alabama, was made by Congress, to some French emigrants, on the express condition of introducing the Olive. The attempt I believe was abortive; the French soldiers, (for these emigrants were soldiers under Napoleon,) as I have understood, abandoning the culture of the olive for that of cotton. There is great reason to believe that the olive might be cultivated in Florida to advantage, if that peninsula shall ever be brought into general settlement, and rendered safe for the pursuits of the husbandman. I think the culture of the olive would be a great acquisition to our agriculture, if the climate of any part of the states will permit its adoption.

Arthur Young mentions in his work on Agriculture, that in his tour in Italy, he found that the sheep in that country, yield milk from which cheese is made in such quantities, as to afford a profit of 18 per cent. Has anything of that kind been attempted in the U. States? and could any thing of the kind be attempted that would render our flocks of sheep more valuable or profitable? Has any attempt been made to cure mutton as *bacon?* Would it not be worth the attention of some of the Ag. Societies in the states, the southern ones particularly, to make a trial of producing cheese from the milk of sheep?

Cambridge, Sept. 1842. WM. JENNISON.

According to Bishop Heber, in his Travels in the Crimea, in the latitudes of from 44° to 46°, there are two varieties of the Olive cultivated there, and have been from time immemorial, which resist the severe frosts of that country, where at times the thermometer falls nearly or quite to zero; and which would be fatal to the olives of Italy, France, or Spain. It is probable if these Crimean Olives were introduced into the Southern states, they would succeed; but present appearances indicate that there will be a greater certainty of success in manufacturing olive oil from pigs than from the fruit of that tree, for a considerable time to come.

BOMMER'S MANURE.

MESSRS. EDITORS—I perceive there is a new method of making vegetable manures by fermentation, invented by Mr. Bommer, which is very highly recommended, and it appears from a notice in the N. G. Farmer that the price of the patent is $10, but there is nothing said about the expense of the process, and I am led to think perhaps it is like a receipt which I once bought for making soft soap, very highly recommended, and I got soft soaped in earnest; for to make six gallons, it required four lbs. of hard soap, and other materials from the druggists, which cost as much as six gallons of soap was worth after it was made. If Mr. Bommer's invention is really valuable, and if straw can be so readily converted into manure, it would be of great use in this wheat growing county, and I would suggest that Mr. Bommer would find it for his interest to make the proprietors of the Agricultural Warehouse at Syracuse, agents for the sale of rights.

I should be pleased to learn from you, what is the expense of the process, and how the manure is increased four-fold in weight in the manufacture? Is it by water added, or by something else? A SUBSCRIBER.

Dewitt, Onondaga co.

"A Subscriber," is referred to Dr. Beck's Report on the manure made by Mr. Bommer, on the ground occupied by the State Society, at their late Fair at Albany, for an answer to his queries. In that instance, straw, corn stalks, swamp grass, weeds, &c. was converted into a capital manure in 15 days. The expense will of course depend on circumstances, but in no instance can it be great. The weight gained is partly from the water added, and partly from other materials, none of which are expensive, and some of which of little or no value before, are converted into first rate manure during the process. It will be seen from Mr. B.'s notice in our last paper, that it is his intention to establish agents for the sale of his method, in the different counties.

MANURE, AND LOCUST FENCE.

"W. P." of Darke Co. Ohio, requests "some information on the best methods of preparing and increasing the quantity of manure; and whether Black Locusts can be planted in any way to make a fence, or posts for a fence?"

The first part of our friend's inquiry, will be found answered in the reply to the inquiry of Mr. Carr, and more at length in the preceding numbers of the Cultivator. We have never known the black locust planted for fence, as its manner of growth would prevent that closeness necessary for this purpose. Its durability for posts, is only equaled, when the wood is mature, by the red cedar. In soils suitable for its growth, we see no reason why it might not be planted in rows ten or twelve feet apart, and when grown to the diameter of eight or ten inches, bars of durable wood sprung into holes made in the bodies, the living tree serving for posts, as we have often seen done in the case of the Lombardy poplar; the only use, by the way, to which this tree is fit to be applied.

SOUTHWEST MISSOURI.

OUR correspondent, D. W. THOMPSON, of Jasper, Pleasant Prairie, in the southwest part of the state of Missouri, gives a flattering, and we doubt not, a just account of that section of the United States. The length of his communication, however, obliges us to condense some parts of it. He says:—

"Permit me to say to the readers of the Cultivator, who wish to emigrate, (for we at the far west want not only the readers of your paper, but those too, who practice according to its precepts,) that I think ours possesses many advantages over any with which I am acquainted. Its climate is admirable, (about 37 degrees of latitude,) temperate and healthy; face of the country generally level or rather undulating; the soil very fertile, producing a greater amount and variety of farm products, than almost any other section of our country. More than 40 bushels of wheat per acre have been raised, and from 800 to 1000 lbs. of cotton are produced. There is every probability that rice might be grown with success. Our streams are branches of the Arkansas, small, swift, and clear, rising from and generally fed by springs, neither freezing in winter, or dry in summer, furnishing abundance of water power. The country is populating and improving rapidly, and there has probably been enough grown the present season to support twice the present number of inhabitants. Wheat is 25 cents per bushel, corn lower. For settlers, we wish the enterprising, industrious, temperate and moral class, to come to our country, as for such, it presents strong inducements; and there is much land not yet taken up, while those who choose, can have choice improvements, in some cases lower than they can be made."

Mr. Thompson wishes a young gentleman "that can come well recommended for morality and science," to engage with him for a few years in the introduction of the silk and mulberry culture, and the gardening and nursery business. The experiments made in silk, prove that the country is well adapted to that culture; and the other branches might doubtless be made profitable. Mr. T. thinks the position a good one for the manufacture and sale of dairy products, and is intending to enter upon that business as soon as suitable arrangements can be made. Emigrants, Mr. T. advises, to bring with them all seeds and scions of fruit trees to be found in eastern gardens or nurseries; and in particular, the seeds of the grasses that are hardy, and calculated for good pasture. Of these, however, the Red clover, Timothy, and Red top, may be excepted, as these are found in abundance in that region.

Mr. Thompson asks for the best manner of sowing and harvesting the Yankee bean, (common field bean we presume,) and whether cultivated grasses can be made to take in the prairie, without first breaking the sod?

The field bean is best cultivated by planting in rows, on moderately fertile soil, rather sandy and light than otherwise, and is to be kept clean with the hoe. When ripe, they only require to be pulled, dried, threshed, and cleaned by the fanning mill, or by being winnowed. The whole process is perfectly simple and easy. Tame, or cultivated grasses, take on prairie lands without difficulty, if the seeds are sown, and the surface thoroughly harrowed. It is still better, if the prairie can be burned over previous to sowing the seeds, as the surface is then left in excellent condition for the new grasses.

THE CRANBERRY.

"A SUBSCRIBER," at Poughkeepsie, asks whether the Cramberry (or Cranberry,) can be grown from seed; whether there are two kinds of the plant, and where, if they cannot be grown from seed, plants of the right kind can be procured? There are three varieties of the cranberry, two in the northern states, and one in the south, but with the exception of the common kind, the others are so rare as not to be of any account. All are creepers, natives of wet places, and may be grown wherever the soil is damp and abounding in vegetable matter or muck. The best method of procuring them, would be to select them at once from fruit bearing cranberry meadows, and they may be transplanted either in spring or fall, as may suit convenience. We have never known their being cultivated from seeds, though the thing is doubtless possible.

SILK MANUFACTURES, SHEEP, &c.

MR. A. E. ERNEST of Bibb co, Geo., informs us that for several years past, he has been experimenting in the culture of silk, and has been eminently successful. He proposes to extend his operations, and wishes some information as to the best machinery for converting cocoons into sewing silk. If some of our friends who have a practical acquaintance with the different machines, reels, &c. in use, such as the Piedmont, Brooks', Jones', Blydenburgh's, Clarke's, or others, will state their opinion of the best for making sewing silk, with the price, and the place where they can be procured, they will confer a favor not only on Mr. E., but on others who are engaged in the silk business.

Mr. Ernest asks what kind of fine wooled sheep would probably suit that climate best, and at what rates fine wooled sheep can be procured?

Sheep derived from a warm country, would doubtless do better in the climate of Georgia, than those from a northern one; and for this reason, the Merino, or the Saxon, or some of their varieties, should be chosen. The South Down is a hardy sheep, and would probably succeed well in Georgia, or elsewhere; but the wool, although of good quality, is not equal to Merino in fineness. The pure Merinos or Saxons may be procured, ewes and rams, at from six to ten dollars each; and the South Downs from fifteen to twenty-five dollars each.

The closing remarks of Mr. Ernest's paper, contain so much truth and good sense, that we are unwilling to withhold them from our readers:

> "The condition of our country certainly requires that we should all be doing what we can to relieve it from its present unhappy state. The distresses of the country have clearly been brought about, by consuming more than we have produced; and it can be relieved by producing more than we consume, and in no other way. It is folly, or worse than folly, to expect relief in any other way. No single individual can do much, but each one can do something. Any person can in themselves furnish an example of industry and economy, if they will, and this is precisely what is wanting. If I can throw $1,000, or $10,000 worth of silk into market every year, I shall do something; and so with any other of our products. The contributions of each may be small, but the aggregate is large; and it is productive industry that tells on the nation's prosperity."

GROUND MOLE AND GOPHER.

OUR correspondent, WM. C. CARR, Esq. of St. Louis, inquires for some method of destroying the moles, and the burrowing animal called the Gopher, (peculiar we believe to the country west of the Mississippi.) He says "they are not only highly destructive to orchards, gardens, yards, and meadows, but to corn fields also."

Of the gopher, we know nothing; but the mole or rather meadow mouse, (which we presume is the animal referred to by Mr. Carr,) is in some years very abundant here, and does much damage to orchards, nurseries, meadows, &c. At such times we have found the best method of saving our trees, was to keep them free from grass, weeds, or any thing that could shelter the mouse, around the roots. They may be poisoned without difficulty by scattering poisoned food in their covered pathways, or they may be caught in traps. Mr. Loudon says that in 1815, the extensive plantations of young trees in the forest of Dean, were attacked by such multitudes of mice that their destruction seemed inevitable. After trying various methods to destroy them, without much effect, recourse was had to digging holes for them. The holes were about 20 inches deep, about the same length, but as narrow at the surface as would admit taking the dirt from them, but broad at the bottom, so as to be shelving over on all sides, from the bottom to the top. These holes were made about 60 feet apart each way, over about 4,000 acres, and 30,000 mice were trapped in a few days, and the nurseries saved.

Mr. Carr asks for the best method of preserving stable manure through the summer? It should be heaped under cover, and mixed with swamp muck, peat, or pond mud, to aid in the fermentation, and absorb the gases. The quantity of manure may be doubled in this way, and load for load remain of equal value to the stable manure. Should it not incline to ferment, pour upon the heaps the wash of the yards, or the urine of the stables.

Agricultural Society Meetings.

WE continue from our last No. the notices of these Agricultural holidays, as they have come to our hands, and only regret that we are not able to give more of the flattering proofs of the increased attention paid to Agriculture, and the consequent success attending, they contain. So rapid, however, has been the increase of these Societies, that we can only find a place in our columns for some of the most prominent incidents of each. Our thanks are justly due to the many gentlemen in all parts of our country, who have so kindly forwarded these interesting notices to us. The success which has attended these Societies the present year, is the more gratifying, from the fact, that many of them are new, and the present their first exhibition.

MAINE.

KENNEBEC AGRICULTURAL SOCIETY.—There are not many Societies in this country, more active and efficient than this favorite society of our Maine friends. The Show and Fair this year, came off in fine style, attended by a multitude of spectators, and lots of exhibited animals, and articles of domestic manufacture. The plowing match was well contested, the work beautifully done in the main, and the great number of spectators much gratified. From the reports of the committee on plows, and the plowing match, we have condensed the following particulars. The number of plows entered was seven. The ground was a sandy loam, with patches of witch [quack] grass; the quantity, one-eighth of an acre to each plow.

No. *Team.*	*Kind of Plow.*	*Time.*	*Depth*
1. Seven years old oxen,	Ruggles & Mason,	33 min.	6¾ in.
2. 1 pair of horses,	New plow,	26	6[illegible]
3. 1 pair of young oxen,	Doe's plow,	35½	6½
4. 2 pair of cattle,	Doe's plow,	36	7
5. Horses and oxen, 1 pr. each,	Greenlow's plow,	29½	5¼
6. 1 pair horses,	Barnaby & Mooers	26	6
7. 1 pair horses,	Doe's plow,	21	5

The first premium was awarded to No. 1, the plow operating admirably, inverting the sod completely, so as to leave no grass visible. The second premium was awarded to No. 3, between the work of which and No. 1, but little difference could be perceived. The third prize was awarded to the new plow, No. 2. It was well plowed, but not so neatly as the two former. The side hill plow of Barnaby and Mooers' is highly spoken of, particularly for side hill work; though doubts are expressed as to its fitness for level land, when compared with the Ruggles plow. The interest excited by the plowing matches of this year, has furnished abundant proof that the managers of Ag. Societies will do well to pay particular attention to that subject hereafter.

MASSACHUSETTS.

HOUSATONIC CATTLE SHOW AND FAIR.—Berkshire County has two Agricultural Societies, both ably managed, and efficiently supported. That at Pittsfield, was noticed in our last Cultivator; and we have now received the proceedings of the Housatonic Society, which held its Fair at Great Barrington, in the beautiful valley which gives its name to the association. It occupied two days, and the whole proceedings were of the most encouraging kind. A team of 100 yoke of beautiful cattle, attached to a plow held by Col. Fitch, preceded by music, passed through the village, amid the cheers of the multitude assembled. The address was by Mr. MERRIAM, of the Boston Cultivator, and is spoken of as highly appropriate and interesting. One of the noticeable events of the two days, was the first entrance of a train of cars on the Bridgport Railroad, with some 600 passengers, ladies and gentlemen, to attend the Fair. It is estimated that during the two days, not less than 12,000 persons were on the ground, and to the honor of the citizen farmers and mechanics of Berkshire, it should be added, not a drunken individual was observed. No intoxicating liquors were used at the excellent dinner given at the Berkshire House; an example which we hope will be followed by all such associations, as have not already adopted the practice. The reports of the several committees speak well of the animals exhibited, and the crops grown in the country, wheat particularly, which has suffered less from the insect the present year, than for several years previous. The farmers of Berkshire are evidently in the way to prosperity; intelligent and industrious, they have only to go forward.

ESSEX AG. SOCIETY.—There are very few societies, if any, in the country that have done more for the promotion of agriculture than this spirited association, as their well printed and numerous reports fully prove. The last fair came off in October at Andover; and the full attendance of farmers and others demonstrated that the interest felt in its proceedings was not lessened. The agricultural capabilities of this county are great; and the intelligent owners of the soil act as though they intended to make the most of them. The show of cattle of all kinds, horses, sheep, swine, vegetables, fruits, products of the farm and dairy, and of domestic products, was most encouraging and satisfactory. Both horses and cattle were entered for the plowing match, and the work was done in a beautiful manner. Addresses were made at the dinner by the president of the society, the Hon. L. Saltonstall, Hon. D. P. King, Col. C. A. Andrews of Boston, and others. The annual address was by the Hon. A. W. DODGE. It was as such addresses should be—"practical in its details; replete with interesting facts, useful suggestions, and judicious advice." The reports made by those exhibitors who receive premiums are of the right kind, showing how the successful results in their case were obtained, and are thus instructive and useful to others. We shall doubtless have occasion to again refer to them.

PLYMOUTH CO. AG. SOCIETY.—The annual cattle show of this society was held at Bridgwater in October. The day was fine. A large number of the substantial farmers of the county with their wives and daughters were present. The show of cattle, principally native, was good. The plowing match was well conducted; and all the proceedings were conducted much to the satisfaction of those assembled to witness them. The dinner was good, and a number of spirited volunteer toasts were washed down with cold water. The address was delivered by S. BOURNE, Esq. of Wareham. It embodied a number of interesting facts, particularly in relation to the use of ashes in forming compost with peat, swamp muck or mud. Eight bushels of ashes, unleached, were sufficient to mix with a cord of muck, or peat; but if leached, one part of ashes would be required to three of muck. This compost is excellent; and all farmers who can procure the ashes will do well to use them in this way, in preference to selling them to the ash man. It is believed no man, after witnessing the fair at Bridgwater, would be disposed to speak lightly of the farmer, or the agricultural products of old Plymouth.

CONNECTICUT.

NEW-HAVEN CO. AG. SOCIETY.—The fair of this active and useful association was held at New-Haven on the 28th and 29th of September, and exceeded in interest any that have preceded it. About 100 head of fine stock, imported and domestic, were on the ground, with any number of sheep, swine, and some excellent horses. The beautiful Short Horn stock of Mr. Whitney, which had been sent to the N. Y. State Fair at Albany, were much missed. The plowing match came off in fine style, and was attended by several thousand spectators. The quantity of land was one-eighth acre to each team; the shortest time in which the plowing was done was 26 minutes; the longest only 32½ minutes. The plows, with but a single exception, were of bad construction and model; and when it is remembered that experiments prove there is a difference of draft in plows of quite 100 per cent, farmers who have any mercy on their beasts or themselves, should be more careful in getting the best ones. But the great charm of the day for the farmer was the unprecedented show of working oxen. The South Green is a parallelogram of 54 by 21 rods, surrounded by double rows of magnificent elms; and around this green as they entered, they were paraded in the form of a hollow square, reaching 9½ times around the whole area, or making a string of 1¾ miles. The number of working oxen was 1,026, 513 yoke; and among these were many of the most beautiful animals. There was one pair of twins, deep red, and so near alike in every respect that the owner, Mr. Todd of North Haven, had no means of distinguishing one from the other, except a small black spot of the size of a pea on the muzzle of one. Their great beauty, form, size, and admirable command, excited the attention of all. The address was by Prof. OLMSTED—"On the Right God has given Man over Animals;" and the subject was ably illustrated. The election of officers of the society was held at the State House on Thursday, and Prof. Benjamin Silliman was chosen president, and the Hon. Alfred Blackman secretary.

HARTFORD CATTLE SHOW AND FAIR.—The fair of this rich county in the land of steady habits was held in the city of Hartford the first week of October, and exhibited abundant evidence of the spirit of honorable emulation, which the association in its progress had awakened. 100 yoke of working oxen were on the ground, mostly of the rich deep red that belongs to the Devonshire blood and its crosses, well formed and trained. We have long been of the opinion that no part of the world can show such numbers of fine working cattle as New-England; and the shows of this year have given ample proof of this fact. A bad day will it be for New-England when she substitutes horse for ox labor on the farm, as many other parts of the U. S. have done, where no particular necessity for this course existed. There was a good show of Short Horns, among which the fine stock of Mr. Watson of East Windsor, and Mr. Peck of Berlin, received much notice. Mr. Peck's cows were imported, and were said to be first rate milkers. Of other animals, there were a respectable number on the ground—many of them very fine. The show of fruits, flowers, vegetables and farm products, was good; and that of domestic manufactures gave proof positive of the industry of the Connecticut fair. The show of statuary and paintings attracted much attention; and as opening a new field for the cultivation of the mind and taste, may well be recommended for the imitation of other societies, where the means of making such an exhibition exists. We have received the report of the committee on farms from this society, and shall endeavor to give a synopsis of its valuable contents as soon as we can find room.

THE UNION AG. SOCIETY of Connecticut is composed of the patriotic and spirited farmers of the towns of Farmington, Bristol, Burlington, Southington and Berlin, in the counties of Hartford and New-Haven, and furnishes a striking proof of what zeal and intelligence, aided by a good cause, can perform. We have received the report of the executive committee, and are gratified to learn that the fair of the present year was attended with such marked success. The exhibition of working cattle was such as many societies of far greater limits and pretensions might well be proud of, numbering 244 yokes, a few of them crosses of the Durham, about thirty full bloods or crosses of the Devon, and the remainder native; by which is understood, breeds of cattle that have been cultivated and bred within the limits of these towns for from 40 to 50 years past. The show of young cattle was unusually fine. The plowing match was well contested, and exhibited some superior specimens of plowing. Many beautiful specimens of domestic manufacture were exhibited, among which the committee particularize a Rob Roy shawl, wholly the manufacture of Mrs. Walker of Southington. They say—"It was a specimen of the useful and beautiful combined, which we have rarely seen among the productions of our fair country women; such an one as the proudest Miss who parades the streets of our cities in the manufacture of a different article,* need not be ashamed to wear." Two beautiful embroidered shawls were also shown. In conclusion, the committee speak with confidence of the benefits of the association and the improvement it has already produced.

Canton Cattle Show and Fair.—We are pleased to chronicle the formation and success of these town societies; as experience proves that they are among the most efficient means of promoting the cause of agriculture wherever they exist. Canton is in Hartford county, Connecticut, and the fair and show was held Oct. 12. The number of animals present was greater than at the former exhibition, and showed a decided improvement in quality and condition. 130 yoke of cattle were on the ground, and a very large number of cows, young cattle, horses, &c. A. G. Mills exhibited a South Down buck, 8 months old, weighing 112 lbs. The show of vegetables and farm products was good, and the specimens fine. As was right, the committee extend a cordial invitation to the ladies to take a part in the next exhibition, and to contribute, by presenting proofs of their own ingenuity and industry, to the interest and usefulness of the association.

NEW-YORK.

Chautauque Cattle Show and Fair.—The Fair and Show of this Society, was held at Westfield. The proceedings were very spirited; the number of animals on the ground good; the agricultural implements exhibited, numerous and well finished; the Reports on the crops very favorable; the plowing match interesting, and the premiums liberal and numerous. Few counties in the state, have developed their resources more rapidly than Chautauque, and the present Fair can only be considered as an earnest of what she will do in that way hereafter.

Dutchess Co. Ag. Society.—The first fair of this rich and flourishing county, one of the most highly cultivated and fertile in the state, was held at Washington Hollow on the 5th and 6th of October, and was in all respects particularly gratifying to the numerous concourse of farmers, and the friends of agriculture present. The collection of stock of all kinds was large; and the variety and excellence of farm products, articles of domestic manufacture, fruits, vegetables, far exceeded the expectations of all. The fine display of farm implements attracted much notice; and the various collections of field and garden vegetables and fruits, presented by Mr. Holbrook of Hyde Park, were admired by all. It was a striking proof of what may be effected by cultivation, when labor is directed by skill and intelligence. A beautiful banner, embroidered on white silk, was presented to the society by the ladies of Washington, with an appropriate motto.

Erie Co. Ag. Society.—The position of Erie county gives it great advantages; and the enterprising farmers are evidently determined to make the most of their fertile soil, as well as local circumstances; of this, the late fair at Buffalo gave satisfactory proof. The number of fine horses, beautiful Durhams, excellent working oxen, superior specimens of sheep and swine, and the great variety of farm products, domestic manufactures, vegetables, fruits, &c. have rarely been exceeded in any part of the state. For the improvement of the domestic animals of Erie, that county owes a large debt of gratitude to the Messrs. Allen, who, both by importation of choice animals and skill in breeding, have done much for the cause. The distribution of the premiums prove that Mr. Allen's animals are properly appreciated. The fat cattle and the dairy products exhibited, attracted much notice. The present was the second meeting of the society; and the spirit manifested proved that in the encouragement of agriculture, Erie will not be behind her sister counties.

Genesee Co. Ag. Society.—This society held its third exhibition at Batavia on the 20th and 21st of October. But two towns in the county were unrepresented by either members or articles for exhibition. The first day was devoted to the exhibition; and a very fine one it was. There was a very decided increase in animals, and in articles of domestic manufacture, over any previous exhibition. The second day was devoted to the plowing match which was well attended, but did not go off with so much spirit as last year. But three teams entered. Mr. Colman, of the New Gen. Farmer, delivered a very able and excellent address in the new Court House to a large and highly interested audience. Premiums were declared off, and the following officers elected for the ensuing year: president, T. C. Peters, Darien; vice-presidents, John Jenne, Bethany—Erastus Cash, Byron—Elijah Platt, Le Roy—Benajah Benedict, Alexander--Frederick P. Pindle, Batavia--Isaac N. Stage, Stafford—Wm. McOmber, Alabama—Chester Hannum, Pavilion; rec. sec'y, Edgar C. Dibble of Batavia; cor. sec'y, F. Follett of Batavia; treasurer, Lewis E. Heston of Batavia, and four managers to each town.

We require one thing more at this time, and then we can get along very well until the act rendering aid to agriculture expires. And that is, to place in every school district library the annual volume of the Transactions of the State Society, at the expense of the state. I hope it will be done; and that the legislature at its next session will take early measures to carry out so important and desirable a measure. Nothing will so readily produce a uniformity of thought and increased action as the distribution of those volumes. The way will then be made easy for a thorough organization of every town in the state. By this means, a vast flood of agricultural knowledge will be simultaneously spread through the land; and the young mind will be *irrigated* by a thousand streams of useful knowledge, of the very first importance to the young farmer. T. C. Peters.

Greene.—The first exhibition of the Greene Co. Society, was held at Cairo, on the 19th of Oct., and a large concourse of gratified spectators, including a large number of ladies, were present. The number of cattle, sheep, swine, horses, agricultural products, and domestic manufactures, was most respectable; and the animals and articles of superior quality. The address was delivered by J. B. Nott, Esq. who was introduced to the society in a neat and pertinent speech by A. Marks, Esq. The address was a production of much merit, and received with marked attention and interest. The result of this first effort in this county, is eminently satisfactory, and is we doubt not, the precursor of others still more worthy of the farmers of that county. We scarcely need say, that to the encouragement afforded by the labors and the presence of the ladies, much of the interest of the Fair was owing; and this is a matter which should be every where well considered and understood.

Lewis Co. Cattle Show and Fair.—The first meeting of the Lewis County Agricultural Society was held at Martinsburg on the 18th of October. According to the Lowville Journal, it was well attended, and there was a spirited competition for the prizes. The exhibition of fine animals exceeded expectation, and was thought to equal the exhibitions in other counties where societies have been for years in existence. The address was by Mr. Comstock, one of the editors of the Central N. Y. Farmer, and abounded with good plain common sense remarks. The impetus given to the cause by this first meeting of the society will be felt, and result in adding many members to the society. The spirit of generous emulation excited will exhibit itself at the next annual meeting; and the friends of agriculture in the Black River section of the state have much to hope from the exertions of the Lewis Co. Agricultural Society.

Ontario Fair and Cattle Show.—The third Fair of this rich and beautiful agricultural county, was held at Canandaigua, on the 18th and 19th of October; and notwithstanding the inclemency of the weather, a great number of the substantial farmers of the county, and the friends of the cause, were present. The first day was devoted to an exhibition of domestic animals, and of these, a greater number, and superior animals, were present, that at any former exhibition. The show of horses in particular, elicited much admiration. The second day was devoted to an examination of domestic products and manufactures; to the plowing match; and to listening to an excellent address prepared by our correspondent, Myron Adams, Esq. of Bloomfield. All the proceedings were of an interesting kind. Twenty-three teams were entered for the plowing match, and the competition, as well as excellence of the work, excited much interest among the large number of spectators. After the address, the Hon. John Greig, was elected President of the Society; Oliver Phelps, Secretary; and J. D. Bemis, Treasurer. There was a general feeling among all present, that in any thing relating to Agriculture, Ontario would be hard to beat.

Orange Co. Ag. Society.—The Cattle Show and Fair of this Society, was held at Goshen, on the 12th of October, and was respectably attended by the sturdy yeomanry of that rich county. The number of premiums distributed was large; and the spirit of emulation excited, cannot fail to be favorably felt on the agricultural interests of the county. The show of fat and working cattle on the ground, was good; and that of horses has rarely been exceeded. Some fine sheep and swine were exhibited; and twenty premiums were awarded for agricultural products. The show of butter, did not belie the reputation of the Orange dairies. We give below, a few of the crops which obtained the premiums awarded:

F. J. Betts, best acre of oats, 3 bushels sown, 77 bushels.
J. I. Dolsen, next best acre of oats, 4 bushels sown, 75 bush.
F. J. Betts, best acre of yellow corn, 205 bushels of ears.
S. J. Wait, 2d best acre of yellow corn, 93½ bushels.
J. I. Dolsen, best acre of Mercer potatoes, 360 bushels.
I. B. Sands, 2d best acre of Mercer potatoes, 330 bushels.

In answer to a letter addressed to F. J. Betts, Esq. we have received a statement of the process of cultivation of the fields of corn and oats, on which he received the first premiums above mentioned, which will be published in our next number. He informs us that 205½ bushels of ears was the average product of the whole field of four and five-eighths acres.

Queens Co. Agricultural Society.—We copy from the Hempsted Inquirer, the following notice of the first Annual Fair and Cattle Show of this Society. We regret that more ample reports of the cattle and crops were not given, as it is evident that Queens cannot be behind her sister counties in such matters. "Never," says the Inquirer, "within our recollection, were so many people in our village at one time, and never we presume were the visitors better pleased with their visit. The number, size, and beauty of the cattle exhibited, far exceeded our expectations, and were such as to do much credit to the farmers of our county. The show of grain, roots, fruit, &c. though not large, was full as much as could be expected at the first exhibition of the kind, and were very good specimens. The ladies of the county, we were pleased to see, not only honored the occasion with their presence, but a number also contributed towards making it worthy of a visit from all. The display of flowers was very beautiful, though not as large as we had hoped to see. A variety of articles of domestic manufacture were also exhibited."

Saratoga Co. Fair.—The Annual Meeting, Fair and Show of this county, was held at Ballston, on the 4th of October. The attendance was good, and the exhibition of animals, products of mechanic skill, articles of domestic manufacture, and farm products, of the most satisfactory kind. Among the proceedings of the Society, we find one relating to the Transactions of the State Society, of which 20 copies were furnished to each County Society. It was resolved, "that the volumes be distributed for the use and benefit of the members of the society, by delivering one copy to some member of the executive committee in each town, upon his giving a proper receipt for its safe keeping, and delivery to the society when required." Some similar measure it will doubtless be advisable for all the County Societies to adopt. The Reports would indicate that the crops the present year, had been very good in Saratoga Co. Some of the premiums were as follows:

Wheat	2	acres,	58	bushels,	2	quarts.	1st	prem.	Expense	$20·
"	2	"	55	"	28	"	2d	"	"	26
Corn	2	"	274	"			1st	"	"	24·37
"	2	"	206	"			2d	"	"	22·53
"	2	"	190	"			3d	"	"	24·37

The first and third premiums on Corn, were to the same farmer, W. Wilcox, Esq. of Saratoga. The first premium wheat was raised after barley; the second, on a white clover sod. The second premium on potatoes, was given to W. C. Caldwell, of Saratoga, for a crop of 300 bushels of Merino potatoes, on half an acre.

St. Lawrence Co. Ag. Society.—The cattle show and fair of this society was held at Canton on the 14th of September, and was well attended by the farmers of this large and fertile county. We have only received the list of premiums awarded, but learn that the show of cattle, horses, and other animals, was good; that a respectable number of implements were on the ground; and that the exhibition of miscellaneous products, fruits, peaches, grapes, &c. &c. was quite encouraging. The premiums were ample and numerous, and the result most satisfactory.

Seneca Co. Cattle Show and Fair.—The agricultural society of Seneca county held its annual meeting at Waterloo on the 20th and 21st of October. A large number of farmers and others were in attendance. Mr. Colman delivered the address. Seneca county has long possessed some excellent horses, and these were well represented at the fair. The number of cattle, sheep, swine, &c. was not large, but some of the specimens were very fine. Mr. Sackett, Mr. Dunlap and Mr. Johnson had some valuable Short Horns on the ground, and a bull of Mr. Dunlap's attracted much notice. Various specimens of farm products, vegetables, &c. were shown of the first quality. Draining tiles were shown, made at Waterloo. They can be afforded at 30 cents per rod, are a half round, and when properly laid, must make first rate drains. Some fine specimens of cloths from the Waterloo woolen factory were exhibited. In the evening a farmer's meeting was held in the C. House, Judge Sackett presiding, at which various agricultural topics were discussed by the farmers present, and all were much interested in the meeting. It has been lately announced in the western states, that a method of rotting hemp by steam has been discovered, by which the process is completed in a few hours, and the product of a beautiful quality. Some flax was presented at the Seneca fair prepared in the same way, and its appearance indicated that the old method of rotting would be abandoned. Great quantities of flax and hemp might and would be grown in this state, if the processes of rotting and dressing could be simplified, and the cost reduced.

Wayne Co. Ag. Society.—The cattle show and fair of this county was held at Palmyra on the 5th and 6th of October, and were days of great interest to the lovers of agriculture and horticulture in that section of the state. The show of animals took place on the first day; and in the evening the annual address was delivered by Stephen Culver, Esq. of Newark. The number of cattle on the ground was not far from 100; and among them were some fine pure blood Durhams, as well as mixed blood and native animals. Several fine horses were exhibited; and a pair of three year olds, of the Sampson breed, plowed a quarter of an acre of sward six inches deep in fifty minutes, and took the first prize. The number of sheep and hogs was not great; but a few fine Berkshires were shown, and also some specimens of the Leicester, South Down, and Saxony sheep, that were deservedly admired. The premium for the first milch cow was given to B. Butler of Palmyra. "The cow," says the owner, "came in on the 17th of May, and has given from 16 to 20 or more quarts of the richest milk per day through the season: we have made the last week full two pounds of butter per day from her milk, besides cream for tea and coffee for the family. She has not had a dozen messes this season; but good pasture. No extra care has been taken of her." We have no doubt that Mr. Butler's cow is an excellent one, and his statement is probably correct; but we must agree with the intelligent committee of awards in this case, that it is very desirable in such matters, to have as little left to *estimate* as possible. The milk should have been measured and the butter weighed, to insure perfect accuracy in all such cases, as this affords the only sure ground of useful results. The specimens of vegetables, fruits, &c. were numerous and excellent. Wayne county is well adapted, from the nature of its soil and the ameliorating influence of Lake Ontario, to the production of fine fruit; and there are few sections of the country that can exceed it in this respect. The show of agricultural implements, and of domestic manufactures was good, and the specimens creditable to the skill and industry of the citizens of the county. A notice of the Premium Crops will be given in our next.

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* Can it be that this "insinivation" refers to the article called "street yarn?"—Eds. Cult.

At the annual meeting of Wayne Co. Ag. Society, held at Palmyra, 11th mo. (Nov.) 15, 1842, the following officers were elected for the coming year, viz: Sam'l E. Hudson, president; Stephen Hyde, William R. Smith, Joel Hall, J. A. Miller, R. H. Foster, Wm. Walmsley, John Borrodaile, vice-presidents; C. S. Button, T. Hemmingway, John Baker, P. G. Price, Abm. Fairchild, executive committee; Daniel Kenyon, treasurer; Geo. W. Cuyler, recording secretary; John J. Thomas, corresponding secretary.

The following resolution was adopted, viz:

Resolved, That the executive committee, for the purpose of improving the character and skill of our plowmen, be directed to offer one class of premiums on the plowing match, to such persons only as are under *twenty years of age*.

Union Ag. Society, Grenada, Miss.—The first annual meeting of this society, which we cannot doubt is destined to work important benefits for this section of the U. States, was held at Grenada on the 10th of Oct., and was well attended by planters, and others interested in improving the agriculture of the southwest. Resolutions were adopted to hold a fair in September next, and a committee appointed to raise the funds for premiums, and make the necessary arrangements. Some spirited resolutions were introduced on the subject of making an effort in that state to provide the bagging and rope required for packing cotton, and making the shipment direct from the ports of that state, rather than through the New-Orleans houses. The address was delivered by Jno. T. Leigh, Esq., president of the society, and was an able and instructive effort. There is so much truth in the following remarks, and they relate to a subject so often overlooked on such occasions, that we cannot resist copying them:

> "And while upon this subject [economy] let me say a few words about the ladies. They have it in their power, by prudent, orderly and economical management of their household affairs, to add much to the prosperity of their husbands. 'Tis in vain for the husband to strive, unless the wife supports and aids him by performing well her duty in doors. Let a due regard to her husband's situation govern her wants and desires; not to be governed by what other ladies have or do, who may be placed in a better situation in life, or who possibly may, by their extravagance, be reducing their husbands and families to difficulties, and ultimately to ruin—though justice to the ladies compels me to say, they generally in their departments perform their duties better than men. They possess more industry, prudence and economy; and have a more lively sense of duty to the interest of the family. To whom ought the husband to go, in matters of importance, for consultation and advice; pure disinterested advice? To the wife of his bosom. No matter how important the subject; my life upon it, nine times out of ten, he will find her advice the very best he can obtain. She feels she is deeply interested in everything relative to her husband and his affairs; and she advises under the highest responsibility—that of interest and love.
>
> "But, says the bachelor, what shall I do. who have no wife? "Are you a planter—*get one*. If you cannot get married, quit—quit farming; for no man can succeed well upon a farm without the aid, assistance, advice and comfort of a wife. But mark—*let your wife be a dutiful daughter of a prudent mother*."

Copies of the Cultivator, and some other agricultural papers, were directed to be ordered for the use of the society.

Lake Co., Ohio, Agricultural Society.—The Second Fair of this Society, was held at Painesville, on the 6th of October. The day was unusually fine, and the collection of farmers, and others interested in the cultivation of the soil unexpectedly great. The ox teams from the towns of Madison, Le Roy, Perry, Concord, Mentor, &c. of from 40 to 75 pairs each, were attached to wagons loaded with every variety of agricultural production, and were objects of much interest to the farmer. The display of domestic manufactures was splendid, consisting of articles of silk, carpeting, bed spreads, shawls, and various kinds of net and fancy work. Lake Co. is famous for its fruit, and pears weighing 3 lbs. were shown by Mr. Webster of Mentor. The display of apples, peaches, &c. was truly beautiful. In the Report on crops, the committee state that they had examined no less than 12 pieces of corn, estimated by them to yield from 100 to 120 bushels to the acre, shelled at the time of gathering. The premium on sugar beets was given to a crop of 1,600 bushels to the acre, (60 lbs. to the bushel.) In short, the Fair was decidedly better than the preceding ones, and shows that the right spirit is abroad among the Lake County Farmers.

The New Genesee Farmer.—We find by the last No. of the New Genesee Farmer, that Mr. Colman has become the sole proprietor and editor of that journal, and that the price is hereafter to be one dollar a year, instead of fifty cents, as heretofore. This is right. The laborer is worthy of his hire. We know something about this publishing papers at fifty cents, and have long been aware, that standing *alone*, they cannot be sustained. If not permitted to get rich, the Agricultural editor should at least be allowed to live, and nothing short of a dollar for such papers as the Cultivator or Farmer, will do this.

A FEW QUERIES.

In the course of the present volume, we have in the best manner we were able, responded to many inquiries proposed by correspondents, and we are always happy to oblige our friends in that way; now we wish the privilege in our turn, to make a few, which each of our readers can answer for themselves.

Have you all things in readiness for winter, for with us at the north, we have several long months of that season before us?

Have you your barns, racks, yards, stables, feeding troughs, &c. in order, that your domestic animals may be well fed and sheltered? An animal kept warm and comfortable requires much less food to keep him in equal condition, than when exposed to the winds, rains, and snows, of a northern winter. If you study economy then, you will see that all is right in these respects.

If your potatoes, turneps, or other roots are pitted or buried, have you examined them to see that they are secure against frost? The best farmers do not cover their roots too deep at first, as they are apt to heat; consequently, they need looking to as the weather grows colder, and if necessary more earth should be thrown upon them. Frozen roots for cooking, or feeding animals, are not the thing.

Is every loose board on your barns and sheds secured? Have you no broken panes in your windows? Look about and see. If you have any of the first, take your hammer and nails, and make all sure at once. If the latter, use some glass and putty forthwith. A broken pane of glass will cost you half a cord of wood at least, during the winter, and give you as many colds as you can desire.

Have you secured your cellar against frost? There is many a man—we will not say farmer, for such are unworthy of the name—who will labor hard through the fall, to get his roots and vegetables into the cellar, and then lose them all by negligence in banking his house, or excluding frost from the cellar. This is miserable policy, and your wife will tell you so, if you will ask her opinion.

Are all your farm implements taken care of, and secured against the weather for further use? Do you think it looks well to see your plow left in the furrow; your cart and wagon in the street; your harrow where it was last used; your hay rack thrown upon the ground with your hay rake, and your chains, axes, and other implements, where it would take a week to hunt them up? Every tool, when you have done with it, should be placed where you can lay your hand upon it at any time, and every implement, where it will be secure from weather. Most farmers suffer much loss annually from neglecting these precautions.

Have you examined all your water furrows and drains, to see that all are clear, and the water flowing where it should? A choked drain or an obstructed water course may do much mischief if let alone during the winter. Surface water is ruinous to many crops, and injurious to all, when long continued. Leave then nothing to chance in these respects.

What preparations have you made for adding to your stock of manures? In your manures is your gold mine, more valuable than any of the Carolina ones; and you should be anxious to increase them accordingly. When you cleaned your yard in the fall, did you cover the whole with muck, or peat, or even loam, to absorb the liquid parts of the manure that so frequently run wholly to waste? Don't be afraid of laying out labor in this way; it is money at compound interest.

Are your children at school? and what have you done to provide for them, and for yourself, the means of acquiring that knowledge so essential to success in life? On this point negligence is a crime; parsimony is ruin. If you are able to do nothing else for your children, you are at least able to secure them a competent education. The state guarantees the means of this; it is for you only to use them. Destitute of education, wanting ordinary intelligence, the man enters upon life with all the chances against him. He may succeed; but the odds are fearful. Let it be impressed on the mind that in this free country intelligence is better than wealth.

What have you done to advance the interests of agriculture in the town or county where you reside? What to aid the funds of the county or state society? What to disseminate agricultural information? There are few men so positively mean as a farmer destitute of public spirit. The means of the intelligent farmer may be limited; but his disposition will be good, and that will produce its proper results in action. He will do what he can; and no more can be asked. His influence will always be on the right side; he will be no drone.

What experiments have you made the past year in farm husbandry? and what has been the result? If favorable, you should let it be known that others may practice the same methods; if unfavorable, that others may escape the error, or be saved useless expenditure. Every farmer may do much in the way of experiment, to advance the cause of agriculture, if they are well and carefully conducted, and the results given to the public.

Do you receive, and read, an agricultural journal? If not, go at once and subscribe for some good one, and pay in advance. The merchant, the manufacturer, the doctor, the lawyer, and the divine, all have their journals, and if they understand their true interests, read them too. And so must the farmer do, if he would not be behind the age, or ignorant of his profession.

There is a somewhat prevalent idea that the farmer has nothing to do in winter. This is a great mistake. If he has improved his time well; if he has everything right· he will have his time during the winter more at command than otherwise; but he will have no moments for idleness. The improvement of the body and the mind will furnish ample occupation; and the attention bestowed will not lose its reward.

EXTRACTS OF LETTERS, &c.

Value of the Cultivator.—A subscriber in Beaver co. Pa., says:—"I planted corn after the directions found in your paper, and the consequence is, I have doubled my crop. Farming is done in a different style from what it was before farmers commenced reading. I frequently hear farmers say they would not take a dollar for the valuable information in a single number of the Cultivator."

Inquiry.—A reader wishes Mr. Cook to give the size of the water wheel for his water power churn, how many buckets or paddles it should have; and to state whether a rise or fall in the wire will hinder its operation, providing pulleys or rollers are used for it to run upon; and also whether it will work at a distance of 160 yards from the house.

Snap Dragon.—Mr. A. R. McCord of La Grange, Dutchess county, informs us that this "abominable weed" may be eradicated by covering it with a coat of straw, thick enough to smother vegetation. Some years since, I saw two patches of it covered in this manner when the field was in grass; the straw was suffered to remain two years, after which it was scattered and the ground broke up. The extirpation was complete."

Large Radish.—J. C. Cunningham, Esq., P. M. at Fairfield, Ia., informs us that Mr. Wm. More of that place the 16th Sept. had a radish growing which measured 38 inches in circumference. "The Hoosiers will crow over this till you down easters can beat it."

Wintering Bees.—From a letter from Mr. M. Quinby of Coxsackie:—"Last fall I followed Mr. Week's direction, wintering two swarms of bees in one hive. I put the bees of twenty hives in ten; some of the swarms very large. Weighed them the 1st Oct; again 1st of April. Greatest loss in that time 25 lbs.; least 21 lbs. Weighed also several single swarms at the same time. Greatest loss 21 lbs.; least 14 lbs. They were in the house during the coldest weather. When they first began work in the spring, the double swarms promised most; but single ones gained so rapidly, the first of June found them in a better condition both as it respects numbers and honey. The result through the summer was decidedly in favor of the single swarms. It may be an advantage to put together two very small ones, but my experiment is against making good swarms better by such means." Mr. Q.'s remarks on swarming bees, &c. will be given hereafter.

Salt for the Cut Worm.—A letter from "G. E. H.," Brownville, Pa., says—"I tried the same experiment as my neighbor D. Miller did, (see Cult., vol. 9, p. 118,) viz: applying salt to corn to kill the cut worm, on 30 acres of land, but with no encouraging success, as it did not kill or keep them off, though it doubtless promoted the growth of corn."

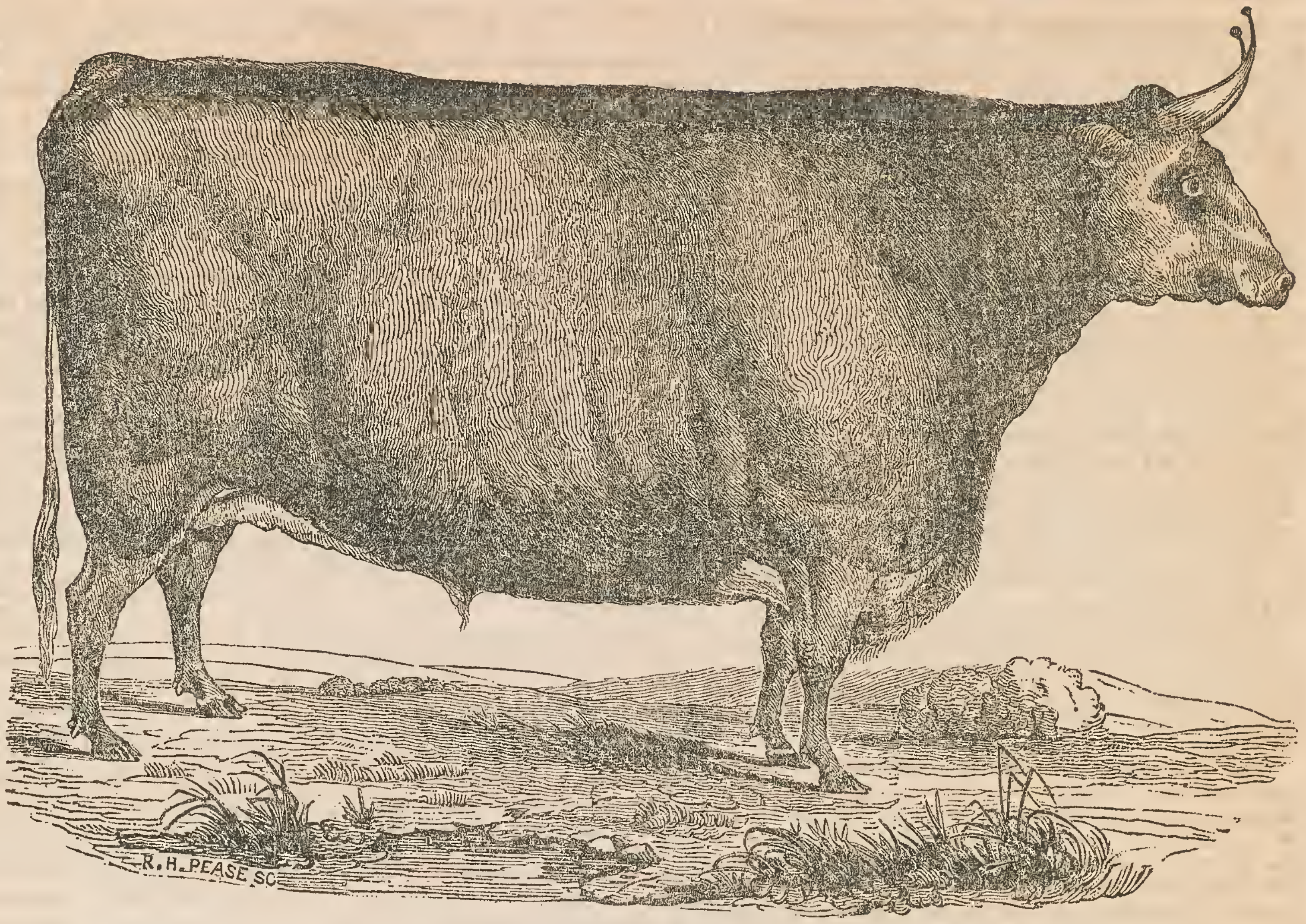
Large Pumpkins, &c.—From a letter from Mr. D. A. Buckley, Manchester, Ill.:—"To show you the richness of our land, I will state that Mr. R. Swallow raised from one pumpkin seed 559 lbs. pumpkins, and 965 lbs. of vines. Another farmer, from one seed, raised 780 lbs.—one pumpkin weighing 164 lbs.; and Mr. G. C. Wood raised a radish in his garden that weighed 17 lbs." The writer adds:—"I wish you would draw the attention of plow makers to the necessity there is for one that will scour in our soils, as such a one is very much wanted."

Mississippi.—Extract of a letter from a subscriber near Vicksburg, dated Oct. 19:—"The crops of corn are very abundant in this quarter. Cotton, if the present fine weather continues, will be about an average crop on the uplands; but on the alluvial bottoms of the Mississippi it will be very abundant, and generally of a good quality. The Cultivator is doing much good in this country. Most planters raise nearly or quite enough meal to last the year round, and sweet potatoes in abundance."

Progress of the Silk Culture.—We think the quantity of cocoons made in the United States the past season, could the whole be ascertained, would surprise the warmest advocates of that culture. The following list of the pounds of cocoons produced in a single neighborhood, near Warwick, Penn., which we take from a letter to Mr. Colman, will show what a few individuals who are in earnest can do:—John McSummy and D. Eberly raised of cocoons 856 lbs.—John Metzler, 423 lbs.—R. and H. Carson, 600 lbs.—A. H. Carr, 400 lbs.—Michael Glein, 300 lbs.—M. Warfell, 300 lbs.—D. Mellinger, 200 lbs.—M. Bushong, 172 lbs.

Bees.—"The best place to put bees in is a *dry, cold, and dark room or outhouse*, if it can be obtained. The colder the winter the better, if the air is dry. Damp cold gives bees the rot. Put your bees there the last week in November, and let them sleep quietly till the flowers begin to come out in the spring. In Switzerland a whole village clubs together, and hires a cold dry room which they darken and put all their bees in."

We find the above in an exchange paper, and think the system recommended at least plausible. So long as bees remain torpid they do not eat; and to keep them in this state, the temperature of the place where they are kept must be low; it must also be dry, or the mass of bees and comb will become mouldy. Bees die in multitudes by being enticed out of their hives in sunny days, before they are able to obtain food, or get back to their hives.



THE SYRACUSE OX—(Fig. 101.)

Owned and fed by P. N. Rust, Esq., *Syracuse, to which was awarded the First Premium of the N. Y. State Ag. Society for the best fat animal exhibited at the Albany Fair*, 1842.

This ox is now eight years old. His live weight, Feb. 19, 1841, was 2,360 lbs. On the 16th Jan., 1842, it was 3,400 lbs. When exhibited at the State Fair in Albany, Sept. 28, 1842, he was said to weigh 4,200 lbs, which would be a gain of about 3 lbs per day, for nineteen months. He yet retains his activity and appetite, and continues to take on flesh about as fast as ever.

LARD OIL.

We have received from various sources inquiries as to the nature and preparation of oil from lard, a subject which is becoming a matter of great interest to the country; and we have embodied below such information as can be obtained, for the benefit of those interested.

Neither animal fat, or vegetable oils, are homogeneous, but are composed of two substances, one of which remains solid, while the other is fluid. These two substances are termed *Olein* and *Stearine;* the first being the fluid part, and the latter the solid. The degree of hardness or fluidity of the original fat or oil, such as tallow, lard, olive oil, &c. is depending on the relative proportion of these two substances; tallow containing more stearine than lard, and the latter more than the vegetable oils. Chevreul was the first to distinguish and separate these two principles, a discovery which promises to effect quite a change in some of our commercial interests, and to influence in no slight degree our agricultural ones. Lard melts at a temperature of about 82°; its specific gravity at 60° is 0.938. By long and powerful pressure at 42° between folds of blotting paper, it yields 62 parts in 100 of weight, of colorless olein or oil, of the specific gravity of 0.915. Of this 100 of boiling alcohol dissolves 123 parts. The solid part of the lard left after the olein is extracted, is solid, granular, and fuses at about 100°. This is the substance which when made into candles, resembles spermaceti in hardness, and burns with much clearness, while the oil so extracted is the lard oil which is rapidly coming into use for lamps, machinery, woolen factories, &c. The olein and stearine of olive oil can be separated in the same manner as lard, by reducing the oil to a low temperature, and submitting it to the same process. The fact that the olein remains combined with the alcohol in which lard, tallow, &c. has been boiled, while the stearine separates on cooling, constitutes the base of the processes for separating and rendering marketable the two articles. The processes adopted by different manufacturers vary very much, and this is the reason why some samples are much more perfect than others.

That prepared according to the patent of J. H. Smith, New-York, is a good article, and we extract so much of his account of his method, as will give a general view of his process. It may not be amiss to state, however, that the Philadelphia manufacturers produce superior oil by a somewhat different mode; and those of Cincinnati, by still another system of treatment. After stating that the vessel in which the lard is to be melted and boiled, should be of a capacity of from ten to one hundred barrels, and that the length of time required for the separation depends much on the quality of the lard, that which is fresh not requiring more than 4 or 5 hours, while that which is old may require ten or twelve, goes on to say:

> "My most important improvement in the within described process, consists in the employment of alcohol, which I mix with the lard in the kettle or boiler at the commencement of the operation. When the lard has become sufficiently fluid, I gradually pour and stir into it about one gallon of alcohol to every eighty gallons of lard, taking care to incorporate the two as intimately as possible; and this has the effect of causing a very perfect separation of the Stearine and Eleaine from each other, by the spontaneous granulation of the former, which takes place when the boiled lard is allowed to cool in a state of rest. I sometimes combine camphor with the alcohol, dissolving about one-fourth of a pound in each gallon of alcohol, which not only gives an agreeable odor to the products, but appears to co-operate with the alcohol to effect the object in view; the camphor, however, is not an essential ingredient, and may be omitted; while spirit of a lower proof than alcohol may be used, but not with equal effect or benefit.
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> "After the boiling of the lard with the alcohol has been continued for a sufficient length of time, the fire is withdrawn or the supply of steam cut off, and the mass is allowed to cool sufficiently to be ladled or drawn off into hogsheads or other suitable coolers, when it is to be left at perfect rest to cool down and acquire the ordinary temperature of the atmosphere; and as the cooling proceeds, the granulation consequent upon the separation of the Stearine from the Eleaine will take place and become perfect. The material is then to be put into bags and pressed moderately under a press of any suitable kind, which will cause the Eleaine to flow out in a state of great purity, there not being contained within it any appreciable portion of Stearine; and this pressure is to be continued until the Stearine is as dry as it can be made in this way. The masses of solid matter thus obtained, are to be re-melted, and in this state are poured into boxes or pans of the capacity of ten or twelve gallons, and allowed to form lumps or blocks; which when removed from these vessels, are piled or stacked in a room for a week or ten days, more or less, the room at a temperature of nearly 80° which will cause a sweating or oozing from the blocks, and they will improve in quality. The blocks are then to be rolled in cloths or put into bags, and these placed between plates, are to be submitted to very heavy pressure by means of an hydraulic press. After this pressure, it is brought again into the form of blocks, and these are to be cut up by means of revolving or other knives or cutters, when the pieces thus obtained, are to be put into bags and subjected to the action of hot water or of steam, in a press, until it becomes hard enough to be manufactured into candles, or put up for other purposes to which it may be desired to apply it. And the manner of subjecting it to the action of heated water or steam, is to place the bags containing the Stearine, in a box or chest into which heated water or steam may be introduced, but not to such extent as to fuse the Stearine. A follower is then to be placed against the bags contained in the chest or box, and moderate pressure made upon them, and the material will now be found to have acquired all the required hardness, and to possess a wax-like consistency, such as would generally cause it to be mistaken for wax."

We consider the manufacture of oil from lard, as one of the most important ones, particularly for the agriculture of the great west, that has yet been attempted; and its influence is as yet but beginning to be felt in the country generally. For the use of the light houses on the lakes west of Ontario, about 11,000 gallons are annually required; for steamboats, ships, machinery, &c. west of the Alleganies, about 30,000 gallons more, making a total of some 40,000 gallons annually; and this amount is rapidly increasing. We find in the Cincinnati Gazette, the following statement respecting one of the manufactories of lard oil in that city, and it must be remembered that this is only one of many establishments already in operation for this manufacture. They are springing up in Illinois, Indiana, Michigan, and Ohio; and the increasing demand for lard in the Atlantic cities, proves that the manufacture is not confined to the country west of the mountains.

"R. W. Lee & Co. use every twenty-four hours, sixteen barrels of lard at their establishment. It requires portions of two hogs to make a keg of lard; and portions of five hogs to make a barrel. We killed last year about one hundred and eight thousand of these animals in the city, and the calculation is that about the same number are killed out of it and brought to the city, so that we may put down the number in our market, at two hundred and sixteen thousand. From these data* it will be seen that one manufactory uses up the lard of 160 hogs every twenty-four hours, or 1120 a week, or 4,800 a month, or 58,400 a year! so that a few manufactories of this kind, would consume portions of all the swine that the farmers in our section of the country could raise."

The farmers of the Mississippi valley can make lard enough to supply the United States with oil and candles we have no doubt, and probably furnish some for exportation, to be returned to us in the form of olive oil, as, from the demand for lard for exportation in our chief cities, is now doubtless the case. There is no question but that the oil made from pure lard, is fitter for every purpose to which olive oil is applied, than that, and the difference in price makes the transmutation an object of some consequence. There is certainly no assignable limit to the quantity of pork and lard that the west can produce, should the demand in any form warrant the efforts of the farmers in that department of agriculture; and of the quality of the oil when properly prepared, there cannot be the least doubt. The Cleveland Herald, in announcing the establishment of a lard oil manufactory in that place, says:—'Lard oil for machinery and wool is unrivaled. It can be made to remain fluid in the coldest weather, and the oil can no more come back to lard, than whiskey can be brought back to corn, when it is properly manufactured. The stearine candles are of various qualities, from common to those exceeding the best of sperm. They burn better, stand a greater temperature, last longer, and are, as well as the oil, afforded much cheaper than sperm."

Corn oil might be made to a great extent in the west, and considerable quantities have already been brought eastward. But the fact that it is only produced in distilleries, and its use must be coupled with the extension of one of the greatest evils that can afflict any country, will prevent the manufacture to any extent. We have seen corn oil burned in lamps, and it proved of the best quality for that purpose; and could its production be separated from that of alcohol, think it would soon become one of profit to the western country. As it is, oil from lard will be depended on to supply the country west of the mountains, and from the quantity that has already been exported eastward, it bids fair to become a formidable competitor to the whale oils of the Atlantic states.

We have stated that of good lard, 62 lbs. in 100 were oil, and the remainder stearine; but this proportion, it must be recollected, will not be obtained in the process of ordinary manufacture, where the details cannot be as accurate as in the laboratory of the chemist. Tallow contains about three-fourths its weight of stearine, which in the best specimens much resembles wax in purity and in burning. The stearine of mutton tallow is white, and partly translucent, and the oil is colorless as water. It is probable that more simple and cheap methods of separating stearine and olein, will be discovered, than those now used, as the whole manufacture may be considered in its infancy.

Sugar from Corn.—We are gratified to see from papers in various parts of the country, that experiments are making to test the practicability of making sugar from corn, and that so far they all appear to have been successful in producing good molasses at least. The great richness of cornstalk juice, when the plant has been grown as recommended by Mr. Webb, that is, planted thick, and prevented forming ears, is truly surprising; and far exceeds that of the cane. Mr. Goodrich of Terre Haute, Ia., finds that eight gallons of such juice makes two gallons of molasses, pronounced by competent judges equal to sugar house molasses; and other experimenters have arrived at the same results. Where the process adopted by Mr. Webb is used, there will be no difficulty in converting this syrup into sugar.

The Brooklyn Cow.—Mr. Smith, Mayor of Brooklyn, exhibited at the Show of the American Institute, a cow that has yielded for ten months, an average of 27 quarts a day; and for 20 days in succession, gave from 33 to 34 quarts of milk per day. The cow is without pedigree, being purchased by a master of a vessel in England, and sold on her arrival here. The food has been Indian and oat meal, about 6 quarts each per day, with as much hay and grass as she requires. The owner has frequently bled her slightly, and occasionally bathed her back and loins with spirits of turpentine. But whatever may have been the treatment, the yield of milk is certainly an extraordinary one.

Black Palmer or Turnep Worm.—A late number of the New Farmers' Journal, states that after a variety of unsuccessful experiments to free a crop of turneps from the formidable pest of the black worm, he succeeded completely, by taking large elder boughs with their foliage, drawing them over the plants, and while they were thus swept upon the ground, sprinkling caustic or fresh slaked lime over the worms. It is probable the cabbage worm and other marauders, might be destroyed in the same way.

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* We give the article as we find it, but do not see how the results stated, follow from the data given. Five hogs to a barrel, and sixteen barrels daily, are 80 hogs daily, instead of 160, and so throughout the reckoning.

Original Papers from Contributors.

“NATIVE” AND OTHER CATTLE.

Messrs. Gaylord & Tucker—I have read, with great interest, the first volume of the Transactions of the New-York State Agricultural Society; and with none of the papers therein contained have I been more pleased than with the one on “Neat Cattle,” by Henry S. Randall, in which are many useful suggestions in regard to the improvement of our cattle, and the production of a breed, or breeds, suited to our climate and purposes.

Mr. R. fears that many are “too prone to underrate our native stock,” which he thinks “has produced animals that would suffer little by comparison with those of any other breed.” In some remarks on Mr. Randall's ideas by Mr. Wm. H. Sotham, in the Sept. No. of the Cultivator, is the following rather *ultra* expression: “He [Mr. R.] may select the best [of the native stock] if he chooses, and breed them until he is of the age of man, and my word for it, he will never breed a beast that a good judge would condescend to put his hand upon.”

There may be a difficulty, I confess, in deciding such a proposition. In the first place, the *premises* should be understood and admitted by the parties. What, then, is “*native stock?*” Here is the grand point; and they may as well dispute about the merits of *British* sheep, or any other species of animal which embraces varieties very widely different in their characters, as to attempt to decide that matter until this point is settled.

If Mr. Randall is to be allowed, (and this is obviously his intention,) to take such animals as Mr. Rust's fat ox as specimens of the scrub or “native breed,” it appears to me he would be under no necessity of breeding till he is three score years and ten, before he could “produce an animal that a good judge would condescend to put his hand upon.” While on my late trip to the East, I saw this ox of Mr. Rust's. He is truly a most *superb* animal. His portrait in the “Transactions” does not do him full justice. He is finer in the neck, and every way more *finished* than the picture represents. He has, both in shape and color, all the leading characteristics of a Hereford; his shoulders are well set, his chime full, back short, loin and hips very wide, rump long, legs clean and sinewy, and he is considerably heavier than any other animal I ever saw of so little bone and offal. At the time I saw him, Mr. Rust thought his weight could not be less than 3,700 pounds; and it had been ascertained by repeated weighing, that his gain was at least three pounds per day. Notwithstanding his immense weight, he was, from the justness of his proportions, very active. When lying down, he would get up as quick as a sucking calf.

I saw the man who said he raised this ox; and the history which he gave of him was, that the bull which sired him was “*part Hereford.*” In this, both he and Mr. Rust agreed. I cannot see why this statement need be doubted; for according to an account which Mr. Bement has published, some Herefords were introduced into this part of the country several years ago. But history and tradition out of the question, it appears to me there would be as much propriety in taking an animal which should show all the principal points in shape and color of an improved Short Horn, as a specimen of the “native stock,” as there is in taking this ox as such. An example of this kind would probably be regarded by the advocates of the Short Horns as not altogether fair.

Your reviewer, Commentator, in the Oct. No. of the Cultivator, in his remarks on Mr. Sotham's expression, given above, says Mr. Bakewell made a similar experiment in England to that proposed by Mr. Randall, “and it is presumable with no better cattle to begin with than Mr. Randall might probably find of what is called the “native breed in New-York.” Now it may be pretty near true that Bakewell began to breed with cattle which were not better than those which *some* have called *native* in this country; but from the best evidence to be had, it seems to me certain, that the animals with which Bakewell began to breed, were not only *very good in themselves*, but belonged to a race whose superior excellence had been long acknowledged. That under the direction of his master mind they attained still higher improvement, is neither denied nor doubted; but that the *originals* were altogether superior to our common cattle, is plain, if we admit testimony on this subject.

The first great advantage which Mr. Bakewell possessed over one who might attempt a similar experiment, confining himself to the common cattle of this country, was the *fixed character* of his stock. Their leading points had been the same, without admixture, as far as we learn, for ages. Hence he might calculate on a certain transmission of the qualities possessed by those he first selected, hereditarily, to their offspring. The originals of our common cattle have been brought from almost every country and district from which this country has ever received emigrants. These animals, so heterogeneous in their character, have generally been bred in an indiscriminate, haphazard manner, until they have, in most cases, lost all marked resemblance to any distinct breed.

Youatt, in the work on British Cattle, gives a very interesting account of the stock from which Mr. Bakewell made his original selections. Under the head of the “Long Horns,” he says, “in the district of Craven, a fertile corner of the West Riding of Yorkshire, bordering on Lancashire, and separated from Westmoreland chiefly by the western moor lands, there has been from the earliest records of British agriculture a peculiar and valuable breed of cattle.” At page 189 is given a portrait of a Craven bull, “supposed to bear about him many of the characters of the old breed.” The portrait conveys an idea of a most excellent animal; one of the best in the book; the body and limbs indicating surprising strength, with a rich mellow coat of hair.

In 1720, it is stated that a blacksmith by the name of Wilby commenced the work of improving the Craven cattle, with some cows which he procured from Sir Thomas Gresley. “Soon after this,” says Mr. Youatt, “Mr. Webster of Canley, near Coventry, distinguished himself as a breeder. He too worked upon Sir Thomas Gresley's stock. He was at considerable trouble in procuring bulls from Lancashire and Westmoreland; and he is said to have had the best stock of cattle then known.” At pages 191, 192, it is said, “improvement had hitherto been attempted to be produced by selecting females from the native stock of the country, and crossing them with males of an alien breed. Mr. Bakewell's good sense led him to imagine that the object might be better accomplished by uniting the superior branches of the same breed, than by any mixture of foreign ones.”

“On this new and judicious principle he started. He purchased two Long Horned heifers from Mr. Webster, and he procured a promising Long Horned bull from Westmoreland. To these and their progeny he confined himself.” * * * “Many years did not pass before his stock was unrivalled for the roundness of its form, and the smallness of its bone, and its aptitude to acquire external fat, while they were small consumers of food in proportion to their size.”

The object in making these quotations is to show that the ancestors of Mr. Bakewell's stock had been considered excellent long before he began his career as a breeder.

In what I have said, I disclaim any intention to “underrate the native stock,” but have been influenced only by a wish that the public may be set right in matters of fact.

Sanford Howard.

Zanesville, Ohio, Oct. 8, 1842.

THE WILD TURKEY.

P. S. In your answer to “poultry inquiries,” you say you “are not aware that the wild turkey has ever been crossed with the domestic one, or that a successful attempt has ever been made to domesticate them.”

The cross you speak of has often been made here; and attempts at domesticating the wild turkey are not unfrequent, and are sometimes successful. They are much disposed to ramble, and their wild nature often leads them to take to the woods from whence they never return. Could they be restrained in their rambles, there is no doubt that their wildness would leave them after several generations, and they would become as tame as other turkeys. According to the principles of phrenology, the organ (perhaps it is “*cautiousness,*”) which gives them their wildness, from being constantly called into action, becomes very strong and developed in a remarkable degree. In a state of domestication, where there are few or no enemies to be guarded against, they have little use for this organ. From the circumstances in which they are placed, it is not enlarged and strengthened by excitement and action; consequently, this organ is not developed as it is in the wild state, but becomes weaker with every succeeding generation produced in the domestic state, until at last it is exactly adapted to the condition of the bird.

An advantage is thought to result from crossing the wild with the domestic turkey; as the latter thereby acquires hardiness, and freedom from those diseases which frequently destroy the young.

Col. Jaques of Charlestown, Mass., has the wild turkey in a fine state of domestication.

S. H.

SHEEP HUSBANDRY.

2d P. S. I have read the article of Mr. J. McD. McIntyre, in the Oct. No. of the Cultivator, on the “Wintering of Sheep.” It is a useful document. I also read the article of Mr. Grove in the “Transactions,” to which Mr. McIntyre refers. I wish Mr. Grove would now give us the average weight of his fleeces, together with the price per pound which they have brought or will bring this year; and that Mr. McIntyre will state the same in regard to the price of his fleeces. We can then see which is most profitable for *wool*. There can be no doubt of the fattening propensity of Mr. McIntyre's sheep. I saw them when I was at your city in July last, and I have never seen sheep in better condition than most of his were on such short pasture. His wethers, a cross of the Cotswold and South Down, are noble fellows. When he kills them, I want to hear from him the particulars of feeding, weight, &c. &c.

It is, in my opinion, a mistaken idea, that we should encourage but one variety of sheep. The different varieties are adapted to different localities. Our country possesses a vast extent of territory well adapted to the production of sheep and wool; and our true policy would be to offer such encouragement as would lead to the production of all the various sorts of wool, excepting, perhaps, those of the very lowest price. This would open the way for the different breeds of sheep. Those most valuable for the carcass might be kept near market, and those valued chiefly for the wool, in the interior. In this way new channels of labor and capital would be opened, and additional stimulus given to enterprise.

S. H.

A German farmer in Pennsylvania, has given 200 bushels of wheat to the poor, as a thank-offering for his abundant harvest.

THE IMPROVED CULTURE OF COTTON—No. I.

Gathered 5,989 lbs. per Acre.

Messrs. Gaylord & Tucker—Permit me to remark in opening a correspondence with you and the planting interest of our country, through the medium of your invaluable agricultural journal, upon the subject of the “*proposed improvement in the culture of the Cotton Plant,*”—that had I not tendered you such promise, since re-examining the extent of the work, I should most assuredly, for the present at least, shrink from the arduous task. Such communication must necessarily, that we may arrive at the true merits of the improved system, embrace an extended rationale, setting forth in the first place, a faithful expose of the present *kill and cripple, and in every way injurious system of culture*, by which the Cotton plant is now grown. Secondly, the principles upon which the proposed improvement is predicated; its reasonable and perfect adaptation to the best interests of the planter and the country. In doing which, I propose instituting a series of argumentation and comparative analysis, as drawn from actual experiments and careful observation,—by which to show most conclusively, that the innate character of the cotton plant has been entirely misconceived, and consequently the plant subjected to the present contracted and ruinous system of culture,—singularly inadequate to that copious development in the perfection of staple and great production of which the plant is capable. And in the third and last place, to render the subject clear and intelligible to all, it will be necessary to give in detail, the “modus operandi,” by which my experiments have been conducted, together with the character and quality of the soil, &c.

Thus you perceive, to treat the subject with that justice, which its grand importance demands, each position in the above prodrome, will require a paper of as great length, at least, as will occupy all the space in any one number of the Cultivator, which you can spare from other matter of general interest to your numerous readers.

But gentlemen, if you shall esteem these papers as meriting sufficient attention, from the all-absorbing interest being excited in the subject discussed, to engage in their publication; surely, after devising the improvement, instituting the experiments, and directing the labor, and last, though not least, having witnessed the triumphant success, equaling my most sanguine expectations, attending the operation, I may spend a few leisure evenings, during the fall and winter, “with my grey goose quill,” in communicating the result. With one other sentiment, I shall have closed the exordium; by remarking that the warmest and most enthusiastic aspiration glowing within my bosom, is to see the science of agriculture,—like the ark of the covenant, in the Jewish ceremonial economy, occupying not only the high places in the land, but as a fixed and governing principle in the hearts of the industrious and intelligent farmer and planter-citizens of our blessed republic,—shedding abroad upon every other science and profession, as it necessarily must, its thousand benign influences, of encouragement and support, riches and honors, together with peace and perfect happiness, “*in tempore,*” the sure rewards of a great and good people.

It may not be improper, before entering immediately upon the discussion of the subject, simply to state some of the inducements, which the proposed improvement in the culture of cotton, holds out to the intelligence and industry of the planter. Its prime object is not so much to augment the number of bags, or multiply the number of pounds already equaling the consumption, as to curtail the enormous expense attending its production; thereby enhancing its value to the planter, in precisely the same ratio. In other words, I propose not only to show, but most satisfactorily to prove, that it is perfectly practicable to produce the 2,000,000 bags—the cotton crop of the United States—with *one-third* the capital engaged, under the present system of culture, in its production. Now if my premises be correct, my conclusions will appear not more fascinating and encouraging to the practical man, than axiomatic. To satisfactorily establish the fact, that the high grounds which I here assume, are not only founded in sound reason, but are tenable in practice, entertained and frequently expressed during the last two years, I have perseveringly devoted, with unceasing energy, the labor of the present season; assisted by careful observations drawn from experiments, as commenced by me last year. A faithful and detailed description of the two systems of culture, essaying neither to prejudice the one, nor accord undue consequence to the other, for the good of the country and the best interests of my fellow citizens engaged in planting,—shall be the single and express object with me, in preparing these papers for publication.

My first object then, as above specified—the work of this number—will be to furnish you, and all interested, with a “faithful expose” of the present, as I term, and shall prove it to be such, “kill and cripple, and in every way injurious system,” by which the Cotton plant is now grown. To some persons, this course may appear at first view of the subject, as supererogatory and quite irrelevant to my purpose; yet I am convinced, that you, gentlemen, and the experienced planter, will view it widely different; since it would be perfectly idle to attempt the refutation of error, until its existence and baneful tendency, be first shown. And here let me congratulate the good cause of reform and improvement, that in the discharge of this very delicate task, I shall be able most fortunately, to bring to my assistance, an article written “on the Culture of Cotton,” which has given universal and acknowledged satisfaction. To the attentive perusal of that very excellent article, at page 49, of the current volume of the Cultivator, (March No.) I wish most respectfully, to recall your attention, and that especially, of every man engaged in the culture of Cotton, whose grand object is his own, his country, and posterity's welfare. This communication appears over the signature of M. W. Philips, of Log Hall, Miss. That your correspondent of Log Hall, is a gentleman of intelligence and experience in the culture of Cotton, under the present system, will appear at once obvious, when we come to examine carefully, which we should, the nice and perspicuous certainty with which he has detailed the several operations, even the smallest minutia, attending the tedious routine of growing cotton under the practice of the country. The satisfaction of those readers, who may not possess the convenience of reference to this article of Mr. Philips, as likewise the necessity arising under certain positions of argument, in elucidation of the several prominent features of advantage, which the proposed improvement offers to the planter render it proper that I make such extracts therefrom, as will serve to illustrate here, the principles of the system. Previous to introducing such extracts, I here remark in reference to that performance, what I think the candor of every experienced planter will readily accord to it,—that it contemplates a greater degree of perfection in many of its operations, as practiced by its author, than is common to the system as we generally meet with it among planters; hence the utility of its quotation, *hoc tempore et loco.* Mr. Philips says:—

> "When our land has been the preceding year in cotton, we either pull up the stalks, throw several rows into one heap row, roll them into heaps and burn; or thresh them down with cudgels, to be plowed in. The latter plan I pursue. Having cut, heaped, and burnt up, what logs may be lying on the ground, we commence our plowing operations by running a furrow, (straight on level land, with the hill on rolling or hilly land,) in the old water furrow with a shovel plow; to this we throw two furrows with a turning plow, and leave it so until time to plant. Should the land have been in corn, many cut down corn stalks, pile and burn, (I plow all in,) and proceed as above; if in oats, I invariably flash deep with a two horse plow, and run off rows as before, 4 feet apart in thin land, and 5 in rich land; on our strongest land, rows are even as much as 8 to 10 feet apart. The plowing so far done, cannot in my opinion, be done too early. From the 1st to the 5th of April, some seasons earlier, we commence planting cotton; having completed planting all corn that the land will admit planting, and now break out the entire row well, and as deep as we can, about 4 inches the deepest, being particular to break out just in advance of the hands planting. * * Then open out the furrow for seed, with some implement about three-fourths of an inch deep. * * This row should be as straight, or as regular in its curves as possible, to permit after work being done to the best advantage. In the furrow on the ridge we sow seed, having had them hauled and dropped in parcels at suitable distances in the field, from 2 to 4 bushels to the acre; not being particular, only in having enough; then cover with a wooden tooth harrow, or a board about 6 inches wide, 18 inches long, concave on the lower edge, and pinned with the heel pin of shovel plow on the chip. * * We do not desire to cover cotton over half an inch; and indeed the covering is not necessary, unless in dry weather; for a light shower will so beat the seed in the soil and compress the wool left on seed, so as to germinate immediately.
>
> "Having planted about half the crop, we pursue other business, for a few days, so that an entire scraping comes on not at same time. One hand and horse can open 10 to 15 acres, 4½ feet apart, one hand can sow seed, and one hand and team cover. But I look on it as very hard work to drop 15 acres; though I have done it myself, I could not have repeated. I always begin to scrape as soon as I have a stand up, grass or no grass, and no regular time for this."

This *first operation,* will be more familiarly recognised when styled, as it is by the great majority of planters, *chopping out.* Mr. P. continues—

> "I have usually begun to scrape by running the bar of a turning plow next to row," (*a very common practice,*) "throw from the plant to water furrow about 1 1-2 to 2 inches deep; but believing with others, it is not best to take earth from the bed, I now use a scraper, attached to chip of shovel plow, that will barely sweep off the surface as near the plant as possible, throwing the surface toward middle of row. When this is well done, one good hand can clear the remainder as easily as is usually done with two ordinary hands, by passing the hoe through the row, cutting out all, to one or two stalks, the breadth of the hoe apart, say about 10 inches apart, leaving the row perfectly clean and scraped. * * About a week or ten days we commence molding the plant with"—(the plow that may best suit the fancy of the planter.) "We make it a point to get the plows in at this work as soon after scraping as we can, and get back with hoes to clean once more, either by *scraping* again or dirting; and if pleasant weather cut out at this time every other stalk. (In poor land I have the stand as at first, single stalks about 10 to 12 inches apart;) reducing to a stand one stalk, in good land, *about* 2 feet apart, in rich land even 3 feet *at times.* If this has been done well and in due season, unless a wet spring, the push is over, as we now cultivate with double shovels, (I prefer it to any thing I have tried,) cultivator and harrow, just as the growth of grass and appearance of earth indicate—governed by—keep clean and stir well. I throw a little earth to the plants, the two or three last workings, but never make a hill unless on hill sides, these merely to prevent washes."

This brings us to the opening snow white staple, blushing to the harvest, which we all gather in the same way, by the fingering operation, since Mr. ———'s boasted *Cotton picking* machine, (at Augusta, Geo.) proved a signal failure, as every such *inanimate neuter* probably ever will, in gathering clean cotton from the plant.

Having turned to and carefully read this article, (which I sincerely desire that every lover of truth do for himself,) I will now add my own testimony, by remarking, that we have here a most faithful and graphic description of the modus operandi of preparing, planting, and cultivating the cotton plant, as practiced throughout the entire length and breadth of the cotton region, from Charleston to New Orleans, with variations so slight as not to affect the general result.

Having the subject now fairly before us, I shall conclude this paper, by making a few general observations, as preliminary to the special dissection of this *monstrous system,* to which I shall carefully attend in the next number. I first observe then, that it is matter of great astonishment to me, that this fallacious system, containing within itself, complete, the elements of certain destruction, has not long, long since exploded. Who among the intelligent planters in the south, and they are innumerable, that has not observed, yea more and sorely felt too, the very striking disparity that exists between the enormous investment of capital, in operating under this system and the meagerly accruing profits! This is not a question however, requiring a formal reply. We have only to look around us on every hand, and remark upon the dilapidated appearance which almost every cotton plantation, of but a half a dozen years standing, presents to the eye, sickening under this blighting influence! Not that the Southern planter has no taste for improvement; the very reverse is the fact; the very influences which our southern genial clime inspire, are both animating and improving; but the system of culture which he pursues, like a vampire, preys upon his vitals, withers his energies, and so saps his profits as to entirely forbid his attempting that improvement about his plantation, so necessary to convenience as well as comfort; and which he loves to admire. Under a scientific and judicious system of agricultural policy, which I contend to be the system best and most profitably adapted to the culture and maturity of the cotton plant, the very idea of wearing out and rejecting land, is a solecism: the constant and invariable tendency of such system is, to improve the soil and augment its production,—ameliorating thereby the condition of every object, both animal and inanimate, that comes within its resuscitating influence. But on the other hand, what have we to look upon as the effect of the present flaying system, but one uninterrupted scene of broad spread ruin, and growing worse? Old worn out fields, red hills and gullied steeps,—admonitory lessons to posterity to migrate to other climes.

N. B. Cloud, M. D.

Planter's Retreat, Ala. Nov. 1, 1842.

CHEMICAL MANURES—AGAIN.

Editors of the Cultivator—I would inform my friend, Mr. Woodfin, that I probably committed one error in the article he has twice criticised, and that is, in acknowledging that under any circumstances, ammonia can decompose plaster of Paris at atmospheric temperatures. I am aware that this opinion is directly opposed to that given by Liebig, in his celebrated work on Agriculture and Physiology, as well as to the admissions of Daubeny in his Oxford Lectures. Those authors are pioneers in the application of science to agriculture, and their works are among the noblest mental efforts of the age; and will no doubt be productive of invaluable results to future generations, if not to the present. Yet the more formidable the standing and the names of authors, the more necessary it is to investigate their opinions, and expose their fallacies.

If my friend, Mr. Woodfin, has been practically engaged in agriculture, he has no doubt observed, that when the leader of a flock of sheep leaps over a fence, the flock suddenly become magnetised by the same impulse, and the whole will leap over, even if they should all land in a quagmire. Just so it is with authors, when a leader gives an opinion, thousands will take the same leap, without examining the ground on which they may land.

I will make a few extracts from Liebig and Daubeny, and will then endeavor to point out wherein they have erred. Liebig says, page 85:

> "The carbonate of ammonia contained in rain water, (and of course when presented from any other source,) is decomposed by gypsum, in precisely the same manner as in the manufacture of sal. ammonia. Soluble sulphate of ammonia and carbonate of lime are formed; and this salt of ammonia, possessing no volatility, is consequently retained in the soil."

At page 89, Liebig asserts,—

> "That powdered charcoal surpasses all other substances in the power which it possesses of condensing ammonia within its pores. Charcoal absorbs 90 times its volume of ammoniacal, which may be again separated by simply moistening it with water. Decayed wood approaches very nearly to charcoal in this power; decayed oak wood absorbs 70 times its volume, after having been completely dried under the air pump."

In the appendix to the same volume, Mr. Webster has given us extracts from Daubeny's Lectures. At page 398, Mr. Daubeny says:

> "Liebig, therefore, has suggested another mode in which gypsum may be beneficial to crops in general, by reference to the property which it possesses, of depriving ammonia of its volatility, and thus preventing its escape into the atmosphere."
>
> "This effect arises from the double decomposition which takes place, when sulphate of lime and carbonate of ammonia are brought together, the lime being converted into a carbonate, and the ammonia uniting with sulphuric acid.
>
> "The above theory of its use being admitted, we may be encouraged to extend its application to other crops besides the leguminosæ, and also to mix it with the dung of our stables, so as to prevent the waste of this valuable material, which is constantly occurring.
>
> "But the farmer must be reminded that it will be necessary that the sulphate of ammonia resulting from the action, should be brought into contact with some substance capable of slowly decomposing it, so as to supply ammonia to the plant.
>
> "For there is no reason to believe that the organs of a vegetable can decompose sulphate of ammonia, and if they were able so to do, the disengagement of free sulphuric acid would hardly fail to be injurious to their structure."

Page 401, Daubeny says:

> "I am indebted to an excellent scientific chemist, for the following details, which may be of use to the agriculturist in enabling him to appreciate the importance of this commodity, and to prepare for himself any quantity that he may require for his farm.
>
> "One gallon of the ammoniacal liquor added to 1 lb. 2½ oz. of powdered, but not calcined gypsum, will produce 1 lb. of crystalized sulphate of ammonia. To effect the decomposition, the materials should be mixed and stirred up together for ten or twelve hours, a heat nearly that of ebullition, being at the same time employed. The sulphate of ammonia remains in solution, and may be obtained in a solid state, by evaporating at a low temperature."

We will now proceed to expose the scientific errors of the above writers. Liebig asserts "that carbonate of ammonia will displace lime from its combination with sulphuric acid, and from sulphate of ammonia; even when the plaster spread on the land is watered with an ammoniacal liquid. He afterwards informs us that powdered charcoal exceeds all other substances in its power of condensing ammonia within its pores."

Daubeny says "the above theory being admitted, (rather a doubtful admission,) we may extend its application," &c. In another section he admits, "that if so formed, free sulphuric acid would be liberated by chemical action in the plant, which could not fail to be injurious."

An excellent scientific chemist informs Daubeny, that at a high temperature, he has made sulphate of ammonia by adding carbonate of ammonia to sulphate of lime; which Daubeny considers a confirmation of Liebig's theory. Now any practical chemist would at once have seen the fallacy of Liebig's theory, from the very fact communicated by the chemist, as we shall presently see.

It is not to be supposed that nature will resort to forced and injurious applications, when more genial and effective series of appliances are at her command.

Of all the alkaline earths, alumina has the least affinity for sulphuric acid, and baryta the greatest. Of all the alkalies, ammonia has the least affinity for sulphuric acid, and potash the greatest. Magnesia will displace ammonia from its combination with sulphuric acid, and lime will displace magnesia. At or near the boiling point, a new series of affinities are formed, and those having the weakest affinity when cool, will at high temperatures, displace those having the stronger; but on cooling, the former affinities again resume their primary influence.

If Daubeny had been a practical chemist, the information received from Mr. Phillips, the chemist, that he had obtained sulphate of ammonia by boiling plaster of Paris with sub-carbonate of ammonia, would have led him to see the fallacy of Liebig's assertion that such a change would be produced at atmospheric temperatures.

I am not a little surprised that so acute a theorist as Liebig, should have been led into this error, when the facts he has presented us, are sufficient to disprove his theory. He asserts that charcoal, where no decomposition is claimed, will retain vastly more ammonia than the sulphuric acid of the plaster; which could not be the case, if the sulphuric acid of the plaster were neutralized with ammonia. We are informed by Daubeny, that 1 lb. 2½ oz. of gypsum, will take all the ammonia of one gallon of ammoniacal liquor to saturate its acid; and will any chemist admit that 1 lb. 2½ oz. of charcoal will retain within its pores the same quantity.

It is evident that both Liebig and Daubeny, in their eagerness to prove a theory, have been blind to mechanical and resulting attractions, which often perform important results without chemical decomposition. Witness the retention of ammonia by charcoal.

I had convinced myself, after making experiments for many months in a London laboratory, that so certain were chemical results from the table of affinities afforded by chemists, beginning with Lavoisier and ending with Davy, that chemistry deserved to be ranked as an exact science; but if this portion of the theory of Liebig be true, it will prove so uncertain as scarcely to deserve the name of science.

Wm. Partridge.

New-York, Oct. 1, 1842.

SHEEP.

Editors of the Cultivator—In your October No. over the signature of J. McD. McIntyre, I notice an article purporting to correct an error in my letter, published in the Transactions of the New-York State Ag. Soc. for 1841. Mr. McIntyre says: "he feeds his own flock (Saxony,) 150 to 200 lbs. hay, and four bushels of potatoes, daily, to the hundred sheep." Those of your readers who have a volume of the Transactions referred to, I would ask to be to the trouble to read my communication, and then decide whether Mr. McIntyre has quoted me correctly; but to those who have not that volume, I beg leave to say that "*and four bushels of potatoes*" daily, is an addition of Mr. McIntyre's.

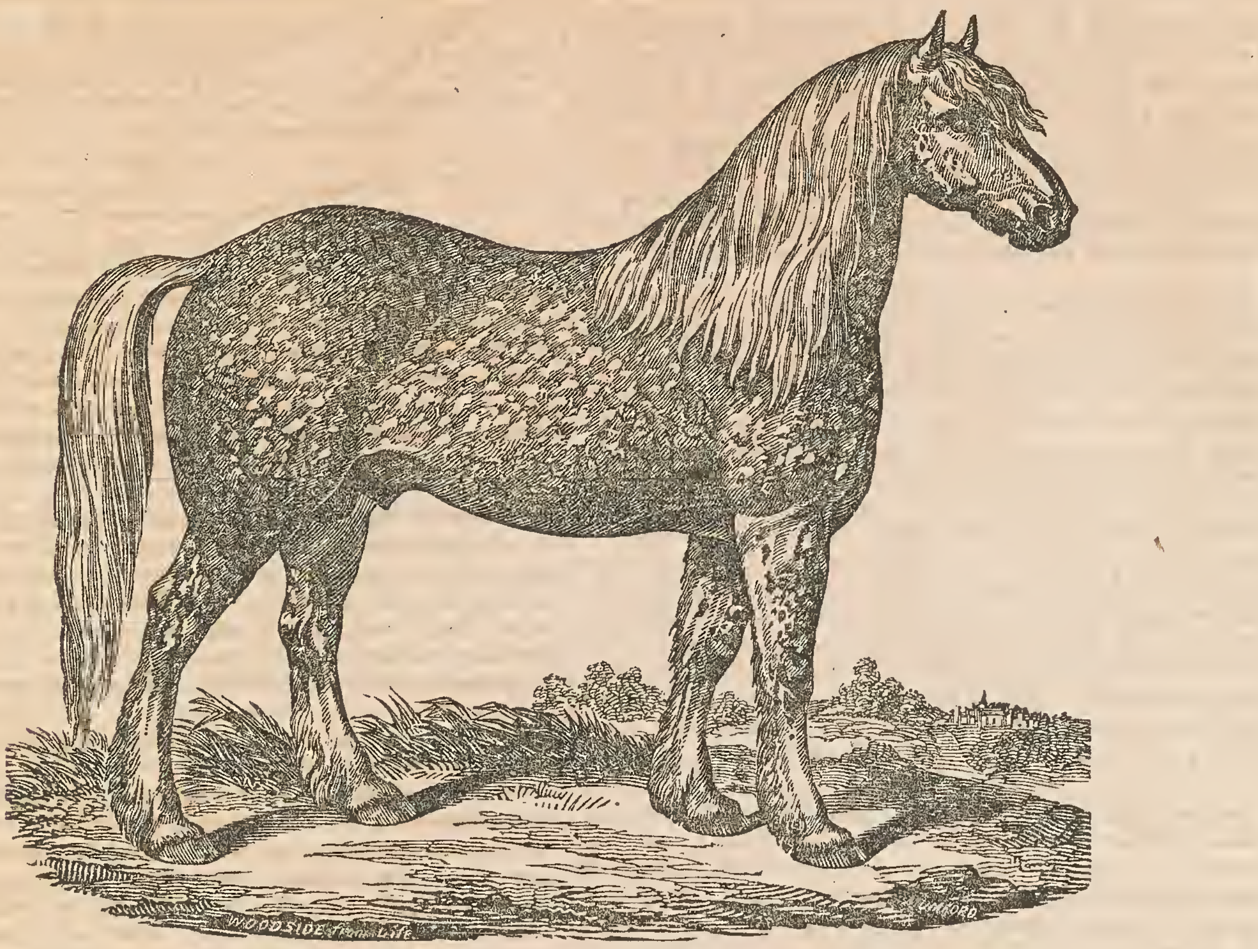
For two winters past, my flock has not received, on an average, over one and a half pounds of hay, daily, or its equivalent in grain, roots, &c. calculating the nutritiousness of the several kinds of provender, as laid down by the most experienced and scientific farmers in Germany.

I feed by weight rather than measure, and keep a pair of steelyards on my hay mow, and weigh often in the course of the winter, not only the hay I feed to my sheep, but the grain, roots, straw, &c. also. This is the method by which I arrive at the quantity my flock consumes. And I frequently weigh the fodder for my cattle also. I did not however intend to occupy much room in the Cultivator at this time, and therefore add only one remark more in conclusion, to express my surprise, that a shepherd of so much exactness as Mr. McIntyre shows himself to be, as to "accurately weigh their (his sheep) food," should otherwise neglect them so much, that "the long continued warm weather, coupled with carelessness in not sufficiently cleaning their yards," cause "many of his flock to lose much of their wool."

Such a negligent shepherd would not find employ long, by

Your humble servant,

Buskirk's Bridge, N. Y H. D. Grove.



NORMAN HORSE "DILIGENCE"—(Fig. 102.)

The Property of Edward Harris, Esq. *Moorestown, New Jersey.*

As a member of the New-York State Agricultural Society, I feel under great obligations to Mr. Edward Harris of Moorestown, N. J. for his generous spirit and liberality, in bringing, at great expense and some risk, to exhibit at our State Fair, in Sept. last, his splendid Norman horse Diligence, whose portrait adorns this No. of the Cultivator, and added so much to the interest of the exhibition.

Mr. H. is a gentlemen of fortune, and while spending a few years on the continent, and when traveling by public conveyance in France, was often surprised with the great power and endurance of their horses, as used before their heavy and cumbrous diligences. It was not uncommon for four of them to perform seven miles within the hour, with from 12 to 14 passengers. Mr. H. was so well convinced from what fell under his observation, of their great superiority over the horses in this country, and that a cross of this breed on our mares, was best calculated to produce "the horse of all work;" uniting great strength, with sufficient activity for the road, the plow, &c. that he determined to import some, and make the attempt, and with this view, he accordingly purchased two stud horses and three mares. One of the horses died on the passage, and one of the mares had her leg broken on one of the cars at Jersey city. Nothing daunted by these misfortunes, and not willing to be foiled in his purpose, he sailed again for France in the same vessel, and returned with Diligence. Another of the mares died the next year, leaving a colt. Mr. H. has now a number of full bloods, as well as several half breeds, all promising to fulfil his expectations.

For a further account and history of this horse, I will refer the reader to the following, which appeared in the 9th No. of the VIth vol. of the Farmers' Cabinet:

"Mr. Editor—I promised to give you some account of my horse Diligence, and of the race from which he springs, to accompany the engraving from Woodside's portrait of him.

"Diligence is of a handsome dapple-grey color, and measures 15 hands under the standard; he was purchased by his present owner in 1839, at the Fair of Guibray, a small village near Falaise, in Normandy, the birth-place of William the Conqueror. This fair lasts fifteen days; and being held in a district the most celebrated in France for the breeding of horses, and the first three days of th efair being devoted to their sale, it is resorted to by dealers from all parts of the country, particularly from Paris, for the supply of the diligences, and for post and carriage horses. This fair is largely supplied with the English breed raised in Normandy, and with its crosses upon the French stock, as well as with their peculiar race, (of which Diligence is a true type) called the Percheron, so universally used in the northern half of France, to draw the diligences and for post-horses.

"The orign of this race, according to French authorities, dates from the occupation of the Netherlands by the Spaniards, who introduced the Andalusian horse, which soon became the favorite stud horse all over the continent. The Spanish horse is known to spring from the Barb or Arabian, introduced by the Moors, on their conquest of that country. All who are conversant with the history of the horse know that the Andalusian has always been celebrated for his beauty, and for his great spirit, combined with extraordinary powers of endurance. The French horse upon which he was crossed, was the old Norman draft horse, which still exists in the country in all its purity; and is, perhaps, the best of all horses for slow draft.

"The average height of these horses is 16 hands, and they may be described as follows: head, short, wide, and hollow between the eyes; jaws, heavy; ears, small and pointed well forward; neck, very short and thick; mane, heavy; shoulder, well inclined backwards; back, extremely short; rump, steep; quarters, very broad; chest, deep and wide; legs, very short, particularly from the knee and hock to the fetlock, and thence to the coronet, which is covered with long hair, hiding half the hoof; much hair on the legs; tendons, large; and muscles excessively developed. Notwithstanding the great size and weight of the old draft horses, they are active. I have seen one of them draw sixteen large bales of cotton in the streets of Havre.

"If this account of the origin of the Percheron horse be correct, it would appear that the crossings with the Spanish horse was continued long enough to reduce, very considerably, the size of the old Norman horse; and that when the supply of Andalusian stud horses was cut off by the expulsion of the Spaniards from the low countries, breeding their progeny with one another has produced a distinct race, as well marked by character and qualities peculiar to itself, as any race of horses in Europe.

"Diligence was chosen as a full sized specimen of the breed, possessing all the quick action of the smaller horses, in order that his immediate progeny from our light mares might approach nearer to the true type of the race. It must be observed, however, that it is more in breadth and size of bone and muscle that he exceeds the standard, than in his height, which is very little above the average. The portrait, or still better, an inspection of the horse, will convince any one that this race is the origin of the Canadian pony, about whose valuable properties little need be said, as they are well known and highly prized in this section of the country, and still more to the north, where they have, undoubtedly, given that stamina and character to the horses of Vermont, New-Hampshire, and the northern section of New-York, which makes them so highly valued all over the Union as road horses; while it is a remarkable fact, that in those states where the attention of breeders has been exclusively devoted to the English race-horse, the carriage and the stage-horse is almost universally supplied from the North. It remains, therefore, for breeders to determine, whether it is not better to resort to the full-sized Percheron to cross upon our light and already too highly bred mares, than to use the degenerated Canadian, (degenerate in size only, through the rigor of the climate—for it must be admitted that the little animal retains all the spirit and nerve of his ancestors, and lacks strength only in proportion to his size). My own opinion is, that a due portion of the French blood mixed with the English, will produce a stock of horses invaluable, as combining all the properties that are required for quick draft on the road or the farm. I need not assure you who are acquainted with the success of Diligence as a stud horse in this place, that such, too, is the opinion of the farmers of New-Jersey.

"I have frequently been questioned as to my reasons for selecting this horse for farmers' use in preference to the English draft-horse. My reply has always been, that the draft-horse of England, whenever brought to this country, must prove a failure; he wants the go-a-head principle; he cannot move out of a walk; which is saying quite enough of him, without dwelling upon his defects of form, which can only be concealed by loads of fat, and not even then, from the eye of the horseman. The true Percheron, or Norman Diligence horse, on the contrary, combines more strength with activity than any horse I have ever sat behind. All travelers, on entering France, are struck with the properties of these horses as displayed in drawing the ponderous machine called a Diligence, by which they are conveyed through the kingdom at a rate fully equal to the average of stage traveling in this country. English horsemen confess that their road-horses could not hold out the same pace before the same load. But I will close this letter with an extract or two from an able article on the Norman horse, in the British Quarterly Journal of Agriculture.

"The writer, after giving an account of the origin of the horse, which agrees in tracing it to the Spanish horse (of Arabian ancestry) with the account I have given above, which I procured from French sources, says: 'The horses of Normandy are a capital race for *hard work and scanty fare.* I have never seen such horses at the collar, under the diligence, the post-carriage, the cumbrous and heavy voiture or cabriolet for one or two horses, or the farm-cart. They are *enduring and energetic beyond description;* with their necks cut to the bone, they flinch not; they put forth all their efforts at the voice of the brutal driver, or at the dreaded sound of his never-ceasing whip; *they keep their condition when other horses would die of neglect and hard treatment.* A better cross for some of our horses cannot be imagined than those of Normandy, provided they have not the ordinary failing, of too much length from the hock downwards and a heavy head.' I think that all who have paid attention to this particular breed of Norman horses (the Percheron which stands A No. 1), will bear me out in the assertion that the latter part of this quotation will not apply to them, and that on the contrary they are short from the hock downwards; that their heads are short, with the true Arabian face, and not thicker than they should be to correspond with the stoutness of their bodies. At all events, you can witness that Diligence has not these failings, which, when absent, an Englishman (evidently, from his article, a good horseman) thinks, constitutes the Norman horse "the best imaginable horse for a cross upon English horses, of a certain description.' This, coming from such a quarter, I look upon as high praise—a golden opinion. I would here observe, that I have seen great numbers of the cross upon the Norman mare by the English thorough-bred, and feel satisfied that they are of superior form and action for road-horses, and that many of them in the hands of our trainers would make fast trotters. Again, he says they are 'very gentle and docile; a kicking or vicious horse is almost unknown there; any person may pass in security at a fair at the heels of hundreds.' Edward Harris."

"Diligence" has made two good seasons in New Jersey, and been well patronized; and his colts are highly appreciated; one hundred to one hundred and fifty dollars, has been offered and refused for some of them, from good mares, when only one year old.

Pennsylvania was long celebrated for its large and beautiful team horses—the Canistoga breed. We also once possessed in this section, a low, heavy, square built, strong and tough horse, called the Dutch horse, in consequence of being bred and used by the Dutch inhabitants in this vicinity. They were truly the farmers' horse,—a large animal in a small compass, capable of great endurance, and keeping in good condition, with a small allowance of grain; powerful enough for the plow and sufficiently active for the road. Where are they now? Just cast your eyes over the horses before the farmers' wagons, as they arrive in the city, and see what a spindle-shanked, long legged, gaunt, unprofitable animal they now possess. They are too light for the plow or the road, and only fit for the saddle and light carriages. They have too much of the *racing* blood, the meanest of all breeds for the work of the farmer. We want to increase their weight, without extending their height: and I know of no horse, in my humble opinion, better calculated to accomplish the desired object, than Diligence; and I am gratified to have it in my power to say that he can be obtained for a season, if suitable encouragement be offered, by the farmers in this section. This can be determined by those who feel disposed to patronize him, if they will leave their names at the office of the Cultivator. C. N. Bement.

Three Hills Farm, Dec. 1842.

TO WESTERN EMIGRANTS.

Readers of the Cultivator—My old Friends—During the last six or eight months you and I have held but little intercourse. To be candid, I did not imagine that my name would have been so much missed, as I am induced to believe it has been by what I am told in a great many letters that I have received. It is true, I had begun a "traveling memorandum," that I intended to have continued throughout all my journey, and brought you with me in imagination over the great northern lakes, and set you quietly down in the chimney corner of a comfortable and happy "log cabin home," where we could have looked back over the varied scene, and called up to view the many new acquaintances, and looked upon their various modes of cultivating the earth, and the many different ways of enjoying the fruits thereof, and then endeavored to find from observation where was the greatest amount of human happiness; for there, be it East or West, is the place to seek a new home.

Now I should have accomplished all this, and I am well assured should have added a little to your happiness, and thereby to my own; but I undertook to drive *too much team.* The consequence was, the connecting chains broke, and although I tried to "toggle" the broken links, it would not do, and there I have been stuck fast ever since.

Reader, let me here inquire whether you have undertaken, during the last summer, "to drive too much team?" Because, if you have, I am pretty sure there is "a link broken" somewhere. This is only another mode of repeating to you what I have often said before about cultivating too much land. I don't mean that, exactly, either; because you cannot *cultivate* too much. But do you cultivate it, or only own it? A great many of my eastern acquaintances want to emigrate to the West "to get more land."

Well, if that is all you want, I pray you come on. Here is plenty of land—good land, and cheap; and if to be the owner of 2,000 acres of good land will make you and your family happy, aye, even happier than they now are, why just bring along $2,500 and you can be the owner of two thousand acres of good land; beautiful land. But what is it worth without cultivation? Why just what half of your present farms are worth that are as uncultivated as the western prairies. That word "your" is wrong; because I am addressing myself to the *readers* of the Cultivator, who have, a great many of them, adopted an improved mode of cultivation. But I will say *the* farms of many of the uneasy spirits of the eastern states, who want to emigrate to the West merely because they want to get more land. Don't understand, by what I say, that I am opposed to emigration. No; like all the first settlers of a new country, I want to see it fill up; but I want it filled by a class of inhabitants that will feel every day, and every member of the family, as though they had bettered their condition by removing from the old homestead to a new and uncultivated spot.

How often do I see and hear the reverse of this. How often do I feel sorry for the fate of the feeble old grandfather and mother, who have been induced to quit all the comforts of the old homestead to seek for "more land;" to get a "bigger farm" in the wilds of the Great West. Singular and strange delusion, that bare acres of land constitute a farm. Let the old man stay at home; and let the young man, with a constitution made to endure toil and hard fare, come here and spend a few years of industry, actually cultivating the rich soil instead of doing as most of us do—"deviling over," and he will be sure to create a home, that to him in his old age will be as highly cherished as that of his father was.

The article under the head of "Western Farming," in the Oct. number, speaks to the men of capital at the East in words of truth, and shows them what may be done at farming on the prairies on a large scale. But men who are able to do likewise, are able to live anywhere. But there is one thing certain; there is no more certain way in which they can invest their capital. Yet such are not the kind of emigrants that are the most likely to improve their condition so as to create an increased amount of happiness for their families; which I still argue should be the moving cause of every mover to the West. There never was a more favorable time for the emigrant than the present. During the rage of the speculation fever, many persons contracted debts that they are totally unable to pay without selling their farms; so that improved land can now be bought for a lower price than used to be paid a few years since for the bare "claim," before the land had been purchased of government. Stock and provisions are also low; and it requires far less capital now for the new settler to make a successful beginning with than it did a few years ago. But enough for the present. In my next, which I promise not to delay beyond reason, I intend to answer, in detail, a great variety of questions which have been asked me during the past summer, which will be interesting to the western emigrant.

Lake C. H. Nov. 1, 1842. SOLON ROBINSON.

COMMENTS ON THE SEPT. AND OCT. NUMBERS OF THE CULTIVATOR.

IN the account given you by Mr. P. L. Simmonds, of the last meeting of the Royal Agricultural Society of England, there is nothing which should gratify an American so much as the two short speeches of our worthy and highly distinguished minister, Mr. Everett. They are most happy and appropriate specimens of the great eloquence for which that gentleman has been so long remarkable. When agriculture is thus honored it will become fashionable; and *this*, added to the vast aids which it is now constantly receiving from men eminent, in every part of the civilized world, for their scientific acquirements, will impart to it an impetus which nothing can resist.

The communication of your correspondent, Mr. R. S. Hardwick, relative to the Chinese tree corn, induces me to state my own trials of it. Three years ago I bought one ear for 25 cents of Mr. Thorburn in New-York; and selected it from a barrel which he had just opened. This evidently contained several varieties, but none of them of a very pure white. The prevailing color was a pale cream, with a slight tinge of pink. All the cobs were uncommonly small; but the number of rows varied from eight to twelve. Some of the grains approached the gourd seed corn in shape, whilst others were very hard and flinty; and to this great diversity I have no doubt we should attribute the very different accounts given of this corn in the numerous communications which have appeared in your paper. The ear which I selected was of the flinty kind, with 10 rows on the cob; but the produce appeared to consist of every variety I had noticed in the barrel from which I selected my ear. These varieties have not yet disappeared, although this is my third year of planting with seed, apparently of the same kind, as near as I could get it. The only change I can discover is, that the ears are somewhat larger; having generally more rows on the cob, and maturing a few days later. In our climate, (say about 37,) I am inclined to believe that it will prove a highly productive corn; as it will bear much closer planting than any of our larger varieties; producing more ears on a stalk, and ripens two or three weeks earlier. A writer in the April number of the Tennessee Agriculturist, which, by the way, is an excellent co-laborer in our cause, pronounces this corn to be "preferable to all others" to plant at the distance of 3 feet each way; but he does not mention how many stalks he leaves in a hill. I have planted 3 feet by 4, and have left from 2 to 4 stalks in a hill, which I have found to be not too thick.

The North Carolina paper, which attributes such wonderfully fertilizing effects to the annual burying of sweet potatoe vines, after digging the potatoes, is certainly wrong. It is true that this process will enable the same ground to produce good successive crops of this root for several years; but some other manure will at last be necessary; and this I assert from long continued observation and experience in their cultivation.

Mr. J. S. Skinner's remarks on agricultural premiums are worthy of the attentive consideration of all our agricultural societies; for I have never yet seen a scheme of premiums which was entirely exempt from the objections which he has so distinctly stated. They are too apt to favor *show*, without sufficient regard to the *cost* at which it is made, and to the general utility of making it.

I most heartily thank Mr. W. H. Sotham for his advice, as I hope it will at least soften his displeasure, (should he feel any) at my little comment upon himself. No offence whatever was intended, as I can truly assure him; for I am always gratified to see such practical communications as he generally sends you; and I rejoice at being now able to rank him among the approvers of my labors.

In all that your correspondent Quercus says of the benefit of green manures I fully concur; but I would prefer letting them dry before they were plowed in. Indeed, the use of them has been so long sanctioned by the best farmers, both in this and other countries, that the man who can now doubt their efficacy must be an incorrigible sceptic. But I must wish that Quercus had given a more intelligible description of what he calls the "Angola or Pigeon pea." I presume he cannot mean any variety of the Indian pea, of which there are at least 20 kinds in the southern states, and all produce more vine in land of the same quality than any imported pea that I have ever seen, and of course yield a more abundant growth to plow in. Another advantage which they have over the imported peas is, that the vines when wilted and stacked with alternate layers of any kind of dry straw, make as good long forage for cattle, sheep and work-horses as any that can be given to them.

The article signed "A Wheat-grower in New-York," contains more valuable information relative to the wheat crop than I have elsewhere seen in so condensed a form, and should be thoroughly studied by every inexperienced wheat grower in the land. I am particularly pleased with it, as it goes far, although incidentally, towards encouraging the practice of drilling wheat, of which, as it is now followed in several parts of Delaware and Pennsylvania, I have lately heard so many authentic and favorable accounts, as to induce a belief that drilling should generally be substituted for sowing broadcast. It has two great advantages over the latter mode: it saves seed, and by depositing them in the bottom of a little shallow trench protects them, in a great degree, from being thrown out by the winter frost, which by pulverizing the earth on the edge of each trench, adds some small portion of it each time to the roots of the wheat.

In your acknowledgment of certain presents from several of your correspondents in the Oct. No. I perceive there is one in which you have been so kind as to give me an interest. It is the seed of the "South American evergreen grass," presented to you by Dr. N. B. Cloud, of Alabama. Circumstances beyond my control, snd which I much regret, have prevented me from receiving in person the portion of this seed which you state that you intended to "divide with your friend Commentator." But it can easily reach me, if you will send it to our friend Mr. Ellsworth; and if Dr. Cloud will send, next summer, to the same gentleman, the seed of the same grass, as he proposes, I am confident that many others, besides myself, will be very thankful to him. All which I may receive shall be fairly tried and the results made public.

I will take this occasion to say, that of all the grasses from warm climates which I have ever yet seen, the Guinea grass appears to me the most valuable. In our climate it requires no culture after the first year; it stands drouth better than any other grass; and will bear cutting at least four times, at an average height, in good high land, of at least 2½ or 3 feet. Another good quality is, that it grows taller in sandy land than any other grass yet known to us.

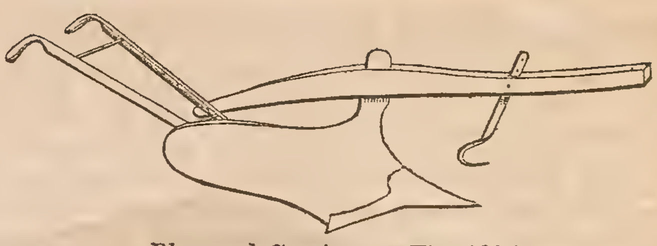
In the extract from Mr. J. King's letter from Iowa, he says—"there is no real cause for hard times." But, with due deference to his opinion, I must think that he himself has stated one, in regard to the reality and permanence of which, there can be no doubt in the minds of any reflecting man. It is neither more nor less than the constant "*president making*" by congress, which has existed from the commencement of our government to the present time; and has now reached such a baneful intensity as to occupy nearly their whole time, to the great neglect frequently of the most pressing exigencies of our country. All the political evils under which we have ever suffered have sprung, either directly or indirectly, from this prolific source; and heaven only knows when it will cease.

Your recommendation of sheep husbandry for the West will suit, unless I greatly err, quite as well for the East, since large portions of the atlantic states are admirably well adapted to this stock; from which I confidently believe that as large annual and clear profits could be derived as from any other stock. Their first cost may be reimbursed in less than a year; and then, with tolerable care, the yearly income from them will be fully equal, if it does not exceed the original outlay.

In your advice to substitute clover for sorrel, I should think that every good farmer would cordially concur; and I will venture to add that the suggestions of the "Maine Cultivator," about feeding sheep with the hay and the seed of this land-poisoner, can hardly be of any use, unless it be to those persons who are so unfortunate as to own lands which produce nothing else but sorrel. With us, it is everywhere considered a great nuisance, and never grows high enough to be worth cutting, even if any of our stock would eat it after it was cut. If the Maine farmers would lime their lands well, they would soon convert this pest into a manure by neutralizing its pernicious acid, and thus so improve their soil as to render it capable of producing any of our best grasses.

The inquiry of your correspondent at "Selim's Grove, Pa.," relative to the best contrivance for "turning over heavy growths of clover," reminds me of a very simple one recommended many years ago by your correspondent Mr. Garnett, in the American Farmer, whilst it was edited by Mr. J. S. Skinner of Baltimore. Having tried it myself, and found it effectual for the purpose, I will here endeavor to give you a correct idea of it by the subjoined sketch of a plow (fig. 103.) with the contrivance attached to it.

You will perceive that it is nothing more than an iron hook notched into the land side of the plow beam, and forming an obtuse angle with the front of said beam, which prevents all shaking. It is fastened to the beam by a small screw bolt; and having a number of holes in it, may be raised or lowered according to the depth of the plowing. The flat part of this iron is about 8 or 9 inches long, 2 inches wide, and one-fourth of an inch thick. The curved part is round, about three-fourths of an inch thick at the largest part, and tapered to a blunt point. This curve should form a semi-circle about one inch wider than the plow-share, and should be so bent as to form a right angle with the flat part of the iron. It will thus move parallel to the surface of the earth, and three or four inches above it, when the plow is entered as deep as you wish it to run. The hook will then take in all the growth, (be it what it may,) which stands up the furrow slice, and by bending it forward, parallel to plow beam, will enable the mold-board to cover up the whole.



Plow and Gearing.—(*Fig.* 103.)

Under the head, "Sowing Clover Seed in the Fall," I beg leave to add to your information, that I have known it to succeed perfectly, in almost every case, between the latitudes 37 and 38, if sown at any time from the 1st of Sept. to the last of Oct. I have also known it to do so when sown among corn, even as early as the last working of it in August, and as late as the middle of November, if sown with wheat. It will not succeed of a dry spring on winter grain, unless it is harrowed immediately after sowing.

You have denounced the words "*can not*" in well merited terms; and you question whether there is another phrase in our language "productive of as much mischief." What think you of its twin brother—"*will not?*" I guess, as Brother Jonathan would say, it is "pull Dick, pull Devil," between them; for they are a matchless pair—if not to perpetrate evil—at least to prevent all good. Occupet extremum scabies, say I, of both of them.

The accounts which you occasionally give us of the agricultural societies of England and Scotland would be enough to sicken the hearts of all the true friends of American husbandry, were it not for the hope that such soul-stirring narratives may at least awaken throughout our whole country the same enthusiasm and ardor in agricultural pursuits which now evidently exists in those countries. Persevere then, gentlemen, I pray you persevere in giving us these accounts, and heaven grant that your highly laudable and meritorious efforts in our cause may meet with all the success they deserve. We have a country unsurpassed in natural advantages by any other in the world; and it wants only *their* full development to realize all the fondest, most sanguine hopes of the wisest, the best, and the most patriotic of her citizens.

Your correspondent, Mr. L. B. Armstrong, has bestowed on me a degree of praise so far above anything which even my own vanity can admit to be just, that it almost made me blush, although I was quite alone when I read it. Still I owe him my best thanks, which I here tender to him, for his very favorable estimation of my communications; and I shall most willingly comply with his request to state my opinions in regard to the subjects upon which he wishes to know them. But in the first place, I must protest against the opinions of Mr. Garnett, or of any other man, having "*almost the force of law*" with any person whatever. Indeed, I greatly mistake the character of that gentleman if he himself would wish it. In regard to his experiments referred to by Mr. Armstrong, I myself have witnessed similar ones with the same results; although it is very possible that Mr. G.'s reasoning and conclusions on them may be incorrect in some respects. This, however, cannot invalidate the facts of the case. In reference to Mr. Garnett's communication, I can think of no way to account for the facts which he there mentions, but one substantially the same that he has adopted. All the comparative experiments which I myself have witnessed between plowing in manures as soon as they were spread and postponing it for some time after spreading them in a state as little fermented as possible, have contributed to prove that the latter mode is best; at least, in regard to vegeto-animal manures; and of such only, I presume, Mr. G. was speaking. As to green manures, I have made no comparative trials with them in the two states of green and dry; but am inclined to believe from analogous reasoning, that to plow in the vegetable growth on land after it is dead, would be more beneficial than in its grown state. As to Mr. Garnett's opinion—"that it is always best to apply manures on the surface of land," it would have been more explicit if he had added,—and there to leave them until just before planting or sowing the crop they were designed to benefit. To state all the arguments in favor of this opinion would extend this already long communication beyond what I wish. I must therefore beg Mr. Armstrong to wait until another opportunity, if he still desires to see them. There is, however, another of Mr. G.'s opinions which Mr. A. deems unfounded, and upon which he asks what I think, that I will here briefly notice. It is, if I may infer it from Mr. A.'s remarks,—that all leaf-bearing plants, particularly trees, derive most of their nourishment from the atmosphere. Although this seems now to be the opinion of all the latest writers on agricultural chemistry and botany, and particularly of that most distinguished of them all, the justly celebrated Liebig; yet I hesitate not to say, that the mere ipse dixit, even of Liebig, should not be admitted without some proof. They have given it, I think, in abundance; but I have not here room to cite it. The fact mentioned by Mr. Garnett, of the bodies of young trees, around which a ring of bark had been taken off, soon growing larger above the ring than below it, appears to me to be one proof, although not mentioned, I believe, by either of the writers alluded to. If Mr. G. imputed the whole of this greater growth to atmospheric influence, I think he was wrong; as the obstruction of the sap in returning to the roots was probably in part the cause. But Mr. A.'s case of a vein swelling when a man's arm is tied up to be bled, has no analogy to the tree case, if he will pardon me for saying so; unless, indeed, upon the supposition that one part grew in the earth; and that if our legs had a ring of skin taken off, all around them, the parts above the ring would soon attain a greatly disproportioned size.

In conclusion, I will venture to say, that if Mr. Garnett is the man I take him to be, he will be so far from thinking any of Mr. Armstrong's remarks "disrespectful to him," that he will be much gratified at the very favorable opinion which Mr. A. has expressed of him and *his* opinions.

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Mr. P. R. S.'s method of extirpating the toad-flax, snap-dragon, or ransted, as some call it, is probably the only effectual one; for it is perennial. It is the antirrhinum of the botanist. Some 8 or 10 years ago it was introduced into our garden as a beautiful flower, and I have been annually pulling it up ever since, but have not yet got rid of it.

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Our friend Solon Robinson's comparison of newspapers to mustard holds good in more respects than one. We often meet with preparations of the latter which are utterly worthless; and so we do of the former. We should therefore *examine carefully* before we buy, or we may get moral poison for our money, instead of a wholesome mental stimulant.

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I can assure your worthy and well informed correspondent G. B. S. that I am quite as averse to controversy as he can be; and had no other object in my former remarks about potatoe oats than to elicit farther inquiry relative to a grain which had been so long in high estimation among us, and certainly had very good looks in their favor, if nothing else.

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"A Wheat grower in Western New-York," whose communication is continued in this number of your paper will prove, if I mistake not, as good "a hand at the business" as any you have among your numerous correspondents; and I earnestly hope he will long be one of them. I would particularly recommend what he says of "chess" to your friend Mr. T. Hudson of Ohio, whose promised experiments I trust will be forth coming before next year passes off. Might I risk a prophecy without offence, he will convict himself of having entertained a very erroneous opinion.

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As Dr. N. B. Cloud has been pleased to mention me in speaking of the South American evergreen grass seed which he lately sent you, I will barely inform him, that some of the Musquit grass seed has been promised to me, and that I will certainly try the two together if I receive them. The result of the trial shall be published, whether it prove favorable or not.

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In regard to the culture of foreign grapes in the United States, I beg leave to state a single fact. Two or three varieties, the distinctive names of which I do not know, but which appear to be too tender to bare well in our climate, have grown most vigorously, and produced abundantly when grafted on our common native vines. In a single season I have known the grafts to grow 20 or 30 feet. COMMENTATOR.

SALT, POULTRY, &c.

FARMERS, SALT YOUR CATTLE IN THE WINTER.—I have long practiced salting my hay when put in the barn, and supposed that would be sufficient for the cattle during winter. But last winter, I kept salt before them constantly, and found that they consumed quite as much as they did in the summer, and therefore consider it as necessary.

LIVERPOOL SALT FOR THE DAIRY.—Some writer for the Cultivator has stated or suggested, that good butter and cheese cannot be made, by salting with Liverpool blown salt. For a number of years, we were of that opinion, and took pains to get the best rock salt we could. But for several years past we have used none but sack salt, bought as Liverpool, and we all consider the butter and cheese quite as good as when we used the other kind. It may take a little more in quantity, as it is lighter than rock salt.

TOP-KNOT HENS.—An inquiry is made in the last number of the Cultivator, for some genuine Poland or top-knot hens. Mrs. Langdon, my next door neighbor has one, and there may be others in the town. Some seven or eight years ago, I procured a couple of that breed of hens, male and female. I am confident they were pure full blooded topknots; they were said not to sit but once in seven years. As I wished to keep fowls for their eggs, and not for their chickens, I was much pleased with the description. During the two first years I succeeded without any difficulty, in raising about thirty, the number of hens I wished to keep. Not one of the full bloods offered to sit while I kept them. The part bloods would sit a week or ten days, but never long enough to hatch chickens. The top-knots first raised having become old, and not producing so many eggs as young hens would, and being more mischievous, (as it is well known, that old hens do not lay as bountifully as young ones, and grow naughty withall,) I tried for two or three years to raise more chickens; but from some fatality, not at all attributable to the kind of hens, I could not succeed in raising a single chick—got discouraged, and determined to keep no hens as they were troublesome to my neighbors, and last spring killed all but one half blood. She has layed all summer but never offered to sit.

I consider the top-knots altogether the most profitable hens for me to keep. As to feeding hens, I am fully satisfied they do not consume half as much grain, when kept where they have free access to it, as when fed to them daily.

Yours, C. BUTLER.

Plymouth, Conn. Oct. 29, 1842.

NINE PLAUSIBLE REASONS FOR SUBSCRIBING FOR THE CULTIVATOR.

MESSRS. GAYLORD & TUCKER—My destiny is to labor —to cultivate the soil—to obtain my "bread by the sweat of my brow"—Father Adam like—an honorable avocation. My hand is callous by the habitual and daily use of the implements of the farm, and more accustomed to wield the plow than the pen, which may account for all deficiencies in my communications.

But, notwithstanding all this, permit me to adduce a few reasons, which have been conceived while following the plow, or other ways engaged, *why farmers should subscribe for the Cultivator.*

1. Every farmer should subscribe for the Cultivator, and *read* it; because a vast deal of manual labor is unnecessarily expended, and completely lost; and a great extent of soil remains in an uncultivated condition, year after year; and benefits no one a farthing, merely for the want of the information, which an agricultural journal so abundantly imparts.

2. Men of most occupations through necessity, require reading adapted to their various pursuits.

The moralist must have his Advocate—the divine his religious periodicals, in order to keep up with the spirit of the times; and to learn the condition and changes in community; and the progress of the moral and religious world.

The politician, the lawyer, and physician, must read extensively; and devote much time to matters relating to their occupations, or they make little or no proficiency in their professions.

And shall not the cultivator of the soil, to whom the votaries of pleasure, and the whole professional class look for support, avail himself of the information, adapted to his pursuit, which he so greatly needs.

Now the Cultivator will furnish him with abundance of the necessary information, both theoretical and practical; and the result of experience clearly demonstrates that if he would be the most successful cultivator of the soil, and a connoisseur in agriculture, he should combine his experimental knowledge with what he reads;—and theory and practice should go hand in hand.

3. The stock of most farmers is improvable; and as it should be the aim of every one, to improve his stock of all kinds, and at the least possible expense to make it the most profitable, he can find in the Cultivator portraits of various animals, which in competition stand unrivaled; and all the requisite knowledge to guide him in matters relative to the treatment of cattle; and particularly to sheep husbandry.

He will find, also, in the veterinary department, prescriptions for the treatment and removal of most of the diseases, to which animals are subject.

4. There may be (as has been the case,) information in the Cultivator which may be the means of improving the condition of the farms of many—of improving their stock —of saving the lives of many neat cattle, and thereby enriching the pockets of the owners many hundreds of dollars.

To corroborate this assertion, I would refer to the testimony of Mr. Woodward, Cultivator, p. 68, who, speaking of agricultural journals, says, "could I have had the Cultivator, with the present light on the subject of farming, when I first commenced (eighteen years since,) I think it would have been more than $1,000 benefit to me.

Also, to the testimony of that enthusiastic and devoted friend to agriculture, COMMENTATOR, who, speaking of the value of your paper, says, "your two statistical tables, alone, would be a bargain at $2.00, could they not be obtained elsewhere."

Also, a writer in a back volume says, "your last number saved me *ten dollars.*" And another, "I consider each number worth a fat cow."

Need we more than this? Does any one question such testimony? The opinion of such gentlemen as I have quoted, *with me*, ranks *exceedingly high*—I can rest assured that they speak the unexaggerated truth.

5. The proper value of the various manures of the farm are not duly appreciated by the majority of farmers, because a correct application is not understood; and thus, much of the good effect, which it should produce, is lost *in toto.*

Now, much light is reflected through the medium of the Cultivator on the great subject of manures—much may be learned in regard to the manufacture of compost, &c. which is, in a great measure, the grand means of keeping the soil in its greatest state of productiveness.

6. From the earliest history of agriculture, until the present time, the implement most to be relied upon in tillage, because of its efficiency and almost universal application, is the common plow; and in the Cultivator may be seen cuts and descriptions of this, and other implements of great utility, such as the harrow, drill-barrow, cultivator, &c. of which all may avail themselves, in the greatest degree of perfection.

7. The Cultivator, wherever it circulates, is an *agricultural lecturer;* and by whomsoever it is perused, it scarcely fails to exert, in some degree, a beneficial influence on them; and where its precepts are practiced, and strenuously adhered to, the most unobserving mind would quickly remark the decided change that has been produced.

8. Each volume of the Cultivator is worth double the annual subscription to bind, and to place in an agricultural library, as a volume to which reference may be made, in relation to the various sorts of husbandry; and in fact, to every thing appertaining to the affairs of the farm.

It embodies a grand mass of facts, which in most cases, are the result of long experience—it contains the improvements, which have been, and are now being made, in the cultivation of the soil; and, also, many in the mechanical department. It embodies the experience of many of the most scientific agriculturists of America—which alone, could not fail to render it valuable, useful and instructive to most classes of community.

It is not a publication of dignified pretensions, merely; but one of *unadorned verity*—of *extraordinary intrinsic merit*, which furnishes a rich supply of food, alike to the illiterate and to the man of science.

The plain and unaffected style of expression, in which the subjects are handled so meritoriously in the editorial department, is such that both old and young readily comprehend the idea, which the author would convey.

9. Modern agriculturists are annually making new improvements in the living science of agriculture; and men of science are continually enlisting in this noble work; and are bringing along with them boundless stores of useful knowledge; and by the light of science, are putting to flight those spurious and traditionary principles of antiquity, to which our ancestors adhered with such death-like grasp; and which were such insurmountable barriers to the improvements in agriculture; and they are evincing to the world, on principles strictly scientific, how barren soils, and those, which, by an injudicious system of management have become completely impoverished, may be resuscitated and restored to their native fertility; and they are publishing the result of their research and investigation, to the world, through the medium of agricultural journals. And now, if the farmer neglects to avail himself of the information, which his imperious necessities demand—if he will not awake from his stupor and arouse to a sense of his condition, from this chilling apathy of indifference and unmindfulness of the changes, which are transpiring around him, and engage heart and hand in promoting the great cause of agriculture, as the march is rapidly onward, he must content himself to sit down in ignoble ease and live unknown and die unmourned—to be a "*cat's-paw*" of artful speculators—a "hewer of wood and drawer of water."

These, MESSRS. EDITORS, are a few *general* reasons why every farmer should subscribe for the Cultivator; and I might easily double this number. But I trust, that these *only* will be sufficient to convince any reflecting person of the great advantage there is to be derived from, and the great need there is in the farmer's subscribing for the Cultivator, or some other agricultural work.

They will, also, deter any one from discontinuing their subscription, it is hoped, at the end of the current volume; and be an inducement for those, who are not subscribers, to transmit their names without delay. And in conclusion, let me request *every subscriber* to use his influence, when it is possible, to obtain one *new* subscriber, for by so doing, he will contribute very materially, towards promoting the great business of cultivating the soil; and through agricultural journals, in a great measure this noble work is to be accomplished. Truly yours, S. E. TODD.

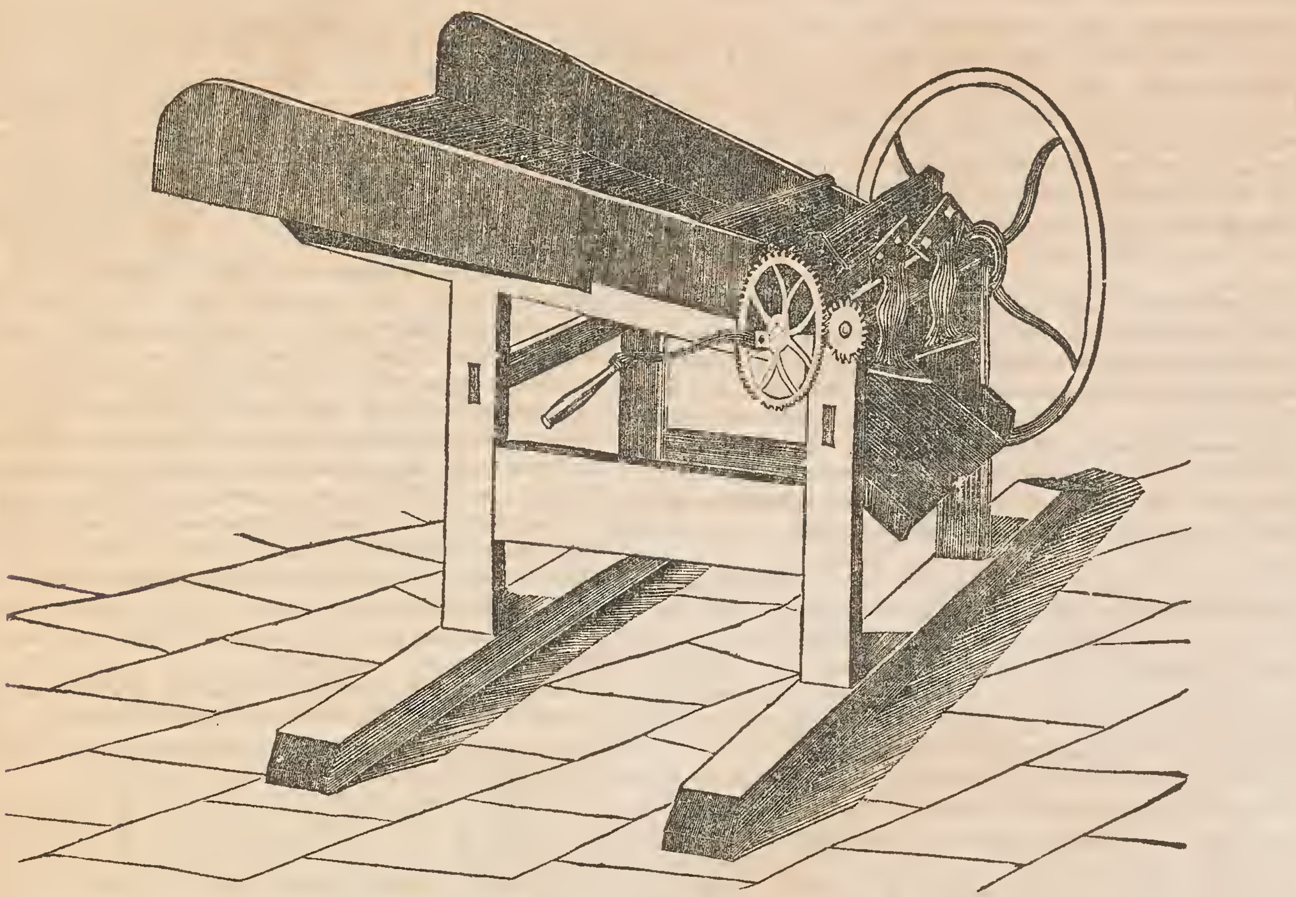
Lansing, Tompkins Co. N. Y.

PLOWING UNDER CLOVER.

MESSRS. GAYLORD & TUCKER—On reading in your No. for the present month the inquiry of your correspondent of Selim's Grove, Pa., and your answer, *on plowing under heavy clover,* I could not resist the inclination to tell you what I know about it. On experiencing the same difficulty mentioned by your correspondent some years since, I studied for, and found a remedy, viz: to the beam of Prouty's or Ruggles and Nourse's plow attach a circular cutter 8 inches in diameter. In land clear of stone, a cast iron one is as good as any. Mine is 1½ inches thick in the centre for 2 inches of the diameter; then three-fourths inch, tapering to an edge. In stony soil, a ring of steel is made and put in the mold, and the center cast on it. The pin in all plow wheels should be cast steel. I do not know but the "star cutter" I saw at your office would do, but think not. Near the end of the beam attach a heavy chain; the other end doubled on itself, should trail in the former furrow, and will bend the tops of any green crop so as to cover them. I have seen Mooers and Barnaby's plow work. It does well, but not as smooth as either of those above mentioned. I think Yankee ingenuity could attach the wheel to *that*, in such a mode as to do the work required. My plow does not clog twice in half a day on an average. The wheel walks directly through 3 inches of the surface, cutting all before it.

Norridgewock, Me., Oct. 11, 1842. JAMES BATES.

Murmur at nothing; if our ills are reparable, it is ungrateful: if remediless, it is vain.—*Lacon.*



BOTTS' STRAW CUTTER—(Fig. 104.)

Messrs. Editors—In compliance with your request, we proceed to give you some account of the straw cutter which we exhibited at the Albany Fair, and to which the third premium was awarded by the committee on agricultural implements. For all the purposes of the farmer, we have no doubt of its being by far the best now in use, although we do not wonder that, under the circumstances, with every disposition and intention to do justice to all, the committee should have preferred others to it. In fact, the particular cutter exhibited at Albany was gotten up in great haste, and much knocked about from steamboat to railroad in getting it on in time for the Fair. The only wonder to us is, that, disjointed and out of order as it was, it should have attracted the notice of the committee at all.

We have said we believe it to be the best implement of the kind now in use; and we are inclined so to esteem it simply because, whilst it is equally efficient, it is more easily adjusted and kept in order than any other we have ever seen. Dozens of cutters had already been produced, operating with sufficient ease and rapidity for all practical purposes; but the misfortune has been that they were constructed by mechanics, and fitted only for the use of mechanics. After the first grinding, they have been found entirely useless in the hands of an ordinary laborer. In proof of this assertion is the well known fact, that notwithstanding the apparent perfection to which this implement has been brought in the last few years, these various improvements having been thoroughly tested by the farmer, have been found, almost without an exception, to require for their adjustment and management a degree of mechanical skill, of which he was not possessed. The consequence has been that they have been generally abandoned for the old fashioned cutter, in which the knife is forced by main strength through the straw—its superior simplicity more than counterbalancing its want of mechanical power.

Having these facts in view, the inventor of this knife spent some years in attempting, and finally succeeded, as he thinks, in obtaining a knife which unites the simplicity of the plainest with the efficiency and mechanical power of the most complicated. The knives are plain and straight, not wider than a common plane iron; they may be made by any smith, and ground and set by any laborer. In point of finish, the cost of workmanship has been expended rather in procuring strength and durability than high polish, which is so much out of place in such an implement. In these two most desirable points, strength and durability, it will compare with any implement made in this country. These qualities, with the peculiar construction of the feed, adapt it equally to cutting the finest hay and the coarsest stalks.

To this cutter has just been awarded the first premium by the agricultural society of Philadelphia, at their late exhibition; and the committee have been pleased, in addition, to recommend it particularly for the qualities we herein claim for it. At the South, where it is universally known and preferred, hundreds of certificates of its superiority can be obtained if necessary. It is retailed at $30 in Richmond, Va., where it is manufactured.
Botts & Burfoot.

Richmond, Va., October, 1842.

DRAFT OF PLOWS.

Editors of Cultivator—I have of late ascertained a mode of finding the relative draft of plows, which is of sufficient accuracy, if the land be level and free of stones; and the result will be readily understood being very simple, and within the reach of almost every individual.

The draft is found by taking a large pair of patent beam scales which hang up, and ascertain what weight will balance one pound on the end of the beam, which mark; then hitch the weighing hook to the clevis of the plow and the other to the doubletree, to which attach your team; then affix a cord to each end of a common or small pair of patent spiral scales; one end of the cord hitch to the end of your large scales, where the pound weight was put, the other end hitch to a staple in your near plow handle, minding to have the cord tied so as to have the large pair of scales stand ever ready for weighing; then start your team and if the cord be tied too long or too short, alter accordingly, until your beam works even; then note the indications of your spiral spring balance index, which also note on an average, as there will of course be some vibration, but none of consequence, if your land be proper. Then make your statement, if for example one pound at the end of your beam will balance 32 on the weighing hook, and your index of the spiral balance when plowing shows 8 as the average figure, then 8 by 32=256 pounds, the weight required to draw your plow, but if your index indicates 14 as the fair average figure, then 14 by 32=448. I have made this statement so that it should be perfectly plain, and it required 32 pounds on the weighing hook of the scales. I used to balance the pounds at the end of the beam.

You may think that on hitching on your scales with the beam on the land side would bring it to the ground, but the moment you start your team it will remain where you place it as to position. I have for a long time thought of some such plan, but never until of late have I found a plan so definite in finding the horizontal draft.

I am very respectfully yours, N. K. CONE.

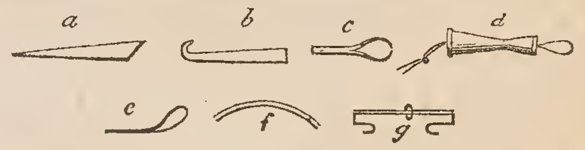
P. S. I presume that a good machinist might make a pair of scales, so that with the spiral scales, the number of pounds required as draft might be graduated on the spiral scales, and so at once give the true indications.

Batavia, Oct. 8th, 1842. N. K. C.

CAPONS.

Messrs. Gaylord & Tucker—I send you some remarks and instructions on the subject and manner of making "capons;" an art of which little is known or practiced in this country, considering the great length of time it has been followed in foreign countries. From time immemorial, it has been practiced in China, and for ages in France and England. Shakspeare speaks of Fallstaff's lining his sides with good fat 'capon.' For its introduction among us, inquiry leads me to bestow the merit upon the Hon. Bela Badger, of Philadelphia, through whose exertions we are indebted, for a practical knowledge of the operation. In order to follow up the subject, so as to make it plain and intelligible to those who have a disposition to undertake the operation, it will be necessary to describe the table, instruments, and *modus operandi*, in the order stated. Although the operation is one of nicety, and in surgical language, bold and dangerous, yet any one possessing tact and intelligence, who will conform to rules hereafter given, may, after a few efforts, become expert in the business. Should he in his first endeavors kill one or two, before a knowledge of the parts are understood, or the use of the instruments become familiar, he need not be discouraged, but should persevere, remembering that practice will shortly subdue all impediments.

For simplicity, I will first describe the table and instruments, the *modus operandi*, and the advantages accruing therefrom. The table may be constructed of any kind of inch boards, 14 inches wide by 22 or 24 inches long; in height 4 feet. The height, however, may be at the caprice of the operator, yet it is well to have it of comfortable height, in order not to fatigue the muscles of the back by too great an inclination forward. The width is necessary for the purpose of holding the instruments. Proceed now to construct the appendages, necessary to confine the subject firmly upon the table. This is done by a strap with a lever running through it, and with an extensor. Make two holes in a direct line diagonally across the table; beginning 6 inches from the left hand corner, and about 4 or 5 inches from the margin—the space between the holes to be 3 inches in the clear. Pass through the holes a leather strap $\frac{3}{4}$ in. in width, by 20 in. in length, the two ends fastened. Below the table, and through the strap, run the lever 2 ft. long, by $1\frac{1}{2}$ in. wide, one end fastened by a movable joint to the opposite leg of the table. This is the lever, on which weights are affixed, which gives the power of firmly holding the subject by the wings. An old ax makes a good weight; it can be moved backward or forward on the lever; increasing or decreasing the power, easily, as required for the various size or strength of the fowl. The strap is passed over the wings, close to the body. Next, nail on the right-hand end of the table, about 4 in. from the corner, an inch buckle; put on a piece of leather, elevated a half inch above the surface of the table. Procure a piece of leather, to pass through the buckle, 6 in. long, punctured full of holes; at one end attach a small cord or thong, sufficiently long to form a slip noose, the use of which is to be thrown over the feet, around the legs, and down through the buckle. This forms the extensor. With the strap around the wings, the lever in force, the strap around the legs and extended, the subject is bound down, immovable by its own efforts. Thus you have the table and its appendages.



(Fig. 105.)

The instruments are next in order. They consist of 4 pieces as now made, but experience teaches me, they should be of six pieces, each separate, and not combined. They are the knife, tenaculum, canula, forceps, elevator and hooks. The shape and cutting edge of the knife is represented by *a*, fig. 105. A scalpel, however, of medium size, will answer all purposes. I prefer it. The tenaculum (*b*) is a valuable instrument. It should be six inches in length, gradually tapering toward the hook. The reflected edge of which should be made extremely sharp, as well as the point itself. The object of this being to cut instead of rupture the membrane, when you lay hold of it. This is not the case with the instruments in use; they tear it, instead of cutting it. The forceps (*c*) are round, six inches long, the fingers 4 in. the points square and closing perfectly tight. The canula is as its name imports, a hollow tube. Its length $3\frac{1}{2}$ inches. The inner walls of the tube must be smooth, in order not to cut the hair, as it is moved backward and forward through it. Two sides externally of the upper end are flattened, to convenience the grasp of the thumb and fore finger; the opposite lower point is indented to hold the testicle from turning, and also in order not to compress at once so closely the spermatic cord. The figure *d* is an attempt to show it with the horse hair looped and run through it. The elevator is required to press out to view the lower testicle, assist in passing the hair over the cord, to scoop out the blood, to lift the lower testicle out after discovered. Its form is shown at *e*. In length 6 inches. The bowl truncated, elongated oval, perfectly smooth, the edge rounded. The hooks are about one inch long, half in. wide; the hooks or lips a fourth of an inch. They are fastened pendulous to a split reed or bamboo, 6 inches long; one hook, however, is fastened only to both split ends of the reed, a ring runs over the reed, with the view of increasing the elasticity or expanding power, drawing further apart the lips of the incision. The two figures will convey an idea of them, and their use—*f*, bent, *g*, straight. Their use is to draw apart the ribs, after the intercostal muscle is separated, so that the operator can have a fair view of the testicles, as they lie in the cavity of the abdomen. This description completes the instruments employed in performing the operation. The Chinese use brass, the French steel, silver and brass. Their instruments are combined, the elevator and tenaculum are one piece, made at each end. This is objectionable in the highest degree; the tenaculum is required while the elevator is in use. The knife and forceps are attached also, but they are decidedly more convenient when made separate. The cost may be slightly advanced, but this is but a small item in comparison to the advantage gained. German silver makes very neat and cheap ones, better than brass or steel.

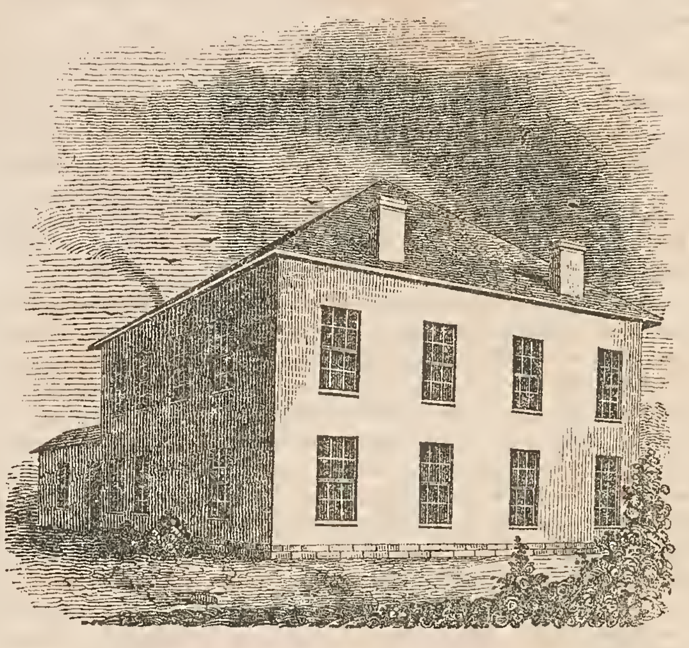
I come now to the second point, the mode of performing the operation. Before proceeding I make a general remark: upon its adoption depends the success of the operation, as well as in a measure the life of the subject. It is this. In all cases, in every instance, it is absolutely necessary, that the fowls should be confined in some convenient place at least 36 or 48 hours, without either food or drink. The object of this treatment is to reduce the fulness of the intestines in order to proceed safely, to lessen the momentum of the circulation, and reduce the vascular action, so that healthy granulations will form without dangerous inflammation. Perhaps the principal object to be gained is in the reduction of the contents of the intestines. The parts necessary to cut through, in order to expose to view the testicles, are the true skin, intercostal muscle, internal-costal muscle, and peritoneum. Place the subject on its left side upon the table, its back being toward the operator, the strap thrown around the wings, and the slip noose over the legs, then pluck away the few feathers over the space of the first and second ribs; with the left hand, thumb and finger, draw the skin tense, ascertaining positively the situation of the space between the ribs—then with the scalpel in the right hand make a single cut, through the skin only, about one inch long, measuring from the point of the first rib backward. This exposes the two ribs, and margin of a large muscle running down the thigh. This muscle is not in danger of being injured, if the proper point is ascertained where to make the incision, but if otherwise, an injury to it will cause lameness. Divide the muscle between the ribs by introducing the knife at the point of the first rib, and cutting backwards; this about one inch. In this way the plura is avoided, and of course an escape of air. Introduce the hooks, which will by the power of the reed draw apart the ribs and expose a bundle of muscular fibres, which is the internal-costal muscle. Should the incision be too small it may be enlarged, by passing the knife around the point of the second rib; this will divide the ligamentous connexion between the two ribs. Divide the belly of the internal-costal muscle longitudinally. This done, a thin, delicate semi-transparent membrane is seen, which is the peritoneum, and must be divided also, taking care to cut as far from the plura as possible; a branch of the ceolic artery traverses this membrane, and may be injured by carelessness. On passing through the peritoneum, the upper testicle is brought distinctly to view, lying on the margin of the lateral spinous processes, surrounded by nerves and blood vessels. It is a small yellow body, its color somewhat darkened by the membrane covering it. Introducing the elevator and pushing towards and downwards the intestines, the lower testicle is seen, somewhat diagonally to the other, lying centrally between two large blood vessels. On elevating it with the elevator it comes in contact with the membrane; the lower blood vessel then is obscure. This vessel is the mesenteric vein that lies between the two testicles; contiguous to the aorta is the descending vena cava. Proceed to remove the lower one first, in all cases by rupturing or lacerating the peritoneum, or that part of the membrane between the two large blood vessels. This is done with the tenaculum. The operator cannot be deceived on this point; wherever the membrane is divided, the testicle presents a shining or bright yellow. After dividing the peritoneum, introduce the canula and hair, carry the hair into the rupture, then pass the elevator under the testicle, in the loop of the hair—with the canula close against the body of the testicle, draw the hair tense, when if the elevator and canula be properly adjusted the hair catches the chord over the testes. Leaving the elevator remaining under the testicle, holding the canula with the left thumb and fore-finger—bearing it slight against the spermatic chord—with the right thumb and fore-finger hold of the knot formed in the hair, the 2d and 3d fingers passed through it, give it a sawing or rotary move, which will soon divide the chord. The elevator or forceps will raise it out. The upper one is removed in nearly the same way. To rupture the peritoneum, use the forceps, instead of the tenaculum, as is recommended in removing the lower one; and cut it with the scalpel near the center of the testicle. There is generally a slight connection of the upper part, with the diaphragm or midriff: it may be loosed with the knife. The edges of the wound are simply drawn together with a needle and thread, a single stich. The difficult part of the operation is in removing the lower one. But the real danger is in removing the upper; as, contiguous to, separated only by a few lines lies, the aorta, the large arterial vessel, sending blood continually to nearly every part of the body. The spermatic arteries come from this large trunk—their use is to convey arterial blood to these organs—the artery of this testicle being much shorter than that of the other, the divided edges of the artery, or more properly speaking the contractile power of this vessel is overcome by the momentum of circulation, and hemorrhages occur that destroy life in a few minutes. Should this occur it will take place before a coagulum forms capable of making further resistance than the natural contractile power of the arteries themselves; and the operator at once sees the sacrifice of his capon, (much to his sorrow if he has an anxiety to succeed, aided by a zeal and laudable desire to spare life after inflicting so much pain,) by the great flow of blood. The arteries of animals as well as human, possess a contractile power peculiar to their construction, the inner coat is muscular, the muscular fibres running in circles. On laceration these fibres shorten by irritability, and hemorrhage is stopped in consequence. As soon as the operation is done, release the subject and let him run; if he lives 10 minutes after, or even commences feeding, the rubicon is passed.

The advantages gained are many. A change of habits takes place. They are great feeders and fatten readily. The male fowl in his natural state takes on fat slow—eating more than their value in market in grain. It is allowed that one of them will consume easily 3 pecks of Indian corn, to say nothing of other condiments, and after this consumption nothing to boast of. The capons become extremely fat, perhaps to many unaccustomed to eating fat fowl, not very palatable. The flesh is more juicy, delicate and soft, highly prized by good eaters and epicures. They command double price in the market. An acquaintance of mine last winter sold 12 pairs in the Philadelphia market, for $5 per pair; they weighed from 18 lbs. to 21½ lbs. per pair. They grow larger. The difference is as perceptible as it is in the bull and ox. They resemble the Berkshire in the facility with which they fatten. Are quiet and gentle, enormous feeders. These are the peculiar advantages gained by the operation, sufficient in my opinion, to induce any one possessing means and disposition, to undertake to caponize. The female may be operated upon also, with the same apparent change in the organization and orgasm, the opening to be made in the opposite side. As a different organization exists between the male and female, a description of the modus operandi will not now be attempted. As your patience must be exhausted, if you have followed me thus far, I will in charity to you, recompense you for your attention, and close.

Accompanying this communication, or following it I fancy, I send you a pair of capons. One about 12 months old and the other 5 months. The oldest is of the mongrel breed, the other of the common Dominico. The first was not emasculated until he had obtained near his full growth; hence the difference in his size is not so great as with the other, who was emasculated when quite young. As a general rule a capon will weigh double the weight of a male of the same breed. They are not fat; they have not been fed, but have always worked for their own living. If convenient, please exhibit them at the fair, after which they are at your disposal, if they are worth an acceptance. Fat them well against the holidays, and if your inclination and taste prompts the sacrifice, you may feast on good fat capon.

Yours, most respectfully, J. N. Keeler.

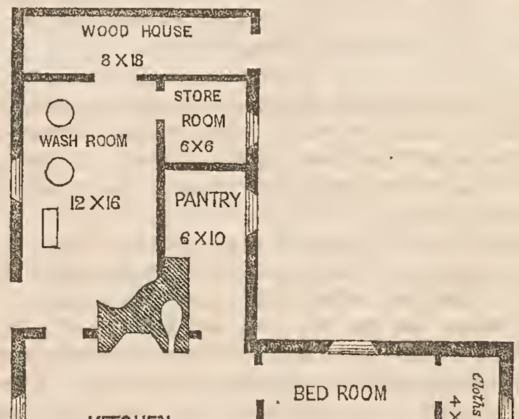
Mulberry Farm, N. J. Sept. 4, 1842.



WORKINGMAN'S COTTAGE.—(Fig. 106.)

Messrs. Gaylord & Tucker—I send enclosed, the plan of a second cottage. It can be introduced into my "*Working Man's Establishment*," (see Cult. vol. IX. p. 161,) without any material change as to the grounds or other buildings, and will be preferred by many to the one there presented. The main building is a perfect square, and consequently, as economical in its structure as it can be made.

The drawing, (fig. 106) is a representation of the cottage, as seen in perspective. The beauty of its exterior would be greatly enhanced by the addition of porticoes, a verandah, &c. with the windows of the drawing and dining rooms, made to extend to the floor. Nor are these mere ornaments. In a climate like ours, they are the source of no little comfort and convenience, in affording us a place where we may regale ourselves of the cooling breeze, secure from the intense heat of the summer's sun, or what is still worse, (at least for health,) evening dews.



Ground Plan.—(Fig. 107.)

The main part of the building is 36 by 36 feet. The addition in the rear is 18 by 24 feet. Every additional foot to its breadth and width will give a proportional enlargement to each room.

I deem it unnecessary to give a plan of the second story, as most would prefer the ground plan. That would give three spacious sleeping apartments, 18 by 18 feet, with a bedroom 10 by 18 feet. R. North, Jr.

Berlin, Conn. Aug. 10, 1842.

SHEEP HUSBANDRY.

Messrs. Editors—Having had some experience in the business of wool growing, I propose advancing some of my views upon that and kindred subjects, which have been gathered from various quarters. Some twenty years since, the citizens of the contiguous county, (Washington,) began to turn their attention to the subject of growing fine wool as a staple article, so that by 1836, it had become the most important business of the county. In 1833, large and fine flocks were introduced into this county, but the falsely so called compromise act, passed over us, and now few are left to tell the tale of former times. Protection being withdrawn from domestic manufactures, they could not afford what seemed a remunerating price for our wool; consequently our flocks have mostly disappeared, and thus have remained unemployed the facilities of Pennsylvania, which are equaled by those of no country in the world. We have in this state millions and millions of acres of land in our mountains, (which occupy three fourths of the state,) which are suited for nothing else than grazing sheep in summer; it is poor, rugged and rocky. I have for some years kept from six hundred to a thousand sheep for four months in the year, upon land so poor as scarcely to yield a vestige of grass; yet they would return in the fall of the year in a much finer condition than the most luxuriant pasture in the lowlands could have made them. You ask, how can that be ? The high mountain and cold clime is suited to their nature, the low stunted bushes afford them food more acceptable than grass, and at the same time afford a shade, which enables them to feed throughout the day, instead of being driven to the shade very early in the morning. So apparent were these advantages, that in prosperous times, flocks have been driven the distance of seventy miles to mountain range. I make these statements, so that others similarly situated may turn their attention to the subject and improve their advantages. Some years' experience in the business warrants me in the belief, that the most luxuriant lowland pasture is not equal for sheep, to the most indifferent mountain range, when covered with bushes. A fair market for wool would in a few years make Pennsylvania one of the largest wool growing states in the union. Our mountains may become to this country, what the Highlands are to England and Scotland, and the mountains of Spain, Switzerland, Germany and Cachmere, are to their respective countries.

Where a farmer can keep a certain number of sheep, he will soon see the advantage of keeping as many ewes, and raising as many lambs as possible; these last cost nothing till the beginning of winter, and they are then as valuable (age and place considered,) as old sheep. This plan enables him to keep a young flock, and to sell off a corresponding number of old sheep every year, (which should of course be wethers.) The farmer on this plan may have each year one third lambs, for the whole number of his flock.

Three years since, I tried the experiment of a new way of washing sheep, which proving effectual, I have since retained. My shepherd brought it from Scotland, where the plan generally prevails. You and others will be as sceptical as myself, in regard to the efficiency of the mode before trial. I select on a creek a place where there is a current, with a bank four or five feet high, and the same depth of water; a pen is built about thirty feet long, being narrow near the bank; a scaffolding four or five feet high above the surface of the water, over which the sheep are driven three or five times: half a dozen being driven over, the others follow without trouble; they should swim about twelve feet, not more, and come out on a sandy or clean beach. My experience is, that by this plan they are not fatigued half so much as by washing by hand, and the wool is as well washed as by hand washing; two hands may in this manner wash eight hundred in a day. In this matter, as in many others, experience will demonstrate what theory will condemn.

In passing let me touch a popular error in regard to the comparative weight of common and Merino sheep. The former are generally kept in very small flocks, and have the range of a whole farm, nipping close what cattle cannot reach, whereas the merinos are kept in large numbers generally, and have not the same advantages. Having many low grade sheep when I established my flock, the coarse sheep would not thrive with the others, and I could select the poorest by picking the coarsest. I have little doubt that the Merino with the the same fare, will weigh as heavy as the common. As to comparative health and endurance, it is in favor of the fine sheep; for several years my loss from all diseases averaging from one to two per cent. As a general rule, I believe that the animals of this country are less liable to disease than those of the British Isles, perhaps owing to our drier climate, and becoming hardier by being left to shift for themselves, and following the prescriptions of nature rather than those of quacks.

I must congratulate you and your readers, upon your good fortune in obtaining the able correspondents, who have given us practical information upon the important subject of sheep husbandry. More information from them on this subject, and more protection from those who are appointed to watch over the interests of the country, and this will become one of the most important interests of the country. All we ask from government is protection for a short time, till our infant manufactures shall have acquired skill and capital sufficient to sustain themselves. The stability of government as well as of the currency, is more surely promoted by a domestic rather than foreign trade, especially when the vast variety of climate and soil, can furnish us with nearly all the articles of commerce which foreign trade now supplies; dependent in trade we must be dependent in policy. While we have the elements of independence, honor, pride and policy, all should impel us to the attainment of so desirable an object.

Yours respectfully,

G. E. H.

Brownsville, Fayette Co. Pa. Aug. 19, 1842.

RENOVATION OF SOILS.

"THERE is in the constituent particles of soils a constant tendency to more minute division. By continual tillage, and the concurrent action of salts, manures, and frost, this division may become so extreme, that at length a soil may be reduced to a fine powder or dust; in which state it will be destitute of substance, and cease to be productive; the rain falling upon it will convert it into mere mire or mud; and this being hardened by the heat of the sun, the air will be excluded, and the roots of plants will be wholly unable to fulfil their functions."

"All these soils,"(for instance, where 45 parts of 100 is clay,) "are unproductive, and become adhesive and clammy when wet; the water which stands upon them is uniformly turbid and whitish, and particularly so when it is agitated by wind; the effect of heat is to contract and crack their surface, to make it hard, and render it impenetrable to the plow; nor can they be made to any considerable extent productive, *but by the liberal application of coarse undecomposed manures*, and especially *by plowing in crops of buckwheat when in flower*."

It is not my purpose to discuss the question of *renovating soils*, for it has often been ably treated in the columns of the Cultivator; but to state the result of an experiment in wheat culture, on a soil approximating the above description, quoted from that sterling work of Chaptal, on Agricultural Chemistry. The soil was rather a stiff clay, and having been some thirty-five years in arable condition, and for much of the former part of this time very productive of wheat, it had been, for want of a knowledge of the benefits of the "rotation system," sadly abused. In 1838, it was summer fallowed, having laid the four years previous to sheep pasture, but the crop of wheat which followed, was very ordinary, not yielding ten bushels to the acre; which in part arose from the adhesive and clammy nature of the soil, causing the frost to heave a very considerable proportion of the plants on the surface to perish. This is well known to be a very common occurrence, in our climate, with heavy clay lands, if sowed late; but this was not the fact in the last particular, and the growth in the fall was beyond an average. After the crop was harvested, I observed on all parts of the field, numerous cracks on the surface, to a much greater extent than is usual with similar soils. I contemplated giving the field a heavy manuring the following season, and plant with corn; but subsequently changed my plan, having resolved to adopt the course recommended as above, by Chaptal. I consequently applied about twenty-five large cart loads of coarse, unfermented manure,drawn from my sheep barns,to the acre,which was spread no faster than the plows would cover. The plants in the fall, assumed so dark a green, that I was a little apprehensive of the usual rank growth before harvest, which almost invariably follows the direct application of manure to the wheat crop, as well as large disproportion of straw to the berry. But doubtless owing to the great poverty of the soil, these results did not follow. The field averaged over twenty bushels to the acre,which is about the average production of well tilled fallow land, sown timely, and in favorable seasons, in this immediate quarter. The coarse manure had evidently effected a material modification of the soil, as few cracks were distinguishable on the surface, after harvest, showing most clearly, that it was more friable. It is a year ago last spring, since the grass seed was sown upon it, and a more luxuriant covering of clover, I have rarely seen, than the field now presents; which is another proof of some renovation of the soil, otherwise, very much of the clover would have been thrown out by the frost of last spring. It is my present impression, that if this field is permitted to rest for two or three years longer, and then sowed with buckwheat and plowed under when in blow, preparatory to wheat, in consideration of what has already been done, its original fertility will be nearly restored, and in some measure the adhesive and clammy texture of the soil destroyed.

But while on this subject, I beg leave to enter a protest against applying manure—except compost—directly to the wheat crop; unless as in the above case, when the soil is rendered quite unproductive, by long and "skinning" management, before agricultural periodicals taught us better. You will permit me to quote your remarks, gentlemen, on this point—for I am quite sure they cannot be kept too much "before the people"—from the 7th vol. of the Cultivator, taken from a sterling article on "Wheat Culture." "One of the greatest evils of direct manuring for the wheat crop, arises from the liability of the grain so manured, to lodge. The rapid growth of the stem, renders it unable to support its own weight, it is soft and flexible, contains much less silex than those grown in a poorer soil; the wheat does not usually perfect its berry, and at all times, from the thinness of the skin or cuticle, it is more liable to mildew and rust. These things render it certainly unadvisable, unless the land is very poor and reduced, to apply unfermented manure to wheat." My own experience, as well as thousands of others, in times past, will attest the truth of these remarks. As nearly as possible, my practice conforms to the "rotation system;" and apply my manure in an unfermented state, to my corn and potatoe crops, and top dressing of meadows. On the last point, I shall have something to say in a future number.

L. A. MORRELL.

P. S. My compliments to "*Commentator*," and can assure him, that when "I justify a boy for *striking his daddy*," when he catches him feeding to his sheep, *oats in the sheaf*, I mean to be understood only in a "Pickwickian point of view;" nothing beyond that, most certainly.

Lansing, Tompkins Co. Nov. 1842.

WORMS.

MESSRS. EDITORS—There has been a general complaint this year in a large section of country, that many kinds of field and garden crops have been either wholly destroyed, or materially damaged, by worms. It may be well to again remind your readers of the advantage of fall plowing. I am practically convinced that if the land be turned over late in the fall or in a winter's thaw, it will destroy a large portion of these depredators that burrow in the earth. Worms, like many other insects and animals, prepare for winter quarters; and if their domicils are routed just before the ground freezes, it gives them no chance to again secure themselves, and are therefore destroyed.

There are three kinds of worms which appear to annoy us more than all the rest. One of these is the *wire worm*, which is very injurious to Indian corn, oats and potatoes; when full grown it is nearly one inch in length, of a yellow color, hard and shining. "It is said to remain in the ground four or five years; then changes to a long slim bug, commonly denominated the *snapping bug*; after depositing its eggs in the earth, perishes within a short time."

Another of these lawless insects is the *white grub;* they are the large worm with red heads that prevail in our meadows, frequently eating off the roots of grasses so completely as to easily turn over large tracts of turf of almost any size. Both these and the wire worm confine their ravages beneath the surface, never showing themselves above the earth until the last transformation is undergone, and the perfect insect produced. "These grubs are said to remain in the ground four years;" when transformed to a perfect insect, it appears in the habiliments and shape of a large brown bug, which rises in the month of May and June in countless numbers at twilight from its hiding places in the earth. Many fields of potatoes were nearly devoured by them this season.

The cabbage or cut worm is an insect when full grown from one to one and a half inches in length—not so large as the grub worm, of a brown or grey color, when they penetrate the soil so deep as not to be effected by the sun's rays; but if they lodge through the day very near the earth's surface, a warm sun will tan them a black color. This worm does his mischief nights and cloudy days; it preys upon the leaves and stalks of the cabbage, sugar-beet, corn and other tender plants. They burrow in the most convenient spot, near the roots of the vegetables where their food abounds, and may be readily found by disturbing the soil near where they last feasted.

In most soils where worms are found clay more or less prevails; if designed for early tillage in the spring, it forwards the work to plow the land in the fall, when the team is better able to do the work, and the weather not so relaxing. No matter if the soil be wet and stiff when turned over. The exposure to the mellowing influences of winter will wholly deprive the soil of that stiff cohesion; a general decomposition of soil and sod takes place in time to benefit any early spring crop. In spring season it may be again planted as late as May or June. Frost is one of the most powerful pulverizers that can be made to operate on a clay soil, which is poorly fitted for a crop when disturbed in the spring, unless it is inverted in a suitable condition; that is, when neither too wet nor dry.

Beneficent Providence has given us bountiful crops; and although they bear small prices, I presume all those who have been attentive readers of the Cultivator have been remunerated the full cost, and will be ready to send you another dollar in season, that you may be encouraged to publish your valuable paper another year. Those who carefully lay up each number have enough in two years to form a handsome and valuable book if bound.

Yours, S. W. JEWETT.

RATS AND MICE.

MESSRS. EDITORS—As rats and mice are often a great annoyance to farmers as well as others, I will state my method of getting rid of them. Having tried dogs, and cats, and traps, and fishhooks to little purpose, I procured the plant *Hound's Tongue*, by some called *Tory Weed*, the *Cynoglossum officinale* of Linnæus, which, it was said, if gathered when full of sap, and bruised and laid in places infested with rats and mice, would cause them immediately to quit the premises. This is a biennial plant; and puts out a purple blossom in July, and may be found on almost every farm. I bruised both the root and stalk, and found that these vermin would quit the immediate vicinity of the plant, but not the whole building. Whether they ate any of it, or whether if they had eaten they would have been poisoned, I was unable to determine. I gathered a quantity of the plant and left it in various places about my house, barn and outhouses, and it had a sensible effect, but was not a universal exterminator.

I then purchased $12\frac{1}{2}$ cents' worth of arsenic, spread a little butter on some bread cut very thin, sprinkled it over with arsenic, and cut it in pieces of the size of a cent; these I put into the holes about my house and barn most frequented by them, and they immediately quit my whole premises, and I saw no signs of a single one for about a year. The stench from a particular place indicated that one at least had been poisoned. That, however, was soon gone. On the return of a few about a year afterwards, I repeated the experiment with arsenic just as before, with the like success. In this way, repeating the experiment once or twice a year, I have got rid of these troublesome vermin for five years; and I have enough left of my first purchase of arsenic to last two or three years more. It is seldom, I believe, that they eat it so as to be killed; but they regard it as their mortal enemy, suspect imminent danger when it is near, and immediately with one accord quit their landlord for his good. It is not improbable, however, that they will pay their respects to some neighbor, who is always fretting and complaining about them, and yet never doing anything effectual to destroy them; and there are a plenty of such. But let that neighbor do as I have done, and I will warrant him success.

In thus clearing your premises of rats and mice, you need not poison your wife or children, cats or dogs, or anything else. Just put the pieces of bread *into* the holes where they come out, and you need apprehend no danger. H. A. P.

IMPURE WELL WATER.

THE water of our well has recently become exceedingly nauseous, so that it is hardly fit for use. The well has been *thoroughly cleansed*, and the mouth well secured, so that impurities cannot find their way into it. The water has been pumped out time and time again; still all our labor is vain. The water contains a large quantity of sulphate of lime, and is, consequently, *very hard.*

By what process may it be rendered pleasant? and to what cause may its impurities be ascribed?

Information on this subject would be gratefully received by your constant reader and friend,

Lansing, Tompkins co., N. Y. S. E. TODD.

The disagreeable taste and smell of the water complained of by our correspondent is doubtless owing to some improper matter in his well, which merely pumping out the water does not remove. Two years since, the well of a friend of ours, which had always before given excellent water, became nauseous and unfit for use. Pumping it out was of no avail. It was suggested, that as the soil in the vicinity was full of the earth worm, enough might have found their way into the well to affect by their decomposition the quality of the water. The well was emptied, and nearly half a bushel of these worms were found at the bottom; some sound, but many dead and decaying. The cleansing given was effectual. We have known several similar instances from the same cause, although it may not be the difficulty with the well of our correspondent. The hardness of the water could not injuriously affect it; as throughout the whole lake country, the water is of this kind. Since writing the preceding, a friend informs us that he has known several instances in which the nauseous taste of water in wells has been at once corrected, by throwing a few quarts of salt, say six or eight, into the well.—EDS.

SHEEP HUSBANDRY—INQUIRY.

MESSRS. EDITORS—Having noticed several communications of late in your valuable paper, in reference to Paular Merino sheep, and particularly one from Mr. Avery, of Galway, in which he gives an account of several heavy fleeces, also of the average of his flock, I feel anxious to have Mr. A. inform the public in reference to his mode of treating his sheep in general, and their feed in particular. Also in reference to the comparative profits of the Paular, and the other varieties of fine wooled sheep which he has formerly kept. What is the effect of crossing them with other varieties; say the Saxony, Merinos, and the coarse long wooled sheep? I presume the author of the communication is the Rev. R. A. Avery, who formerly preached in this Co. I should place implicit confidence in any statement which he might make, and am confident that a full answer to the above from him would be regarded as valuable information by more than one. INQUIRER.

Washington Co. N. Y. Oct. 31, 1842.

MILCH COWS.

EDITORS OF THE CULTIVATOR—The fair of the State Agricultural Society, held at Albany, in September, was a very brilliant exhibit of improved animals, vegetables, fruits, &c. &c. as stated in the Albany papers. My son was on a visit with his family, in Connecticut, which prevented either of us from attending the fair. I lamented much, that he could not attend it, as he has a taste for agricultural pursuits; particularly for the improved breeds of the animals composing farm stock; and I should have been highly gratified to have been at the fair, but other duties required me at home.

The specimens of fine cattle were superb, as stated to me, by a gentlemen who exhibited some of the finest. He remarked, however, that none of the cows shown, gave milk.* They were trained and exhibited merely as samples of symmetry and beauty, in high condition. All this is fine, and very valuable; but, I ask, whether usefulness and profit, in all agricultural relations, ought not to be among the first objects of such a fair? A good milker, if not the first quality among good cows, is certainly the second. Beauty and usefulness combined, constitute the highest consideration in farm stock.

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* This is a mistake. Most of the cows exhibited gave milk, and there were among them some of the best milkers in the State.—EDS.

If it could be said, with truth, that the most beautiful cow gave more and richer milk than any other cow, she would be of greater value than any other cow. The preference with dairymen would be, for the cow that gave the most and richest milk—hence, those qualities should be the object of the exhibitor. Respectfully,

David Tomlinson.

Schenectady, Oct. 3, 1842.

Domestic Economy.

PRESS FOR WORKING OVER BUTTER.

Smooth, as perfectly as possible, a piece of hard wood plank, 18 inches wide and 24 long. On both sides and end, nail pieces of board, rising one inch above the surface. Near the open end screw in a small ring-bolt; or what is better, three; one at each corner and one in the center. Let the ring on the bolt be one inch in diameter. Make a brake 30 inches long, 9 inches of which is for the handle. Let it be 3½ inches wide, 1½ thick; one edge made sharp, and the other rounded. On the end to go next the eye-bolts put a ring, and in the center screw a bolt with a head, which will just slip through the eye of either of the ring-bolts.*

Need I say more? The rest is plain. Give the end next you a slight elevation; and by using the brake as a braker does his, and by changing as occasion requires, all the milk may be worked from butter with a trifling labor.

A marble slab would be preferable, as the butter would stick less to the surface. A small wooden shovel 3 inches square, with the edges perfectly straight, should be at hand to keep all in place. James Bates.

CURING HAMS, PORK, &c.

Messrs. Gaylord & Tucker—As the time is drawing nigh when the farmer is again to secure his stock of meats for another year, and as I consider the knowledge of curing meat for "home consumption," very essential to a farmer, and as the many receipts, &c. which are already extant are more or less expensive and laborious, permit me to give your readers my method.

We kill our family pork about the last of December, leave it hanging upon the shambles until the next morning after killing, being careful that it does not freeze. It is then cut up, by first taking off the head; 2d, split the hog through the back bone; 3d, take out the lard; 4th, cut the ham and shoulders; 5th, cut off all the flank or belly pieces, (for sausage meat;) 6th, divide the remainder of the side in pieces 6 inches wide. We then cut off the legs from the hams and shoulders, and cut holes in the rinds ready for hanging on the hooks, and place them in a cask, (molasses hogshead if a good one can be procured,) not packed too close, without salt. We then make a strong brine in the following manner; the caldron or some other large kettle being properly cleaned, we put in it about 3 pecks of clean Turks Island salt, to about one barrel of soft water; heat it gradually to boiling point; it is frequently stirred, and all the scum is carefully removed from the surface; it is then dipped out into a barrel or tub, and permitted to cool down to about blood heat; we then add half pound salt-petre, and again stir it well; we then add half a gallon of molasses, well stirred, and immediately put it upon the ham until it is fully covered. A weight is placed upon the meat, so that all in the cask is fully immersed. It is permitted to stand until about the first of March, when it is hung up in the smoke house, from which it is not taken until and only as required for use.

My smoke house is ten by five feet, double boarded side and top, shingle roof, brick floor, and inside laid up with brick about two feet high; in the center of the floor there is a vault about two feet deep, one foot square, laid up in the form of a chimney, the top even with the surface of the floor, in which a shovel full of coals are thrown and then filled with corn cobs; a small cast iron plate covering about two-thirds of the top is thrown over it, which will make a dense smoke for several hours. This is repeated once every day for several days, or until the meat begins to have a brown color, when it is permitted to remain until warm weather; a smoke is then made at least once a week, and in excessive hot weather as often as once in two or three days. I have followed this practice for the last ten years, and have never lost a pound of smoked meat, and have it in September as sweet and clean as in May.

Some may ask why is your smoke house of this length and width? I will briefly state that a farmer has different kinds or grades of meat. 1st, I hang the smoke beef and chops, &c. at the extreme end—2d, the shoulders in the center as they are required to be used first—3rd, the hams on either sides of the shoulders. As to the size, I must say it is none too large, as no one piece should touch the other; and as to the plan and the materials, I have only to say that from experience, I prefer a wood to a brick or stone smoke house, because meat with the foregoing treatment does not mold; and as to its being double boarded all over, is first to prevent flies from having access, and 2d, the immediate action of the atmosphere is prevented by the thickness of it upon the meat; as to the brick sides and floor, the rats and mice are prevented from doing their wonted mischief.

The smoke-beef, chops, &c. may all go in the same cask with the hams, if care is taken to have them well cleansed of blood. The side pork, or summer pork as it is generally termed by farmers, we pack down in layers, upon the edges, around the cask, as close as possible, with good Turks Island salt, about a bushel to a barrel, proportionally divided between the layers; and put one-fourth lb. salt petre, one quart molasses to as much water as will cover a barrel of pork packed as above. I would farther state, we preserve our beef in the same manner as our hams, and preserved in the cask with the same brine. I would also remark, that we in no case use any other tools for cutting up our meat but a good sharp hand saw and knife. Ein Landsman.

Schaghticoke, Oct. 8, 1842.

MAKING VINEGAR.

We have on hand a number of pipes of the juice of apples, manufactured last fall, exclusively for vinegar; and since fermentation took place there has been little or no change in regard to the acidity of it, although it has been placed during the winter in the cellar, and in the summer under an open shed exposed to the air.

Is there any process by which it may be rendered more acetous while it remains in the pipes?

What effect would boiling produce, and mixing with it a small quantity of molasses, or some other saccharine substance? S. E. T.

We have never found any difficulty in making good vinegar from cider, when we have drawn it from the lees after the fermentation was wholly over, and placed it in a place where the temperature was higher than it is in the cellar. Left on the lees, or in a low temperature, the acetous fermentation is rarely complete. If our correspondent will place his cider where the temperature is from 65 to 80 degrees, and draw a pailfull daily from each cask, to be returned by the bung hole; or if he will procure from a cask of good vinegar a quantity of the substance called mother of vinegar, and add it to a cask, we think he will soon have vinegar. There are in London extensive vinegar factories managed in this way. The casks are placed on end, and the tops made full of holes. On each is placed a bucket or tub, containing about half a bushel of inferior, or Malaga raisins. A man is constantly employed in passing around the rooms, which are heated to 75 or 80 degrees, drawing a pailfull from the bottom and pouring it upon the raisins, from which it enters the cask. This gives the wine-flavor and body. If the cider is too weak, sugar and a little tartar is added. The vinegar is first rate in a fortnight. Boiling would do no good.—Eds.

Pine Apple Jam.—Pare your Pines; cut them up in small pieces; add to six pines, 3 lemons, cut in slices; to a pound of fruit, add half a pound of sugar; boil one half hour. S.

The Garden and the Orchard.

THE ROSE BUG ON THE GRAPE.

To the Editors of the Cultivator—I have seen a communication in the "Cultivator," signed "H. W. S. C., Burlington, N. J." describing the injurious effects of the rose bug on the grape vines, the failure of the whale oil soap to destroy them, and asking information of you as to the effect of planting rose bushes near the vines, for the purpose of attracting the bug to the former, and in this way preserving the grape from their depredations. In reply you remark, "we are unable to answer the request of our friend satisfactorily, and hope some of our subscribers acquainted with the fruit, will favor us with the results of their experience in the matter." I am unable to communicate to you any information in regard to the effect of planting rose bushes among the grape vines, not having made the experiment, but will describe the course which I have pursued, and with great success, for the extermination of this troublesome and destructive pest of the vineyard. The labor and expense of planting rose bushes would be very great, and should not be incurred, when other means of accomplishing the same end, successfully, can be resorted to at a very trifling cost.

I have cultivated the grape, particularly the Isabella and Catawba, on a pretty extensive scale, for a number of years, at my vineyards on "Croton Point," near Sing-Sing, N. Y; and among the difficulties and enemies with which I have had to contend, and which experience I may add, has enabled me to overcome, the rose bug has not been the least. Several years since, when my vineyards were smaller than they are at present, I found the rose bug a formidable enemy. They appeared on the vines when they were in blossom, or just as the blossoms were falling off and the young grapes forming, and devoured them with the greatest avidity. This feast continued from eight to twelve days, or till the cherries on the trees in the vicinity began to ripen, when they, with one accord, flew to them for a change of diet, I presume, or from some other cause. I was quite familiar with the habits of the caterpiller, and had been in the practice of clearing them from my orchards in the spring, before they had destroyed scarcely a leaf. This I did not consider a great or difficult matter; for they were enveloped in a web early in the morning, and one man in a few days, was able to clear many hundred trees, by twisting them off web and all, with a bushed pole, and carefully placing them *under his foot.*

The rose bug, however, did not, like the caterpiller, make their appearance in clusters or in webs, but in small numbers at first, and scattered through the vineyards, increasing rapidly every day. Though taken from the vines on the trellis every morning, they continued to multiply till the eighth or twelfth day, when they suddenly left for the cherry trees, as above stated. I was at a loss, at first, to know where they came from, till at length I discovered the ground perforated with numerous holes, through which they made their way to the surface.

I observed when they first appeared on the vines, they were so feeble as to be unable to fly even for a few yards. Having surmounted all other difficulties, I was determined not to be defeated in the vineyard cultivation of the grape, by this insect, and consequently resorted to the following means for their destruction. I directed my men to take each a cup, with a little water in it; and go through the vineyards every morning, removing every bug from the vines; and this was done quite rapidly by passing the cup under the leaf and merely touching it, when the bugs instantly dropped, and were received in the cup containing the water. When the cup was full, they were soon destroyed by pressing the foot upon them on a hard surface. After all of them had been taken off, on the following morning there were ten on the vines were we had found but one; and on the following morning, after having been removed as before, there were one hundred where there were but ten before; and so on. I was not discouraged, however, and directed my men to persevere in the work of destruction, and we should thus, perhaps, prevent the formation of an other progeny for the next season; for it is very easily shown that they do not migrate to any great distance; and by thus destroying the present race, I am convinced that we ensure ourselves from their further depredations to any injurious extent. When a person of some energy has cleared them from his vineyard or garden, he is pretty certain to enjoy the benefit of his labor another season as well as the present, though he may have a few from his less resolute neighbor. Pursuing the course I have mentioned, I very soon lessened the rose bug so much that they gave me very little trouble.

I also tried plowing my vineyards just before winter set in, so as to expose to the weather the insect in the larva state, which will certainly destroy all the young tribe, that have not descended below the reach of the plow. For two years past the number has been so small, that I have omitted this process for their destruction.

Such is a brief account of the course I have pursued for the destruction of the rose bug, and I regret that my professional duties do not allow me leisure to treat on some other subjects, connected with the culture of the grape the present time. Should these observations encourage those who have entered upon the vineyard cultivation of the grape, a fruit that has excited the liveliest interest from the earliest ages of the world, to persevere in this most delightful occupation, until their efforts are crowned with success, as they assuredly will be when they are properly directed, I shall feel that I have not labored in vain. Yours respect'y,

R. T. Underhill, M.D., No. 400 Broadway.

New-York, Sep. 13, 1842.

ROT IN THE RARE-RIPE PEACH.

Messrs. Gaylord & Tucker—Have you or any of your numerous correspondents noticed the *rot* in the *rare-ripe peach?* and can there be any good reason given for the cause of this destruction of this most delicious fruit?

We have a number of trees of this excellent fruit which are great bearers, young and healthy, standing in a good soil, which is well adapted to the peach, aad which were *loaded* with fruit the past season; and it also attained a good size. But just before it began to be fit for use, nearly every peach commenced *decaying;* and scarcely a solitary one came to maturity.

As I have a "*peach-tooth,*" I was congratulating myself upon a sumptuous repast; but prematnre decay of these delicacies of nature blasted my anticipation. I have examined scores of them with great care, and am unable to discover the least vestige of an insect. Notwithstanding, I then attributed this mischief to them.

Still, may it not be owing to the superabundance of rain which has fallen this fall? and to the damp, unwholsome state of the atmosphere which has generated disease in the tree, and thus imparted decay to the fruit? Scarcely a tree has escaped in this section; and no one is able to assign for this cause a valid reason.

S. E. T.

We have never observed the disease of the peach of which our correspondent speaks, and as it is noticed by neither Kendrick or McIntosh, we presume the cause to which he ascribes it, is the correct one. Plums, this year, have uffered much from the same cause, and on a fine Magnum Bonum, the fruit of which has rarely failed, standing in our garden, there was hardly a dozen sound ones. Draining, where water exists in the soil to excess, might remedy the evil; but where it depends on the weather, the case is hopeless.—Eds.

Large Pear Tree.—In the last *Magazine of Horticulture*, the Rev. Mr. Beecher of Indianopolis, gives an account of an extraordinary pear tree, on a farm about ten miles north of Vincennes. It is said to have sprung from a seed planted some 35 or 40 years since. It now measures, one foot above the ground, ten feet in circumference—and at nine feet above the ground, six and a half feet. The space covered by the branches, from outside to outside, is sixty-nine feet. In the year 1834, it yielded 134 bushels of pears—in 1839, 80 bushels—in 1840, it produced *one hundred and forty bushels.* It is perfectly hardy, a constant bearer, and, as the above indicates, an enormously productive kind. It is an early fall pear—fruit about the size of a turkey's egg, and rating as to quality with about the third grade of dessert pears.

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* The bolts should be screwed into the plank, so that when the brake is attached its edges will exactly fit to the surface the whole length.

Veterinary Department.

ALTERING MALE QUADRUPEDS.

After commencing operation as a farmer, I observed with regret, the barbarous method of operating on domestic animals, particularly upon swine, and in filling the bag with salt or ashes; but those who were accustomed to this method could not be persuaded to adopt any other practice. The salt and ashes applied on such occasions act as a styptic and prevent bleeding, but they excite inflammation and endanger the life of the animal. I have noticed the agony and uneasiness of pigs after such applications, and have recommended milder ones. In 1840 I lost a large shoat in three days after the operation, and came near losing a steer by bleeding from the cord. The method which I consider preferable is exhibited in the following instances :

Sept. 15th, 1842. Altered a large Berkshire boar 3½ years old, one that no person would undertake to castrate, lest he should die after the operation. I found a man, however, who was willing to act under my directions. He used a sharp knife and made a smooth cut, and after laying bare the testis, I applied a ligature on the cord, as a surgeon would to a bleeding artery, and then cut the cord below the ligature. The second testis was removed in the same manner, and the wound dressed with a mixture of tar and grease. The operation was soon performed, there was no bleeding from the wound, and the animal seemed to mind it no more than a kick. He eat his allowance daily afterwards, and never fell off in flesh from the operation, and is now (Nov.) a fat hog.

On the same day nine boar pigs which had been weaned some time, were altered without tying the cord, and the wounds rubbed with the mixture of tar and grease. They never lost a meal nor appeared to suffer pain or inconvenience from the operation, and all speedily recovered.

October 7th, 1842. Altered a two year old Galway bull by the same method. Having prepared a waxed thread, the cord was tied, and the testes removed as in the case of the boar, with the loss of only a few drops of blood in cutting through the skin. The wound was rubbed with the tar and grease, and the ánimal after being kept in the barn yard a few nights, was suffered to run in the field. The ligature comes away by the sloughing or rotting of the lower end of the cord, and then the wound heals.

On the same day another stout Berkshire boar, one year old, was operated upon in the same manner, without the loss of blood or flesh. He recovered rapidly and is now (Nov. 9th,) in a fair way to make a heavy porker.

Richmond.

FOOT ROT IN SHEEP.

Respected Friends—Having seen several recipes in your paper on the treatment of the foot rot in sheep, and having tried them all, to very little or no purpose, I discovered by accident a cheap and sure cure, without much trouble or injury to the sheep, viz:—Take a few bushels of lime, and put it near some place over which the sheep have to pass, say the bars; and as it is natural for sheep to jump, take notice where they alight, and place the lime there, about 3 inches deep. This did effectually cure my flock in about one week. The lime should be fresh and slacked, and not less than 3 inches deep; if deeper, it might take the hair off the leg above the hoof.

Wilmington, Del. 8 *mo.* 4*th*, 1842. T. Baynes.

RELIEF OF CHOKED CATTLE.

Messrs. Editors—In the July number of the Cultivator *(current volume)* Mr. J. Judson objects to the use of the hickory piston, in relieving choked cattle, because there is danger of "bursting the pipe." The method proposed by him is easily tried, and in *most* cases may be effectual. But should it *fail*, try the piston. There is no danger, *provided*, before using it, you go to your pork barrel and get a piece of pork rind as large as your two hands, double it over the end of the piston, *flesh side out*, and make it secure by tying. I have seen the above used without harm, and with perfect success.

Berlin, Conn. Aug. 19, 1842. R. North, Jr.

Inflammation of the Stomach in Cattle.—It is well known that when animals are taken from grass and put on different food, inflammation frequently supervenes. Mr. Climenson gives an instance in which 22 bullocks were taken from grass, and put on white turneps and hay, without water. After being on this four days, one bullock was found dead, and three more in a dying state. On examining the first that died, "the food was found quite dry and hard in the first and second stomachs, and also in the manifold: the fourth stomach was inflamed, the inner coat peeling off." Castor oil, Epsom salts and sulphur with carbonate of soda, were given the living ones but produced no effect: the three died. The remainder were purged with salts and sulphur, their food changed, and they all recovered.

FOREIGN NOTICES.

Sale of Short Horns in England.—The New Farmers' Journal of Oct. 3, furnishes us with a statement of the sale of the stock of Short Horns belonging to Mr. Smith of West Rusen. There were 37 cows and heifers over two years old, sold at an average of 31½ guineas ($146 79) per head; the highest bringing 150 guineas. The heifers, under 2 years and calves, of which 27 were sold, brought an average of 24 guineas ($111 84.) There were 14 bulls and bull calves sold at an average of 43½ guineas; the highest on the list was a two year old bull, sired by Sir Thomas Fairfax (the sire of Mr. Prentice's Fairfax,) which brought 255 guineas ($1,188 30.) The next highest on the list brought 70 guineas.

Preparation of Night Soil.—The value of night soil, and its preparations, consists in the great quantity of ammonia or nitrogen it contains, in which it exceeds all other animal substances, bones excepted. The following, which we find in the Farmers' Magazine, is a plain and easy method of preparing this manure, in such a manner that its value shall be fully retained, while the offensive odor is effectually destroyed:—"To every 100 lbs. of night soil, add 7 lbs. of sulphate of lime (gypsum,) in powder; a double decomposition will ensue, and the result will be, instead of sulphate of lime and carbonate of ammonia, carbonate of lime and sulphate of ammonia, the latter a soluble salt that cannot be volatilized. It may now be mixed with other compost, or dried any way thought proper, and applied to the roots of the vegetable, to be again transformed into bread, butter, cheese," &c. It is probable that the mixture of the gypsum, as recommended above, thoroughly with the night soil, and then incorporating it with compost, will be found the best method in which it can be used by the farmer.

(*From our Correspondent.*)

The losses of the corn speculators in England, this harvest, are estimated at £2,000,000 sterling. Failures continue to be very numerous, both here and on the continent.

The present year seems also likely to be as conspicuous in the seed time as in the harvest season. Favorable weather for preparing the land and sowing the winter wheat, does not always insure a good crop, but it is one of the first and most important steps towards the attainment of that object.

The diseases among horned cattle, as well as that amongst sheep, still continue to be excessively injurious, and the losses from it fall very severely on the farmers in all parts of the empire, just now.

Dr. Buckland, the geologist, Dr. Lyon Playfair, the translator of Professor Liebig's work on "Organic Chemistry," and Mr. George Stephenson, the civil engineer, have been on a visit to Drayton Manor. Sir Robert Peel invited his principal tenants and the leading agriculturists in the neighborhood, to meet them at breakfast, in order that they might profit by the opportunity of personal intercourse with men of so much eminence. A party of upwards of 30 persons was assembled. Conversations took place in the course of the morning, of the most interesting nature, on various subjects connected with the improvement of agriculture—on the necessity of draining, as the foundation of all other improvements—on the use of lime as manure—on the feeding of cattle, and the importance of warmth as well as food, &c.

The Beach Tree.—The communication of "H. A. P." published in a late No. of the Cultivator, in which the writer came to the conclusion that for some reason as yet unexplained, this tree has always escaped the effects of atmospheric electricity, has brought to light several instances in which it has not thus escaped. Prof. Loomis, of the Western Reserve College, informs us, in the *Ohio Observer*, that during a storm at Hudson, June 22, 1841, a beech tree was struck by lightning. "The tree was perhaps seventy feet high, of good size, the lower half being quite fresh and vigorous, the upper part entirely dead and dry. The top limbs were shivered into a large number of fragments and scattered in all directions. The marks of the lightning are very evident until it came to the green limbs, after which no traces of it could be perceived. The green trunk is supposed to be so good a conductor as to have conveyed off the fluid with little resistance."

A writer in the *Western Reserve Cabinet*, gives three instances, which occurred in Cabel Co. Va. In the first, the electric fluid struck the highest branch of a tall white wood tree, and after descending about 20 feet, divided, and one portion of it passed down the branch of a beech tree the distance of 10 feet, and a few feet down the trunk, when it returned to the white wood tree 10 feet from the ground. Both were *dead* trees. In the second case, the electric fluid first passed down one of the large branches, then entering the heart or pith, descended into the ground beneath the center, splitting the tree from the top to the roots. In the third case, the lightning descended a beach tree, and killed two hogs which were lying near its roots. All these trees were in the same neighborhood. Supposing these instances to be exceptions to a general rule, the writer greatly doubts the correctness of H. A. P.'s conclusions, and the practical applications which he suggests. He thinks that a building, instead of being protected by beech trees standing near, would, on that very account, be more likely to be struck; and in any event, they would not ward off the fiery bolt more than a few feet, and consequently would be entirely useless in protecting buildings of any kind.

In addition to these instances, we see it stated in the papers that four young men were instantaneously killed by lightning on the 21st July last, near Brewersville, Ky. "They had taken shelter from the storm under a *beech* tree, which, according to a popular error, is supposed to be a non-conductor of electricity; but, in this instance, it unfortunately proved otherwise."

Fair of the American Institute.—The show of stock, though embracing some very superior animals of all kinds, was not as large as usual. Dr. Poole of New-Brunswick was the most extensive contributor. To him was awarded two prizes on heifers, (one to an Alderney,) one on his stallion "Raritan," and one for his imported Spanish Jack, "Don Juan." Our friend Henry Watson of East Windsor was there with specimens of his skill in breeding; and to his "Prince Hal," a 2 year old Durham, was awarded the prize for the second best bull on the ground—his "Betsey Wilson" also received the prize for the best brood mare. Mr. Prentice of Mount Hope, near this city, had a choice selection from his herd on the ground, and he received the prizes for the best bull, (Fairfax) over 2 years old—for the best bull calf, (Cato, sired by Fairfax,)—and for the the best (Matilda) and second best (Daisy) cows. The usual variety of premiums was awarded, and we shall try and make room in our next for a list of those relating particularly to the husbandman.

RENEWAL OF SUBSCRIPTIONS.

Subscribers to "The Cultivator," in the several cities, can renew their subscriptions, by applying to the following Agents:

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NOTICES TO CORRESPONDENTS, &c.

Communications have been received during the past month, from S. W. Jewett, Wm. Partridge, W. R. P., Inquirer, James Jones, D. A. Buckley, C. Butler, T. M. Niven, Richmond, N. B. Cloud, Solon Robinson, Salmon Higgins, A. G. C., S. Wurmser, (we have sent his inquiries to Mr. Webb of Delaware, in the hope that he will favor us with a reply to them,) C. N. Bement, T. C. Peters, P. L. Simmonds, F. J. Betts, M., A Country Friend to the Institute.

Our thanks are due also to Hon. *Wm. C. Rives* and *J. S. Skinner, Esq.* for copies of Mr. Rives' Address before the Albemarle Ag. Society, on the 29th Oct.—to *J. M. Garnett*, Esq. for a copy of his Address at Wilmington,—to Hon. *Robert Denniston*, for a copy of the Report of the American Institute for 1841—to *John Caldwell*, Esq. for his Address to the Orange Co. Ag. Society—to *Wm. Miller*, Esq. Richmond, Va. for his Report of his visit to the North—to *Wiley & Putnam*, booksellers, N. York, for the two last parts of the Journal of the Royal Ag. Society, and for the first number of the Chemical Gazette, to be published semi-monthly in London—to the Editors of the London New Farmers' Journal, for the continued files of that valuable journal, and to friends in different parts of the country, for numerous papers, containing accounts of Fairs, &c.

With all our efforts to compress as much as possible, our broad and solid pages, and the liberty we have taken in shortening very many of the communications * we have published, we have still quite a number on file for publication in the next volume. Among these are the favors of Messrs. Niven, Jewett, Jones, Thomas, G. B. and L. Smith, Partridge, Betts, Crocheron, Durand, Simmonds, Weeks, Weller, Shattuck, Horsfield, Long, Willard, Hitchcock, Beach, Friend Hasty, A Young Farmer, A. H. C., W. R. P., A Yankee Farmer, &c.

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* This is particularly the case in the present number, and has been done, not because there was any thing objectionable in the parts omitted, but simply that we might make room for a greater number of the favors of our friends, and on this account we trust they will excuse the liberty we have taken.

FALL OF RAIN.

THE RAIN GUAGE, greatly improved by L. P. Casella, member of the Council of the Metcorological Society of Great Britain: a neat ornament for the garden or pleasure ground, so perfect yet simple in its construction, as to be used with the greatest ease, while a knowledge of the weekly and monthly fall of rain, afforded by it, is found of important service to the agriculturist and florist, and affords also a high degree of satisfaction to the contemplative admirer of nature. Price with description, £2 sterling.

Marine and house barometers, symplesometers, saccharometers, hydrometers, and guaging instruments, sold at TAGLIABUE & CASELLA'S', manufacturers and opticians, 23 Hatton Garden, London; sole agents for Robert's esteemed work on British wine making and domestic brewing, price 5*s.*, or with the saccharometer, 10*s.* 6*d.* Wholesale and retail, home and foreign orders promptly attended to, if accompanied by a remittance, or reference for payment in London.

HUSSEY'S REAPING MACHINE.

GRAIN GROWERS of the United States, are respectfully informed that the subscriber continues to manufacture his Reaping Machines in Baltimore. He has made great improvements during the past year, by which more than 20 acres can be cut by one machine in one day. Besides which a pair of forward wheels have been added, to support the fore part of the machine, which formerly rested on the shaft horse; this admits of a tongue to gear two horses abreast.

HUSSEY'S CORN AND COB CRUSHER,

which obtained the first premium at the exhibition of the New-York State Agricultural Society, held at Albany, on the 27th, 28th, and 29th of Sept. 1842, will be kept constantly on hand for sale; warranted to crush finer and faster at the same fineness, than any other implement for the same purpose. Orders may be directed to the subscriber, at Baltimore, Md.

Baltimore, Md. Nov. 23, 1842. OBED HUSSEY.

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